

CORESEARCH

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Produced by the Central Communication Unit for circulation among members of CSIRO staff

January 1975

Special report of papers and discussions

FOR three days last month 36 members of the staff of CSIRO debated matters relating to staff relations at a seminar in Canberra.

Organised by Head Office Staff Section on behalf of the Executive, the meeting brought together from many parts of the country laboratory craftsmen, scientists, administrators, technical officers and clerical workers.

DELEGATES

Chairman: D. W. Rawson,
Senior Fellow in Political
Science, Australian National
University.

Association Delegates:

Administrative and Clerical
Officers' Association (CPS): K.
L. Hodges, P. A. O'Brien, L. W.
Richards, D. J. Scullin.

Australian Public Service As-
sociation (Fourth Division Offi-
cers): D. G. Banks, S. I.
Record, R. C. Waller, M. F. C.
Abdullah.

CSIRO Laboratory Crafts-
men Association: D. V. H. Alex-
ander, J. W. Ikin, J. A. Jones,
R. W. Shearstone.

CSIRO Officers' Associa-
tion: T. Biegler, J. S. Hawker,
B. G. Cook, E. W. Radoslovich.

CSIRO Technical Associa-
tion: M. J. Franklin, R. J. Hill,
G. W. Jones, C. E. Popham.

Advisory Council Members:
C. K. Coogan, R. S. McInnes.

Participants drawn from the staff:

Experimental Officer, B. H.
Flinter; Clerical Assistant, G.
A. Holmes; Senior Technical
Officer, A. Bell; Senior Lab.
Craftsman, R. C. Thomas; Tech-
nical Officer, C. M. Zorin.

Head Office delegates: J. B.
Allen, P. F. Butler, H. C.
Crozier, J. F. Mitchell, L. C.
Thompson, J. R. Warwick, G.
R. Williams, L. G. Wilson,
D. V. Young.

Recorder: I. D. Whiting.
Observer: N. Carnegie, Aus-
tralian Atomic Energy Com-
mission, Sydney.

It was a residential seminar,
staged at Burton Hall at the
Australian National University,
and was attended by represen-
tatives of Staff Associations and
Head Office, staff members re-
cently co-opted to the Advisory
Council and five participants
drawn from the staff.

The topics for discussion in-
cluded CSIRO's staff promo-
tional process, the management
of CSIRO, the training and
development of staff, and com-
munications, but in the pro-
cess of debating these dozens of
other side issues were touched
on.

There is a cliché abroad these
days which describes meetings
of this nature as a place where
'there is a full and frank discus-
sion,' and the phrase has tended
to become meaningless. There
would have been few who left
the ANU after the seminar,
however, who could say that
the three days' deliberation had
not at least been pretty frank.

While some participants were
content to sit and listen at the
plenary sessions (but were
happy to make their contribu-
tions at syndicate discussions),
most were ready to put forward
either their association's point
of view or express their per-
sonal feelings on a subject.

At times members were
treated to a quiet explanation
of fact from Mr Gratton Wil-
son, Secretary (Administration),
when it became clear that such
a statement would set an issue
right; at times a quick, witty

CSIRO STAFF HAVE THEIR SAY - 3 DAY SEMINAR

remark would put things back
into perspective; on the odd
occasion the seminar was given
a homily from one member
who was a self-confessed Divi-
nity student—an interest which
he hastened to add was a spare-
time non-vocational study.

Always ready to bring the
meeting back to the subject
under discussion was the Chair-
man, Dr Don Rawson.

His task never appeared
simple for he was dealing with
a vocal group which was being
given the opportunity to have
its say. Often, too, each speaker
would have quite a different
point of view, yet as Dr Raw-
son said, it was one of the
easier seminars he had chaired
perhaps because, it seemed to
him, basically speaking the
participants had a real pride in
the Organization they worked
for.

From time to time, too, ad-
ditional representatives of Staff
Section sat in on the discussions
as observers and there was
always at least one member of
the Executive present.

Informality

The seminar itself was run
on pleasantly informal lines
with times being set aside for
both plenary sessions and syn-
dicate discussions.

Morning and afternoon tea
breaks and lunches provided an
opportunity for people to get
to know each other while intro-
ductions were made on the Sun-
day night in Burton Hall's
'Buttery'.

Papers to be printed

The full text of the
papers submitted by
Staff Associations, in-
dividuals and Head
Office on the seminar
topics, a comprehensive
coverage of the discus-
sions from both the syn-
dicate meetings and
plenary sessions, and the
recommendations which
came out of the meeting
will be compiled in a
report for publication
early this year.

These will be distri-
buted to each partici-
pant and copies will
be available through
Divisional and other
CSIRO libraries.

Probably some of these 'ses-
sions' and the Chairman's dinner
were in their own way as valu-
able as any other part of the
seminar in that they gave the
participants a chance to get to
know each other.

It was this personal contact,
in fact, that contributed to
much of the success of the
seminar and several members
said that all too often their
impressions of CSIRO were
largely governed by what hap-
pened in their own Divisions.

Since Divisional management
varied from one place to the
next, it became obvious to them
that the Organization as a whole
should not necessarily be judged
from that particular standpoint.

Recommendations

At the end of the seminar the
participants came up with a
number of recommendations
which will be passed on to the
Executive.

At the time of going to press,
these were regarded as being
'tentative'. They will be sub-
mitted to participants for final
approval before being passed
on but are printed in 'Core-
search' on the understanding
that there could be some minor
changes to them.

It would not be true to say
that all the participants left
the ANU confident that every
recommendation would be
adopted by the Executive, that
all Chiefs, section heads and
administrators would change
overnight those tactics with
which the members disagreed
or would implement suggestions
which had been formulated.

Or even that some Divisional
people would have a sudden
sense of being more than just
part of a staff of some auto-
nomous, isolated Division that
worked on scientific research.

But it would be true to say
that many points of view were
expressed—and listened to—
and most participants would
have returned to their labora-
tories and offices with a better
understanding of other people's
problems.

Stop press

All CSIRO staff who were in Darwin at the time of the
cyclone are safe.

The laboratory received only minor damage from a falling
tree and has since provided a refuge for staff members and
families.

All but two of the homes of staff are uninhabitable and
everyone suffered serious personal loss.

Some women and children were evacuated in the airlift
and a convoy of men and some wives left on 30 December
to make its way to Canberra.

A small working party led by Dr Michael Ridpath, the
O-I-C, is remaining at the laboratory in the meantime.

The Executive has discussed the personal situation of
individuals and is making arrangements for their future . . .
fuller details next edition.

In the meantime, it has asked all staff to take part in a
special appeal which is being organised through the various
Divisions, offices and laboratories for the CSIRO staff who
were involved.

● MORE DETAILS START ON P.4



Col. Bennett and Mike Thornber working underground at Kambalda in WA.

'The difficulties of exploration are enormous in a complex land system like Australia. You could liken our work to providing a form guide in racing—we don't pick winners but we do help to improve the odds for the explorer who invests his money, time and effort.'—Wilf Ewers, Officer-in-Charge, Division of Mineralogy, W.A.

CSIRO minerals team helps industry in WA

In the mid-1950s two Western Australian prospectors tried to cash in on the discovery of uranium. They set out to find new deposits of the elusive element and their search took them through the areas known as the 'greenstone belts' around the old gold producing localities.

History does not record their success, or lack of it, in the uranium field but at Kambalda they did come across some rocks which they felt were interesting enough to warrant an assay at the School of Mines.

The report they received was negative on the uranium content but they were told the rocks contained a 'bit of nickel'.

The men were unimpressed about that and went off to resume their search for the more important uranium.

While they went in one direction, international companies were making concentrated efforts to find deposits of just what the prospectors were overlooking—nickel.

One of them, in fact, International Nickel, the largest nickel producer in the world, had been searching for it in Australia since the 1950s.

Another, Western Mining, was active in the area and in 1965 when the prospectors heard about their efforts they decided it might be worthwhile to talk to them about their old rocks with their nickel content.

Impact

That decision changed the course of history in Australia.

It also had an impact on CSIRO because it was as a result of that 1966 nickel discovery at Kambalda that the Organization began its important involvement with nickel mineralisation, work for which

they now have an international reputation.

Because the mining companies had been successful in their exploration for nickel overseas, they had believed that the techniques they had used in other countries would be successful in Australia.

International Nickel, for example, following their Canadian experience, looked for a geological environment similar to Sudbury in Ontario, with the result that much of their search was directed to Central Australia. So far, that area has not proved to have nickel sulphides in economic quantities.

Other companies fell into much the same trap.

On the basis of the information Western Mining gained from the two prospectors—and it came at a time when their exploration budget was stretched to its limits—the company investigated the locality where the men had found the nickel-bearing rocks.

The rest is history. The discovery of the large deposits was the catalyst which sparked off Australia's nickel boom.

Genesis

It now became important to understand the genesis of the ore deposits and to re-think the techniques for exploration.

CSIRO, already investigating the national resources, saw this was a new area where it could work on a project which could have far-reaching implications on the nation's economy.

The mining companies on their part realised that CSIRO had a lot to offer with its ability to make detailed laboratory studies.

First to begin CSIRO's research on the nickel program was Wilf Ewers, a chemist who is now the Officer-in-Charge of the Division of Mineralogy's Perth laboratory.

Interaction

From small beginnings in 1968 the project gradually picked up and has continued to grow until today it is a successful example of a multi- and inter-disciplinary effort.

Three geologists, Russell Hudson, Robin Hill and Jack Hallberg, a mineralogist, Ernie Nickel, a physicist, Jim Graham, and two of Wilf's chemical colleagues, Mike Thornber and Bill Baker, have worked on the program.

All the scientists have support staff backing up their efforts.

'When we started the program, we found that a lot of relevant work had been done in North America,' Wilf said. 'But it had to be interpreted in a very different geological setting in order to work out the chemical and geological processes which had taken place below the surface.'

'Techniques of exploration in Canada, where the land has been scoured by glaciation, were not suitable for Australia.'

'Here, over many millions of years, the land had been deeply weathered during wet periods and then baked in a hot, arid climate, with the result that the nickel sulphides had been leached from the surface and obscured by transported deposits,' Wilf said.

'Our team is looking at the whole complex picture of ore genesis and of the subsequent geological changes that have affected the areas involved.'

'This tells us what to look for on the surface which would indicate that nickel might be present underneath.'

The data the team builds up is fed out to the mining industry and has been so valuable that in the last few years, Wilf says, most new nickel explorers in Australia have first consulted CSIRO before going into business.

Animal Physiology Chief retires

been associated with the Division's research programs.

Dr McDonald had many friends to wish him well on his retirement. Following an academic career he joined CSIRO's Animal Nutrition Laboratory in Adelaide in 1935 and was among those who worked on the cobalt and copper deficiency in sheep.

When Dr Ian McDonald (right) retired last month from his position as Chief of the Division of Animal Physiology in Sydney he had his future carefully mapped out.

He wanted, he said, firstly to improve his golf handicap.

Next in importance, he said, would be the opportunity he would now have to study native flora and fauna, especially birds.

He also plans to study sea-shore biology, continue his hobbies of painting and photography and to catch up on reading.

A particular interest lies in the origins of agriculture as revealed through archeology—he is fascinated by the enormous intellectual jump taken by mankind when it ceased to merely collect information on biological phenomena and began to exploit its knowledge.

Before he left the Division, his colleagues held a farewell symposium in his honour. The theme for this was the Division's progress in research during the last 20 years and Dr McDonald's unique contribution to it.

Participants included members of the Executive, Chiefs of allied Divisions, senior university personnel and industrialists and pastoralists who have



Later he became a veterinary pathologist at the Institute of Medical and Veterinary Science in Adelaide and then did research work on digestion in sheep at the Institute of Animal Physiology in Cambridge.

In 1955, Dr McDonald rejoined CSIRO as Officer-in-Charge of the Ian Clunies Ross Animal Research Laboratory. Four years later he became Chief of the Division of Animal Physiology.

Dr T. W. Scott has been appointed Acting Chief of the Division following Dr McDonald's retirement.

Warm farewell for retiring librarian

Few people have ever left CSIRO in a greater blaze of glory than did Ms Barbara Johnston, librarian of the Division of Food Research, North Ryde.

Barbara, who joined CSIR in 1939 as the joint librarian to the Divisions of Food Preservation and Transport and the McMaster Laboratory, has had a continual association with Food Research throughout her career with the Organization.



the air ducting system, it was felt that help from the fire brigade might be highly desirable.

Suitably recognising the importance of the occasion however, Barbara and her colleagues continued their party to the accompaniment of various firemen traipsing through the place complete with axes, CO2 extinguishers and other emergency paraphernalia.

By this time the lights were out but undeterred the party continued by candle-light, adding a soft glow to the whole proceedings.

The party was duly considered to be most fortuitous because it had been timed for after work. Had it not been held no one would normally have been on the premises after 5 pm on a Friday afternoon and chances are the building would have been lost before the fire was discovered.

All of which has led some people to think that after-work parties should be strongly encouraged in the cause of fire-prevention.

One of Australia's best known special librarians, Barbara made a significant contribution to the development of library practices and services in this country and played an active part in the affairs of the Library Association of Australia.

Within CSIRO she notched up a number of 'firsts'—she was the first librarian to complete and pass the examinations of the Australian Institute of Librarians and was the first Organization librarian to be sent on an extended overseas tour.

World's first radio astronomer operates in Tasmania

Once a week a rather battered old car trundles into the courtyard at the back of 'Stowell', CSIRO's Hobart laboratory.

One might expect something different from the inventor of an electric car but as far as Dr Grote Reber is concerned,

the vehicle is good enough to get him from his home at Bothwell, 80 km from Hobart, to the office.

Dr. Grote Reber, the world's first radio astronomer, is the holder of a CSIRO honorary research fellowship. His quiet mid-western American drawl has become, over a long period, a familiar sound around 'Stowell' although there are intervals when he may be back home in the United States for two or three years at a time.

Over the years, the 'Stowell' staff have become used to Dr Reber doing quite unusual things.

To start with, he's the only person known to be working in the field of radio astronomy in 150m and 300m wavelengths. And far from having an elaborate set-up such as the Parkes radio telescope, he operates a one-man establishment on the Bothwell property he rents.

He's an electrical engineer of some note and when he is not involved with his search of the skies he works on his electrical cars.

He believes there's a future for a vehicle that is powered from nickel cadmium batteries that can be plugged into a power point and recharged for about 15 cents while the owner is at work or goes shopping.

When he wants to get away from the future, Dr Reber turns the clock back to study historical origins of the Australian Aborigines and has discovered camp sites thousands of years old.

And as a passing interest, he's carried out a few odd experiments like growing beans to see if there's any difference in the way they twist in the southern hemisphere to the way they grow in the north. (The answer, he says, is none.)

First love

But radio astronomy is Dr Reber's first love and it is for this that he is best known.

With a degree in electrical engineering behind him, he first became involved in the subject when Dr Karl Jansky, who had built a rotating radio antenna at the Bell Telephone Laboratories in 1931, revealed

he had detected unsuspected radio emission from the Milky Way Galaxy.

Dr Jansky was not able to take the subject further, but when Dr Reber heard about the discovery, he became intensely curious. He corresponded with Dr Jansky and offered to work for him, but it became obvious that nothing more was going to be done.

Further consultation with other astronomers only brought a similar response.

'I felt this was fertile field of endeavour and decided to build my own radio telescope at my home in Wheaton, Illinois,' Dr Reber said.

Apart from the general state of ignorance about the new subject, he was hampered by the suspicions of his neighbours who were none too sure of what he was up to, and by their children who thought the new telescope was a playing area.

Nevertheless Dr Reber was able not only to detect radio waves from the Milky Way with the 10m diameter instrument he built, but was able to map their distribution on the sky at a wavelength of 1.9m.

By the 1950s radioastronomy was accepted as an exciting new area for research. While most people were concentrating on the short wavelengths, Dr Reber decided to be different — he would work in long wavelengths above 10m.

'I first had to find the right place to set up an instrument,' he said. 'I was working in Hawaii and had access to ionosphere data and by the process of elimination I reckoned that Tasmania was the best place in the world to come to.'

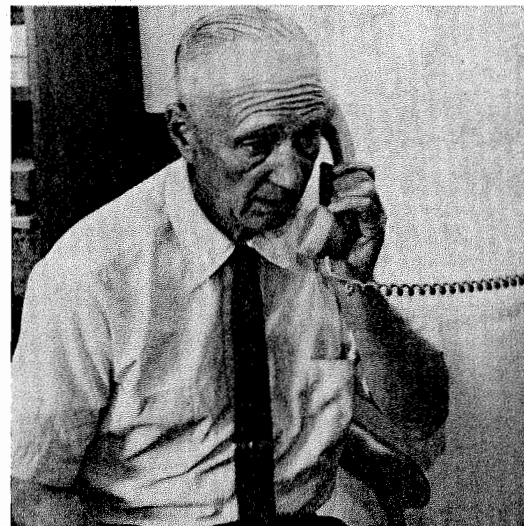
'I consulted several people, got a lot of discouraging advice about all the pitfalls, but decided to come here anyway.'

Achievement

Dr Reber arrived in Tasmania in 1954, set up his equipment and on the first night he began his observations, demonstrated that the phenomena did exist and that the technology for their observation was available.

'That's really all I intended to do . . . just to prove that it could be done.'

Cont'd on page 8



New award

Dr J. Wilson Lee (below) of the CSIRO Wheat Research Unit, has been awarded the F. B. Guthrie Medal by the Cereal Chemistry Division of the Royal Australian Chemical Institute.

Dr Lee is the first recipient of this newly instituted award, made for 'meritorious services to cereal chemistry in Australia and New Zealand'.



The medal commemorates the contribution made to the Australian wheat industry by Frederick Bickell Guthrie, Chief Chemist with the N.S.W. Department of Agriculture from 1892 to 1924.

In presenting the award at the RACI Cereal Chemistry Division's annual conference, particular reference was made to Dr Lee's contributions to research on the chemistry of wheat proteins and carbohydrates and the practical application of some of these studies.

Staff support for CAA

Over a long period CSIRO staff have supported Community Aid Abroad. Notice boards in most Divisions have CAA literature on them and many groups within the Organization actively raise funds for various projects.

A number of staff members have also accepted office on

different State and district committees of CAA, the latest appointment being that of Dr R. Arnold of the Division of Mineral Chemistry to the Victorian State Committee for 1975.

A recent issue of CAA's 'Review' carries a profile of two of its energetic workers, Judith Stump and John Birch, both of whom are members of CSIRO.

John, a physicist at the National Measurement Laboratory in Sydney, is Chairman of the NSW State Committee. CAA study tours have taken him to India and Indonesia where he has had a chance to observe for himself the problems of the poorer sections of the community in those countries.

Judith, a CSIRO librarian in the Central Library, Melbourne, and member of the Canterbury CAA Group, joined CAA in 1962 out of a 'sense of mis-giving, perhaps guilt,' because she enjoyed all the benefits of an affluent and ordered society.

She has since held various positions in the Group where she is at present Publicity Officer. She is also a member of the Victorian State Committee.

Image of science — ANZAAS symposium

What is the scientist's self-image?

What image does the non-scientist have of science as it is presented to him through the various media of communication?

Dr. Peter Pockley of the University of New South Wales wants to find some of the answers to questions like these at a symposium he is convening during ANZAAS.

To be held in Canberra on 21 January, it will be entitled 'Science and the people — popular images and reality.'

The symposium will attempt to provide a participatory forum for scientists and non-scientists to confess and analyse their hangups about science.

'It could be a noble failure,' says Peter, 'but if enough delegates to ANZAAS come prepared to talk directly and honestly about themselves in relation to science it could be a lively and valuable affair.'

Contributions should be substantial but limited to five minutes.

A panel of speakers will present prepared papers tackling the different aspects of the images and reality question.

It will include Dr David Davies, editor of 'Nature', and a physical scientist; Dr Earle Hackett, deputy Director of the Institute of Medical and Veterinary Science, Adelaide, Vice-Chairman of the ABC, pathologist, and writer and broadcaster about science and medicine; and Dr Pockley, Adviser, Public Affairs at the University of NSW and commentator on the science scene.

For further information contact Dr Pockley at the University, P.O. Box 1, Kensington, NSW, 2033. Tel — Sydney 662 3464.

New Chief appointed

Professor B. Rawlings of the University of Sheffield, United Kingdom, has been appointed Chief of the Division of Mechanical Engineering at Highett. He will take up his new post in the first half of this year.

The Division's former chief, Mr Roger Morse, now heads CSIRO's Solar Energy Studies Unit.

Professor Rawlings, B.Sc., B.E., M.Eng.Sc., Ph.D., is currently Deputy Dean of the Faculty of Engineering and head of the Department of Civil and Structural Engineering at Sheffield.

He is a civil engineering graduate of the University of Sydney where he held posts as lecturer, senior lecturer and reader from 1953 until his appointment to Sheffield in 1967.

High fashion — Keep it low for safety

The following excerpt is from the Safety Notes which appeared in the August 1965 issue of Coresearch:

'Fashions change, and whether we like it or not, most of us are slaves of fashion. What well dressed young girl these days does not wear high spiked heel shoes with pointed toes?

'If the one ambition of shoe designers was to design the most hazardous type of footwear they could for use on stairways, they would find it hard to improve on today's footwear.'

It's taken almost a decade to do it, but improve they have. The elevated platform sole shoes win hands down (or bottom — it depends which way you fall) over those stiletto heels and pointed toes of yesteryear.

Stairs, however, appear to be an unnecessary factor for a fall when wearing the more extreme versions of these elevated shoes. Also, they are obviously not made with the safe operation of vehicle foot controls in mind.

So, a plea to all you fashion conscious girls — please leave your highest platforms at home and find some other, safer, way to make sure that you are not overlooked at work.

— Gil Barnes, Safety Officer.



CONCLUSIONS AND RECOMMENDATIONS

Appeals

It was agreed that employees are inadequately informed about existing mechanisms for lodging appeals in relation to their classifications or the promotion of other staff, and that the appeals process would work more effectively if it was better understood.

Information about appeals procedures should be disseminated widely to staff with emphasis on the fact that there are no unfavourable consequences for future promotional prospects for those who lodge appeals.

Unitary salary scale

Opinion was divided on the possible merits for CSIRO employees of a unitary salary structure such as the G.S. system used in United States Government agencies. The seminar was generally in favour, however, of the Executive seeking the opinion of all staff on this matter, provided that adequate information was first made available.

Clerical assistants

It was generally agreed that clerical assistants with the requisite qualifications should not be debarred from applying for promotion to any positions of clerk or administrative officer. However, some representatives of ACOA felt that this was a matter to which their Association would wish to give further consideration.

It was accepted that this is a question which must be resolved by the unions concerned in association with the employer.

It was also agreed that clerical assistants should have the same rights in relation to promotion appeals as currently apply to administrative officers and clerks.

Counselling

The seminar agreed that: (a) an identifiable counselling mechanism should be established within all CSIRO Divisions;

(b) the mechanism should provide counselling which is freely available, and which is voluntary except in cases where the performance of employees is considered to be poor; in the latter case, the employee should be informed and the reasons for this conclusion made known to him by those engaged in counselling;

(c) supervisors and counsellors should be provided with training in counselling techniques.

This counselling mechanism should be additional to the staff counselling which group managers and supervisors should continue to provide.

The management of CSIRO

After a wide-ranging discussion of the management and organisation of CSIRO, the seminar agreed that existing arrangements were generally effective and satisfactory. However it was felt that it would be advantageous to introduce the following improvements:

(a) Intra-Divisional Committees

It was felt that there would be advantage in estab-

lishing within Divisions a general, consultative staff relations committee comprising representatives of the various staff categories. Members of the committee should be acceptable to the staff represented and to the Chief. The committee would make recommendations to the Chief on internal matters.

In addition to establishing this committee framework, the seminar agreed that there was a need for the general level of supervision and management skills to be improved.

(b) Green Paper

One of the major aspects discussed by the Seminar was the management of change. The seminar generally agreed that, on appropriate future occasions when major organisational changes were being considered, it could be beneficial for the staff involved if the Executive were to issue 'green papers' canvassing the merits of various proposals under consideration.

The seminar further agreed that, regardless of the outcome of this recommendation, it should be a general rule that advance information of impending changes should be conveyed to the staff affected, at the earliest opportunity.

Communication

Although a number of criticisms were made of the effectiveness of communication within CSIRO, it was conceded that no significant organizational improvements were necessary. However it was agreed that there is a need to improve individual

and intra-divisional communication.

Training and development

The Seminar appreciated that the CSIRO training program had recently been the subject of a detailed and serious review by the Executive and that a number of changes although not yet readily apparent were in the process of being introduced. While conscious of these developments, the seminar considered that a number of general and specific recommendations could be made at this stage.

Non-vocational training

In general the seminar responded sympathetically to non-vocational training and considered that it should be encouraged but not to an extent which would be prejudicial to the efficiency of the Organization.

Vocational training

The Seminar agreed that CSIRO should actively facilitate vocational training and encourage the development of its staff, and that it should be made clear to supervisory staff at all levels that they should accept the short-term inconvenience which this process inevitably involves. Specifically it was proposed that—

(a) study assistance should be regarded as a right where the studies undertaken are directly related to career development (e.g. when technical assistants work towards qualifications required for promotion to the technical officer grades);

(b) courses in supervision techniques should be provided for supervisors at all levels;

(c) audio-visual techniques should be the subject of further examination to see whether they can be used more extensively;

(d) the exchange of staff for short-terms either internally between Divisions or with appropriate external institutions, should be encouraged (e.g. laboratory craftsmen who in some circumstances can be at a disadvantage by belonging to a small organization, could be temporarily seconded to work with relevant industrial companies in order to obtain experience in specialist techniques);

(e) research scientists undergoing a period of retraining because of changes in the Organization's work programs should not be subject to the normal criteria for advancement over efficiency bars but should be assessed according to progress made in retraining; and

(f) without regard to classification, appropriate staff should be sent overseas to obtain requisite skills, knowledge and experience, where this is not available in Australia.

Accreditation of qualifications

The seminar noted the steps being taken by the Organization to establish acceptable qualification standards and was generally satisfied with progress in this area.

The processes of promotion

THE VIEW OF HEAD OFFICE

There were two basic approaches to promotions policy in CSIRO — one based on personal merit and the other based on an evaluation of the position or the 'establishment' system the paper from Head Office stated.

There was a tendency to believe that their application was 'absolute' (e.g. the merit system applied to the research scientist and the establishment system to the administrative officer) but in reality each overlapped the other to some extent.

This meant that 'establishment' might influence the classification of research staff especially in the higher ranges where formal research management requirements might be a feature.

In the same way there was provision within the clerical-administrative areas for some merit advancement.

The merit system was essentially based on personal assessment and could be said to have two aims—rewarding outstanding individual contributions and allowing the individual to continue in a specialised field.

It offered advantages and disadvantages to both the individual and the Organization —

while it offered inducement to the staff concerned and helped to produce stable work teams where people competed against a standard rather than each other, it retarded mobility and might inhibit a cross flow of ideas and concepts.

As well, there was no promotion on transfer.

With the establishment system, the individual competed against others for a position and was almost always promoted on transfer. But this system was geared to the availability of vacancies and when expansion was rapid, mobility could be very high to the detriment of job performance.

At times of constraint there were disadvantages to the individual.

In outlining the way recommendations were made, the paper stated that some Divisions had well developed consultative machinery. Others had none with the Chief holding the responsibility exclusively to himself.

While it had yet to be demonstrated that either approach led to a more or less favourable result overall, there was a growing feeling that the processes would be facilitated by a more democratic approach. The means to achieve this was under review.

The system of appeal, embodied in Paragraph 11 of T & C was outlined as was the staff counselling service.



A relaxed moment during morning tea break — from left: Don Rawson (chairman), K. L. Hodges, B. G. Cook, M. J. Franklin, R. W. Shearstone and D. G. Banks.

ACOA's POINT OF VIEW

An outline of the status of staff in both the APS and CSIRO, their promotional processes and systems of appeal was given in this paper.

The main points of concern for CSIRO staff among their members (clerks and administrative officers) included a lack of information on those positions which contained an element of the merit system and thought by some not to exist at all, except on an ad hoc basis.

There were problems, the paper said, when positions in this category were down-graded when someone left and up-graded when the promotee met certain unidentified conditions.

A duty statement would assist officers in their application for positions.

The right of appeal against temporary transfers was also discussed, especially in view of the increased leave and changes in furlough conditions.

ATTITUDE OF CSIROTA

While basically agreeing that a merit system was superior to the establishment system, CSIRO's promotional process had serious faults, according to the CSIROTA.

It disapproved of the transfer of laboratory craftsmen, farm assistants, animal attendants and similar designations into the technical ranges without specific changes of duties.

The Association was also concerned with the adult entry point into technical and clerical grades which introduced an outside influence into the merit system, and objected to the lack

of promotional opportunities for some members whose work was a routine service without scope for reclassification.

The Association was perturbed about the secrecy surrounding the promotional process and saw this as one of the biggest obstructions to improvement in staff relations. It believed personal files should be accessible to its members once a year and that the staff should have the right of appeal against detrimental comments.

Opportunities for furthering their education and the rationalisation of qualifications so that differing standards in the various states were recognised were other subjects discussed.

LABORATORY CRAFTSMEN

The LCA saw as their main grounds for dissatisfaction the promotion of those who might

• Continued page 7

CHAIRMAN'S ADDRESS

Now that's really communication!

'Communication is like sex — when it is good it is very good, satisfying and creative. When it is not so good it is still better than nothing,' the Chairman of CSIRO, Dr J. R. Price, told the staff relations seminar dinner.

He said CSIRO is a dynamic organization. If it ceased to be that way, it would fail.

'If we are to continue to be effective in a dynamic situation we will have to continually change not only our objectives but to reorient our teams and restructure our research groups to be able to tackle new objectives.'

'This means change — change for the staff involved, sometimes a minor change in direction but sometimes a more significant one involving geographical transfer,' Dr Price said.

Occasionally it was necessary to subdivide large and long established groups into smaller ones and at times to reconstruct them into different larger groups.

National goals

'I am speaking about the changes the Executive has to make to achieve national goals,' he said. 'Not about the changes which the staff concerned might believe are made for administrative tidiness or just for the sake of change.'

Dr Price referred to the necessity to sometimes close down areas of research and to open new ones. The consequence of some of these, he said, might be uncomfortable for individuals but they were necessary if CSIRO was to fulfil its functions of service to the Australian community and not just to provide a haven for the employment of scientists.

Long consideration was always given by the Executive to any proposed changes before decisions were made. Previously it had not always been the practice to discuss those proposals first with staff, but following association representation more recently it had been its policy to consult with them.

'I am not convinced that anything we have done in this way has avoided situations that give rise to rumour, speculation and personal worry on the part of those involved,' he said.

New Division

Talking about the recent establishment of the Division of Human Nutrition, Dr Price said that despite staff consultation he thought the Executive had not succeeded in reducing the level of concern to any considerable extent.

'I offer the suggestion for discussion that there is no more trauma involved in an announced but previously undebated decision than there is in one which has been arrived at by the Executive after the staff has had the opportunity for debating the alternatives and expressing their views.'

'I do recognize, however, that almost all the people get a feeling of satisfaction if they have had the chance to put a point of view concerning the direction in which their own future might develop.'

This, he said, brought him to the 'vexed' question of staff participation in decision making. 'I suggest it is not practicable for staff, as a whole, to participate in this. What is possible and could be arranged without undue bureaucratic barriers, is for staff to put their views on specific matters requiring decisions to the Chief of a Division or to the Executive, or at whatever the level may be, and for the person concerned to take those views into account. The staff associations, of course, are already making a substantial input of this kind.'

Dr Price described briefly the system which worked in the Max Planck Institutes in Germany, an organization which bore a closer relation to CSIRO than did any others.

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Staff views

'Their Director is the decision maker but if the decision he takes differs from the consensus of staff views, he is expected to explain why he took the steps he did.'

'I believe this is the only practicable way in which we could attempt to realise anything approaching staff participation in decision making.'

'To try to do so on a completely democratic basis would I believe, be disastrous. Not so much because of the possibility of wrong decisions being taken but because of the interminable delays in taking any decision at all.'

Allegiances

Dr Price said he did not think there was a reasonable or feasible proposition that a member of the staff could be a part-time member of the Executive. While the right person from any of the staff could make a valuable contribution, no one could have two allegiances and two responsibilities within one organization.

'I can see no objection to the appointment of a more senior member of the professional, technical or administrative staff to the position of a fulltime member of the Executive.'

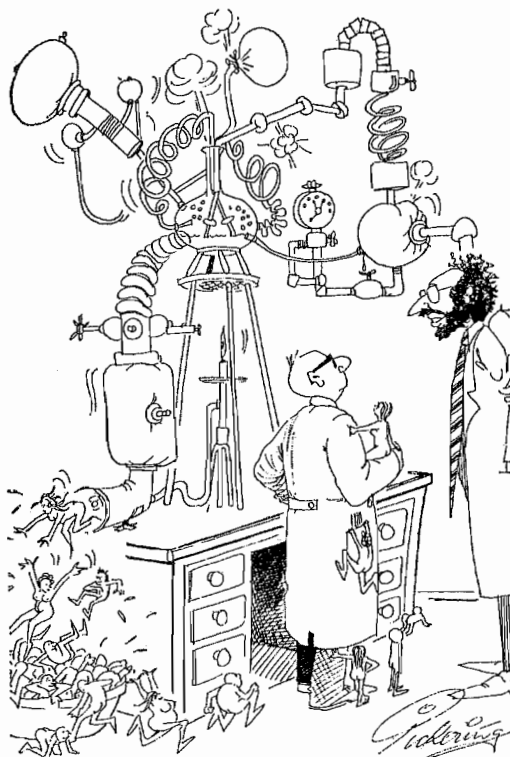
'He would have to understand though that he would be taking on a job in which whatever he does he will be wrong.'

Talking about CSIRO itself, Dr Price left no doubt in the minds of the participants that he believed it to be an elitist organization.

Best employed

Whether the word was 'non-U' or not, he felt a research organisation could be nothing else. To meet the objectives laid down in the Act, CSIRO had to employ the best people it could get and to provide the best environment in which they could work.

'There is nothing wrong with elitism — we see it every day with the worship of the elite in our sporting worlds. The success of CSIRO hinges primarily on the research scientists, but — and this is an important but — our success hinges also on the extension of the elitist tradition to all other categories of CSIRO staff.'



"Bloody marvellous, Smythe . . . What a pity you don't have a degree!"

(By courtesy of the National Times)

ISSUE OF TRAINING, DEVELOPMENT

Head Office

Historically, because it was a scientific research institute CSIRO, had always, apart from the clerical-administrative area, emphasised the acquisition of scientific and technical qualifications combined with actual work experience to produce the discreet level of competence of its staff. These qualifications were invariably acquired outside the Organization.

In the past, this had meant that in CSIRO in these areas the training function had had a lower priority than it has had in other organizations.

New attitudes were now emerging however, and there was now:

- recognition of gaps in external training
- a growing realisation that there were specific areas of expertise needed by staff to upgrade their effectiveness for which there was no suitable training available outside CSIRO
- a recognition of the 'challenge of changes' in science and society which were crowding in at such a rate that the traditional ways of an organisation were not responsive enough to ensure its continued effectiveness.

The paper outlined some of the steps now being taken by CSIRO to move into these new areas of staff training and development.

Lab. Craftsmen

The Association attacked what they called 'the civil service inertia' of CSIRO which resulted in delays in getting answers to inquiries, special leave applications, pay increases and overtime.

While administrative staff regarded these delays as an occupational hazard, to the individuals they were the reason for continued frustration.

It was felt that the Executive took it for granted that the administrative and supervisory staff worked with the best of

ideals and that there were no problems of importance. It was also possible that the Executive tended to concentrate on the scientific and business side of the Organisation and neglected the aspect of human relationships.

The Association suggested a number of ways by which the Organisation could be improved in these areas (see full report).

The craftsmen also pointed out that while the scientists were given opportunities to further their careers at seminars and conferences and by engaging in 'straight out trial and error in the laboratories,' the same chances were less common among the technical staff and quite rare in the workshop.

The Association felt strongly that all its members should have the opportunity to try to make Grade 3 and that there should be training facilities which would allow them to do so.

CSIROOA

The growing recognition throughout the community that even highly educated people might need further training during the course of their working careers was the basis of the OA submission.

There were several areas, it said, where training and development of active scientists could be helpful, even essential. The implementation of such programs might, however, cause short-term problems for the individual, especially in his promotion and this should be taken into account.

The OA also saw that there could be related problems in the technical area which were accentuated by the lack of formal and appropriate advanced certificates which were recognised nationally.

Solutions to these problems included in-house training, re-

FREEDOM OF THE WRITER

The publication — or suppression — of scientific papers was touched on at the seminar.

Mr Gratton Wilson, Secretary (Administration), explained that to put the matter in perspective there would be a Head Office circular issued on this matter early this year.

'From time to time the policy on this has been stated but there are now people within the Organization who wouldn't know what this was,' he said.

The Executive's attitude was that work should be published unless there was some good reason why it should not be, perhaps because of patents.

Chiefs largely had the authority delegated to them to decide whether a paper should be published. If there was a disagreement, in most cases a Chief would consult with others in the Division but there was always the author's right to appeal to the Executive.

Should the Executive refuse to publish a paper with CSIRO's backing, the author still had the right to publish privately.

CSIROTA

The Technical Association looked at the individual development through education with reference to study leave and the recognition of technical qualifications.

It was also concerned with the recognition of technical work as a career on its own as opposed to the entry of graduates and came up with some 'speculations on training and development' (see full report).

In his paper Mr Ray McInnes submitted ideas for planning for technological changes, in-service training, protection against redundancy and making the burden of redeployment easier.

ACOA

In wanting increased training opportunities for its members, ACOA also offered its support for the idea of training schemes for the professional, technical and trade areas.

The Association had previously submitted proposals for training and development and while some of its ideas had been implemented, it was concerned that others had not.

It was also concerned that a disproportionate number of graduates had recently been recruited having regard to the reality of their job opportunities and their own aspirations, and it felt that good young staff could be recruited, encouraged and motivated to carry out the best traditions of CSIRO.

'COMMUNICATION PROBLEMS REST WITH DIVISIONS'

Communication in CSIRO was not seen as an industrial problem of any magnitude, the moderator of the seminar, Dr Rawson, said in introducing the session on that topic.

'Rather it would seem we are seeking to improve something that is already good, not bad.'

To effect any major changes would require major changes themselves in the structure of CSIRO and no one had said that was wanted.

But he did see that the Organization had grown over the

years and that this had led to a decline in informal discussion. There was the other dimension — that in today's world people expected to be consulted more.

'It's my impression as an outsider that the greatest problem seems to be within the Divisions themselves. The Chiefs appear to communicate with the Executive but are less likely to communicate within their Divisions.'

Consultation

Among the ways he thought this might be overcome was the setting up of a small group which could become 'the eyes and ears' of the Executive which could seek to restore some of the lost area of consultation.

In the discussion that followed Ms Carol Popham raised the issue of new fields of communication being developed through mechanical means and spoke of the developments overseas in this direction. 'People,' she said, 'are getting away from the written word.'

When publications came under scrutiny, Mr Wilson spoke of the great number of these which were already produced by CSIRO and said that plenty of information was in fact available if people were prepared to read it.

'Coresearch'

'Coresearch' came in for some attention from Mr B. H. Flintner who felt it could perhaps be slanted differently so that more information could be given on research programs instead of using 'tatty social things'.

Speaking as Manager of the Central Communication Unit, Mr Williams said it would not be possible for the paper to cope with information about 300 research programs that were undertaken in CSIRO, but said that in writing about people of CSIRO, the editor hoped to get some coverage of CSIRO's activities for the whole of Australia.

In their homes people bought a particular newspaper because it suited their interests. 'Coresearch' on the other hand had to cater for the interests of all areas of staff, no matter where they were located in a work situation or geographically.

Mr Williams said he did not see the Organisation's publications as a solution to the basic problem. 'It requires a lot of effort from a lot of people,' he said.

When a breakdown in communication occurred it was easy to be critical without finding where the breakdown occurred. The fault could be either at the transmitting or receiving end but 'the other person' was always to blame.

A new avenue of thought for some was introduced when Dr Coogan said the effect of the media should not be overlooked. 'The staff can read a lot about what's happening within the Organization by picking the stories up through these channels,' he said.



Peter Butler has coffee with Ms Roseanne Waller and Ms Margaret Zorin.

Successful

Discussing the promotional process in CSIRO, Dr Clive Coogan said he knew of people who had come into the Organization without academic qualifications and who had attained the highest recognition, including one case where a person became a Fellow of the Royal Society.

'I suppose you would call that an unqualified success.'

MANAGEMENT OF CSIRO

Head Office

In its paper on this topic, Head Office did not attempt to answer the questions which had been posed in the seminar brief, but rather confined its submission to a definition of some of the responsibilities inherent in achieving the objectives of the Organization. This, it felt, provided a background for the discussions which followed.

Lab. Craftsmen

The Laboratory Craftsmen Association was in favour of greater opportunity for the voice of the ordinary individual to be heard in decision making and while approving the appointment of staff association members to the Advisory Council felt this move could be extended to co-opting people from the association with the right capabilities on to the Executive.

Whether this should be for a short or long term or even for a single meeting if an opinion of a particular matter was wanted, was open for discussion.

Similarly the association would like to see Staff Association representatives on Divisional committees, not to speak on matters which did not concern them, but to voice opinions when there were subjects which were related to their sphere of work.

Views on management were also submitted by the two staff representatives on the Advisory Council, Mr Ray McInnes and Dr Clive Coogan, with the latter expressing some strong opinions — which he said were those of the author alone. These, along with all the other papers, will be covered fully in the seminar report.

ACOA

The recent election of two Staff Association representatives to the Advisory Council was seen as the first step towards 'the democratisation' of management, the paper submitted by ACOA stated, and it was noted that for many years the Staff Association had been invited to discuss problems with management, even if that was at Secretariat and not Executive level.

The 'divine right' of Chiefs was regarded as an integral part of the CSIRO management style. The Chief of a Division was 'still lord of his manor' but his rights were becoming more questionable, and in numerous areas was being over-ridden by Head Office.

ACOA saw the secretariat as a cohesive influence between the Chiefs and the Executive but 'one with little teeth that tended to nibble on the periphery of this line of communication and responsibility.'

ACOA also saw the Secretariat as being a body that did not lack in expertise and as one that was doing its best, but felt it was bogged down because of a shortage of experienced sup-

port staff, coupled with a massive increase in the volume of work. This, it said, had caused a chronic bottleneck of work in Canberra, and outlined some ideas which might overcome this.

In the Divisions, the Association felt there was a need for a vast increase in delegations from Head Office if management was to be effective, and in turn, the Chiefs should involve their administrative officers more in local management.

One of the comparatively few references to the RAOs was made in this paper and it was seen that they were critically short of trained personnel.

CSIROOA

The OA summarised its attitude saying that staff participation in management should be sought through a freeing of information and discussion rather than by electing representatives to management and that open management should be attained by 'evolution and not revolution.'

There were difficulties of communicating with management which needed to be overcome and it outlined some of its philosophies on that subject.

CSIROTA

The Technical Association paper looked more closely at the policies of management at Executive level, employee representation on the Executive and Association access to the Executive.

It also dealt with the Executives' dependence on the Public Service Board and what it felt might be external pressures on management.

Discussion

The democratisation of management at all levels in CSIRO, the 'divine right' of Chiefs and the secretariat function, the role of Head Office in relation to that of Divisions and the need for delegation within Divisions and Divisional responsibility were some of the aspects which came under the scrutiny of the discussion session on 'Management of CSIRO.'

In giving an outline to the topic, Dr Rawson indicated that with such a broad subject it could not be a 'tidy' discussion and many of the lines of it would be 'blurred'.

There were almost as many different opinions on this subject as there were speakers and Dr Rawson's 'outside' view — that there were probably many people in CSIRO who probably did not want to become involved in management but who wanted the right to have a say in it on the occasion when they

or their organisations became involved — possibly summed up the line of thinking of at least a good few participants.

Agreeing with Dr Rawson's impressions, Mr Bruce Cook said that most people wanted to contribute when they felt they had something worthwhile to say: 'But there's no way for many of getting that message represented.'

Ms Carol Popham suggested that when staff felt a decision was being made that would affect their own positions, they should be allowed to express their feelings on the matter. 'It shouldn't have to go through the filter system,' she added. 'If your supervisor doesn't like what you have to say it may get no further.'

CSIRO was an organisation with a number of people who held unusually high academic qualifications. Traditionally these were the ones who rose to administrative areas (i.e. scientists to Executive level) so that, in some ways CSIRO was managed by 'amateurs' in the field of administration, Dr Clive Coogan submitted.

There were other people who felt that they could do equally well in the management area and this gave rise to a frustration syndrome in those who felt their abilities were not being used.

The idea of more people being given the chance to take part in the management courses arranged by Head Office was raised with the suggestion that those who showed potential for this work should be earmarked for further training.

Mr Ron Shearstone suggested that the management of CSIRO could not perform some of its functions because it had to consider the reactions of the Public Service Board. 'My Association (Laboratory Craftsmen) feels that CSIRO should be divorced from the APS,' he said.

He also spoke on the difficulty his members experienced in getting information handed down the line, but said if that premise was challenged, staff were told it was their job to ask for it.

'How can you ask about something which you don't know exists?' he asked.

Mr Shearstone suggested there was a need for Divisional committees, with representation at all levels, to be set up.

'If such committees were told in advance for instance of changes and the information was passed on to staff, a lot of the grizzling that goes on wouldn't happen,' he said.

Many other speakers, including the representatives of the OA, also saw the need for greater information about changes to be passed on, and while this in some ways infringed on the session on communication it also developed into a strong expression in this segment of the discussions.

Moderator reckons we're OK

The Moderator of the Seminar was Dr D. W. Rawson, Senior Fellow in Political Science at the Australian National University.

A man who has held various positions at the ANU and was Reader in Political Science at the University of Queensland, Dr Rawson has also undertaken work, mostly on the political aspects of industrial relations, at the University of Oxford (as a Rockefeller Fellow) and at a number of universities in the United States, most recently the University of California at Berkeley.

Dr Rawson told delegates to the seminar he hoped they would be prepared to think and act as individuals, not in the sense of forgetting they belonged to various staff associations, but in the sense of remembering that everyone was more than a mouthpiece of some larger body.

In an interview after the seminar, Dr Rawson said his overall impression had been that delegates had a real pride in their Organization and he believed from an employee point of view CSIRO compared favourably with the APS and other large organisations.

'There seems to be little widespread demand for changes in basic principles such as the autonomy of the Divisions and the power of Chiefs,' he said.

Most satisfied

Most people appeared to be basically satisfied with the continued existence of the Organization as it was, which he saw as being in some respects a feudal system — very powerful and he hoped, beneficent.

On the other hand he felt there was a strong feeling that communications at all levels were not as efficient as they should be, although these had probably improved in the last year or so.

There was wide support for the establishment of consultative committees of various kinds, although these were not seen as a substitute for the free flow of information through the various levels.

Most people, he said, thought the seminar had been valuable and hoped that its conclusions would be taken seriously and that it might be followed by more — either similar in nature or held more frequently in State or local regions.

CSIRO formally moves into field of medical research

'Concern for Staff'—
Dr. A. E. Pierce

CSIRO's new Division of Human Nutrition came into being in Adelaide on 1 January.

Its creation stemmed from a report made by Professor Frank Fenner, formerly Director of the John Curtin School of Medical Research at the Australian National University, who had been invited by the Executive to make a study of CSIRO's work in medical research.

Professor Fenner recommended that the Organization should:

- review its official attitude on medical research in CSIRO
- establish a CSIRO Committee on Medical Research
- establish a Division of Human Nutrition.

With the formation of the new Division, action has now been taken on all three recommendations. A CSIRO Medical Research Liaison Committee was established last year and has members from both Government and non-government medical research organisations as well as CSIRO on it.

The Executive has also reviewed its policy on medical research and a statement on this will be made early this year.

Background

Consideration was given to setting up the new Division after Professor Fenner's report clearly backed up generally held beliefs that:

- human nutrition was a subject which had been neglected in Australia

- the establishment of such a Division in CSIRO would be a logical extension of the Organization's existing research programs including those in food research, nutritional biochemistry and fundamental aspects of animal physiology and health.

Much of the work of the primary industry Divisions and all the work of the Division of Food Research was involved with human foods, but stopped short of consideration of their health aspects, the report stated.

Other facts also came to light during the investigations.

Little was known for instance, about the eating habits of Australians, yet overseas surveys indicated that if Australia was on the same course as other countries where there was too much reliance on processed and refined products rather than on fresh foods, its people could be headed for nutritional problems — if they didn't already have them.

Australian consumers, it was found, had little protection against nutritionally inferior food products. Food laws existed but they were concerned with ensuring safe levels of potentially harmful substances and took little account of the nutritional value of food.

It was also claimed there was a need in Australia for basic studies to be made of the metabolic processes that lie at the root of food utilisation and that it was essential to have an understanding of the metabolic

diseases to which man is prone.

In short, the Executive came to realise an essential and rather startling fact... that far more was known about animal nutrition in Australia than was known about human nutrition.

Reorganisation

Before the decision to establish a Division of Human Nutrition was taken, the Executive had been considering the reorganisation of the Division of Nutritional Biochemistry and the move then to locate the new Division in Adelaide using some of the facilities of Nutritional Biochemistry seemed a logical step.

The Executive was also aware that there were a number of research programs in Nutritional Biochemistry which would be relevant to human nutrition and that some of the staff would want to transfer to the new group.

At the same time, however, there was no suggestion that with the demise of Nutritional Biochemistry all the work on the animal programs in Adelaide would automatically come to an end.

Before the decision was made public, a member of the Executive, Dr A. E. Pierce, told the staff in Adelaide, what was happening.

He indicated in his talk that most people would probably transfer to the new Division but because there was a need for animal work to be continued in South Australia, some would continue in that area.

Since it was not practicable for all staff to be able to in-

dicate before 1 January the area they would like to work in, they would all be attached, initially, to Human Nutrition.

No final decision will be taken over their movements until the new Chiefs of both the Divisions of Human Nutrition and Animal Physiology have been appointed.

Research programs

Because it is CSIRO policy that the research programs of a Division are decided on only after consultation between the Chief and the Executive, no firm decisions on those to be undertaken in human nutrition will be made until the new Chief is appointed.

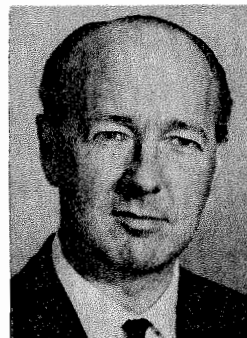
The Executive does not believe it will be easy to find the right person for the job since there are a limited number of research organisations engaged in human nutrition which might provide a recruiting ground.

And since Chiefs' positions are advertised overseas as well as in Australia, it could be at least 12 months before the successful applicant is free to take up duty.

While final decisions cannot be made until all these steps have taken place, the Executive has nevertheless given careful consideration to areas of research which could be appropriate for the Division to study.

These might include:

- a study of trace elements, minerals and vitamins
- assessment of nutritional status and energy metabolism under varying environmental and socio-economic condi-



tions, including ethnic groups and old people

- impact of technological and social developments on dietary patterns and nutrient intakes
- nutritive values of fresh and processed foods
- biochemical aspects of nutrition in relation to growth and development, including aspects of gerontology

The Division will not itself engage in clinical research.

'We recognise that some of the stories and rumours which have been circulating have introduced a degree of confusion,' Dr Pierce told 'Coresearch' and we are concerned about this.

'In changes such as this, when the Organization has to move in a new direction, it is never easy to sort out all the problems that occur, but we hope that those that must inevitably come with this change can be resolved as soon as possible.'

PROMOTION IN CSIRO

• Continued from page 4

be 'in favour' to the detriment of more deserving cases; the placing of limits on the number of people of each classification in a particular area, irrespective of the ability of the individual; the bringing in of newcomers on the same or higher classifications as men with a great deal of experience and service; and that qualifications for each classification differed among Divisions.

CSIROOA's FEELINGS

The promotional process, based on merit, as it applied to members of the OA, was outlined in this paper, but despite what had previously been written about it, the OA still felt that many of the professional staff were unaware of the criteria used in the assessment of merit and promotion, and the fact that at times, reclassifications were prepared differently from one Division to the next.

The secrecy surrounding the recommendations or their lack of success was again listed as a cause for concern and the Association believed its members should be kept informed if their rate of promotion fell behind the 'weight for age' curve for the Division or Organization as a whole.

Chiefs were not always willing or able to carry out staff counselling in an adequate manner, perhaps because of their personalities or because

of their lack of training in this area.

The Association was satisfied about the formal provisions for appeals against Executive decisions but said detailed information about the manner in which an individual should prepare and present an appeal was not readily available.

The restrictions which might be placed on supporting staff for promotion were also discussed.

INDIVIDUAL SUBMISSIONS

Individual submissions in this section came from Dr A. E. Martin, Chief, Division of Soils, Mr Ray McInnes, a member of the Advisory Council and a former president of the CSIROA, and Mr J. Middlehurst, Division of Food Research.

DISCUSSION FROM FLOOR

The two systems under which staff are promoted in CSIRO, the secrecy which they considered surrounded the recommendations for promotion, the appeals system and the limitations on promotions for clerical staff were the main issues which came under fire in the discussion session in the section entitled 'The Promotional Process'.

As in all sessions, there was no shortage of speakers, no shortage of ideas.

First cab off the rank was undoubtedly Mr D. G. Banks who, in a forthright statement, said that the process was the basic root of dissatisfaction among fourth division officers in CSIRO.

He thought there was little understanding outside the Organization and the APS (Australian Public Service) of the establishment system and the limitations on advancement for clerical assistants into clerical ranks.

'Consequently we tend to get people joining as clerical assistants with qualifications which would enable them to join as clerks. Then when it comes to wanting promotion they find themselves up against a high, thick brick wall.'

'To get promotion they must leave CSIRO and join the Australian Public Service. Can CSIRO afford to lose its staff this way — apart from letting such a system build up resentment?'

Secondly there were those CAs who joined without higher qualifications but who after some years of satisfactory work had considerable skills. There was no way for them to gain further advancement, he said.

'And at that point private enterprise would be delighted to get their hands on them.'

'We aren't asking for special privileges. We only want advancement for our officers as a result of their achievements. We aren't asking for that right to advancement. We are demanding it.'

Mr Howard Crozier explained that CAs could apply for base grade clerical vacancies provided they were qualified and could have their CA salary carried if this were higher than the base grade clerical rate.

A person transferred in this way could then be promoted in the normal clerical way.

Sympathy for those caught up in this situation was expressed by Mr Gratton Wilson. 'Throughout the Organization there are people who might or might not be qualified to move to higher positions,' he said. 'The organization that doesn't give such people the opportunity to move forward is a poor one.'

As far as CSIRO was concerned, there were some areas where there was more such promotional movement than in others, possibly because greater pressure had been brought to bear by interested parties.

'Perhaps more of that pressure is needed from CAs,' he said.

Mr. R. C. Thomas said a single category starting from a technical assistant through to a research scientist could be substituted for the present system.

Speaking out for some of the groups not represented at the seminar, Ms C. M. Zorin said that opportunities for career advancement should be given to them as well. 'I'm talking about the gardeners who should be able to progress and trades people who should be able to move into the technical area.'

'It's difficult in some of these areas to gain promotion until the person above moves on,' she said. 'Once the situation has been reached when people know they can't go any higher because there can only be one person at the top of the range, they sometimes only do the minimal work for the money they're paid.'

A point raised by Ms C. E. Popham was the possibility of a wider assessment of a person's skills... not just confining his value to the job he actually

filled but what he might be able to do if he reached the end of his advancement in one area. She also queried whether promotion could be gained because the volume of a person's work might have substantially increased though the work itself remained essentially the same.

A speedy answer of 'no' from Staff Section delegates answered that question for her.

Counselling

The method of informing people when their recommendation for promotion had not been successful came under fire. Many believed too much secrecy surrounded this aspect of the system.

Mr R. S. McInnes said that perhaps staff counselling should be introduced into the Divisions so that staff could be informed on both their immediate prospects and their long-term future within the Organization.

Whether this should be made compulsory sparked off a debate but it was the consensus that it should be left to the individual to seek such an interview if he so desired it.

Those who were content to accept their promotion or lack of it without question should be left to go on their contented way. Those, however, who were lagging behind should be brought before the committee and the error of their ways pointed out to them.

'If you had such a unit it would need to be composed of say three people,' suggested Mr Wilson, 'because no one person in CSIRO could have the qualifications to understand all the different facets of work in our Organization.'

'In a multitude of counsellors there is much wisdom,' quoted Dr Coogan.

'Sprightly' shows her form at sea

'Sprightly', The Division of Fisheries and Oceanography's chartered research vessel at Perth, is beginning to live up to her name.

She has already developed a reputation among the Division's staff who sail in her.

She is, they say, a lady of somewhat dignified status, a little close to collecting her superannuation but who nevertheless can still kick up her heels on occasions, especially when the Indian Ocean, her sailing ground, comes up with a fine performance.

Ask Terry Golding, for instance, of his opinion of her.

Normally based at Cronulla, Terry has been helping George Cresswell with his satellite buoy program, part of the western rock lobster project.

He was getting gear ready at Cronulla recently when he accidentally stepped back on a coiled rope. The result — a painful multiple fracture of the leg.

In due course, he was pronounced fit to return to work and went off to Perth and out to sea on 'Sprightly'. The vessel decided the wind and sea were just the right conditions for some playful antics and capriciously began to cavort among the waves.

Terry did his best to keep upright, but 'Sprightly' proved

too much for him. Over he went against another coil of rope and once more he was a casualty... a fracture which had apparently not quite mended was broken once more.

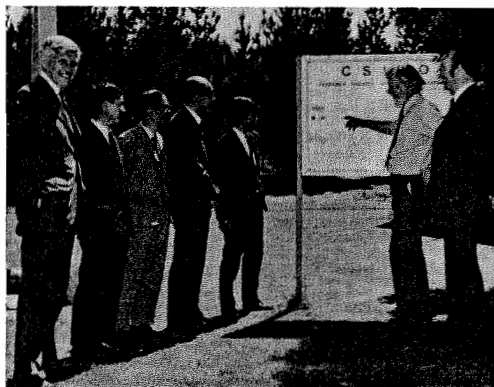
And then there's the story they tell about Fred Morse from the Perth staff. The way they recount it over there is that 'Sprightly' was giving everyone a bit of a shake up that day with the result that Fred lost his upper dentures over the side during some heaving actions.

Officer-in-charge Graham Chittleborough signed what he felt was a justifiable claim for \$95 — for the replacement of essential equipment lost at sea.

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.



LETTERS

I believe the use of the prefix 'Ms' to be unnecessary and even ridiculous, particularly when applied to those appearing in a photograph taken in the 1930s who would almost certainly not have wished themselves to be described in such a manner.

I note that in the caption the male members of the staff appearing in the photograph (Coresearch 186) have no prefix to their names. Moreover, there is no consistency in respect of the females since four are awarded an 'Ms' while the two others are treated in the same manner as the males.

I feel sure that a great many women (females) are not ashamed to indicate whether they are single or married, and I suspect that most would support Miss Stanissopoulos against Ms Greer. Having seen and heard both on television I certainly would...

Yours conservatively,

J. R. Price,
Head Office.

The policy of using 'Ms' in 'Coresearch' was begun by a former editor and is continued because it appears to be generally acceptable. It is now an officially accepted alternative term for 'Mrs' and 'Miss' in both the APS and CSIRO.

It is also a convenient prefix when women's names are sent in without any courtesy title. The use of 'Ms' then saves guesswork or the cost of telephone calls to make sure.

There are, of course, some people who also believe that a woman's marital status should be as free from identification as that of a man when he uses 'Mr'.

The inconsistency in the caption referred to is regrettable... Ed.

The caption on your photograph ('Coresearch 186') of the members of the Division of Entomology, including the administrative staff, in the 1930s contained an error. Two of the women were incorrectly named — Ms Kent Hughes should have been Ms McCarthy and Ms Barnes should be Ms Dorothy Arnold.

I should like to add that I enjoyed reading your article on women in CSIRO ('Coresearch' 185). As far back as the 1930s when I was a member of the Plant Industry staff I can recall that women in the Organization were always recognised equally with men — by their work, not their sex.

Phyllis Nicholson,
Canberra.

Thank you for pointing out the correct names of the women concerned. A number of early members of the staff, both at Black Mountain and in the RAO, tried to identify the people for us. There was uncertainty about the two names you mentioned but the people who gave us the information

were as sure as they could be that they were right. We're pleased to be able to put the record straight.—Ed.

★ ★ ★

Following advice from the Executive Officer of the CSIRO Technical Association that the current application for salary increases had been partially granted, a number of technical staff of the Divisions of Cloud Physics and Radiophysics at Epping, have requested our Association not to proceed further with this claim.

In recent years, numerous salary increases have resulted solely from flow-ons from the Metal Trades Industry. We do not feel that additional increases on this basis are justified at this time. Therefore, should this particular claim be granted, the increase can only add to the current inflation.

In requesting our Association not to proceed further with it, we hope to encourage other groups, unions and associations to take a similar stand against the present inflationary trend. We are of the opinion that voluntary wage restraint must eventually stabilise prices.

None of the above is to be interpreted as dissatisfaction with our Association, or as a lack of appreciation of the very great efforts required in achieving the present standard of working conditions for members.

Velma McFarland and
Diana du Cross,
Association Members.

Visit from Chinese scientists

Eight members of the Academia Sinica in Peking have recently visited Australia as guests of the Australian Academy of Science.

During their time here, some of the members of the delegation visited CSIRO Divisions, including Chemical Technology, Mechanical Engineering, Protein Chemistry and the Dairy Research Laboratory of Food Research in Melbourne and Environmental Mechanics in Canberra.

At Chemical Technology three of the group inspected some of the laboratories and then went to Lower Plenty to see the Physico-Chemical pilot plant for the treatment of waste water.

Mr Ha, Tiong Chee, a technical assistant in the Water Treatment Research Group, accompanied them as translator.

Professor Huang Ping-Wei, Director of the Institute of Geography of the Academia Sinica, and members of the Pye Laboratory in Canberra found they had mutual interests in the problems of the energy and water balance at the earth's surface and their consequences for plant growth.

Members of the Laboratory also gained useful insights into developments in micrometeorological and soil physical research in China.

CSIRO golf

Twenty-five teams from Australian Government Departments, Authorities and Commissions in Canberra recently competed in the 20th annual golf tournament for the Permanent Head's Shield at Queanbeyan Golf Club.

The shield was won by the team from the Industries Association Commission.

CSIRO was represented by Peter Hanlon, Tim Dean, Brian Sprake and Dudley Scullin and the team was narrowly beaten on a countback for runners-up. However, there was some consolation as Brian and Dudley won the individual pairs events with a total of 47 stableford points.

First radio astronomer

Cont'd from page 3

speculation.

'That's one of the reasons I'm involved in the work,' he said. 'The theory I like is that the radio energy comes from loss of energy of light photons as they travel through intergalactic space from distant galaxies. Maybe if that's right we have a whole new picture of the structure of the universe.'

That doesn't conform with the orthodox view, as he points out, but then as Grote Reber might politely remind the sceptics, what he did back in the 1930s didn't conform with orthodox astronomy either.

To secure good results the ionosphere must be transparent.

'There's a school of thought that says, if that's the case, put the equipment above the ionosphere. In other words into space by satellite,' he said.

'But satellite experiences in radioastronomy have already shown that scientists working in that school pick up man-made interference from earth.

In spite of all their connections with multi-million dollar programs I'm still getting better results from my earth-bound installation. I have been told that the NASA people use my results to interpret their satellite data.'

Back in the United States, however, Dr Reber found it was a 'habit that couldn't be kicked' and by 1961 he was making plans to return to Australia, this time armed with much better equipment.

He obtained, under agreement with a local farmer, the right to use an area of land beyond Bothwell and set out to work in the 150m wavelength region of spectrum.

In 1967 he ceased his operations and returned to the United States but in 1972 came back to remodel his equipment and work in the 300 metre wavelength region. He is believed to be the only person in the world doing this.

Dr Reber's Bothwell installation at 150 metre wavelength comprises 192 dipoles supported on 128 stringybark poles each 21 metres above the ground and three metres below it.

The antenna system is about 1170 metres in diameter. The acceptance pattern of beam is 7.10 in diameter.

Unknown

The main energy source of the wavelengths Dr Reber is observing are still a matter of

Appointment to ANMRC

CSIRO Senior Principal Research Scientist, Mr R. H. Clarke, has been appointed Officer-in-Charge of the Australian Numerical Meteorology Research Centre jointly operated in Melbourne by the Bureau of Meteorology of the Department of Science and CSIRO.

Mr Clarke will direct the scientific programs and administration of the Centre (formerly the Commonwealth Meteorology Research Centre).

Mr Clarke is currently with CSIRO's Division of Atmospheric Physics at Aspendale, Victoria, and succeeds Dr Brian Tucker who is now Chief of that Division.

Information circulars:

- 74/79 Head Office arrangements
- Mr S. Lattimore Acting Secretary (I & P Sciences)
- 74/79 Australian Numerical Meteorology Research Centre—Change of location
- 74/80 Acting Chief — Division of Applied Geomechanics (Dr C. M. Gerrard)
- 74/81 Address Chief — Division of Mathematics and Statistics
- 74/82 Officer-in-Charge — McMaster Laboratory
- Division of Animal Health
- 74/84 CSIRO Postgraduate Scholarships 1975
- 74/85 Long Pocket Laboratories, Indooroopilly, Q'ld (Chairman of Committee of Management — Mr P. H. Durie)
- 74/86 Alteration to telephone number (Division of Tribophysics)
- 74/87 Acting Chief — Division of Entomology, Acting Officer-in-Charge — Dairy Research Laboratory
- 74/89 The Royal Society of New South Wales — Walter Burfitt Prize (Nominations closed 4.12.74)
- 74/90 Christmas-New Year Holidays 1974-75
- 74/91 Swiss Government Scholarships 1975-76 (closed 22.11.74)
- 74/92 Division of Human Nutrition
- 74/93 Kimberley Research Station, Acting Officer-in-Charge (Mr A. L. Chapman)
- 74/94 Appointment of Assistant Chief — Division of Building Research
- 74/95 STD Facilities — Division of Wildlife Research, Darwin
- 74/96 Overseas procurement
- 74/99 Confederation of British Industry Overseas Engineering Scholarships 1975

Policy circulars:

- 74/42 Extraneous Payments based on Salary — Amendment of Terms and Conditions Provision
- 74/43 Recording of names on official forms
- 74/44 Salary adjustment — research scientists, experimental officers, engineers, scientific services officers and librarians
- 74/45 Advances against travelling allowance — Visits within Australia
- 74/46 Sale and distribution of CSIRO publications
- 74/47 Living away from home allowance — Canberra boarding allowance
- 74/48 Salary adjustment — technical officers and draftsman
- 74/49 Salary adjustment — printing tradesmen
- 74/50 Salary adjustment — animal attendants, assistants (food service), assistants (laboratory services), cafeteria supervisors, caretakers (in residence), cleaners, farm assistants, gardeners, housekeepers, housemaids, labourers and lift attendants: caretakers (in residence) — supervisory allowances
- 74/51 Salary adjustments — architects
- 74/52 Intermediate certificate salary rate

CORRESEARCH

189

Produced by the Central Communication Unit for circulation among members of CSIRO staff

February 1975

Cyclone victims evacuated

Staff rally to help colleagues

Two-year-old Alison Sinclair and her older sister, Cathy, expected to spend Christmas day at their home in Darwin opening their presents and doing all the things little girls of that age like to do on such a special occasion.

But what with Santa getting blown off course and one thing and another happening in the northern city that day, the girls ended up picking their way through the rubble of their suburb and making their way out to the CSIRO laboratory with their parents, Tony and Anne Sinclair.

They didn't even have that much time with their parents because their mother, a former nurse, set up a dispensary and treated people for minor injuries and shock received in the cyclone while Tony, one of

the scientists from the Division of Wildlife Research, like the other men was kept well and truly occupied.

Some of their time was spent trying to retrieve food from the deep freezers of staff who had gone to the laboratory so that all the people who had turned up there—about 50 at one time—could at least get something to eat.

Reg and Kathy Barrett sheltered at the lab during the cyclone and soon afterwards Kathy set about organising the cooking of the food. In this she was helped by Paule Ridpath, wife



Canberra's regional administrative officer, Ken Prowse (left), Tony Culnane, personnel officer and Jacki Foster (right), the RAO's telex operator, show Anita Nicholls, some of the telex messages which passed between Darwin and Canberra during the Darwin crisis. Anita, who was the telex operator in the Darwin Laboratory, was evacuated to Canberra with her eight-month old baby, Fiona. She will be relocated at Gunghalin, at least in the meantime.

Pictures: Napier Mitchell.

of Mike Ridpath, the laboratory's officer-in-charge, Juliet Burrell, Lyn Wombey and another young girl who had taken refuge there.

As people came out of their dazed state, plans were put into action.

Tony had rescued a family which had gone through a shocking ordeal—at one stage the father had had his small son blown out of his arms and when he was nearly frantic because he couldn't find the child, the boy was blown back to him. Happily for the CSIRO people,

the man was an electrician and helped to get going a generator the lab had acquired.

The power was limited but it allowed them to get cooking facilities going, the air conditioner to work and to make communication with the RAO telex operator in Canberra.

Evacuation arrangements were started and the first two women and their children to reach Canberra were Anne Sinclair and the Division's telex operator, Anita Nicholls, and her eight-months-old baby.

For the Sinclair children it was a Christmas bonus because Santa had found they were to be billeted with the Chief of the Division, Dr Harry Frith, and his wife, Dorothy, and not only was there a Christmas tree waiting for them, but there were also presents for the girls at the bottom of it.

While some of the women came out by air, others without children elected to join the convoy which was being arranged to take out some of the men and vehicles.

It was to prove a long journey but apart from one or two cars leaving to go their individual ways down the route, the

convoy stayed together, travelling down to Katherine across to Mt Isa and Townsville and then south to Canberra.

Throughout the trip, their progress was monitored by the RAO and the Division in Canberra and arrangements were made for their stopovers. CSIRO mechanics were on hand to make any repairs as they reached the different stations and laboratories.

It was an exhausted group that finally reached Canberra at 11 pm on 10 January.

A small working party headed by Mike Ridpath remained behind in Darwin and will continue to manage the laboratory at least in the meantime. At the time of going to press, Dr Frith had just left Canberra to make a tour of inspection of the situation.

But while all this activity was going on with the northern personnel, Canberra staff were equally involved in the disaster, if in a different way.

Cont'd on page 8

Science for the people in the national capital

Scientists and technologists will step down from the ivory towers in which they are alleged to live for 10 days next month when 'Australia '75', a festival of creative arts and sciences, is staged in Canberra.

The festival will provide people from all over Australia with an opportunity to see and talk to scientists and technologists, to gain some understanding of how they tackle a research program, of the frustrations it may involve and the many months, perhaps years, it may take to achieve success.

The exhibition will be different from anything ever seen before in Australia and will cover topics which were carefully selected to illustrate in depth the creative processes of pure science, of invention and of the application of science and invention in technological use.

CSIRO is taking an active role in the festival and will be involved in two of the exhibits, 'Dung Down Under' and 'The Search for the Origins of Life'.

The Division of Entomology and the Central Communication Unit are organising the first of these. It will tell the story of the problems associated with

the dung beetle story, not just the success it has achieved.

The second is being created by the Division of Radiophysics and Monash University and concerns the search for molecules in space, and the comparatively new science of radio-astronomy and all that that has opened up.

Like other exhibitors, CSIRO will have staff on duty throughout the festival to talk to people.

In addition, the Organization will also have an interest in several of the displays being staged by commercial enterprise through its association with the inventions concerned—Repro Ltd's 'Spinning a Yarn', Varion Techtron's 'The Absorbing Atom', AWA's 'Creative Communications', and ICI's 'Fit to Breathe? Fit to Drink?'

Science contributions will also be made by the Anglo Australian Telescope Board, ABC, Australian National University, Patents Office, and the Walter and Eliza Hall Institute of Medical Research.

In addition there will be a display at Canberra's Botanic Gardens showing Australian contributions to botanical research and the Division of Plant Industry will be represented in this.

The Academy of Science's display, entitled 'The Web of Life', will show the evolution of a new system of Australian biology teaching.

The Bureau of Mineral Resources will have an exhibition on urban geology and geophysical techniques and visitors are invited to bring their own rocks, minerals and fossils for identification.

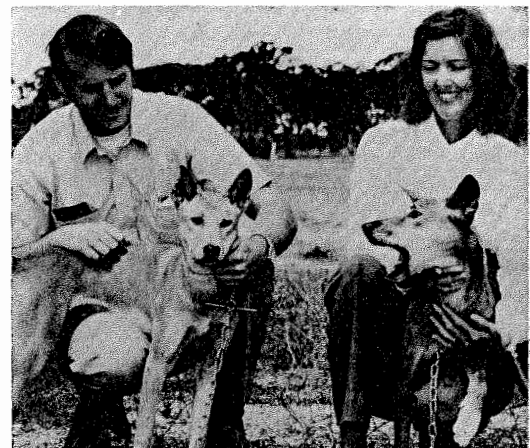
Lectures, forums and science tours of places of interest in Canberra will give visitors a chance to learn about science and researchers.

While the scientists are involved in their part of the festival, simultaneously there will be displays of visual arts, craft exhibitions, films, children's programs and a series of concerts by Australian artists.

The national capital will go gay for the occasion with a street opera, minstrel folk singers and audio visual programs staged in Civic and in shopping centres, not to mention a free pop concert at the showgrounds.

Embassies and some of the private gardens will be open for inspection and other attractions will include a race meeting and even an aquatic festival on Lake Burley Griffin.

Reg and Kathy Barrett with the two dingoes they brought through to the Gunghalin laboratory from Darwin on the convoy.



'Over in W.A. a funny thing happened—'

Perth Laboratory confers 1974 awards

Staff at the WA Laboratory in Perth are seldom able to keep a secret for long. What doesn't get shouted abroad is carefully whispered into the receptive ear of librarian Ms Doris Leadbetter who surreptitiously keeps a dossier on all the 'happenings'.

It's become traditional for Doris to 'reveal all' at the Christmas party and last year's list of awards brought forth the usual high standard of 'tall tales and true'—not to mention laughs and a few blushes.

For instance, the Jack the Ripper Award went to Justin Murphy of the Division of Land Resources Management, one of the finer physical specimens that the Division is noted for.

Justin, alleged to have been in the pink of condition, one day went into the LRM's typists' room and got into an idle discussion about his physical prowess.

Looking round for some way to prove his claims, he picked up the telephone directory and proceeded to tear it in half. Exactly 43 minutes later, so it was reported, a distinctly weakened Justin had succeeded in his task.

One honour — the Olleh award — was inevitable. It went to Rudi Horwitz who was

one of two travellers who ran into problems when their vehicle encountered mechanical trouble some miles out of Meekatharra. Probably everyone in CSIRO read of their adventures in the papers but the true story may not have been revealed.

It seemed that Rudi Horwitz and Mike Krenecj had heard from an old prospector they met that a couple of their colleagues had had mechanical trouble, a message to this effect having been broadcast.

As Mike and Rudi drove on to their own destination out the back of beyond, they were highly amused about the discomfort of their fellow workers.

But their amusement didn't last all that long. They struck similar trouble themselves and, finding they only had reverse gear, they had to emulate the feats of the Italian army in retreat, with Rudi driving 60 miles to civilisation backwards.

For his feat, and for putting up with Mike at the same time, Rudi was also on the award list for 1974.

Russell Hudson was another of the Mineralogy team who was a recipient.

Wrong door

Russell, it seemed, had attended a long drawn-out meeting at the end of which he made a quick exit for rather obvious purposes.

On this occasion, however, he forgot he was on the first floor and not his usual second floor and the layout of some functional rooms was different.

The appointments, he noted, seemed better than usual, too.

But it just happened that Pat Lawrence had seen him and somehow the story got around. She called out 'Are you there?' and for Russell came the realisation of his blunder.

As soon as he was able, he endeavoured to make a discreet escape, only to find most of Mineralogy and several happy friends waiting to greet him.

A flushed scientist was given the Women's Liberation Award.

Ray Perry, LRM's Chief, was not allowed to escape a measure of attention and the story was told of his field trip from which he brought back a live snake. No herpetologist, Ray nevertheless answered questions about his newly acquired animal.

One interested spectator asked some pertinent points about a snake's personal habits and Ray was busy explaining that rock pythons had a very odd metabolism which meant they rarely had to seek privacy. About once a month in fact.

Only it seemed for this particular python, the month was up. As someone said: 'That'll teach him to syphon a python.'

But the story that won him his award concerned the time he placed an overseas phone call and asked his secretary, Pam Collins, to let him know when it came through. When it finally did so after a very long delay, Ray was found in a distant office, immersed in other matters of the day. The call had completely escaped his mind.

Happily when Pam said: 'I've got that call of yours to Jerusalem,' Ray had instant recall,



Ray Perry



Russell Hudson



Justin Murphy

leapt to his feet and cried: 'Jesus Christ.'

For having such first class contacts, Ray was awarded the Scripture Prize for 1974.

Deflated

Then there was the story of the person who was anxiously awaiting the transfer of funds from a foreign land. He needed the cash urgently to meet financial commitments and day by day reported to colleagues the devastating remarks he was making to his bank manager about the efficiency with which he operated.

Finally he yelled at the bank manager: 'Unless that money is produced on Monday at 8.37 am precisely I shall spit on your revolving doors.'

With only days to go to meet the deadline, the money arrived.

Four days later, the Australian dollar was devalued.

For proving that the loss of \$2000 was better than losing a battle, John Marshall was awarded the Economists' Award.

Among the women members of the staff who were included in the honours list were Lyn Hayles and Anne Hepworth, described respectively (and respectfully) as 'the demon of the outback and the Peter Wherrett of the compound'.

One day Lyn drove out to a place some miles from town to do some field work. On reaching the appointed place she was horrified to see petrol dripping from the undercarriage of her Z-plated vehicle.

Knowing the problems this could cause, Lyn hurried off in pursuit of the nearest service station, five miles away. A garbled phone call back to the lab eventually brought a Department of Supply mechanic to her aid.

Hastening back to the abandoned car with Lyn, the mechanic surveyed the vehicle and then with the greatest restraint told her that when the petrol tank had last been filled, it had overflowed.

The four drops she had watched drip from the car, one by one, were probably the last bit of an overflow that had just

been waiting for a chance to drop off.

Anne, on the other hand, did not have to leave the compound.

She got into a car and saw that her way out was blocked by another car being filled with petrol.

She made a comprehensive survey of the area, saw Gary Pavy's head as he drove his vehicle in next door to the compound and decided she would make for the exit he must be using.

Unfortunately, she failed to take into account that the road Gary was on was four feet below the compound. Anne's car finished up in a strange angle, halfway in the compound, half in the neighbouring road below.

Embarrassed and puzzled, Anne leapt out, only to land into the arms of John Beresford who happened to be passing below.

Now you remember the Department of Supply mechanic who went out to rescue Lyn?

Well, he had just returned to his depot when his boss said: 'Hey, Charlie, just take the crane over to CSIRO, will you? One of the birds has done something funny with a car.'

Before they carted him off, the mechanic asked that the Department's award for 'Ladies who Drive' be given to our two colleagues.

Eclipsed

The most coveted award is called 'The Scientist of the Year'. It is not easy to determine who among such a stalwart body of men and women who strive to further man's knowledge about himself and the world he lives in, should receive this.

This year's winner designed a simple, but elegant, experiment to find out a little more about the processes involved in photosynthesis. After several months spent designing the experiment, devising rigorous controls and selecting the right material, he was all ready to go.

At last it came. Thursday, 20 June, dawned fine cloudless and spot-on for photosynthesising.

Unfortunately, halfway through the experiment, Perth had a not altogether unexpected solar eclipse.

Peter Farrington was given the prized award.

Award

Dr R. C. Giffkins of the Division of Tribophysics has been awarded one of the 1974 Hofmann Memorial Prizes.

The award is made by the Lead Development Association in conjunction with a triennial international conference on lead and is in memory of R. C. Hofmann who devoted his life to the study of lead.

Entries are in the form of original papers on lead and are judged by an international consortium drawn from Europe, the United States and Australia.

The award carries a medal and money to the value of about £300.

CAMELS TO CAMPUS



Napier Mitchell (right) gets a short back and sides from 'Noballs'. (Picture: Courtesy 'Canberra Times'.)

After two years as a science writer with the Central Communication Unit, Napier Mitchell is leaving to take up an academic post at the Queensland Institute of Technology.

Napier came to the Unit from the Division of Entomology where he was a technical officer, working on insects associated with eucalypts.

He lists his hobbies as second hand camel dealing, bird photography (unfeathered), short story writing and travelling in the bush — all of which he claims qualifies him admirably for his new post as lecturer in science communication.

Napier has just completed a part-time Bachelor of Science degree at the Canberra College of Advanced Education and he is believed to be the first graduate of an Australian College of Advanced Education to be appointed to a lecturing post.

Unfortunately, he says, he will not be taking his pet camel, 'Noballs', to Queensland with him. 'Noballs' mysteriously disappeared early last year and although a stray camel was recently reported from nearby Gundagai, Napier is not claiming ownership, in case 'Noballs' has knocked down a few fences on the way.

However, Napier is not disillusioned by his bad experiences with camels. As he has been heard to say, 'There's nothing wrong with owning a camel providing you don't get an ugly one.'

Industrialist for CSIRO Executive

A leading Australian industrialist, Mr F. M. Wiltshire of Melbourne, has been appointed a part-time member of the Executive.

He succeeds Dr D. L. Ford who has served on the Executive for the past three years.

'Mr Wiltshire will bring with him a strong background in Australian industrial development and a sound commercial judgment,' said the Minister for Science, Mr. Bill Morrison, when he announced the appointment.

Managing Director of Wiltshire File Co. Pty. Ltd., since 1938 and Managing Director of Wiltshire Cutlery Pty. Ltd., since 1959, Mr. Wiltshire is also a director of Australian Paper Mills and Repco Ltd.

He has served in recent years on several important committees as President of the Australian Industry Development Association, Chairman of the Committee of Enquiry into awards for Colleges of Advanced Education, Deputy Chairman of the Manufacturing Industry Advisory Council, Vice Chairman of the Aircraft and Guided Weapons Industry Advisory Committee, and a member of the Australian Academy of Science Forum on Science and Industry.



View from the study of John McKean's home. More than two-thirds of the Division's Darwin staff lived within a one-mile radius of this point. The intensity of the damage in this part of the northern suburbs leaves little doubt that most of our staff were in the centre of the cyclone.

Darwin Report

After the February issue had gone to press 'Coresearch' received an air-freighted account of what had happened to the Wildlife staff both during and after Cyclone Tracy from the O-i-C of the Darwin lab, Dr Michael Ridpath. The same day, the Chief of the Division, Dr Harry Frith, brought us in a selection of pictures he and Bob Collins had taken of both the lab and what remained of staff homes.

Because of the special interest being taken in the Darwin staff and the appeal for funds which is currently being held, 'Coresearch' decided to run a supplement using the new material.

The pictures taken by Bob Collins were those showing Darwin late in December; the later ones taken by Harry Frith on 16 January.

Cyclone Tracy Supplement

Darwin expects cyclone alerts during the wet season from November onwards. It has had half a dozen or so alerts since the Division of Wildlife Research began research here in 1970, but the city has only experienced a cyclone once every 30 years or so since settlement.

Cyclone Tracy had been hanging around north of Bathurst Island over the weekend rather like cyclone Selma about three weeks before.

Eight of the staff of 24 were on leave by the Christmas week, seven in the south and one on Bathurst Island.

On Christmas Eve several of the remainder had a few drinks about 4 pm before going home. Somebody mentioned that Tracy was coming closer and that the oil rigs had sent their staff home.

As in the case of previous alerts, it was arranged to leave the lab lights switched on and doors and gates unlocked in case the cyclone did come and people wished to shelter in the lab in preference to home.

Even at this stage the cyclone was not moving directly towards Darwin and seemed likely to do no worse than give it a buffeting from its periphery. We wished each other a merry Christmas and went home to complete the last bits of shopping.

About 9 pm the ABC broadcast a Top Priority warning to say that the cyclone was about 40 km away, had turned and was now heading directly for Darwin.

Over the next couple of hours as winds began to increase, four staff and their families decided the lab would be the best place to last it out and Mike Ridpath, Reg Barrett, Mick Gill and John Estbergs and their families drove out, somewhat

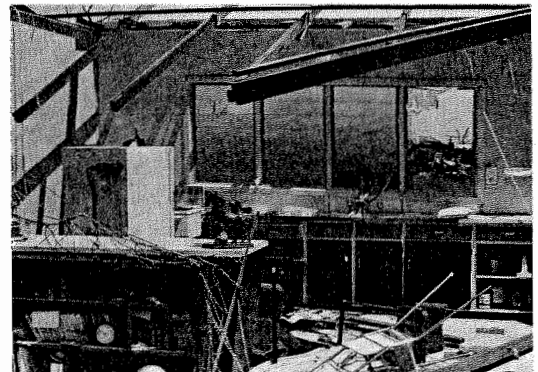
erratically in the wind, and dosed down on the floors.

Rather later, Bob Collins had rather a hectic 10 km drive to the lab with four neighbours, all of whose houses had lost their roofs.

The ABC went off the air at 2.30 am on Christmas morning, not to return for 36 hours.

The lab suffered only minor damage, a tribute to its architects, and no doubt also a consequence of the surrounding woodland which filtered and reduced the force of the wind, even though many large trees were uprooted. All lost limbs and every leaf.

Those who remained in their houses during what must be described as a terrifying night were Anita Nicholls, John



Anita and John Nicholls and their baby sheltered in the angle between the refrigerator and the bookshelf. At one stage, John held a waving beam off the heads of his family for four hours while they crouched in an armchair covered by a carpet. The outside wall was loose and waving in the wind.

Wombey, Rodney Haritos, Tony Sinclair, Peter Starr, Juliet Burrell, Peter Pan Quee, Nigel Gellar, Don McPhee and Milan Klaubek, four of them with very young children.

When dawn broke and the wind dropped an hour or so later, those in the lab formed four separate search parties to visit the houses of those who had remained home, and also

what the roar of the night had made us expect — the destruction was in the category of a disaster.

Almost unbelievably nobody from the lab was hurt. One cannot but wonder whether this would have been the case had those on leave remained in Darwin for six of their houses had collapsed.

From the entire laboratory only two families had houses which remained largely intact. The rest were uninhabitable having suffered damage which varied from loss of roof to total collapse. Most are beyond repair.

By lunch time all the staff and their families were safely established in the lab. In fact by that night and for several days we housed and fed a total of 67 people (43 adults and 24 children).

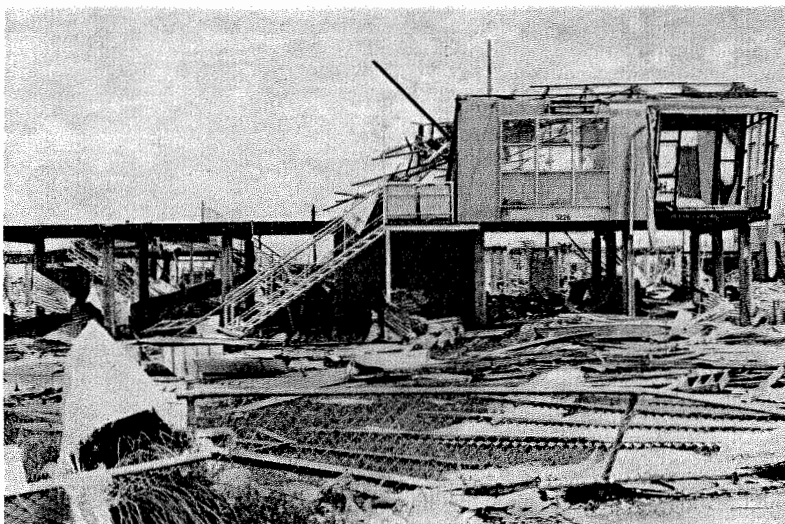
I cannot pay too high a tribute to the wives who cooked, cleaned up and coped for this enormous family. They included several non-CSIRO people who were also homeless

'We wished each other a Merry Christmas and went home to complete last-minute shopping ...'

to fetch food. The little convoy traversed a couple of miles of road, barred every 200 yards by fallen transmission poles, in the face of a mounting flow of vehicles in the opposite direction (only subsequently did we realise these shocked people were driving straight out of Darwin to the south).

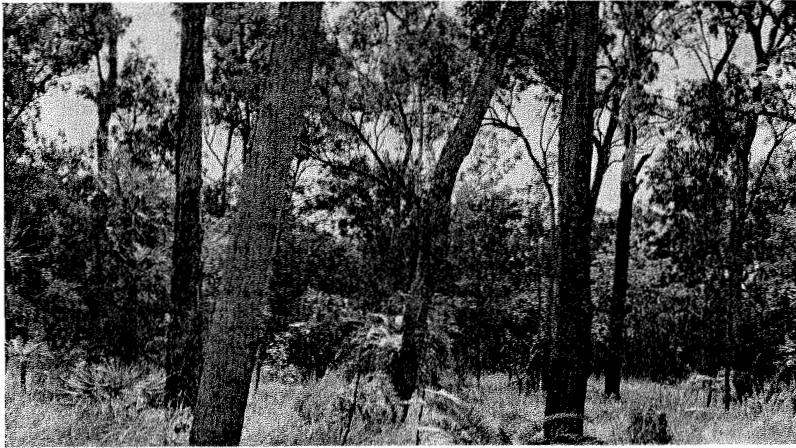
One glance at the first outskirts we came to: confirmed

Turn to pages 4, 5 and 6.



You could only call this a wind-swept scene... the remains of Trevor Redhead's home.

Before, it looked like this



The land surrounding the lab was previously covered by rain forest and a thick undergrowth.
—(Photo: Ed Slater)

Division Chief visits Darwin

'The staff have had a terrible experience. The place is an absolute bloody disaster.'

That's the way Wildlife's Chief, Dr Harry Frith, described the situation when he returned from a brief visit to the north.

As soon as permits became available, Dr Frith flew into Darwin to assess the situation of the staff at the lab and to see for himself the conditions of the homes of the Wildlife members.

He described that visit as a shattering experience.

'To stand in the middle of what had been John McKean's study and see the sodden remains of the best library of Australian bats, even to pick up a little thing like one of his wife's hairclips — it all hits you in a very personal way,' Dr Frith said.

On his return to Canberra, Dr Frith admitted he had initially felt a great sense of despondency. He was deeply concerned about the shocked state of his staff and their families and the personal losses all of them had sustained.

The whole scene in Darwin had been much worse than he had expected but he had also been greatly heartened by the attitude of those who had been involved.

'Some of the staff are even now keen to go back but it's futile for them to do that without homes for their families,' he said.

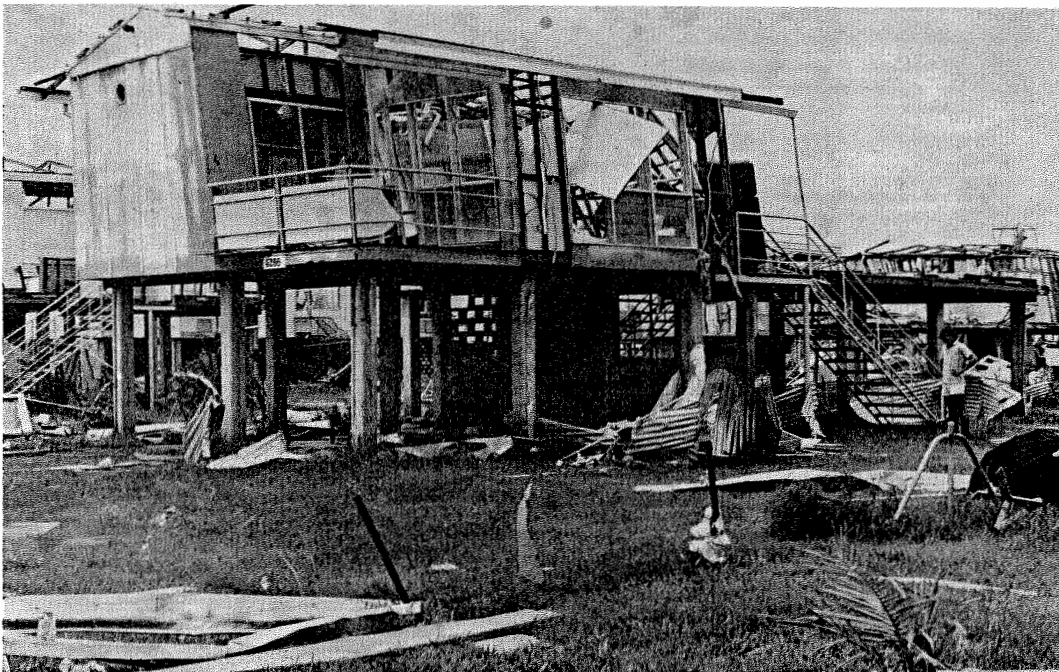
From the professional angle the disaster has been a special blow for the establishment of a substantial group of resident scientists at Darwin had become one of his ambitions after he'd seen the enormous potential for wildlife research in the top end of the Northern Territory when he went there to work on Magpie Geese in 1956.

'Support was slow to come but by December last year the

Cont'd on page 6

Then next morning the trees were bare and no small animals could be seen

Below: There's not much you can do with your house when it's been knocked backwards as well as sideways like Rodney Haritos' home. Rodney sheltered here with a small baby and his mother until the wall which was giving them protection looked like collapsing. Shortly after they fled to the 'safety' of their car, the wall collapsed and came in on top of the area where they'd been sitting.



'All our Wildlife — Message received

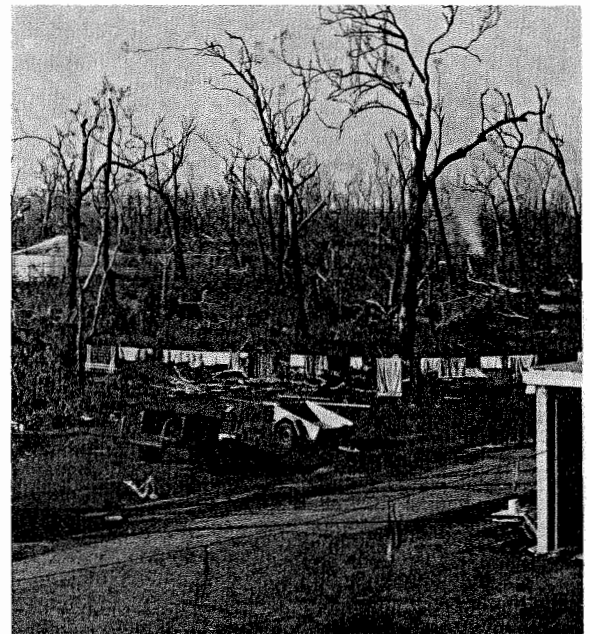
• Continued from page 3

— a NT Department biologist, a PMG worker, a St. John Ambulance driver, two Aboriginal trainee school teachers, two old ladies, two walking wounded and others.

It was great good fortune that for most of the time our water supply remained on. A major effort was made to re-

trieve as much food as possible from staff houses in the belief that food might become short — actually it never did. The next days were spent in salvaging foods from the houses of those present and on leave.

Communications with the south were cut and it was not possible to contact Canberra to



The desolate scene that greeted staff the next day when the forest had been stripped of its foliage for days and eight-months-old Fiona Nicholls left behind before her evacuation flight was called.



Staff members were forced to leave the place for days and eight-months-old Fiona Nicholls left behind before her evacuation flight was called.



staff are safe' ed, 27 December

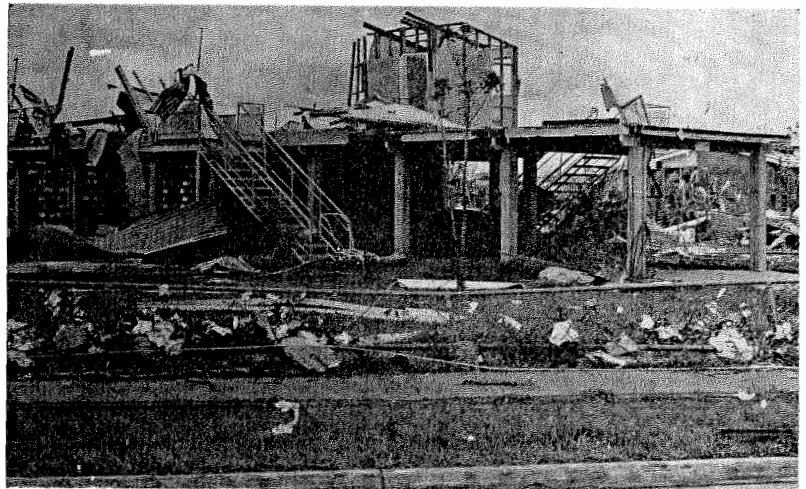
tell Harry Frith, Chief of the Division, that everybody was safe, till midday on Friday, 27 December. That phone conversation relieved a lot of concern as everybody wanted their relations to know they were all right.

On that day, too, we were able to acquire a 106 Kva diesel

generator belonging to Peter Pan Quee which supplied normal power to the lab. This allowed us to run lighting, refrigerators and even air-conditioning — a solid brick building without much ventilation and 67 inhabitants gets a bit torrid in Darwin's hot, humid December climate.



had been defoliated. Wet and quickly moulding clothing festooned a sodden teddy bear pegged by the ear which hadn't dried out



The savage effect of the cyclone is shown in this picture of what was Brian Abbey's home.

Greatly to our surprise, we discovered our teleprinter link was open and when we hooked on the power we had a direct teleprinter link to Ken Prowse at RAO in Canberra for three vital days. This was extremely valuable.

The generator drank around 70 gals of diesel a day and obtaining supplies was a logistic problem which required a flexible approach. One of the answers was provided by Rodney Haritos and Bob Collins who with three friends took a boat out to a wreck and salvaged 13 44-gal drums of diesel from the hold. It was an exhausting operation for them.

Three wives with their children were evacuated by air after four or five days. A convoy of nine vehicles led by Reg Barrett left on Monday, 30 December, with seven staff, two wives and three others travelling via Mt Isa to Canberra which they reached on 10 January. This left a staff of six in Darwin — Mike Ridpath (O-i-C), Bob Collins (T.O.), Peter Pan Quee, Rodney Haritos, Milan Klaubek (T.A.s) and Peter Starr (Clerk).

In view of the good conditions of our lab, CSIRO has housed the bacteriological section of the drinking water testing laboratory of the NT Department as their building was destroyed and their vital services interrupted.

During Dr Frith's visit we had discussions with the Admini-

stration and have found several other ways to do useful work to help them in their emergency.

Since the cyclone, Bob Leicester and Greg Reardon of the

Division of Building Research spent 10 days in Darwin investigating the effects of the cyclone in relation to building design. They lived at and were based in the Darwin lab.

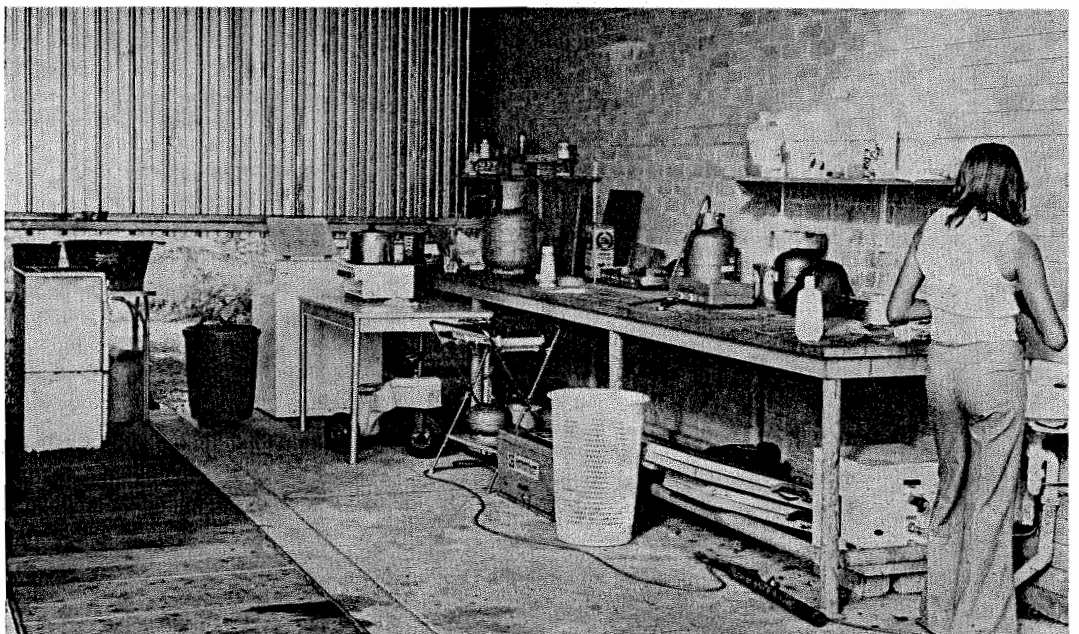


The sodden remains of the personal library of John McKean in what was formerly his study. John had the best known collection of books on Australian bats.

The improvised kitchen for the 22 staff members and other survivors in the workshop bay at the lab. Estelle Pan Quee, daughter of Peter Pan Quee, is officiating. At one time, the kitchen was used to feed more than 50 people taking refuge at the lab. Food was gathered from staff homes by salvage teams in case there should be a shortage and a team of women took turns at cooking and distributing it as it was needed.



ave pets behind. Since their the lab have looked after them, ilon's pig pens.



Chief's visit

Cont'd from page 4

Division had a fine laboratory, an almost full staff, much of the necessary equipment and a substantial program was just moving into top gear,' he said.

'And then came Tracy.

'On arrival in Darwin after the cyclone I had several emotions.

wildlife research group in the top end; it will monitor the growth of rat populations in the town's rubble and food stores for the public health authority.

'The second and longer term aim is to re-establish the research work with the disability

'I would like on behalf of all the staff of the Darwin lab, to thank all our colleagues in CSIRO who helped us officially and personally in ways too numerous and too varied to mention. The spontaneous and practical aid we have received from such a large number of sources and people in CSIRO has been one of the most encouraging and heart-warming aspects of this experience.'

—Mike Ridpath,
Officer-in-charge,
Darwin Lab.

'The first was despair and consternation at the devastation (the press had not exaggerated after all), the sight of the demolished houses of the staff, their personal libraries dispersed, sodden and worthless, and the pathetic remnants of their personal lives lying among the rubble.

'The second was utter amazement that none of our people was killed. It is still a mystery why some of them survived the collapse of their houses or the sheets of iron that are wrapped around every upright object.

'The third was the need to salvage and restore the program, impossible though it seemed.

'The final emotion was of joy and some humility to see the maintenance group, resident in the lab and getting on with it despite the appalling difficulties.

'The Division has now two immediate aims in Darwin. The first is to assist the harassed local authorities with whatever scientific services we have.

'Half of the bench space is now given over to the local water quality and bacteriological testing laboratory, their building having been destroyed; the Division temporarily will administer and support the NT

that there is no local accommodation for married staff and might not be for two years.'

The residue who remain in the lab (living in their offices), Dr Ridpath and Messrs Starr, Collins, Pan Quee, Haritos and Klaubek, have already begun a study of the changes in fauna and its recovery after a tropical cyclone and, with advice from Dr Juliet Burrell have begun to monitor the recovery of the vegetation, Dr Frith said.

'For the rest, no doubt we can locate a small group of unmarried research and technical staff in portable quarters on the lab site and recommence the other works by more senior people visiting there periodically and arranging programs of observations that can be continued by the local staff between visits.

'Certainly the Division has no intention of giving up just yet.

'One of the more pragmatic members came off our road convoy saying "Oh well, it does give us a chance to review the program and catch up with our writing."

'With such people no Division can go wrong.'

Juliet Burrell's valuable antique cedar furniture now lies cracked and warped, if not smashed.



Wrong address

Building materials and generators destined for the Indonesian laboratory at Bogor are now part of Darwin's restored homes and other buildings.

The equipment, the property of the Department of Housing and Construction, was in store at the Government stores depot at Silverwater in Sydney when the cyclone struck.

It was quickly acquired by the authorities, transferred to HMAS Melbourne and shipped to Darwin.

According to CSIRO staff involved in the Bogor project, it was 'just one of those things'.

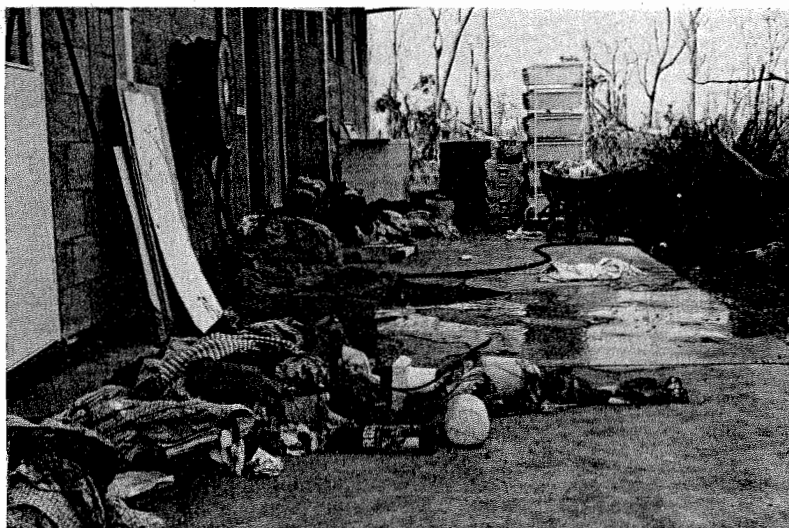
The change of destination for the material has set the laboratory building schedules back about three months.



There's been little time for salvage teams to sit and think but Rodney Haritos couldn't resist at least having a rest at this place — even if the Chief was standing by with his camera.



Mike Ridpath's home was completely de-roofed but the roof was replaced by a union labour gang from Perth. The internal walls, and ceilings were still sodden and sagging and there was no water, electricity or sewerage when this picture was taken on 16 January.



Staff belongings at the lab which were found by the salvage teams.

ANZAAS Medallist

A former Chairman of CSIRO, Sir Frederick White, has been awarded the ANZAAS medal for outstanding achievements as a scientist and an administrator, and in recognition of his sustained services to ANZAAS over 25 years.

Few men have had a more dominant influence on the pattern and development of scientific research in Australia over the past 30 years than Sir Frederick.



A New Zealander by birth, early in his career he demonstrated his outstanding abilities as a physicist and was awarded a scholarship which took him to Cambridge where he worked in the Cavendish Laboratory under Lord Rutherford.

In 1937 he was appointed Professor of Physics at Canterbury University in Christchurch, but soon after the outbreak of war, at the request of the Australian Government, he came here to assist with the research and development of radar being undertaken by CSIR.

In 1942 he became Chief of the Division of Radiophysics and headed it during the time it made its significant wartime contributions.

After the war Sir Frederick was appointed to the Executive Committee of CSIR and continued as such after it became CSIRO.

He became its Chairman in 1959 following the death of Sir Ian Clunies Ross and retired in 1970.

Sir Frederick was associated with much of the expansion of CSIRO, particularly in the establishment of laboratories to undertake research on wool and wool textiles, meteorological physics, the utilisation of coal and the construction of the radiotelescope at Parkes and the radioheliograph at Culgoora.

Throughout his career, Sir Frederick has advised the Government of Australia, and those of a number of overseas countries, on science policy and the establishment of research laboratories and organisations.

A former President of ANZAAS and its first Chairman, Sir Frederick has done much to encourage communication among scientists and between scientists and the public.

Manhandling animals was a pain in the neck

Divisional staff devised animal cradle

Ever tried restraining a sheep, or similar sized animal, rotating it from the vertical to horizontal position, collecting a biological sample, putting the animal back on its feet and releasing it?

And doing all that without running the risk of pulling a few muscles or sustaining a back injury?

Lots of people do it all the time but Ian Maddocks who is in charge of the histology section of the Division of Animal Physiology and Harold King, a senior laboratory craftsman, have come up with an easier method than manhandling the animal.

They've developed a sheep-handling cradle which has already proved its worth for both their own work and that of their colleagues at the Ian Clunies Ross Laboratory at Prospect.

As well, the cradle or bail, has been in extensive use at the Condobolin Laboratory of the NSW Department of Agriculture where it has proved both useful and versatile.

According to the men, the cradle can be constructed by a farmer or by laboratory craftsmen if other Divisions want to use the idea.

Moreover, after long years of handling animals the hard way — they've both been at the Division since 1955 — they're prepared to recommend their invention to anyone with similar working conditions . . . or sore backs!

Apart from its use for carrying out biological samples it can be used by farmers for de-horning, fleece clipping and milking and other operations.

Instructions for making a cradle such as is seen in the accompanying pictures are given below:

The horizontal frame is constructed of angle iron $1\frac{1}{2}$ " x $1\frac{1}{2}$ " x $\frac{3}{4}$ " (38 mm x 38 mm x 5 mm). The overall dimensions of 50" x 20" (127 cm x 51 cm) suits average sized animals, but can be varied if necessary. This size conveniently accommodates a mesh floor of a type used in a standard metabolism cage. On the farm the

use of a floor is probably unnecessary, but a waterproof plywood floor can be fitted.

The vertical member is formed from $\frac{1}{2}$ " water pipe (22 mm outside diameter), as shown. A hinged yoke locking handle with a sliding latch secures the head of the animal in position, while a pivoted frame restrains the rear end. In the model shown, hooks are provided on the rear corners, to which ropes can be attached should further leg restraint be necessary.

For convenience of transportation, the vertical section is hinged, and locked in the upright position with a "T" bolt. The height of the headframe can be made adjustable by the use of two vertical telescoping tubes.

The bail shown is designed primarily for the holding and restraining of goats for experimental sampling. Variations of the basic model can be made for small and large sheep, neck width to 5" (12½ cms) (Fig. 2). A strip of hardwood may also be mounted on the top side of the yoke to facilitate de-horning operations.

At the laboratory, two sizes of rear frame, both attachable to the same base, were made to hold sheep of small and large body sizes.

The bails are versatile and are made from readily available material.

Where restraint of sheep and goats is necessary use of such a bail will minimise labour and reduce considerably the risk of injuries sustained in the manual restraint of animals (Fig. 3).

An animal can easily be placed in the bail by raising its head a few inches and sliding the neck into the yoke, before closing the yoke lock lever.

The operator may then use his knees to align the animal's body with the rear loop before closing it to the restraining position.

The award commemorates the Swedish scientist who led American weather research through the 1930s and 1940s and is made annually for outstanding contributions to man's understanding of the structure or behaviour of the atmosphere.

Dr Priestley is only the third scientist outside the US to receive the award since its inception in 1951.

As Chairman of the Environmental Physics Laboratories, Dr Priestley co-ordinates three separate CSIRO Divisions and the Australian Numerical Meteorology Centre. He has led Australian weather research since he established the first meteorological research group — CSIRO's Meteorological Physics Section — in 1946.

Met. scientist honoured

Dr C. H. B. Priestley, Chairman of the CSIRO Environmental Physics Research Laboratories, has been awarded the Carl-Gustaf Rossby Research Medal, the highest honour of the American Meteorological Society.

The award was bestowed on Dr Priestley for his 'fundamental contributions to the understanding of turbulent processes and the links between small-scale and large-scale dynamics in the atmosphere'.

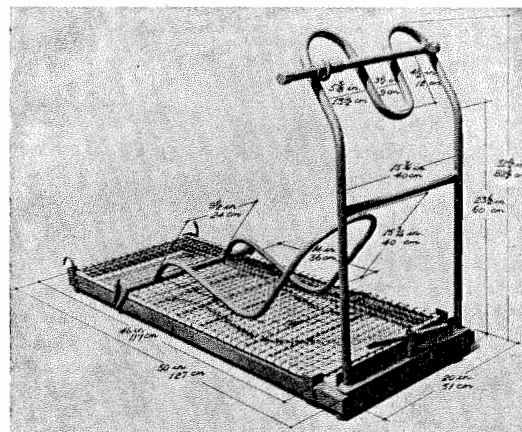


Fig. 1: Animal handling bail with recommended dimensions indicated.

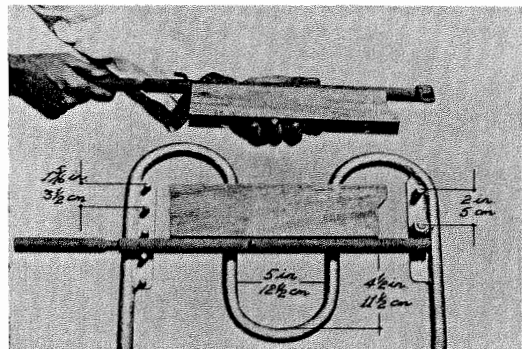


Fig. 2: Modified head yoke incorporating wooden block for de-horning.

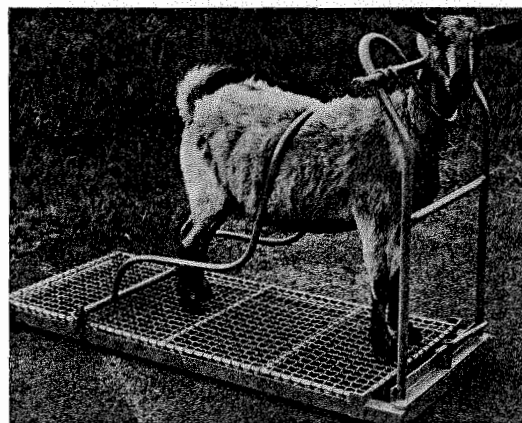


Fig. 3: Feral goat comfortably restrained in animal handling bail. Photographer: Tom Daggy.

New association formed

CSIRO staff who are associated with remote sensing for earth resources now have the opportunity to keep up to date with international advances in their subject through a new organisation, the Australian Remote Sensing Association.

The aims of the association are to:

- bring together those professionally engaged in remote sensing together with those who wish to learn more about the techniques.
- provide a forum for free interchange of ideas and to disseminate new knowledge, news and information within Australia and from abroad.
- promote knowledge and public awareness of the subject of remote sensing.
- provide a means of introduction to the subject for students and people currently unfamiliar with its applications and technology.
- maintain close liaison with other organisations here and abroad in the immediate field of remote sensing and seek co-operation in allied fields concerned with remote sensing.

To achieve these aims the association is producing a quarterly bulletin to provide for the dissemination of news, meetings, opinions, technical notes, references, research results and symposia announcements.

It is also producing an annual directory of remote sensing in Australia documenting all those engaged in the field and with brief details of their activities.

The association will encourage the formation of local groups engaged or interested in remote sensing in various centres around Australia and plans to organise seminars, workshop courses and symposia on various aspects of remote sensing.

State branches of the association are now being formed and staff who are interested in obtaining further information should contact Mr Alex Riddler, Secretary, RSAA, NSW Department of Agriculture, Private Mail Bag 10, P.O., Rydalmere, N.S.W. 2116.

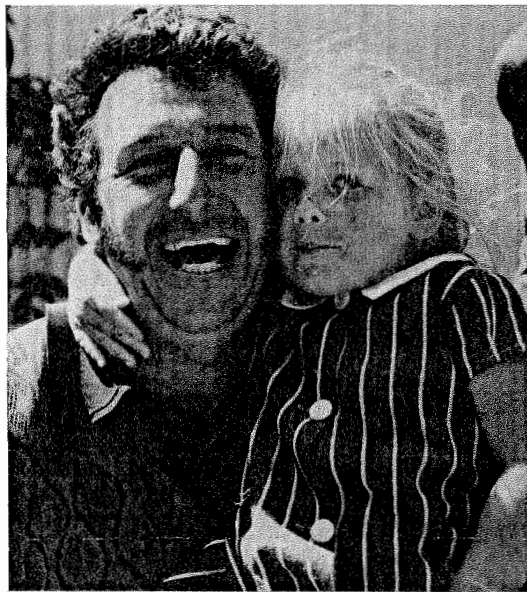
Santa came to our place...

Father Christmas needed CSIRO ingenuity to get around as many Divisions, offices and laboratories as he obviously managed, but he stayed long enough at the Division of Mechanical Engineering at Highett for photographer Neil Hamilton to get these pictures.

PICTURES:

Top right: Workshop supervisor Peter Hume donned traditional clothing to keep the kids happy.

Bottom left: Eric Slaughter, the Division's electrician, had a smile for Santa but daughter Karen proved a little camera-shy.



Kath Walsh retires from ASLO

A small note in a Division newsletter recently recorded the fact that Ms Kath Walsh of ASLO staff in London was retiring.

To many people in CSIRO the name might not mean much but anyone who has passed through London in the last 25 years will almost certainly recall her.

Others who have been appointed to the Organization through ASLO will have good reason to feel grateful to her for her kindly efficient handling of their affairs.

After training as a school teacher and being involved in personnel work during the war, Kath joined the Australian High Commission in 1949 and went to ASLO in the December of that year.

ASLO officers say: 'She's been one of those rare people who become completely dedicated to their work and we've been fortunate to have her devoted service for so many years.'

Kath has helped introduce many improvements to the running of ASLO in London but told 'Coresearch': 'If only those people 'down under' would delete all reference to the possibility of sea travel to Australia from letters of appointment (there are few ships on the run these days) I could move into retirement with an even greater sense of achievement.'

'This small change would add something to the good wishes of the Organization for my future happiness.'

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.

Appointment

Mr Ray McVilly, Assistant Secretary (Finance and Supplies) will be retiring from the Organization about the middle of the year. His position will be taken by Mr F. J. Whitty of ASLO who is at present in London.

Printed by CSIRO, Melbourne

LETTERS

CSIRONOMS

The five trade unions in CSIRO currently have uncomfortable initials which do not roll off the tongue easily.

CSIROLCA — Laboratory Craftsmen's Association.

CSIROTA — Technical Association.

CSIROOA — Officers' Association.

ACOA (CSIRO) — Administrative Clerical Officers' Association.

FDO (CSIRO) — Fourth Division Officers.

With a little licence these can be much more as follows, bearing in mind that CSIRO is an elitist organization, as Dr Price himself maintains.

The last two associations together act to oil the works of CSIRO and keep things moving. They are, of course, in this respect the Cream Of Government Service — CSIROCOGS!

This should, incidentally, enable them to immediately recruit the Biggest Wheel of All, Dr Price himself!

The Laboratory Craftsmen really serve admirably in developing the technical concepts of the Organization, as they are the Leading Australian Development Staff they must become the CSIROLADS.

The technicians are first class and are therefore, at the top levels of salary, also entering the realms of the Cameron Fat Cats. For this reason they offer without doubt Class A Technical Support — the CSIROCATS no less.

The other associations sometimes disparage the OA because that Association lacks an executive officer or research officers. They appear to others to be a disorganised bunch of thinkers — the CSIROMOB, which with some generosity could be interpreted as Men Of Brain.

CSIROCOGS, CSIROLADS, CSIROCATS and CSIROMOB unite — you have nothing to lose but your initials!

—CSIRONUT,
Division of Soils,
Adelaide.

In-house journal

I was disturbed to read the details of the staff survey taken for a new in-house journal and published in the December edition of 'Coresearch'.

The sampling procedure appeared to be adequate (13 per cent of all CSIRO employees), but on closer inspection it can be seen that only eight per cent of the sample returned completed questionnaires.

One could speculate as to the reasons for this extremely low response rate; perhaps it simply reflects employee apathy.

However, the first point I wish to make is that regardless of the reasons for lack of response, questionnaires returned and subsequently analysed constitute a biased sample and the opinions expressed might not necessarily reflect real staff attitudes.

Did people reply to the questionnaire because they are unhappy or dissatisfied with the present situation, or do they represent the 'conscientious' segment who feel obliged to comply with a request such as this?

Question 1 in the questionnaire reads 'Do you believe there are serious difficulties in CSIRO over discussion of new research proposals, existing research policy, or the principles upon which CSIRO is operating?'

This is the crucial question as the reply (Yes/No) determines whether or not the respondent is to proceed any further and so it is essential that it be unbiased.

However, the wording of this question tends to direct attention to 'difficulties in CSIRO' and could be described as 'leading the witness', predisposing respondents to answer 'yes'.

An alternative is to put forward an impartial question, e.g. 'What is your opinion of the opportunities in CSIRO for discussion of new research proposals existing research policy, or the principles upon which CSIRO is operating?' A dichotomous question could follow, e.g., 'Adequate/Inadequate'.

In my view the results of this survey should be treated with caution.

—R. L. McBride,
Food Research.

Cyclone evacuation

Cont'd from page 1

Immediately the emergency was known, Dr Frith, divisional secretary, Paul Magi, regional administrative officer, Ken Prowse, and personnel officer, Tony Culnane, were called back from leave. They were joined by Margo Wright from Head Office staff who coped with secretarial and telex duties and later in the proceedings, her place was taken by Jackie Foster, the RAO's telex operator.

For the next fortnight or so, none of them had much let up and some extraordinary long hours were worked.

The Chief Executive Officer, Dr J. A. Allen, also on leave, came back on duty for special meetings with those members of the Executive who were available.

All the Darwin staff lost personal property, and all but two homes were seriously damaged.

All that most people could bring out was a suitcase each and what could be packed into the convoy vehicles after extra petrol and water were loaded on.

Arrangements were immediately made to have funds available from the CSIRO Benevolent Fund, the emergency services such as those of the Salvation Army were quick to come to the assistance of the staff as they arrived in Canberra and elsewhere, and individual gifts were made by colleagues.

An appeal for funds has been organised throughout the whole Organization.

Housing, either on a temporary or longer-term basis, has been found for everyone in

Canberra and discussions are under way about future research programs.

It is likely that these will be continued in the meantime from Canberra with the staff commuting to Darwin as is required, but no final decisions had been made on this at the time of going to press.

Rare animals

One of the first concerns of the Darwin staff once the initial business of looking after families was under control, was for the animals at the laboratory.

This was particularly the case for one animal, a water rat (*Xeromys*) which was regarded as one of the rarest members of Australian wildlife.

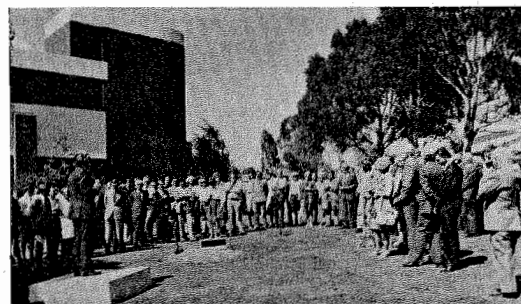
First sighted in 1864 and not again until 1903, little was known of the animals until a small number was found in the late 1930s and early 1940s. They were not seen again until the Wildlife Division scientists found two in 1973.

One which died was preserved at the laboratory and the other, still alive after the cyclone, was placed in a cage and taken on the convoy to Katherine.

Arrangements had been made to fly the precious animal out to Canberra but when the scientists reached Katherine they found it had not survived.

It too, has been preserved, but at least the scientists now know that there is a chance that more will be found in the region.

Two dingoes, however, did survive the long journey by road and are now housed at the Gunghalin laboratory.



Tree planting ceremony

About 100 members of the staff of the Divisions on Black Mountain, representatives of the Executive, the CSIRO Technical Association, Head Office and RAO attended a tree planting ceremony in Canberra recently when a silky oak was planted in memory of Bill Bruce.

Bill, who died towards the end of last year, became Entomology's first laboratory assistant when he joined the Organization in 1929. Later he transferred to Plant Industry, retiring in 1971.

All his life he loved trees and his family was associated with tree-planting on a professional basis for many years, planting well over two million of those in the national capital.

After Bill's death, the family made a request to CSIRO for permission to plant a tree in his memory on the Black Mountain site.

Speakers at the ceremony included Dr Milton Moore of Land Use Research and Dr Lloyd Evans, Chief of Plant Industry, and Bill's brother, Bob Bruce.

Among the visitors were members of the Bruce family, including Mr Bob Bruce, Mr Phillip Bruce (who works at Entomology) and his wife, Mr and Mrs. J. Anderson (sister), and Dr H. Angell, Mr T. Greaves who are retired members of the staff, and Mr J. Robertson from the Cooper Laboratory at Lawes in Queensland.

Picture shows Dr Milton Moore talking to the crowd on the lawn at Plant Industry.

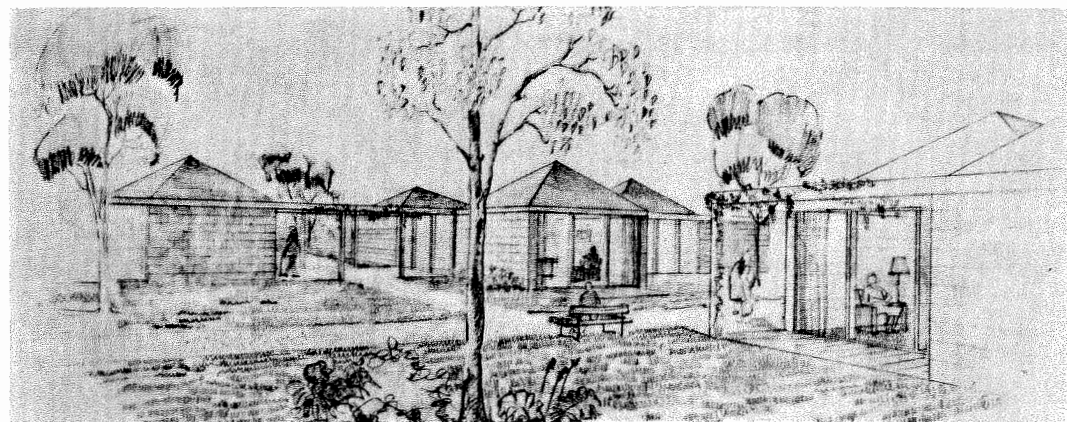
Photo: Colin Totterdell.

CORESEARCH

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Produced by the Central Communication Unit for circulation among members of CSIRO staff

March 1975



An artists' impression of the first units of 'Sirovilla,' a home for elderly people being built by the Social Club of the Division of Textile Industry.

\$80,000 Government grant for 'Sirovilla' project

The Australian Government has announced a grant of \$80,000 to 'Sirovilla,' the project organised by the Social Club of the Division of Textile Industry to provide home units for the elderly in Geelong.

The club hoped to receive the final plans for the homes towards the end of last month.

Approval of them will be sought as soon as possible from the Department of Social Security and once that has been obtained and a tender accepted, construction on the first eight units will be started.

The Government has indicated that more money may be available for the project, subject to the price of the tender.

The need for such a home in the community has been well demonstrated by the size of the waiting list—already more than 30 people have placed their names on this and that has happened without any invitations being issued.

'Sirovilla' will be built on a one hectare site on the Princes Highway about a kilometre from the Division. The land is valued in excess of \$50,000, but thanks to the generosity of a local orphanage, it was purchased at a much lower cost than its market value.

The project will eventually provide about 40 home units similar to one bedroomed flats, suitable for either single people or married couples. In the initial stage eight units to house nine people will be constructed.

Basic furnishings such as electric ranges, refrigerators and floor coverings will be included but it will be left to the residents to furnish the flats to

their own taste and with their own things to make them feel more at home.

The welfare of the people will be well looked after. Meals on wheels will be available from the city if residents don't want to cook for themselves or if they become sick, a medical practitioner on the committee, Dr P. Foster, is available to give advice on medical matters, there will be regular visits from geriatric workers from the Victorian Hospitals and Charities Commission and close links with the Grace McKellar Home for the Elderly in Geelong have already been established.

Origin

The idea for an Elderly People's Home Society was first mooted by the Division's Social Club in 1971. The society, later named 'Sirovilla,' was formed at a public meeting held at the Division in February 1972.

A committee was set up to organise the raising of funds and the preparation of the project. Nine out of its 12 members belong to the Division with the other three positions being held by local residents. The president, Don Taylor, the secretary, Geoff Watson, and treasurer, Ken Drayton, are all members of the Division.

Since the project started more than \$25,000 has been raised, mostly through the hard work of Divisional staff, but there has also been help from

various trust funds, local groups, businesses, schools and individuals, making it a community effort.

Fund-raising projects have included a successful fair ('Siro-fair'), which raised \$4000, a fashion parade, the staging of a melodrama and rock musical and there has been a wine tasting function. Catering and baby sitting have been undertaken, there have been sales of produce and agistment of stock and many other ways found to support the project.

The latest effort will be a gymkhana which will be held on Sunday, 16 March, at the Geelong Riding Club.

According to Geoff Watson, the organising committee has never lost its enthusiasm for the program, but it would welcome ideas for raising more money from other people in CSIRO.

Similarly cash support from other social clubs or groups in the Organization who might wish to help the project would be appreciated.

New Chief for Animal Physiology

Dr Trevor Scott, the man who played a leading role in the development in Australia of polyunsaturated meat and dairy products, has been appointed the new Chief of the Division of Animal Physiology at Prospect, NSW.

He has been Acting Chief of the Division since the retirement of the former Chief, Dr Ian McDonald, in December.

Dr Scott, a graduate of Sydney University with post-doctoral research experience at Cambridge and Harvard Universities, was awarded a Queen Elizabeth Research Fellowship in 1965 which he undertook at the CSIRO Division of Animal Physiology.

In 1967 he joined the Division as a senior research scientist and was later appointed a senior principal research scientist.

Dr Scott has established an international reputation in the field of lipid metabolism in animals.

He was largely responsible for developing a way of enabling ruminant animals to make better use of lipids in their diets, and developed a new feed supplement which brought about polyunsaturation in the fats of ruminants.

This in turn led to the development of polyunsaturated meat and dairy products.

Dr Scott was awarded the 1970 Bond Gold Medal by the American Oil Chemists' Society.

He is the author or co-author of 88 scientific publications.

Chiefs do time in Siberia



Has the Executive found a new method of dealing with recalcitrant Chiefs? Banished to Siberia and obviously enjoying it are (from left) Dr Ken McCracken, Chief of Mineral Physics, Mr Ivan Newnham, Director of the Mineral Research Laboratories, and Dr Brian Tucker, Chief of Atmospheric Physics.

The scientists were part of a team who visited the USSR to discuss possible Soviet-Australian scientific exchange. The picture was taken in Novosibirsk. The temperature was -20°C .

Tiny possums returned to mountain home

Five of Australia's most secretive and little known animals, the mountain pygmy possum, have been released in the Kosciuszko National Park by Hans Dimpel, the taxidermist at the Division of Wildlife Research.

For the last two or three years, the Division has been making a study of these tiny animals which until 1966 were unknown as living animals.

When one was live trapped that year and another was cap-

tured in 1970, wildlife scientists became very interested in the animals, especially when Hans managed to bring some back alive to Canberra after capturing them in the Kosciuszko National Park.

Although these died some months later from a vitamin deficiency, more were captured. Special permission was then obtained for Hans to keep them under close scrutiny at his Canberra home.

No animals ever received greater care and attention than did the little possums and eventually Hans was successful in getting them to breed.

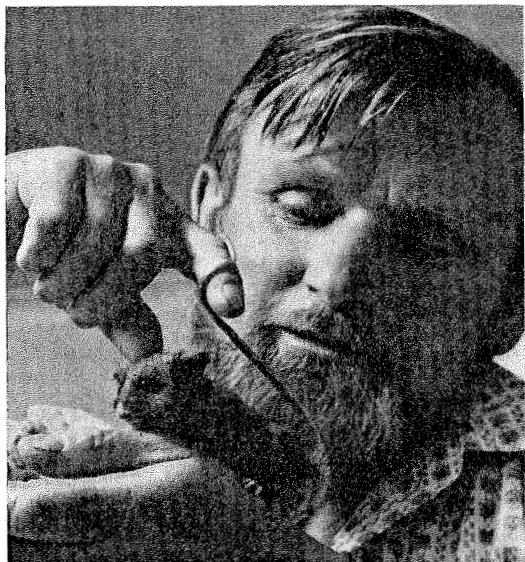
Since then a gift of several specimens has been made to the Taronga Park Zoo and recently Hans took five males back to Mt Kosciuszko to their natural habitat to see if captive bred animals could survive in the wild.

The females were retained in Canberra until they had completed a breeding cycle but Hans is planning to release them early this month.

While he is up in the Park he will also try to re-trap the males — each was marked so that he could be identified if found again—to check on their numbers and condition.

Throughout the time Hans has looked after the possums (scientifically known as *Burramys parvus*), he has kept notes of their habits and in association with Mr John Calaby of the Division, has already published two small papers on them.

He is now planning to publish a more detailed paper on the subject.



Above: Hans Dimpel with one of his tiny mountain pygmy possums. — Picture: AIS.

Top: A baby pygmy possum just out of the pouch. — Picture: Napier Mitchell.

Overseas . . .

The Chairman, Dr J. R. Price, and the Executive Officer, Dr. J. A. Allen, will leave Australia on 1 April on a fortnight's visit to Japan and Korea where they will have discussions with various scientific organisations to further scientific and technological co-operation between Australia

and those two countries. technological cooperation. Dr Price plans to return to Canberra mid-April while Dr Allen will continue on to Europe and North America for discussions with bodies analogous to CSIRO on research management and their relationships with science policies broadly similar to ASTEC. He will return to Canberra about mid-May.

In an emergency — call Lyn



Staff at the Division of Textile Physics in Sydney should be capable of handling an emergency at their laboratory should the occasion arise.

A firefighting demonstration and practice were staged there recently by the NSW Fire Brigade and staff were instructed in the use of the right way to use equipment in different circumstances.

Among those who had a go at handling a firehose was Ms Lyn Allan, (above), one of the technical assistants.



Radiation protection officers to meet

In recent years there has been a heightened awareness of the potential hazards in the use of radioactive material, whether it is being used for the benefit of mankind in laboratories and hospitals or in more dangerous areas.

This has served to highlight the role of radiation protection officers, or health physicists as they are sometimes called.

The radiation protection officer is a man of many forms depending on the use of radioactive material or more generally, ionizing radiation, in his institution.

In many CSIRO laboratories he is a senior member of the research staff whose radiation protection role is an important but subsidiary part of his work as research scientist.

In many hospitals, he is the medical physicist, responsible for physical and instrumental aspects of clinical work, or he may be the physician in charge of the nuclear medicine unit.

In universities he may be a senior member of the academic staff in any science department, although there are now four full-time university radiation protection officers in Australia.

The scope of radiation protection includes not only the

familiar radioisotope and X-ray machine but also the more exotic accelerators, neutron generators and research reactors. The problem of keeping abreast with development in such a broad multidisciplinary field is a real one and one which the few existing professional associations with peripheral interests in radiation protection do not meet.

The first meeting of Australian Radiation Protection Officers was convened last May through the efforts of Dr Ron Rosen, radiation protection officer of the University of New South Wales. Considerable interest was shown in an association of Australian radiation protection officers open to all interested in the field.

The formation of such an association will be the major business for the second meeting to be held on 12-13 May at the University of Melbourne.

There will also be a scientific program for the meeting and interested persons may obtain further information from the Program Secretary, Mr T. Tan, Chemistry Department, Monash University, Clayton, Victoria, 3168.

Distinguished scientist dies

The death has occurred of Dr Bill Mansfield, a scientist who had a long and distinguished career in CSIRO.

Bill joined the physical chemistry group of the Division of Industrial Chemistry in 1946. Although he was then only 21 years of age, he had completed an Honours (1st class) B.Sc., and one further year of research at the University of Adelaide.

His first project was concerned with improving the methods of wool-scouring, and he was able to make a number of useful contributions to this process.

In 1951, he spent a year working with the late Professor A. E. Alexander at the N.S.W. University of Technology.

This year was very important to his development and it was soon after his return to Fishermen's Bend that he started work on the control of evaporation from water storages in hot, dry locations, a project which established his scientific reputation.

After the Torrey Canyon disaster in the English Channel, the Australian Government became concerned about the possibility of oil pollution to coastal waters from damaged oil tankers.

The Department of Shipping and Transport convened an interdepartmental committee to develop a national plan to handle such an occurrence and Bill was co-opted onto this, tackling the problem with enthusiasm.

He carried out a number of laboratory experiments and then took part in some small field trials held in the Great Australian Bight and operating from the lighthouse provision ship, 'Cape Pillar'.

Early in 1967, Bill learned of the postulated existence of a new and more stable form of water, often described as poly-water.

He realised that the behaviour of this postulated species of water was inconsistent with the second law of thermodynamics and reasoned that the observed behaviour must be the result of experimental artefacts.

Bill set out systematically to repeat many of the experiments that had been described in the literature.

He correctly found that traces of silicates or lactates (from sweat) were responsible for the experimental observations.

Unfortunately, he was a few months too early with these results and found the scientific journals unwilling to accept his papers, with the result that later investigators received most of the credit for these discoveries.

About 1970, Bill began to consider the importance of the methods of physical chemistry (on a grand scale) to the study of the environment. He prepared a research proposal for the study of the distribution of CO₂ and other molecular species in the atmosphere and their transfer to the oceans and to the soil.



After 28 years at Fishermen's Bend (except for the year spent in Sydney), Bill transferred last June to the Division of Atmospheric Physics where he continued working on this project, which he described as atmospheric and oceanic chemistry.

Bill had very strong views on the motivation of scientists and believed it wrong to seek self-glory and worldly honours.

However, he moderated his position on worldly honours a little in the last few years, allowing himself to obtain a D.Sc. from the University of Adelaide, and to be elected to Fellowship of the Royal Australian Chemical Institute and the Australian Institute of Physics.

He is survived by his wife Ensa, and son Ian.

Food scientist sees potential of Tasmanian fisheries

David James, a scientist with the Tasmanian Unit of the Division of Food Research, left last month to begin a three-year term on secondment to FAO in Rome.

David departed from Hobart after making a significant contribution to Australia's fishing industry.

He had to go leaving behind him some still incomplete research on two or three programs but went confident that there would be others who would take up where he had to leave off.

After 11 years in fisheries research in Tasmania, David was in no doubt about the potential of Australia's fisheries but believed it needed an injection of money and incentive if they were to be developed.

'It wants better conditions of employment for the men involved in the industry,' he said, 'more diversification, and better utilisation of the resources.'

Efficient processing plants and upgraded technology were two other avenues he saw as being important.

During his time with the Unit, David was involved in a number of research programs, including ones on frozen rock lobster and abalone processing.

In one of the latest undertakings, he investigated the potential of Tasmania's slender or Falla's tuna, a species which until recently was considered to be rare or at least uncommon.

About a year ago purse seiners caught 170 tonnes of the fish in Storm Bay and since then more schools of it have been located.

'We don't know much about its potential as a commercial fishery as yet,' David said, 'but Tasmanians who have tasted the fish cooked say it's good.'

Another interest on which he had been working was the techniques of sending high quality fresh tuna and the roe from sea urchins to Japan.

In the last few months before his departure, David set up a project to separate fish flesh from skin and bone, a subject he knew well, having worked on it in Japan, Denmark and

Greenland. In this he modified an imported Japanese machine to Australian requirements and if the project is successful and gets off the ground commercially, it could have considerable ramifications for the industry, not just in Tasmania, but elsewhere in Australia.

'At present Australia imports most of its fish blocks for the manufacture of fish fingers and cakes,' he said. 'I see no reason why we shouldn't replace these imports with a local product.'

'It would make good use of our less prestigious fish to develop it as an industry, but it will need a high capital investment and a high turnover.'

David has been working in association with the Fishing Industry Research Council on this project and has had the co-operation of local fishermen, those of the Eden Fishermen's Co-operative and the NSW Fisheries Department.

'If all goes according to plan,' he said, 'we could have the project to a commercial stage in about 12 months.'

David was hopeful that while he was away someone would look seriously at the possibility of developing a krill fishery in Australia.

There were rumours, he said, that an overseas firm might be interested in setting up a krill factory to handle the plankton in Hobart.

'They'd fish in southern waters for the species, *Euphausia superba*, and then rather than process it on their freezer boat, they'd have a shore-based factory.'

'Soup makers, especially the Norwegians, would like to use krill and the Russians are using it for a commercial fish paste,' he said.

'Krill is a major resource in the south, but any move we made into the industry ourselves would be dependent on



For 11 years David James has been a familiar figure around Hobart's wharves. He's had plenty of co-operation from the fishermen for his projects which he believes has largely come about because he understands their problems and speaks their own language. Picture: Bill Kelly.

the development of catching technology and a sizeable investment being available.'

When David took off for Rome he was adding just one more overseas experience to an already colourful career.

He has already worked extensively overseas and most years has managed to spend between two and three months overseas (not at CSIRO's expense). 'I'll go anywhere at any opportunity,' he said. 'I love travelling.'

Tree seed workers unite

A computerised World Directory of Tree Seed Workers is being compiled by Dr D. G. W. Edwards, Canadian Forestry Service, Victoria, B.C., Canada, on behalf of the International Union of Forest Research Organizations (IUFRO) Working Party S2.01.06 (Seed Problems).

The directory will include all aspects of seed ontogeny, origin, technology and health, and will supersede the one recently published by Simak.

In addition to being a source of addresses and a mailing list for meetings, it will serve as a general manpower source and a register of expertise to advise on or investigate specific tree seed problems.

The directory, which will be updated periodically, will list all tree workers, whether they are involved on a research level or industrial-operational level, in all nations of the world.

Individuals may be listed by completing questionnaires being distributed early in 1975.

Because some seed workers may be overlooked by co-ordinators, anyone wishing to be listed who has not received a questionnaire by the end of March should contact Dr E. P. Bachelard, Department of Forestry, A.N.U., P.O. Box 4, Canberra, A.C.T. 2600.

Dr Price's conservative approach to Ms made me realise that 'Coresearch' was still using the M.C.P. title 'Chairman'. Surely a devotion to women's causes would prompt you to refer to Chair-person Price. And while you are about it, how about removing other prejudicial terms? In future why not use hu-person—and indeed, why not wo-person.

N. J. Barrow,
Perth.

LETTERS

Staff Relations Seminar

In the January issue of 'Coresearch' it was reported that during the Staff Relations Seminar I had suggested giving more information on research programs in 'Coresearch', instead of using 'tatty social things'. What I actually said was 'as well as the usual chatty social things'.

Basil Flinter,
Division of Mineralogy,
North Ryde.

Did Mr Basil Flinter (delegate to the recent Staff Relations Seminar) really say that 'Coresearch' tends to emphasise 'tatty social things' in its columns?

Those who know Basil's soft spoken style will realise how deceptively he can pronounce an initial letter 't'.

In fact, Basil makes his 't' moist as in 'char'.

So for 'tatty' read 'chatty' and everyone's face will be saved.

Anon.,
Division of Mineral
Chemistry,
North Ryde.

Thank goodness for that letter. The editor was about to organise an appointment with an ear specialist.—Ed.

The following statements made by the Chairman, Dr J. R. Price, at the Staff Relations Seminar and reported in January issue of 'Coresearch' seem important for CSIRO staff.

• 'To meet the objectives laid down in the Act, CSIRO had to employ the best people it could get and to provide the best environment in which they could work.'

• 'I suggest it is not practicable for staff, as a whole, to participate in this (decision making).'

• 'I offer the suggestion for discussion that there is no more trauma involved in an announced but previously undebated decision than there is in one which has been arrived at by the Executive after the staff has had the opportunity for debating the alternatives and express its views.'

We might all question:

1. Is there some incompatibility between the necessity posed by the first quotation and the suggestions in the other two?
2. Is the participation in decision making by staff involved likely to increase:

(i) the probability of bad decisions;

(ii) the physical and personal obstacles to putting decisions into effect; and

(iii) the possible alienation, to the point of silent protest expressed by non-cooperation or resistance, of staff affected?

3. How important is the avoidance of trauma relative to these three?

4. Would a year of debate and discussion by the Executive with the people concerned, and most likely to be well informed on the topic, be a good investment? Since most decisions on research take years to implement (winding down, looking, winding up) this seems likely. Unfortunately for several reasons the research staff are likely to regard undebated decisions by the Executive with suspicion, and even hostility. Although unfortunate, this is avoidable.

F. Morley,
Division of Plant Industry.

Wanted

Head office is trying to build up several full collections of 'Coresearch' to have bound for record purposes. Anyone who has copies of issues No. 1-27 and who would be willing to part with them is asked to send the issues to the editor.

Caught

A tuna which was tagged by CSIRO's Division of Fisheries and Oceanography in 1963 has been recovered by a Japanese long line fishing boat.

It had been at liberty 3957 days.

The tuna was tagged and released off Albany in Western Australia when it was three years old.

The fish's long tagged swim is the longest recorded by the Division. The previous best was 3844 days when another tuna was recaptured by a Japanese fishing boat in 1973.

Dr Clive Hackett, a well-known and vocal member of the Division of Land Use Research in Canberra, will leave this month on a three-month visit to Fiji, Hawaii, Canada, USA, Jamaica, Venezuela, Trinidad, the UK and Europe.

For your information

INFORMATION CIRCULARS

75/1	Darwin Disaster CSIRO Appeal	
75/2	Head Office Directory	7.1.75
75/3	Assistant Secretary (Finance and Supplies)	
	Head Office	3.1.75
75/4	Entry into Darwin	8.1
75/5	Amendment to Information Circular No. 74/114	8.1
75/6	Queen Elizabeth II Fellowships	
	Physical and Biological Sciences	13.1
75/7	David Syme Research Prize 1975	8.1
75/8	Authorised Holidays 1975	14.1
75/9	Counsellor (Scientific) Tokyo	15.1
75/10	Assistant Secretary (Administrative Systems)	
	Head Office	22.1
75/11	Scientific Contacts with Papua New Guinea	29.1

POLICY CIRCULARS

75/1	Allowances for intermittent motor driving duties	8.1
75/2	District Allowance	15.1
75/3	Salary Adjustments — Assistants (Transport)	15.1
75/4	Salary Adjustments — Stores Staff	15.1
75/5	Salary Adjustments — Administrative and Clerical Staff	21/1
75/6	Extraneous payments based on salary —	
	Amendment of Terms and Conditions provisions	24/1
75/7	Salary Adjustments — Film Production Staff	30/1

'If only the Chinese would drink it too'—Tony Quarmby

New hops variety gives hope to beer industry

If the world consumption of beer continues to rise as it is doing at present, Tasmania may well have found itself a brand new gold mine.

This is the opinion of Mr Tony Quarmby (below), a scientist with the Tasmanian Unit of the Division of Food Research who is investigating a comparatively new variety of hops called Pride of Ringwood.

Tasmania has been growing hops traditionally for more than a century but in the last few years has turned to this new variety.

Originally bred in Victoria, Pride of Ringwood produces the quality brewers all round the world are seeking — a hop with a high alpha acid content, the component that gives

beer its characteristically bitter flavour. It is also a preservative.

While most other varieties of hops will produce an alpha acid content of between four and six per cent, Pride of Ringwood contains between 10 and 12 per cent.

Today there is a trend to sell hops on the weight of their alpha acid content rather than on the weight of the hops themselves and this new approach has sent growers all round the world looking for varieties which produce this highly desirable characteristic.

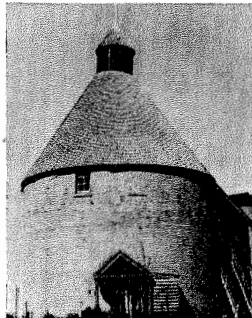
Research shows that the plants which will produce this high rate do best in areas between 48 and 42 degrees latitude.

Tasmania is in this belt and growers throughout the State are pinning their hopes on the

Pride of Ringwood for the future of the industry, especially the smaller producers who are finding it difficult to stay in business.

But it isn't, they have found, simply a matter of making wide plantings of the species.

The alpha acid presents peculiar problems and the Tasmanian growers have asked CSIRO to help solve them.



This century-old oast-house near Hobart is a tourist attraction in Tasmania and indicates the length of time the hops industry has been established in the island state.

'Unfortunately for the growers, a lot of the acid content can be lost before the hops reach the breweries,' Tony said. 'We want to know where and how this happens and what can be done to overcome it.'

Working closely with the growers, he has come to the conclusion that the problem partially lies in the drying of the hops but, he says, considerably more work is needed to prove this and more still to know what to do about it.

'A lot of research has gone into the making of beer and there's been a lot of effort put into the plant breeding side of the industry. But comparatively little work has been done to date on what happens to the hops between the harvesting and processing.'

'A State like Tasmania has to look carefully at its resources and as more people move out

of the apple-growing industry and into hop growing the ability to grow Pride of Ringwood may well become one of its more valuable assets.'

There was a world-wide trend today to consume beer rather than spirits, Tony said, which could have a significant influence on Tasmania as a hops source.

'In Russia, for instance, people are slowly being weaned away from their traditional custom of drinking vodka and they're turning more to beer.'

'In Africa efforts are being made to encourage the people in the newly emerging countries to drink beer rather than spirits as they find a comparative affluence, in the hope that it will cut down the rate of alcoholism.'

'If only the Chinese could be persuaded to drink it too, Tasmania should have it made.'

Ministerial appointment



Bill Dominguez of the Finance Section at Head Office (above) has been appointed the CSIRO science liaison officer in the office of the Minister for Science, Mr Bill Morrison. He will replace Terry Healy who has returned to Head Office after 14 months in the position.

Bill goes to the Minister's staff well versed in both CSIRO affairs and politics. He has been employed in the Divisions of Horticulture and Plant Industry, and the Australian Numerical Meteorological Research Centre. He graduated from the University of Adelaide with a double major in political science.

Maths' role in science

'Mathematics and the real world' was the topic of an open day at the Division of Environmental Mechanics in Canberra.

The occasion was the visit of students of the Australian National University and the Australian Association of Mathematics Teachers National Mathematics Summer School.

Based on the ANU campus, it was held for about 60 of the most talented of the year's input of Australian sixth-form mathematics students.

At the Pye Field Environmental Laboratory the students examined the role of mathematics in the research of the Division and tackled various experiments that demonstrated the fruitful marriage of mathematics and science.

The take-home message of the day was, as Dr J. R. Phillip, Chief of the Division said in his welcoming talk, 'that whatever the fascinations of mathematics for its own sake... the plain fact is that mathematics plays an absolutely central role in the natural sciences.'

New habitat for writer

Mr David Horwood, writer for the magazine 'Rural Research' and known around Canberra as a 'cyclist extraordinaire' has left CSIRO to teach environmental biology in the Department of Environmental Design at the College of Advanced Education in Hobart.

The department trains architects, urban planners, building supervisors and landscape architects.

His absence will be keenly felt, not just by his colleagues in the A and B Sciences Branch, but also by the RAO where his two-wheeled exploits within CAGA Centre once reached legendary proportions.

Before joining CSIRO, David became a highly qualified apple picker, an occupation he took up after leaving university in preference to living on the 'dole'.

He then spent a few weeks in another occupation which proved to be unrewarding before the Division of Animal Physiology came to his rescue.

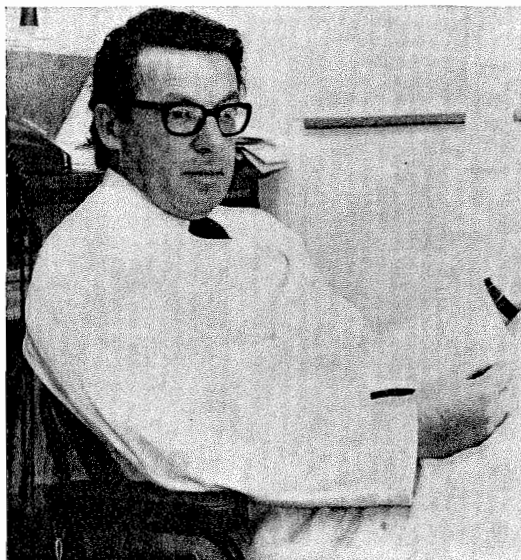
Following a two-year spell as the Division's liaison officer, David joined the 'Rural Research' staff.

At the college, he will be involved with a department which operates with an 'innovative teaching philosophy based on problem solving and which does not lay down a formal curriculum.'

'Students,' said David, 'are responsible for their own learning programs. They work on projects dealing with real world problems faced by professionals in their elected subjects so that theory and practice are not separated — they are cemented by the chosen problem.'

Part of the six-year course involves employment away from the college in a normal, relevant job which means the teachers are regarded more as advisers-consultants rather than as distant teachers.

Printed by CSIRO, Melbourne



Bob Williams retires from Plant Industry

Dr R. F. Williams (right) retired in January after 30 years of service with the Division of Plant Industry.

From 1945-1953, he was located at Griffith and from 1953-1975 at Divisional headquarters in Canberra.

Bob graduated from the University of Western Australia in

1932 and joined A. H. K. Petrie (the 'father' of Australian plant physiology) at the Waite Agricultural Research Institute to work on the growth of crop plants. He joined CSIRO in 1945.

His major contribution in the world of science has been an approach to agricultural prob-

lems by precise quantitative descriptions of plant development and he was awarded a D.Sc. by the University of Adelaide in 1957 for published work on quantitative studies in the physiology of plant growth.

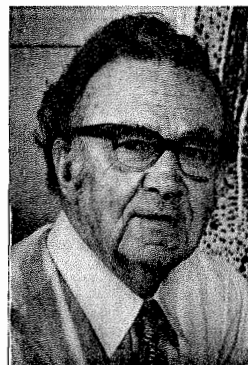
His most recent, and perhaps most important, contribution in this field is a book entitled 'The Shoot Apex and Leaf Growth' which will be published by Cambridge University Press this year.

Bob was a foundation member of the Australian Institute of Agricultural Science and the Australian Society of Plant Physiologists.

Colleagues will miss his valuable advice in the successful execution of their research programs.

Appointment

Mr John Warwick of Staff Section, Head Office, has been appointed to the position of Assistant Secretary (Administrative Systems) at Head Office and took up his new duties on 3 February.



'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.



'What do I do with my industrial waste?'

Courtesy: Saturday Review

coresearch

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Produced by the Central Communication Unit for circulation among members of CSIRO staff

April 1975

Scientists (and friend) sign minutes



Dr I. A. Timoffejev, Senior Consultant, Department of Foreign Relations of the Academy of Sciences of USSR, and Dr Paul Wild, Chief of the Division of Radiophysics, and another Australian signing the minutes of the first meeting of the Russian and Australia radioastronomers held under the USSR-Australia Science Agreement. Photo: John Masterson.

Astronomers to visit USSR in May

Five Australian radioastronomers will visit the USSR next month under the recently-signed USSR-Australia Science Agreement.

The delegation will comprise Dr Paul Wild, Chief of the Division of Radiophysics, Dr Brian Robinson, also of the Division and leader of CSIRO's team which works on molecules in space, Professor G. R. A. Ellis, University of Tasmania, Professor B. Y. Mills, University of Sydney, and Dr D. B. Melrose of the Australian National University.

The visit follows on the February tour of Australian observatories made by a group of Russian astronomers, led by Dr V. S. Troitsky from the Radiophysics Institute at Gorky.

While they were in Australia, the Russians inspected CSIRO's installations at Parkes and Culgoora, visited the various universities and the Fleurs and Molonglo Observatories.

During their time at the Division, Dr Wild and Dr Troitsky signed the minutes of this first meeting held under the Science Agreement and formulated proposals for areas of collaboration between the two countries.

ments for consideration and support.

Commenting on the Russian visit, Dr Robinson said he had found the Russians were knowledgeable about Australian research in astronomy. 'In fact, when the Science Agreement was being discussed,' he said, 'it was they who first mooted the idea of radioastronomy being included.'

Comparing the research which is being done in both countries, Dr Robinson said he thought that theoretically the Russians were in advance of Australia, but he felt the Australians were

CSIRO appeal raises funds for Darwin evacuees

The CSIRO appeal to help the staff who were affected by Cyclone Tracy in Darwin raised \$13,939.79.

The money is now being distributed among the victims on the basis of the personal circumstances of each family.

Stories of how the money was raised have been reaching 'Coresearch' and it can only be said that some people have been particularly resourceful in the ways they encouraged colleagues to part with their cash.

At Highett, the various Divisions combined to hold a barbecue in the Australian Garden and raised more than \$1200.

At the Parkes telescope, public information officer, Les Fellows, helped by Miss Gladys Page, collected a substantial sum of money.

Les isn't talking too much about how he raised the money. He just says: 'You could say it was a method inspired by the film "The Sting" which I had recently seen.'

The Perth Divisions made a large contribution and succeeded in producing some 'esprit de corps' in the process by having staff from all the WA laboratories together for a function at Floreat Park.

According to reports from our far-flung correspondents, Maurie Woodward, of the Division of Land Resources Management, came up with the idea of a Maori hangi, and although not a New Zealander, he professed to know a lot about such methods of cooking.

The earth ovens were duly dug and prepared by Justin Murphy, Ross Clarke (also

Another team, led by LRM's Chief, Ray Perry, arrived at 7am to wake a well-stoked team from their slightly comatose state and to go through the ceremony of placing the food in the oven.

Thanks to Dennis Roberts of Food Research, this comprised two 100lb pigs and three 50lb lambs, all of which had been adequately stuffed with various delicacies.

It is understood that much of this food was either given to the staff or made available to them at discounted prices by the business community with which the laboratories have dealings. Liquid refreshments were similarly supplied.

The food was cooked all day during which time Maurie was reported to show signs of great nervous tension, largely due to the fact that he had never before cooked in an oven made in sandy soil but after their 12 hours in the ground, the animals were taken out and pronounced by all to be a succulent feast worthy of kings — or Darwin evacuees.

During the proceedings, a colour television set which had been acquired at cost price from a Perth firm, was raffled and was won by Norman Robinson, a retired member of the Division of Wildlife staff.

Thanks . . .

We wish to express our sincere and heartfelt thanks to the staff members at RAO, Head Office, Gungahlin and throughout CSIRO for their efforts on our behalf after Cyclone Tracy.

We especially thank staff members and their families who so freely helped us and assisted the progress of the convoy on its way to Canberra. The families who so kindly billeted us until we found homes also deserve a special 'thank you' for their patience and hospitality.

We are very grateful for the financial assistance given to us through your donations: 'Thank you' is such an inadequate word in the face of such generosity.

The Darwin Evacuees.

LRM) and Maurie who then volunteered to remain on duty overnight to keep the home fires burning and all that.



The Russians took time off radioastronomy activities to meet some other Australians at Culgoora. Second from the left is Dr Steve Smerd of the Division of Radiophysics.

Six possible areas which they believe they could effectively work on together are:

- pulsars
- solar radio astronomy
- radio spectroscopy
- extra galactic sources
- very long base line interferometry.

The proposals will now be put to the respective govern-

in a better position experimentally. 'They haven't got the hardware that we have.'

The visit to Russia, scheduled to last a fortnight, will take the Australians to Moscow to begin with and then over a wide area of the country to see the various installations.

The party is scheduled to leave the USSR on 3 June.

Lottery luck

Two members of the staff of the Division of Wildlife Research were walking round their Gungahlin laboratory in Canberra about 10 feet off the ground last month when they heard the announcement over the air that they had shared a \$60,000 jackpot lottery ticket.

They are Leckie MacLean and Penny Woollard, both of whom are members of the native water rat section.

They bought the ticket after Leckie won \$100 in the previous lottery. They decided to share one in the next draw and succeeded in having their number come out of the barrel first.

Both say that it's a bit too soon to know what they want to do with their win.

'It's just nice to have it,' Leckie said.

Thousands saw Australia 75 science festival in ACT

Thousands of people from the ACT and interstate visitors had a good insight into the working of CSIRO during the Australia 75 festival staged in Canberra between 7-16 March.

Every day hundreds of adults and children poured into Melville Hall at the Australian National University to see the exhibition, 'The other arts: Science, Invention and Technology', and to talk to the scientists and technical and other staff who manned the displays.

Many hours went into setting up the exhibits and many more hours of people's time went into keeping them staffed for the 12 hours each day the display was open.

The heat in the unairconditioned building was at times overpowering during a week of humid weather and the conditions were not made easier by the size of the crowds — much bigger than was expected by either the organisers or the exhibitors.

Those who manned the 'Dung Down Under' exhibit became more than familiar with the smell of fresh dung which was brought in each day to keep the dung beetles working happily but as the CSIRO staff on duty explained — 'Ours isn't simply audio visual. We've added that extra dimension.'

There were some visitors who came in, looked at the pictures, pressed buttons and didn't bother to find out what the research was all about, but for the most part people were genuinely curious and wanted to learn more about the different projects.

The dung beetles were a constant source of interest to everyone — at times the beetles became so lively that they took off from their boxes, only to return to their dung pads when homing instincts or hunger brought them back to their only source of food in Melville Hall.

The model of the Parkes telescope and the story of finding molecules in space greatly intrigued many visitors some of whom had not previously realised that astronomy was not confined solely to the more familiar optical aspects of the science.

They were well catered for in this field, however, since the Anglo Australian Telescope Board also had a display in the Hall and the Mt Stromlo Observatory and Tidbinbilla Tracking Station visitor's centre were open for inspection.

Reeco Ltd, AWA, ICI and Varian Techtron Ltd displayed machinery and equipment which they have developed commercially from CSIRO research so that the public was given a good opportunity to see some of the practical side of the Organization's work.

In the city's renowned Botanic Gardens, the Division of Plant Industry staged a display which showed some of their work which has been a contribution to Australian botanic research, particularly their research into nitrogen fixation, a natural process which enables legumes to utilise nitrogen directly from the air to build proteins.

During the course of the festival, the Minister for Science, Mr Bill Morrison, and other

politicians, made a visit to the exhibition.

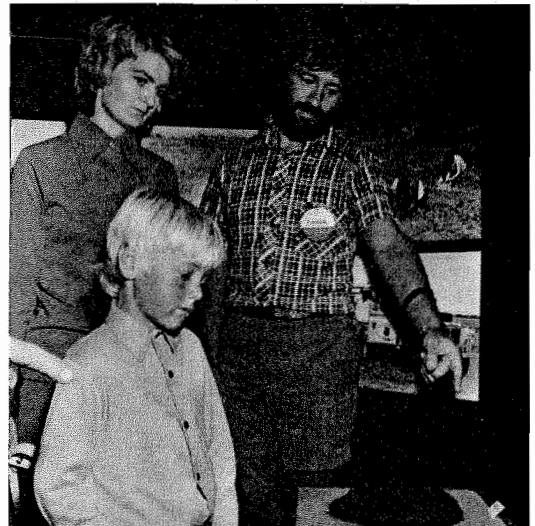
Afterwards Mr Morrison commented that he had been most impressed with the display and he was delighted with the communication between the public and the scientists.

The organiser of the science exhibition, Professor Arthur Birch, head of the ANU's Research School of Chemistry, was equally pleased with the success of the venture.

'Scientists don't usually show off their work,' he said, 'but there is growing awareness that the public needs an understanding of scientific endeavour.'

'The two stereotypes usually thought representative of scientists are of introverted knob-twiddlers who neglect their wives and have no idea of what goes on in the world, or super-intelligent magicians who produce ideas in mysterious ways like rabbits out of a hat.'

'This opportunity for the public to see what scientists are doing and to question them should have been of great benefit to society.'



See it, feel it, even smell it — but certainly talk about it! That was the message the scientists got across to the public at the Australia 75 science festival. Paul Ferrar, leader of the Dung Beetle Unit at the Division of Entomology in Canberra, explains the biological control of dung project to some of the visitors to the 'Dung down Under' display.

Photographic display by Ed Slater

An exhibition of late eighteenth and early nineteenth century natural history paintings and drawings staged as part of the Australia 75 Festival in Canberra was the work of Mr Ed Slater, photographer at the Division of Wildlife Research.

The pictures were all photographic copies made by Ed from originals, most of which are housed in the British Museum of Natural History. They were taken during a recent visit he made to Britain as part of an assignment he had set himself.

In preparing the display, Ed had assistance from Dr Dick Barwick of the Australian National University who helped by supplying some of the material and with the organisation and mounting.

The exhibition was entitled, 'A Banksian Folio 1770-1820' because Sir Joseph Banks, the English naturalist and scientist was the inspiration behind much of the natural history painting done during that period.

Banks travelled with Cook in the 'Endeavour' and although this was his only trip to Australia he remained deeply interested in the country for the rest of his life, Ed said.

He was remembered mainly, not for his own research, but for his promotion of science, and his herbarium and natural history library were among the most comprehensive of the time.

Banks sent out collectors to gather botanical specimens from various countries and artists to travel with Cook and other explorers on their trips to record the natural history. Material gathered during these expeditions included many paintings and sketches by artists associated with the early days of Australia.

'It's interesting to see the beauty that's expressed in their work despite the strange and hostile environment in which some of them lived,' Ed said. 'Was this perhaps a form of escapism?'

The exhibition included pictures by Sydney Parkinson, an artist in Cook's first expedition

on the 'Endeavour', wood engravings made by Thomas Bewick, paintings of seabirds seen by Johann Georg Adam Foster, a lad of 18 who sailed with Cook on the 'Resolution', and paintings executed by John Latham sometimes known as 'the grandfather of Australian ornithology'.

The first professional artist in the colony was Thomas Watling who arrived in 1792 convicted of forgery. Some of his pictures were shown, together with the work of other artists.

Several sketches of bats were chosen from some newly found work by Gould which had never previously been exhibited and which were unearthed by Ed during his London visit.

Ed has strong feelings that most of this material covering the early history of Australia is



Ed Slater

located outside this country and is endeavouring to bring as much of it back at least in photographic form, as he can.

He would like to establish a reference collection of this material because of its great value to botanists, zoologists and historians, and is trying to identify more of the artists and track down further as yet undiscovered work.

Lab craftsman advises Peru marine institute

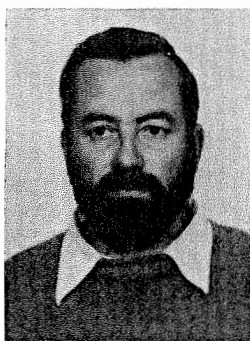
Mr Rex Flynn (right), senior laboratory craftsman in the Division of Fisheries and Oceanography, has returned to Cronulla following a visit to Peru where he advised the Instituto del Mar on the setting up of their laboratory workshop.

Rex's invitation came about through a recommendation made by Dr G. L. Kesteven, a former assistant Chief of the Division who is working in Peru on an FAO project, while the cost of his visit was met by ADAA (Australian Development Assistance Agency).

During the two months Rex was in Lima he visited machinery retailers to compare prices (they proved to be two to three times higher than those in Sydney), he drew up plans for the workshop, advised the Institute on what machinery to buy and how and where it should be installed.

'Before I left Australia I was told not to worry about the language barrier, that plenty of people could speak English,' Rex said.

'It didn't work out like that and I spent most of my time



wandering around with a dictionary in my hand.'

While he was at the Institute, Rex learned something about Peruvian fisheries research and their fisheries industry. The latter, he said, was largely based on the anchovy fishery.

He also made the most of his spare time and visited the ruins of an Inca city, Machu Picchu, in the Andes and travelled to some of the seaside areas along the Peruvian coast.

NZ Liaison Officer

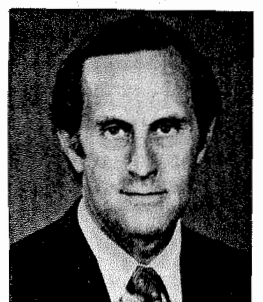
CSIRO staff who have 'diplomatic relations' with New Zealand's DSIR, may soon meet the Department's newly appointed liaison officer (International Science), Mr W. R. A. B. Dale.

Mr. Dale's position has been established to promote external relations in the development of science and technology.

He will deal with such organisations as OECD, UNESCO, UN (ECOSOC), ASCA, the Commonwealth Scientific Committee and the Commonwealth Agricultural Bureaux. He will also liaise with the Ministry of Foreign Affairs on overseas aid and related work.

Mr Dale graduated B.Sc. from Auckland University College in 1954 and gained a Dip.Agr.Sc. from Lincoln College in 1963.

He joined the Department of Agriculture in Auckland in



1950 and transferred to head office as a research officer in 1955.

Since 1970 he has been Chief Advisory Officer (Extension), Ministry of Agriculture and Fisheries, in which capacity he did much to develop the Ministry's information services.

Information service launched by Division of Food Research

CSIRO has launched a new food information service specifically aimed at the consumer.

The service is being provided by the Consumer Liaison Section of the Division of Food Research at North Ryde in Sydney.

Announcing the project, the Minister for Science, Mr Bill Morrison, said it had been set up to tell the public in simple terms some of the basic facts about the food we eat.

Mr Morrison said the expertise of CSIRO had long been available to industry and this would remain one of its major priorities.

'But the information gained from CSIRO research, especially in food, can be of great benefit to the consumer and the new Consumer Liaison Section is a significant step in this direction.'

As part of the service, CSIRO is publishing a number of free leaflets giving expert guidance on food subjects in ordinary language. These have been compiled by the Division in association with the Central Communication Unit.

The first of these, 'Don't Poison Your Family' and 'Handling Food in the Home' have already been released and have been in great demand.

They can be obtained from the Division by sending a self-addressed, stamped envelope (24cm x 16cm) to the consumer Liaison Section, CSIRO, PO Box 52, North Ryde.

The Section will also provide advice to individual consumers with particular food problems.



Mr Bill Morrison

Honour for Astronomer

The Royal Society of New South Wales has awarded its Walter Burfitt Prize for 1974 to Dr Brian Robinson of the Division of Radiophysics, Epping.

The prize which consists of a bronze medal and \$150 is awarded every three years to the person whose contributions published during the past six years are considered to be of 'the highest scientific merit'.

They must be an account of work described for the first time by the author mainly in Australia and New Zealand.

Brian has led the Radiophysics team which has worked on the discovery of molecules in space at the Parkes radio telescope and will be in the Australian delegation which will visit radioastronomy installations in the USSR next month.

Staff members retire after long service

When Ray Skewes retired from the Division of Mineral Chemistry after 31 years with CSIRO, his colleagues marked the occasion with a social gathering.

Ray's love of the outback, correctness of speech and his ability to critically assess wine were all recognised in the gifts made to him by his many friends who have appreciated his 'civilised and humorous approach to life'.

Ray joined the Waite Institute in 1925 and then transferred to the CSIR Division of Soils.

During the war he was seconded to the Ministry of Munitions but returned after hostilities were over to the Division of Soils for a brief time before joining the Minerals Utilisation Section (later to become the Division of Mineral Chemistry).

His work was consistently aimed at the application of electrochemistry to industrial problems and he published many papers on aspects of his research.

* * *

Harry Offord, who joined the staff of the McMaster Laboratory in 1932, has retired after 43 years service with CSIRO.

In 1926 he joined the staff of the Veterinary School of the University of Sydney as a technician, where he assisted in the initial training of many of the research scientists who have worked at the McMaster Laboratory.

He transferred to the Laboratory himself in 1932 with Sir Ian Clunies-Ross and as the technician in bacteriology took over the preparation of media, a responsibility which he has only just relinquished.

During World War II Harry was initially posted to Artillery, becoming a Quarter Master Sergeant, and he subsequently served as a technician in the Medical Corps.

On his return to the McMaster Laboratory his wartime training was immediately recognised, and in addition to his other duties, he was made responsible for the newly created store. Those who joined the staff at that time have vivid memories of the efficiency with which he guarded his wares.

At this time, Harry played a major part in efficient functioning of much of the research laboratory. With the expansion of the staff, he was able to relinquish gradually many of his responsibilities and again became primarily responsible for media preparation and the culture of bacteria.



Ray Skewes

His abilities in this field have played a significant part in the success of the bacteriological research programs over the years.

His farewell was marked by a laboratory party at which many of his early colleagues were present.

Tracey by name and...

Last year Ms Reinhilde Schreiner, an Austrian rain forest taxonomist, spent three months in Australia working with the Rain Forest Ecology Unit at Long Pocket Laboratories as part of her PhD studies.

Now rain forest taxonomists are a very rare breed and Australia has all too few of them so there is just the suspicion that Dr Len Webb who heads the unit, and his partner, Mr Geoff Tracey, plotted ways to keep their visitor in Queensland.

Geoff, a confirmed bachelor, seems to have come up with the best possible solution. In what Len describes as a cyclopic courtship, he persuaded Reinhilde that both he and Australia needed her more than did her native country, with the result that Geoff is flying to Vienna next month to marry her and bring her back to Brisbane.

In the meantime, Reinhilde has been completing her PhD at the University of Vienna, while the men are wondering how they can best use her professional talents.

Lecture Room dedicated

The name of Richard Grenfell Thomas, first Chief of the Division of Mineral Chemistry and 'master of words from wise to hilarious', will be always remembered at Port Melbourne — the elegant meeting place in the new administration building of the Division has been named the R. G. Thomas Lecture Room in his honour.

The Chief of the Division, Dr D. F. A. Koch, presided at the commemoration ceremony and the Chairman, Dr J. R. Price, introduced Sir Ian Wark who gave the address.

Among those present were Mrs Lynette Thomas and members of the Thomas family, Chiefs of Divisions, former colleagues of Mr Thomas, and the members of the Division.

Closed circuit television enabled those who could not be accommodated in the Lecture Room itself to see and hear the proceedings in the library.

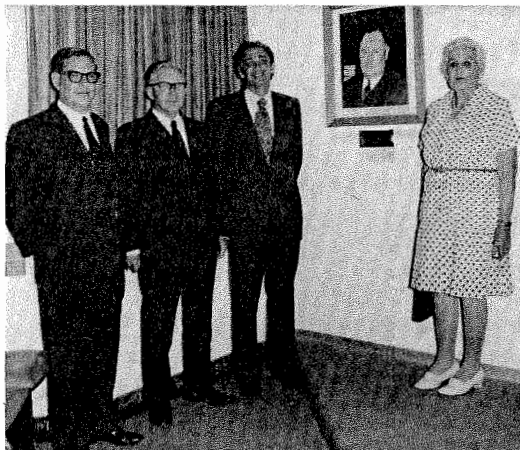
Mr Thomas early appreciated the vast opportunities for mineral investigations that would lie within the newly-formed Division of Industrial Chemistry and in 1940 was recruited from the CSIR Division of Animal Nutrition to set up a Section of Minerals Utilisation.

He set the pattern for future minerals research in CSIRO and encouraged and developed a team of independent research workers who will continue to serve CSIRO and Australia for many years to come.

It was a source of great pleasure to him that the Chiefs who followed — Mr I. E. Newnham and Dr Koch — came from his own staff.

Mr Thomas had a vast knowledge and love of minerals and made many expeditions — some arduous — to study them on location. To see, to touch, and to get to know every chemical element was a lifelong challenge.

The tribute concentrated on Mr Thomas himself — a man who inspired affection as well as respect, a man 'with wide-ranging interests, originality and initiative, a spirit of adventure and a passion for nature.' He was concerned about conservation long before it became a popular cause, and his eloquence and mastery of words were revealed when he spoke or wrote about matters close to his heart, his colleagues said.



Dr J. R. Price, Sir Ian Wark, Dr D. F. A. Koch and Mrs Lynette Thomas photographed by the picture of Mr R. G. Thomas at the official opening of the R. G. Thomas Lecture Room at the Division of Mineral Chemistry, Port Melbourne. Photo: E. T. Stephens.

For your information

Information circulars

75/12	Administrative Systems	7.2.75
75/13	Kimberley Research Station—Appointment of Officer-in-Charge	7.2.75
75/14	Appointment of Chief—Division of Animal Physiology	11.2.75
75/15	Study Applications—Macquarie Island	18.2.75
75/16	Payment of Net Salary to Permanent Building Society Savings Accounts	20.2.75
75/17	Commonwealth Employees Furlough Act—Proposed Amendments	21.2.75
75/18	Officer-in-Charge—Division of Land Resources Management, Alice Springs	28.2.75
75/19	Churchill Fellowships for 1976	3.3.75

Policy circulars

75/8	Superannuation—New Scale of Units of Pension	17.2.75
75/9	Camping Allowance	18.2.75

Anyone for cricket?

The Radiophysics Cricket Club, now in its 27th season, is a member club of the City and

Suburban Cricket Association playing on turf wickets in the Sydney metropolitan area. Matches are of one day duration, scheduled to start at 1.30 pm, and are played under the limited overs rules.

The standard of cricket is good as some teams have former Test, Shield and Grade players as well as enthusiasts.

Radiophysics Cricket Club has a few vacancies for next season and batsmen and leg-spinners are specially welcome.

Any interested player is invited to set out playing experience, grading, if any, and age to—

G. H. Trent,
Division of Radiophysics,
P.O. Box 76,
EPPING, N.S.W., 2121.

'Corresearch'

'Corresearch' is produced by the Central Communication Unit for CSIRO staff. Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.

LETTERS

That Ms thing again

Dr J. R. Price (Coresearch 188), has a valid comment about the title Ms being applied to women in a 1930s photo. Obviously, these women were never given any choice regarding their so-called 'courtesy' title.

He then goes on from this valid point to express his opinion that most modern women would not favour Ms as a title and to express his support of Miss Stanissopoulos, also saying that most women would support him in this view.

Since when is Dr Price an authority on women's views, and what, if anything other than his own personal bias can he cite to support his opinions.

I would have expected a more reasoned and less dogmatic approach from Dr Price. I believe that the individual woman should be able to choose which title she prefers (Ms, Miss or Mrs), and that is in spite of my own belief that it is discriminatory to apply the titles of Miss or Mrs to women when men always go by Mr, irrespective of their marital status.

Yours rationally,
Pam Powell,
Indooroopilly.

In the ethereal and elitist atmosphere of Oxonian debate, words and abstract propositions become all important, and the shadow is often mistaken for the substance.

Disagreements about the use of Mrs or Ms have nothing to do with shame about marital status, although they do induce some good old-fashioned Australian bastardry. They are not so superficial as to be simply resolved by debating ability on television. Oh yes, the Greek beat the Aussie in that arena.

But ecologically and sociologically-minded people must ask and try to understand why there is this emerging intraspecific on the part of many women/females (all derivatives of Adam's rib) who want a handle to their name which doesn't perpetuate their disadvantages in so many ways in modern society.

These disadvantages (some real, some imagined, but some not at all debatable) are spelt out by eloquent and articulate sheilash — woops, women in many publications and by some responsible organisations such as WEL, and I won't go into them here.

By a coincidence, there were two references to sex by a Mister Price reported in your last issue. The irony did not missus. As in the semantic debate, the word 'communication' conceals much deeper issues. Does the equation of sex and communication mean self-

expression, i.e. self-satisfaction only, or exchange of something that people always need to know and to share?

Yours respectfully,
L. J. Webb,
Queensland (thence permanently in exile).

P.S.—It seems inappropriate to sign myself 'Yours conservatively', because one has to be radical, these days, to be truly conservative.

It has long been one of the governing myths of CSIRO that too much interest in the sex of fellow members of the Organization, during working hours at least, is often a prelude to speedy resignation.

Perhaps for this reason, most of the senior scientific staff have retreated behind the chaste and sexless Dr, spurning those effete continental models that would suggest Mr, Dr and Ms, Dr.

Should we not go the whole hog, abandon the unnecessary distinction between Mr and Ms and denote everybody by some title that shows that their sex is irrelevant to their work. Thus we could revert to Mag. (for Magister) Smith, Bac. (for Baccaureus) Jones and even Cand. (for Candidatus) Robinson for those who haven't completed a course yet.

If this is thought to be too snobbish and hierarchical, then why not blanket terms such as Scientist Brown and Administrator Green?

This last would bring about immediate sexual equality in terminology, since not even the most fervent anti-libber would wish to be known as Scientist Brown or Administrator Green (or Editress Braxton?)

M. A. Jermyn (Mr Dr),
Protein Chemistry.

Fracture mechanics

May I illustrate the breadth of CSIRO's expertise by reference to the problem of tearing telephone books in half which has 'exercised' the people of the WA Laboratory (Coresearch 189). I'm not seeking to expand the telephone-book-tearing industry, but am able to report that it is possible for a 70kg, 50-year-old weakling to tear a Melbourne telephone book in half in about 20 seconds, using techniques that are not analogous to killing a cat by choking it to death with \$5 notes.

The approach would be fairly evident to CSIRO people who are concerned with fracture mechanics.

Wm. McKenzie,
Division of Building
Research, Highett.

All in a name

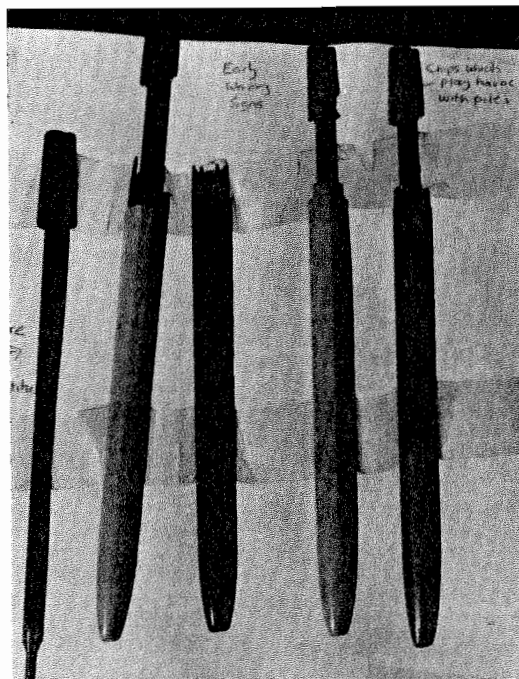
This is International Women's Year when women are being encouraged to accept their right 'to choose'.

Your editor therefore chooses to reverse the decision of a previous (male) editor of 'Coresearch' to style all women in CSIRO as Ms.

Women's names will in future carry the courtesy title that is given to us in reports — i.e. the anonymous Dr or Ms or Mrs or Miss.

It has been pointed out to us (by a male) that the use of Miss or Mrs adds an extra piece of information to our story and that that is what the art of communication is all about anyway.

When no such honorific is supplied rather than make telephone calls all around Australia, the editor will continue to use the officially acceptable alternative form Ms or apply the journalistic adage of 'when in doubt, leave out'.



A sample of pens chewed by Napier Roffey-Mitchell. Before his departure the RAO Social Club in Canberra presented him with a metal one.

Biros attacked

I wish to draw your attention to a serious error of judgment that has occurred in CSIRO's purchasing department. It concerns a recent change in the policy of issuing biros.

Some well-meaning officer apparently decided some time ago to institute an economy by replacing the standard hard-cased, screw-topped, replaceable refill biro (available in the Public Service to Class 7s and above) with a plastic two-tone, two-piece, brittle-cased, non-refillable excuse for a biro, stamped with the insignia Commonwealth of Australia model MB4 and available in black and blue, proof reader pink and chunder green.

Model MB4

While MB4 is undoubtedly cheaper than the aforementioned variety, unfortunately it does have a number of serious drawbacks for people like myself who suffer from the malady of penmasticatitus.

Penmasticatitus, dear editor (if you will pardon my presumption that you have not heard of the malady) is a disease of the posterior automotor mechanism of the cerebrum — the main part of the brain of vertebrates concerned with sensory perception and thought.

The symptoms do not appear to be synchronous with the circadian rhythm and can appear in crepuscular, nocturnal or diurnal pendactylous, omnivorous, non-diploblastic monotypic animals such as man.

The victims of penmasticatitus first show a tendency to suckle their digits when young, and in later life they transfer their attention to their pens. According to either Freud or Masters and Johnson they are usually deprived of an adequate period of antenatal breast feeding.

While both MB4 and its predecessor are attacked with equal vigour, the original pen showed more resistance, although in some cases the metal caps were removed and swallowed by patients with more chronic symptoms.

In the case of model MB4, small chips of poly vinyl chloride are shaved from the stem by the caninal incisors and ingested and deposited in the distal portion of the duodenum.

Under continued attack the posterior portion of the pen is weakened, breaks off into large chips and lodges, often with painful results, in the rectum.

Ink ingestion often accompanies the collapse of the pen and the victim acquires an azure lingual and suffers necrosis of the pancreas, constriction of the wolfriam ducts, opaquening of the vitreous humour, ecdysis of the pubic setae and dehydration of the sebaceous glands. One of the female victims is still suffering from mammary oedema induced, no doubt, by ingestion of the ink.

To further complicate matters the ink has a diuretic effect and the salivats and renals produce blue expectorates and urine. In some cases this has caused the patients to suffer a severe psychological breakdown by mistaking the symptoms for a particularly nasty form of V.D.

Catching?

As you can see the replacement of the original model biro with model MB4 has had some dire and no doubt unforeseen consequences on our staff.

Furthermore, observations in our section alone suggest that the incidence of penmasticatitus is sufficiently prevalent to cast doubts on the economic wisdom of replacing the previous pen with model MB4.

Four out of 12 writers admit to the disease and judging by the incidence of glaucous discoloration in the urinal, I feel sure there are several more surreptitious pen chewers among our ranks.

As each of us probably manage to masticate two MB4s per day (even more when working under extreme pressure), I am sure you will realise the doubtful wisdom of the purchase.

Unfortunately, dear editor, I will shortly be leaving CSIRO, attracted, I shamefully admit by the glamour, gold and sabbaticals of academic life. However, I hope the risk I have taken in admitting the heinous crimes of my gastronomic intakes during my 10 years in CSIRO will be constructively used for the betterment of others who suffer from penmasticatitus.

Napier Roffey-Mitchell,
Central Communication Unit.
Encl: Some samples of recent work (we had to prepare an Executive paper).

When Napier left us we had to call in the PMG Department — he also had the habit of chewing his telephone cord when talking to people and in his final efforts he chewed through the cord causing damage to its electrical systems and giving him a dose of verbal diarrhoea.

Napier is now a science communicator in Brisbane.—Ed.

Communication!

The following appears in the introduction to the annual report of a well known research organization — "To summarise, it may be said that . . . has over the years evolved progressively and pragmatically a system of program management, priority assignment and resource allocation which is continuous, comprehensive, and sufficiently detailed for effective and comparative decision-making, and which is capable of absorbing a large number of parameters of judgment."

If 'Coresearch' would like to sponsor an award for scientific rhetoric I would like to submit this quote as my entry.

—Bedazzled,
St Lucia,
Brisbane.



"I didn't realise that I'd be just an insignificant cog in a large organisation up here too"

CORERESEARCH

Produced by the CSIRO Central Communication Unit

192

May 1975

CSIRO is to establish a Division of Forest Research.

It will come into operation on 1 July with headquarters in Canberra and will be the Organization's 37th Division.

New Division of Forest Research

At the time of going to press the appointment of a Chief had not been made. The Executive is considering appointing an acting Officer-in-Charge in the interim.

Details of how CSIRO staff already engaged in forest research will be affected will be announced later.

The announcement of the new Division was made in a joint statement by the Leader of the Government in the Senate and the Australian Minister for Agriculture, Senator K.S. Wreidt and the Australian Minister for Science, Mr Bill Morrison.

The Australian Government was planning a major re-organisation of its forestry scientific research program, the statement said.

The Division would include the research activities at present carried out by the Forest Research Institute and the harvesting and mensuration research groups of the Forestry and Timber Bureau.

About 200 officers of the Forestry and Timber Bureau located in Canberra and field stations in the States will be affected by the change.

Following transfer of the Forestry and Timber Bureau to the Australian Department of Agriculture in 1972, a comprehensive review of the functions and work of the Bureau was undertaken.

This found that circumstances had changed since the Bureau was established in the early 1930s. Nowadays most States carried out

extensive scientific research into forestry. CSIRO also had a significant forest research effort in several of its Divisions. Better co-ordination of Australian Government scientific research into forestry could be achieved by bringing many of its activities together in a CSIRO Division.

The Ministers said CSIRO's role would be to concentrate on long term strategic research to complement the forestry research undertaken by the State forestry authorities.

The move had the support of the Standing Committee of the Australian Forestry Council — comprising representatives of all State forestry authorities — and of industry.

Discussions with the States had suggested areas of research for the new Division, including ecology, management and harvesting of forests, forest pests, tree physiology, health and nutrition.

The Division will be concerned with the whole forest ecosystem in relation to timber production, and just as importantly, to all other uses of forests.

Its program will be complemented by research in other CSIRO Divisions also concerned with such matters as forest hydrology and the multiple use of forests.

Consideration is also being given to the formation of a Forest Research Advisory Committee comprising representatives of State Governments and forestry industry interests to help identify research problems and to provide an avenue for dissemination of research results.

An inter-departmental committee will be established to make recommendations on Australian Government administrative arrangements for policy formulation for forestry and forest products. In the meantime, the remaining staff of the Forestry and Timber Bureau working on policy matters will remain with the Australian Department of Agriculture.

CSIRO research

SINCE its inception, CSIRO has undertaken research on the utilisation of forest products.

While to date no single Division has been concerned with the problems associated with the production of timber, a lot of work has gone on in a number of Divisions.

Several Divisions have studied the pests of the forests, particularly control of the Sirex wasp. Others have done extensive work on forest diseases, including *Phytophthora cinnamomi*, the cause of jarrah die-back.

The Division of Soils has been involved with various aspects of the soils of forest lands and was particularly concerned with a study of mycorrhizal fungi which effectively help the trees to obtain their mineral requirements from the soil.

The hydrology of forests, the utilisation of both pines and native forest products for timber and the pulp and paper industry, bush fire control and tropical rain forest ecology are only some of the subjects to which over the years CSIRO has already devoted a great deal of attention.



Yvonne Esplin

Information officer appointed for NSW

NEW SOUTH WALES has a new regional information officer. She is Yvonne Esplin (above), formerly a librarian at the Division of Textile Physics.

Now a member of the Central Information, Library and Editorial Services (CILES), Yvonne will be responsible for information services in the NSW region.

This will involve her in the indexing of CSIRO literature, the handling of inquiries and referrals to centres of expertise.

She will also be involved in CILES' rapidly developing SDI program which covers six major data bases in Chemistry, Physics, Electrotechnology, Water Resources and in the near future, Agricultural and Geological Sciences.

Yvonne is a science graduate from Sydney University, an arts graduate from Macquarie and she has a librarianship diploma from the University of NSW.

Following her departure from university life, she joined ICI and then became an information scientist with the Research Association of British Rubber Manufacturers in England.

Before taking up her new position Yvonne will spend a month overseas on leave during which time she will visit the UK, Europe, USA and South America. In the United States she plans to visit several information centres.

Acting OIC for Alice Springs

MR R.E. WINKWORTH will be acting Officer-in-Charge of the Alice Springs Field Centre at the Division of Land Resources Management for 12 months while the usual Officer-in-Charge, Dr M.A. Ross, spends a year with the Division in Perth.

Sludge men pool tips on slops

FORTY-ONE of CSIRO's sludge scientists from 14 Divisions got down to the nitty gritty on sludge at an inter-divisional conference held at the Division of Textile Industry at Geelong.

They met with three major aims —

- to achieve communication between interested workers in CSIRO on sludge properties, treatment and utilisation
- to share information about particular sludge (including slime and slurry) systems and techniques
- and to define problems and specific research needs.

A comprehensive program was organised to cover many facets of the problems associated with the handling of sludge in industry.

Participants later said this drew attention to the usefulness of such inter-divisional discussions.

They felt that not only had they learned of ways in which these problems were being studied or handled in other Divisions but they also had the opportunity to get to know co-workers in the field.

This, they said, could only lead to improved communication and co-operation.

Following the symposium, a dinner was held at which the Minister for Environment and Conservation, Dr Moss Cass, was the guest speaker.

While admitting that it was claimed politicians were sometimes experts on the subject of rubbish and garbage, Dr Cass elected 'not to demonstrate this expertise and talk about sludge'

but rather to confine his talk to speaking about the problems involved in the conflicting demands between economic development and environmental protection.

Later he discussed points of conservation policy and practice with his audience.

At the end of the symposium, a member of the Executive, Mr Victor Burgmann, talked about the structure of CSIRO, making the point that Divisions took up problems associated with particular industries and for that reason were not usually able to cover all aspects of a given problem.

This led to the need for good inter-divisional communication and he cited instances of a number of multi-divisional symposia which have been held in recent years.



(From left) Sludge and the environment were under discussion when Mr Victor Burgmann (a member of the CSIRO Executive), Dr M. Lipson (Chief, Division of Textile Industry), Dr M.H. Cass (Minister for Environment and Conservation) and Mr J.G. Downes (Chief, Textile Physics) got together at the Geelong symposium.

New plants discovered in Tasmanian mountains

LETTERS



David and Ann Ratkowsky photographed at 'Stowell', CSIRO's Tasmanian Laboratories.

STATISTICIAN AND HIS WIFE SHARE INTEREST IN BOTANY

A CSIRO statistician, Dr David Ratkowsky and his wife, Ann, have discovered three new plants in Tasmania.

They have capped that effort by rediscovering one that had only rarely been seen in the past.

The Ratkowskys have been in Tasmania since David joined the Division of Mathematics and Statistics in 1970.

During office hours David is available as a consultant statistician to the staff at the Hobart group laboratories as well as to people who use 'Stowell' as their base while visiting the State from mainland Divisions.

Outside working hours, however, David turns to completely different interests, those of bushwalking and botany, two hobbies he shares with his wife.

'Sometime ago we discovered that during the 1930s a survey of the plants of Mt Wellington — the peak that backs Hobart — was made by the Officer-in-Charge of 'Stowell', Dr Don Martin.

'But then in 1967, Mt Wellington was ravaged by a disastrous bush

fire and we wondered how it had affected the flora.

'Ann and I decided to investigate this and since then Ann has been on the mountain a couple of hundred times searching for plants and to check any missing ones.

'We're now compiling a new census and hope to complete this soon. Preliminary results have led us to believe that the fire did no permanent damage to the mountain's plant life and only a few species remain unaccounted for.'

The Ratkowskys' interest has not been confined to the Hobart region, however, and they have spent a lot of time tramping over most areas of the island except, so far, the north and north-west coast.

Their most exciting find to date involves a cushion plant which was seen in flower on the Hamilton Crags within a mile of the ski development in Ben Lomond National Park. Tasmania already had five known species of cushion plant.

Now the new one has been identified as belonging to the genus *Pygmaea* (*Scrophulariaceae*), a genus not previously known outside New Zealand, although a close relation has been found on Mt Kosciuszko.

The second new plant which appears to belong to the genus *Ixodia*, was found on an expedition north of Kelleve in south eastern Tasmania, while the third, a willow-herb, was found on Mt Wellington.

This has since been identified as *Epilobium rotundifolium*, previously known only in New Zealand and its surrounding islands.

The rediscovery was of a daisy bush, *Olearia persoonioides* var. *lanceolata* which the Ratkowskys have now found in four different places in the south east of the island.

CSIRO work

During the four years he has been in Tasmania, David has been involved in projects ranging from the post-harvest physiology of apples to the pollution survey of the Derwent River.

Statistics always need to be analysed and in providing this service for the staff and visitors, David has employed techniques which have helped his colleagues prove, for instance, that orchardists, who strike trouble such as bitter pit in their apples, can trace its origin back to the mineral content of the fruit, particularly calcium.

To a person with an analytical mind, statistics and their analysis present a challenge, but while many people who specialise in working out such problems deal only in large samples, David is evolving techniques to handle small numbers.

Sirovilla

WHILE applauding the endeavours of the Social Club of the Division of Textile Industry to establish the Sirovilla project, the choice of a site 'on the Princes Highway' would appear to be rather unfortunate.

If, as the description suggests, the site is on the main road out of Geelong, then one can immediately envisage a safety problem and a traffic-noise problem.

Why not away from a main traffic route? Would it be very far from shops, churches, etc?

Paul Goard,
Division of Mineral Chemistry
North Ryde

THIS letter was referred to the Secretary of the Sirovilla Committee Geoff Watson who commented that the scheme was planned in conjunction with the local City Council, and advice from expert sources such as social workers and geriatric hospitals indicated that the location had many advantages.

The main entrance is not on the main road and the intended bypass road will greatly reduce the volume of traffic. A screen of trees will also help to reduce noise.

Liberated Lib

MR DR JERMYN's suggestion in April 'Coresearch' that we might usefully adopt a work-indicative title rather than Mrs, Miss or Ms is a splendid idea. I would think every woman librarian in the CSIRO will be delighted to write a firm LIB before her name.

As there seems to be a feeling that the extra information provided by the usual honorifics is a valid and desirable bit of communication, perhaps we should go a little further and provide a brief biographical subscript?

(LIB) Doris M.E. Leadbetter
WA Laboratories,
Born Yorks., educ. posh school,
London Univ., public bars.
Slightly mature age,

P.S. The stars are, of course, based on the well-known Michelin Guide.

Defenceless?

RUSHING to Justin Murphy's defence, as he considers it beneath him to do so, I would like to bring certain facts to the attention of Wm. McKenzie who slightly dismissed the time Mr Murphy took to tear a telephone directory in half.

Simultaneous with this trivial display of muscular co-ordination — which he performed purely to edify the girls who cluster round him at the time — he was playing the trickier parts of a Beethoven Violin Concerto on comb and paper through his left nostril, teaching the Chief's secretary an improved version of the Belly Dance (he has the instructions available for a nominal charge), and mixing the RSs daily dose of LSD and Senna with his toes.

And I must point out that all this was done without violence; I can assure Wm. McKenzie — who expressed some doubt — that Mr Murphy would be most concerned about fractured mechanics. (LIB) Anne Hepworth
WA Laboratories
Born Surrey, raised Tassy.
Student of life, likes cats and yogurt, not nec. tog.
Ageing. **

Art exhibition

A MEMBER of CSIRO's Film and Video Centre, Perce Watson has had an exhibition of his paintings at the Hawthorn City Art Gallery, Melbourne.

It was a retrospective exhibition covering his work over 25 years. Each picture was dated so that viewers could follow his progress and change of style from figurative paintings (ones with subject matter) to abstracts.

Perce sold more than \$1200

worth of paintings which gave him a small profit after paying his expenses. All the paintings were done in his spare time.

His interest in art goes back to his boyhood. He did a four year art course and studied under George Bell, a well known art teacher. He had held several previous exhibitions.

In his work for CSIRO Perce is responsible for the animation and graphics used in the Centre's films.

CORESEARCH GOES OFFSET



After 191 editions, CSIRO's Printing Unit in Melbourne has given up the task of doing the make-up of 'Coresearch' and printing it letterpress.

From this issue onwards, the publication will be printed offset and will be set up in the Central Communication Unit in Canberra although its actual printing will still be handled by the Melbourne Unit.

The task of typing all the copy for publication is now in the hands of Pam Felsman, the CCU's IBM composer operator, while its Design Section will be responsible for preparing the copy to the camera-ready stage.

Checking the last edition to be prepared at Rokeby Street are, from left, Len Chard, Brian Banks, John Buchanan and Reg Lawrence.

CSIRO 'old boys' elected to Royal Society

THREE Australian scientists are among 32 elected this year throughout the world to the Royal Society, London.

They are Professor P.A. Moran and Professor R.O. Slatyer, both of the Australian National University and Dr E.G. Bowen, Counsellor (Scientific) at the Australian Embassy in Washington.

Two of them, Dr Bowen and Professor Slatyer, have had a long association with CSIRO.

"Taffy" Bowen was Chief of the Division of Radiophysics from 1946 until 1971.

Born in Wales, Dr Bowen obtained his Ph.D. degree in London in 1934 and in 1957 was awarded the honorary degree of D.Sc. by the University of Sydney.

1935 saw him working with Sir Robert Watson Watt and A.F. Wilkin in England to build the first experimental air warning radar in the world.

He was also in charge of the team which developed the first airborne radar as used in air interception and sea search during the night battles over Britain and in the Battle of the Atlantic.

He fitted the first experimental radar equipment to be installed in any aircraft in the United States.

In 1945 Dr Bowen came to Australia to join the Division of Radiophysics and became its Chief the next year.

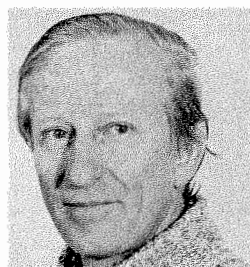
His personal research in cloud physics and the work of the Division under his leadership brought Australia to the fore in important areas of radiophysics.



Dr E.G. Bowen

The 64m radio telescope at Parkes largely owes its existence to his vision, enterprise and enthusiasm.

Professor Slatyer's research career began in CSIRO where he worked until 1967, making important contributions to the understanding of the interaction between plants and their environment.



Professor R.O. Slatyer

At the time of his resignation, he was Associate Chief of the then Division of Land Research and leader of its Environmental Biology Group.

During his years with the Organization, his research centred on the physiological and ecological effects of water energy regimes, and the effect of climate on plant distribution and productivity.

Professor Slatyer has also been keenly involved with a variety of organisations, both national and international, concerned with the environment, reflecting his feelings on the social responsibilities of scientists.

He was elected to the Australian Academy of Science before joining the ANU as the Foundation Professor of Environmental Biology in 1967.

Astronomer

DR PAUL WILD, Chief of the Division of Radiophysics, Epping, has had another honour conferred on him. This time it is the 1975 Thomas Ranken Lyle Medal, awarded to him by the Australian Academy of Science 'for his distinguished contributions in the field of solar radiophysics.'

Last year, Dr Wild, a Fellow of the Royal Society and a Fellow of the Australian Academy of Science, was awarded the Herschel Medal for similar services.

Appita award presented

A MAN who has made a valuable contribution to Australia's pulp and paper industry, Mr A.J. Watson of the Division of Chemical Technology in Melbourne, has been awarded the Appita (Australia and New Zealand Pulp and Paper Industries Technical Association) L.R. Benjamin Medal.

Mr Watson has been a member of the Organization for more than 40 years.

In that time he has become a world authority on pulp and paper science.

His early research had an important bearing on the development of the unique papermaking technology that was so essential for the emerging Australian industry, while his knowledge of the pulping of eucalypts, and of testing and analytical methods is highly regarded both here and overseas.

Some of Mr Watson's recent work has included an evaluation of the pulping potential of various

Research staff get recognition of their work



Mr A.J. Watson (left) with Dr W.J. Mitchell of the Tasman Pulp and Paper Company and the retiring President of Appita after receiving his award.

species in Western Australia and Papua New Guinea, research which has helped those areas develop as pulpwood sources.

Mr Watson has served the paper industry in many other ways besides his work for CSIRO.

Overseas scientists frequently seek his advice, he has lectured in many countries and has conducted science courses at universities in South America.

Mr Watson has been on the Executive Committee of Appita several times and was President of the association in 1962-63.

He has played an active role in the National Association of Testing Authorities and in the Standards Association of Australia.

A prolific writer himself, with more than 60 technical papers published, he was editor of the Appita Journal for 11 years.

According to his colleagues, the common feature in all the work Mr Watson undertakes is his meticulous attention to detail — all his efforts to the industry and Appita have been characterised by the thoroughness with which he carries out his work.

Agronomist to head Queensland ASAP

DR T.H. STOBBS, Division of Tropical Agronomy, St Lucia, Brisbane, has been elected president of the Queensland branch of the Australian Society of Animal Production (ASAP) which has 325 members.

A man with an international background, Dr Stobbs worked in Trinidad and Uganda before joining CSIRO in 1969 to work on tropical pastures.

Most of his work is done at Samford Research Station where he uses dairy animals to assess the nutritive value of tropical pasture species and to measure their productivity.

He has also been looking at the feeding behaviour of the animal as a means of assessing nutritive value.

With animals having to harvest

about 65 kg of feed every day, Dr Stobbs believes researchers should not just be looking at pasture yield, but must consider the availability of the feed, its leafiness (cattle select leaf from the stem to eat) and its nutritive value.

He feels that ASAP serves an important use in bringing farmers and scientists together and in bringing the results of research before the public.

MR IAN ROWLEY will be the acting Officer-in-Charge at the Division of Wildlife Research laboratory at Helena Valley, WA, while Dr Stephen Davies is away until August.

University appointment

MR A.F. MOODIE, head of the Division of Chemical Physics' Electron Diffraction Section, has recently accepted a Commonwealth Visiting Professorship at the University of Oxford for the academic year beginning in October.

Mr Moodie will be working on electron diffraction and electron microscopy with Professor P.B. Hirsch at the Department of Metallurgy.

In addition he expects to be undertaking some post-graduate lecturing at the University.

Commonwealth Visiting Professorships, which are open to all academic disciplines, are granted by the Commonwealth Scholarship Commission, and the recipients of the award (four or five a year) are chosen from persons nominated by vice-chancellors and principals of universities and colleges in the U.K.



A.F. Moodie

Studentships

IT'S TIME again to put in applications for CSIRO Post-doctoral Studentships. About 15 awards are available for study in areas of interest to CSIRO.

They are usually renewable in overseas institutions although consideration may be given to offering a limited number of awards tenable in Australia.

For further information and application forms write to the Secretary (Administration) CSIRO, PO Box 225, Dickson ACT 2602, or to the Registrars of Australian universities.

Watch for it...

The June edition will contain news on:

- flexitime in CSIRO
- appointments in the new Division of Forest Research
- report on the meeting of the Association for Science Cooperation in Asia held in Canberra
- field day at Belmont, Queensland

Glassblowers of CSIRO

KAROLY GROSZ, the Division of Chemical Physics' glassblower, learned his craft the hard way...in a factory in Hungary during the war years when both the standard of work and the output had to be high, where discipline was strict and absenteeism was so frowned upon that being AWOL without a good reason meant being jailed in the factory for several nights as a punishment.

Karoly is one of the seven glassblowers employed by CSIRO, a rare breed of technicians at the best of times for there are probably no more than 80 of them working in a professional capacity in the whole of Australia.

Probably one of the least heard-about sections of CSIRO's staff, the glassblowers play an important role for without their skills and the ingenuity, inventiveness and creativity that goes with their craft, the scientists and other technical members of the Organization would frequently have difficulty in getting the appropriate apparatus for their work.

Karoly began his apprenticeship in Budapest in 1941 and at the Orion Glassworking Company was taught a wide range of glass blowing skills.

He learned to make anything from neon lamps to Dewar flasks, from ampoules to high vacuum equipment.

'It was wartime and we had to work a five and a half day week for a very small wage,' he said. 'The only consolation was that if our performance for the five days was satisfactory we could use Saturday morning to make pieces for our own interest.'

of Hungarian glassblowing factories. His experience enabled him to get a position at Szeged University in the Department of Medicine where he worked until he decided to migrate to Australia via England.

He spent two years in the UK and arrived in Australia in 1959 where he worked for several firms in Adelaide, including Philips (Australia) Ltd.

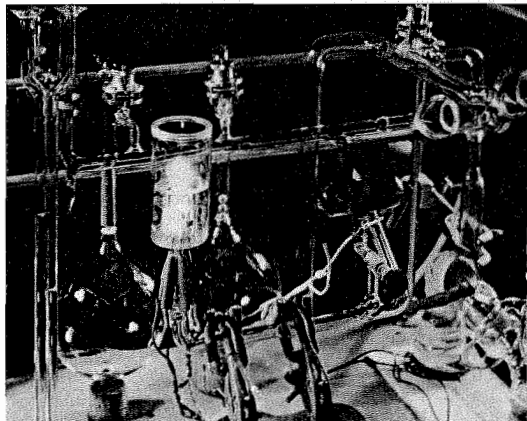
'But then I lost interest in it all for a time and took to driving semi-trailers between Adelaide, Sydney and Melbourne and looking for a more suitable position.'

Karoly found it at the Division of Chemical Physics and has been there since 1961.

Working in the same Division is Bill Lahey who began his career as an apprenticed glassblower in 1946 with Eccam Ltd in London.

Five years later he joined Edison and Swan (AEI) as a general glassblower and had his introduction to vacuum-tube technology and glass-to-metal sealing techniques.

Bill decided in 1962 to emigrate to Australia and had his first taste of work here at the Weapons



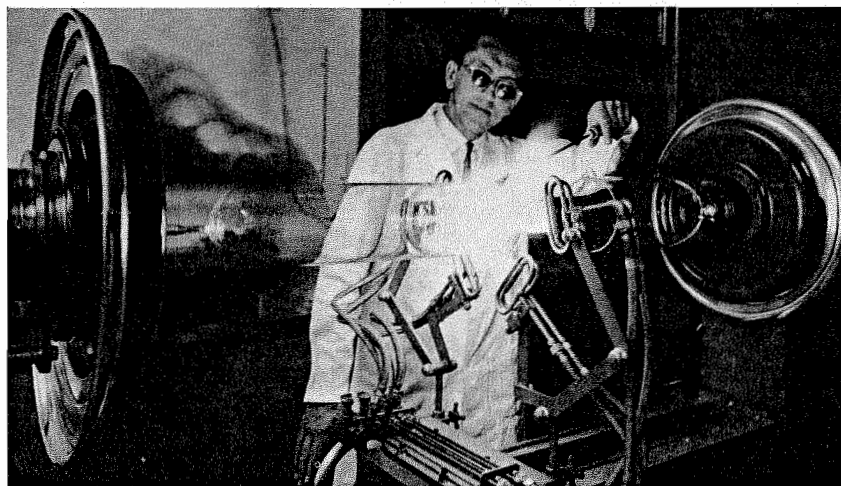
A vacuum system used to evacuate the chamber of a hollow-cathode lamp manufactured by Bill Lahey. A difficult feature of the manufacture of this lamp was the formation of the glass-to-metal seals between the metal pins and lower surface of the lamp.

'It was in this way that I came to make novelty ware, an art I still practise occasionally.'

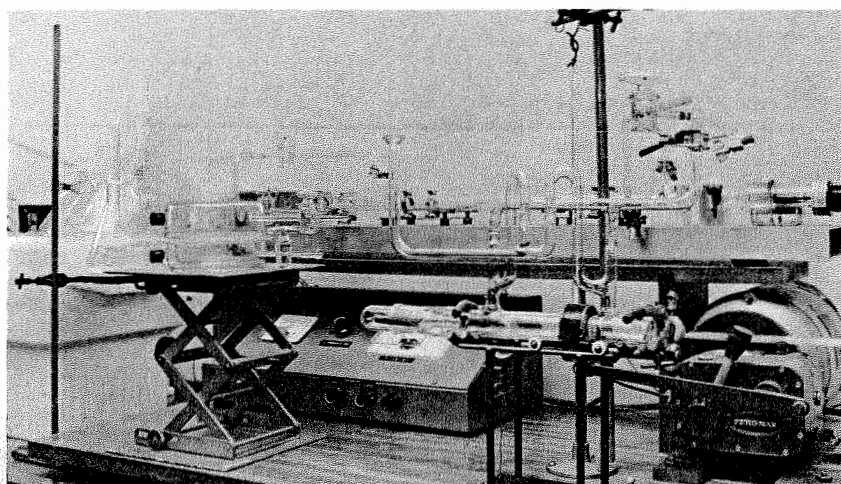
By 1946 Karoly had completed his apprenticeship and worked for the next few years in a variety

Research Establishment in Salisbury, South Australia.

That led to an appointment at the University of Adelaide and then to his present position with the Division.



Karoly Grosz at work on the glass lathe during the manufacture of a large Dewar.



'Coming to CSIRO presented me with an opportunity to employ a wide range of skills in a well equipped laboratory,' he said.

For Doug Rose who is employed at the Division of Food Research at North Ryde, CSIRO came as a distinct change after his previous work in Crown Crystal Glass Manufacturers where he had learned to produce anything from eye droppers to mine horns and hand grenade capsules during the war.

Lured to the Organization with the bait of more interesting and a greater variety of technical and scientific apparatus, Doug has been with Food Research since 1953.

Before then, though, like many of the glassblowers, he designed and manufactured glass novelties, including animals and birds, when he felt like relaxing and simply enjoying his skill.

Doug shares his interest in his craft with his wife who was also employed as a glassblower at

THE art of glassmaking was probably discovered 4000 years ago: sailors who tried to cook food on sandy Syrian beaches, supporting their utensils on blocks of soda from their cargoes.

When the heat fused the soda and sand they found a transparent liquid that hardened on cooling.

The Egyptians and Jews used glass and the Phoenicians invented the glassblowpipe for glassblowing.

A blowpipe works in much the same way as a pipe one uses in blowing soap bubbles.

Substitute the soapy water for hot molten glass. 'Gather' some glass onto the end of the pipe and puff. If the pipe is handled and revolved with dexterity, a glass bubble is formed. The art then lies in manipulation.

To that skill a glassblower working in a research organisation must add a broad general knowledge of science so that he can co-operate with the scientist and understand his requirements.

Crown Crystal manufacturing scientific apparatus.

Both of them have demonstrated the art of making glass models to a variety of audiences and have done this in association with another former CSIRO glassblower, George Gordon, and his wife.

George, who worked for the Division of Fisheries and Oceanography for about 24 years, only recently retired and the Division now has to send to craftsmen outside for any of the apparatus it needs.

Rudolf Pillig arrived in Australia from Germany in 1954 to work with the John Curtin School of Medical Research in Canberra but was enticed to Melbourne by the Olympic Games two years later.

In 1960 he joined the Division of Chemical Physics and 10 years later transferred to Mineral Chemistry.

Rudolf, who was born in Mexico, did his apprenticeship in Germany and was offered a chance

The sulphur dioxide permeability measuring circulating system, together with associated plastic film sample is held between glass. Sulphur dioxide in nitrogen is passed across the film by a pump on the other side. Pumping piston in a constant bore tube. The diaphragm valves. The gas passes into a UV absorber returned via a series of taps to the permeability cell. The choice of suitable packaging was made by Doug Rose.

IN THIS selection of pictures no other glassblower can be seen.

The intricacy of the design camera except under special photo most CSIRO laboratory apparatus was no opportunity for our glass their work for this collection.

Glassblowers do not often get their work in a glass case for equipment has served its purpose and is salvaged are stored away for photographs are representative laboratory' at the time 'Coresearch

The photographers were: F. Ed Stephens and Geoff Lane. (National Measurement Laboratory)

by to study scientific glassblowing with a research institute near Munich.

ent He completed a four-year course in 12 months less than the normal time and simultaneously completed a three-year optometry course, receiving a Fellowship Diploma for Scientific Glassblowing from the Chamber of Industry and Commerce, Munich, and a Certificate of Optometry from the Munich Optometry College.

ust Before coming to Australia, Rudolf worked with the Development Section of Siemens Schuckert.

'Technical and scientific glassblowing fills my working hours' he said, 'but I occasionally design and make ornaments, including golf and soccer trophies, purely for pleasure. I also give exhibitions of the art for schools and charity organisations to raise funds.'

Brian Carruthers, who is now the glassblower at the Division of Mineral Chemistry, had no intention of taking up this type of work.

He originally applied for a position as an apprentice electrical fitter with Standard Telephones and Cables.

'But I was told I was too young and that I had to serve six months in their glass shop which was engaged in producing transmitting valves for the Armed Forces.'

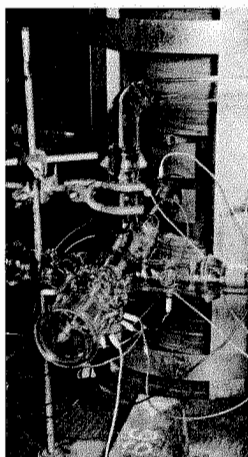
Once in the Valve Division, there was no release for Brian and when the section closed in 1961 he was in charge of the glass working department.

During the next three years Brian had a complete change...he took to greenkeeping and horticulture, obtaining a certificate of qualification at the Ryde College of Horticulture.

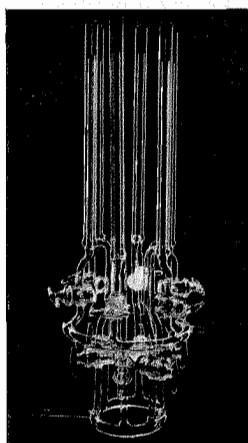
'But the urge to return to glassblowing was too strong and I joined CSIRO in 1964.'

Like most of the others, Brian has enjoyed giving demonstrations of his work and at weekends when he was employed by private enterprise used to travel with country shows and fairs.

'For some years after the war three other glass-blowers and I made countless thousands of glass Christmas tree decorations but that project came to an end when



Front view of mass-spectrometer revealing analyser tube passing through the centre between the pole pieces of magnet. Created by Rudolf Pillig.



This set of six traps made by Brian Carruthers was used to take samples of gaseous products produced in a propane-air flame when SO₂ was introduced. This ring system of traps was immersed in liquid nitrogen and the gas samples taken through a silica probe at varying distances up the flame. It allows six samples to be taken under the exact same conditions, excepting the position in the flame.

cheap Asian products hit the Australian market,' he said.

Today much of Brian's work consists of low vacuum systems and much of it is done using silica, a material which creates its own difficulties.

Harry Howes was recruited to the Organization from England. He arrived in 1961 to start work as a glass-blower with Chemical Physics at Fishermen's Bend and subsequently joined Applied Organic Chemistry.

He also does glassblowing for the Divisions of Chemical Technology and Tribophysics and gives advice and assistance to the Dairy Research Laboratories and the Division of Animal Health.

Harry's association with this craft stretches back a good few years — he started learning his trade at the Physics Department of Queen's University, Belfast when he was only 13 years of age.

By the time he came to Australia, he had had 25 years experience in research establishments, including universities in England and Scotland, where he came to know the requirements of research scientists. For eight years he

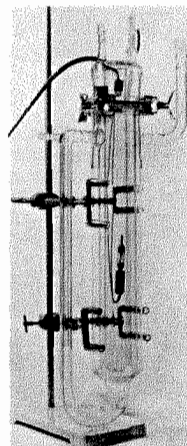
worked in industry.

Harry's present work is varied. He is involved not just in the fabrication of specialised glassware, but in the planning and designing of equipment.

He has written a paper entitled 'A novel method of making graduations in glass' which has aroused interest in several countries overseas.

As a change from the demands of scientific work, he enjoys giving talks and demonstrations in glassblowing for charity. Another interest is his art shows where he has enjoyed some success with bark painting and watercolours.

An ultra violet chemical reactor which Harry Howes is at present designing. (right)



WORKING with an oil company in Iran where he was the only glassblower in the whole country, being involved in the production of equipment for the first trans-Atlantic television hook-up in the 1960s and, more recently, becoming a member of the staff of the National Measurement Laboratories in Sydney, have all been part of the 40 years' experience Alex Bell has had as a glassblower.

Alex was born in England in the town of Sunderland which relied on shipbuilding as its main source of employment.

The eldest of a family of four sons, he left school in 1935, sternly warned by his father, a shipyard plater by trade and who had been out of work for seven years, that he must get rid of any ideas of following in paternal footsteps.

'I wanted to join the RAF but my parents would have no truck with that idea and I eventually found a job working in the factory of J.A. Jobling, the makers of Pyrex glassware,' Alex said.

The first work Alex did in the 'glasshouse' was to polish by hand the cast iron moulds used in the manufacture of any pressed glassware. The process was repeated on every mould after it had been used for an eight-hour shift.

One such mould that Alex recalls vividly to this day weighed about 12 kg. He was giving it his customary enthusiastic bit of elbow grease when it slipped from the bench and landed on his big toe.

'I was carried away for first aid treatment which was effected by a uniformed commissioner who did a Picasso bit with his iodine, and paint brush—there were no fancy first aid stations in those days.'

During the operation, the owner of the firm came in, took note of what was happening and departed.

Three weeks later he gave Alex the opportunity of transferring to the scientific apparatus department, where he remained for the next seven years.

When the war ended he felt he should gain experience in other applications of his craft.

After a period with a firm where he obtained a great deal of practice in tungsten-to-glass sealing, he left to work in Iran.

This was Alex' first experience of working in laboratories and he found it an 'enlightening' period of his life.

With the nationalisation of the oil industry, along with many others, Alex found himself redundant and returned to England.

'After working in laboratories, ordinary production now seemed

soul-destroying,' he said, 'so I joined an electronics company in Manchester.'

This gave him the chance to be in an exciting and satisfying area and working with the division that produced the stand-by microwave tube for the trans-Atlantic television hook-up.

'I was particularly proud of the 5-inch diameter Kovar-to-glass tubular seals that held that tube together,' he said.

After 11 years with the firm, Alex felt the need of a change. But where to go?

He and his wife decided to emigrate. Australia came into the picture.

They made inquiries at Australia House. The officer interviewing them asked: 'What is a scientific glassblower?'

On being told, he replied: 'No sir, I don't think Australia has need of your skills. We import all our window glass.'

Alex came close to giving the idea away when he had word

There are probably less than 80 professional glassblowers working in Australia. Seven of this rare breed of technicians are located in CSIRO.

CSIRO glassblowers

Alex Bell — National Measurement Laboratories

Brian Carruthers — Mineral Chemistry

Karoly Grosz — Chemical Physics

Bill Lakey — Chemical Physics

Harry Howes — Applied Organic Chemistry

Rudolf Pillig — Mineral Chemistry

Doug Rose — Food Research

from Victorian contacts which gave him a ray of hope.

He and his wife decided to sell up and head for Melbourne. It was at that time he saw the advertisement for the then National Standards Laboratory in Sydney. He joined CSIRO soon afterwards.

'In my career of nearly 40 years of glassblowing, I've had many satisfying periods when my work has gone well,' Alex summed it up.

'There've been others when I wished I'd never become a glassblower — I think most of us have experienced these feelings.'

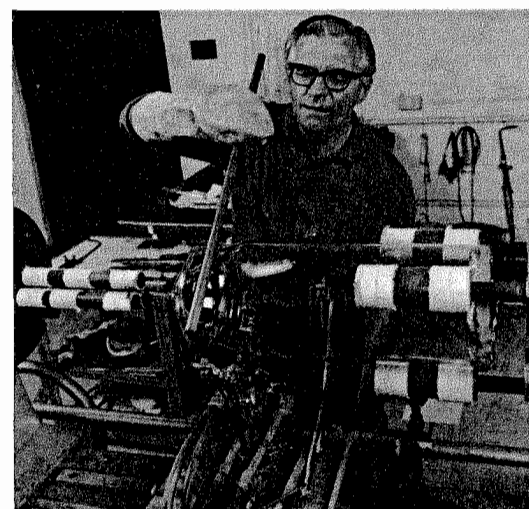
If Alex has regrets he says it's been his lack of a flair for artistic glassworking. Because of this, he's never taken part in exhibitions or competitions.

'I must admit to a little envy when I see some of the gems of workmanship and skill of other glassblowers. But other than that, my work gives me a lot of satisfaction.'

Since joining CSIRO Alex has made many pieces of equipment of a varied and complex nature.

'By and large, most scientific glasswork is a slow build up of many pieces of glass.'

He didn't add that scientists who have seen the men at work would say that it calls for infinite patience and great skill.



The photo's show the start of an impressive piece of equipment being made by Alex Bell (NML), a pair of Dewar containers. They took about two months to complete, simply because they were too large to pass through the heads of the lathe. The length of these Dewars was such that there was little more than one inch of movement left on the length of the lathe for the final assembly. In use these Dewars fit one inside the other, the inner one housing a cryostat under liquid helium. The inner vessel is permanently pumped, the outer one is sealed off.

ring apparatus consists of an all-glass gasated electrical measuring equipment. A round faces in a glass permeability cell, cross one side of the film while nitrogen is carried out using a magnetically driven action of flow is controlled by non-return pton cell with quartz faces before being neability cell. In this way the increase in is measured. Data from this system are a films for dried fruit. This apparatus

real appreciation of the true skill of

can seldom be captured by the otographic conditions. And since s; it is used as soon as it is made there blowers to set up special pieces of

et the chance to put examples of display — for the most part, once s; it is dismantled. Parts which can use in another experiment. These of work which 'was around the h' requested pictures.

'rank Lugton (Chemical Physics), (Mineral Chemistry), Don Rose ies), Will Rushton (Food Research).



The conflict of the hills and plains

Scientists investigate land resources management near Perth

To a stranger the Scarp looks little more than a decent-sized cliff that drops from the plateau beyond.

But you can't dismiss it like that. Because what happens on the Escarpment is of great importance to the cities of Perth and Fremantle, the other towns and settlements in the region and to the strip of land between the hills and the ocean known as the Swan Coastal Plain where farming and industry make use of the land.

To start with, Perth is almost solely dependent on the water that is obtained during the summer months from the Darling Range areas.

Covered with jarrah forests already suffering from the effects of jarrah die-back disease, the ranges form a green belt between the inland plateau and the coastal plain and provide facilities for an ever-expanding population continually applying recreational pressures on the area.

The land on which the forests grow is also rich in bauxite and despite opposition from conservationists, mining operations have been started and are an important economic asset for the State.

Already a conflict of land use has developed and it was into this picture that the recently-formed Division of Land Resources Management moved with a ready-made challenge for its staff.

Early in the 1970s soil and plant surveys in the Darling Range were begun by the Divisions of Soils and Plant Industry but LRM is now working on a much more comprehensive investigation of the region.

This involves a multi-disciplinary team which covers subjects such as soil and vegetation surveys, pedology, mapping, chemistry, soil physics, hydrology and microbiology.

In addition, computing and technical staff are supplying support services and others, whose expertise lies in systems analysis, are also assisting.

Those who are closely associated with the project include Maurice Mulcahy, Adrian Peck, Eric Bettenay, David Williamson, Barry Carbon, Bill McArthur, Max Churchward, Nick Malajczuk, Geoff Dimmock and Frank Hingston.

The problem with salt

One of the most significant discoveries has been the extent of the soluble salt content of the soil profile of the range. This has been found to be as high as 1 million kg per hectare (400 tons to the acre).

Once the native forest is disturbed, more water passes through the soil, causing the salts to leach out into the streams and rivers. These then reach the reservoirs used by both irrigation and domestic consumers.

ABOUT 25 km to the east of Perth there's a geographical feature called the Darling Range. The Scarp or Escarpment, the locals call it.

No self-respecting mountaineer would get excited about the range as a training ground for alpine climbing — its altitude is only about 300 metres.

It is now known that many uses the ranges are put to have a potential or actual effect on water supplies.

So that Federal, State and local authorities have scientific evidence on which to base their decisions for land management, the Division is gathering evidence on many facets of land use and their effects.

Take the bauxite mining. The bauxite itself is located within about half to five metres of the surface and to get to it the forest and top soil both have to be removed.

The top soil is stock-piled and when an area has been worked out, the compacted clay surface left below is broken up with a ripper, the soil is spread back and the ground is then replanted with trees.

At present less than 200 hectares a year are being used by the mines but the scientists want to know what effect the disturbance to the land is having on the salinity of the nearby water.

But if mining operations are resulting in clear felling of the original forest, so too is the clearance of other forested areas for expanding agriculture.

In fact, agriculture is probably still a far greater factor than anything else affecting the forest.

Before mining began, the Perth Metropolitan Water Board had set up two study areas near Jarrahdale and they are monitoring the quality and quantity of the water to see what changes are taking place.

The Division is making its own more detailed measurements near Dwellingup.

Die-back

The jarrah die-back disease is another issue of importance. This isn't a problem that's peculiar to Western Australia, but it's been suggested that if a solution to it isn't found, the jarrah forests may be lost from the Ranges within the next 20 or 30 years.

A number of experts have worked on this for some time and LRM has appointed a microbiologist, Dr Nick Malajczuk, to make an intensive study of the problem.

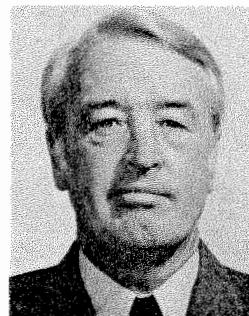
The one thing that is certain is that any major activity in the forests helps the spread of the disease.

The Plain story

The Coastal Plain is a valuable asset to the region for urban expansion, farming and, in selected areas, for secondary industry.

Already the increased salinity of the water from the catchment areas is causing some farmers in the irrigation areas to voice concern about their future.

While much of the team's work is concentrated on the Ranges, changes taking place on the plain are another aspect of the Division's research work for at the same time



Maurice Mulcahy — involved in the multi-disciplinary investigation team.

as industry is welcomed by some, conservationists are casting anxious eyes on the land, its lakes and its coastal and estuarine waters.

'It's all a very complex picture,' the scientists say.

The tourist trip

You can drive around the country and see what they mean. It's not hard to get up into the forests and see evidence of the jarrah disease.

You can also find the mining operations and while you mightn't appreciate their scarring of the land, their administrators can certainly show you where the trees are growing in a regeneration project.

Back on the coastal plain, team members like Bill McArthur who has a personal interest in wildlife conservation, will show you small lakes that in the past have been hidden from the road by rushes and trees.

Now land around them has been cleared, their edges have been filled with the city's refuse to form a reclamation area and recreational facilities have been provided.

The lakes are more accessible and useful to the public but conservationists query the practice, suggesting that it may endanger the fish and water birds that permanently or seasonally inhabit the lakes.

There's a canal housing estate that's been finished for a long time but where as yet no homes are actually built.

Right on the waterfront it looks ideal for those who like to live and play near the sea.

But you wonder...Australia's estuarine waters are like those of other countries. Vulnerable to this sort of urban expansion.

Then nearer the cities there are the industrial areas. Signs of prosperity.

But you've heard the fishermen talking about the possible decline of the rock lobster and other fish resources and some conservationists are questioning whether the food for the fish is being affected by industrial and urban expansion and its effects on the coastal waters.

You make 'the grand tour' with the scientists and you finish up agreeing with them — it is a complex picture.

You ask how long before they know the answers and it isn't all that surprising when they say: 'It'll take years to gather all the evidence, but we already have pressures on us to make preliminary predictions.'



Drilling operations in one of the Darling Range catchments to monitor the salinity of groundwater. Pictured are Tom Bromilow, Wally Russell and Adrian Peck, all from the Division of Land Resources Management.

Tropical Agronomy believes 'overseas interaction' important part of work

The Division of Tropical Agronomy in Queensland enjoys an international reputation for the work it has done in northern Australia on pasture and related animal production.

As a result there's a constant flow of overseas visitors to the Division's Cunningham Laboratory in Brisbane, Davies Laboratory in Townsville and to the various field research stations it has located in the north.

The last few months have seen many individuals arrive from other countries as well as delegations such as the group of Chinese animal husbandry specialists, the party of North Vietnamese which included their Minister for Trade, and a high level Government mission from Thailand.

Just as regularly invitations are received by the Division to send members of the staff overseas to act as consultants and advisers.

They go with the prime object of sharing their knowledge with the countries that want such assistance but, as their Chief, Dr Mark Hutton says: 'Let it be said that we in our turn learn a great deal from them.'

Dr Hutton is fully aware of the demands that such exchanges make on the staff — not just on those who are actively involved in the travel but also on those who have the administrative and other work to do — but he believes that 'overseas interaction' is an important aspect of the Division's undertakings.

Political

He's also convinced that such interaction can be of political significance and that it has opened doors which have been to Australia's advantage.

Despite difficulties that countries like Australia were at present having with marketing their own

beef, there was still an increasing world demand for beef and dairy products, Dr Hutton said.

In Cuba recently he had found, for instance, that the people were rationed to about 400 gm of meat a fortnight and were also rationed on milk supplies.

The reason for this was a lack of foreign exchange for imports. It was therefore important to the country's eight million population that their own dairy and beef production be increased and he had been asked by the Cuban Government to spend a fortnight at the Institute of Animal Science to give them some advice.

In Mexico last year, Dr Hutton gave three seminars, one for the powerful and influential Bank of Mexico, which has important beef and pasture development programs, another at the National University School of Agriculture and the third at the National Institute for Cattle Investigations (INIP).

While in Venezuela in 1972 he assisted the Shell Foundation with their plan for increasing local beef production.

At the International Tropical Agriculture Centre (CIAT) in Colombia, Dr Hutton was on a panel set up to evaluate the Centre's beef production systems program.

He has also recently visited China and given seminars there.

'Usually all that agricultural research workers in most countries

need is some advice and guidance,' he said.

Other members of the staff have also been prepared to work overseas as consultants.

Like their Chief, they frequently travel in their own time, not in CSIRO's.

Thai aid

Mr Ian Wood, of the tropical grains crops section, was in Thailand in 1970-1971 on secondment to the Department of Foreign Affairs to work on the Thai-Australian land development project.

Since returning to Australia he and two other Australians have been asked to serve on a technical advisory committee to compile a feasibility study for another land project, this time one initiated by the King of Thailand.

The committee's report has been presented to the Thai Government and it is expected that further assistance will be sought from ADAA (the Australian Development Assistance Agency).

MARDI

Several of the staff are involved in a five-year collaborative project between CSIRO and the Malaysian Agricultural Research and Development Institute (MARDI) with the aim of developing research in plant nutrition and in pasture and animal management. At the same time

a training program for the Malaysian staff has been introduced.

Dr Ted Henzell, the Assistant Chief, advised MARDI on the general development of the project and since then Dr Peter Kerridge has been working in Malaysia on the plant nutrition aspects.

Dr Len 't Manneje has initiated the project's grazing and animal production research and next month will hand over to Dr Doug Nicholls.

The scheme, which is administered by ADAA, is paid for by the Australian Government through the Colombo Plan and is being run by CSIRO.

Before the MARDI program was instituted, the Divisional Secretary, Mr Alan Eyles, looked at a proposition for pasture and fodder research for the Department of Foreign Affairs, following a request by the Malaysian Government for research assistance.

Last year he again visited Malaysia and Washington when he was asked by the World Bank to

join an appraisal mission to help expand the Malaysian agricultural activities.

A considerable part of Alan's input was on the administrative side of the \$US25 million project and the mission's report is expected to be completed soon.

Other members of the staff recently involved in projects include Dr Peter Gillard (animal feeding in Bangladesh), Dr Roger Jones (pasture development in the Solomon Islands) and Dr Col Andrew (pasture development in Fiji).

The Division is at present host to visiting research workers from Venezuela, Brazil, Japan, the Netherlands, Mexico, Malaysia and India who are spending periods with the staff on different agricultural projects.

A list on the notice board in Alan Eyles's office, though, indicates that they are only the first of many for the year. More are expected from Peru, Papua New Guinea, India and Germany to note just a few of the home countries.

Cover girl



It was a family affair

WHEN the Organization's Annual Report is being prepared, it is never easy to find a cover picture.

The illustration has to be appropriate in its subject matter, it has to be a high quality photograph and it has to be arresting in its colour, to name just some of the qualities that are required.

Last year the Division of Atmospheric Physics submitted this one which showed a CSIRO staff member calibrating net radiometers (radiation measuring instruments) at the Division using artificial solar radiation from a Xenon arc.

As far as the Report was concerned, the caption only concerned itself with saying what the picture was about, but the Technical Association delved more deeply into it.

What they asked, was the story behind the cover girl?

In the last issue of the CSIRO Gazette they had the family story.

The 'Gazette's' inquiries revealed that the technician shown at work was Veronica Van Leeuwen, a technical assistant with the Division of Food Research, at the Dairy Research Laboratories, Hightett.

Veronica started with CSIRO in 1969 at the Division of Protein Chemistry, working for Dr Brian Milligan who was carrying out

research into the cross linking of wool.

She was trained in various protein chemistry techniques and in 1972 transferred to the Division of Atmospheric Physics, where she was mainly concerned with the calibration service CSIRO provides for the local manufacturers of net radiometers (as shown in the photograph).

After 16 months with Atmospheric Physics, Veronica transferred to Dairy Research Laboratories, working under Ron Hill in the Protein Laboratory, and joining the same team as her brother, Hank Van Leeuwen.

Hank, who had joined CSIRO in 1965 as a TA with Dairy Research, met his wife Kathy who also worked for CSIRO. They were married in 1970, and Hank went to work in the Protein Laboratory with his wife in 1971.

It was following the departure of Kathy in June 1973 that Veronica joined the team.

Coincidentally, the original construction and development of the net radiometer featured in the photograph with Veronica, was carried out by Gordon Vanderheiden, Divisional Representative at Dairy Research, when he was a scientific instrument maker with the Division of Meteorological Physics 16 years ago.

The cover picture was taken by David Whillas.



A number of CSIRO, university and State agricultural research stations were on the itinerary of Dr C. Devendra, Chief of the Animal Nutrition Branch, Malaysian Agricultural Research and Development Institute (MARDI), Malaysia, when he recently visited Australia.

Main object of Dr Devendra's fact finding mission was to discuss the latest techniques being used for the digestibility of animal feeds.

A major part of his visit was spent with CSIRO's Division of Tropical Agronomy in Queensland and he is seen here with Mr T.R. Evans inspecting a kikuyu grass pasture at the Beerwah Pasture Research Station.



Dr Eric French has relinquished his position of Officer-in-Charge of the Animal Health Laboratory of the Division of Animal Health, Parkville, and will return to research work. He has been succeeded by Dr Ian Parsonson for a term of three years.

A dinner was held to mark this occasion, at which the Chief of the Division, Dr Alick Lascelles, spoke of Dr French's work. From left, Dr Parsonson, Mrs French, Dr French, Mrs Parsonson, Dr Lascelles.

For your information

Information circulars

75/20	CSIRO Postdoctoral Studentships 1975	3.3.75
75/21	Centre for Animal Research and Development, Bogor, Indonesia	20.3.75
75/22	Head Office arrangements during absence overseas of Dr J.A. Allen	20.3.75
75/23	(not issued yet)	
75/24	Officer-in-Charge, Animal Health Laboratory, Parkville, Vic. (Dr I.M. Parsonson from 24.3.75)	
75/25	OECD - Training Program (Applications close 15.5.75)	
75/26	Officer-in-Charge - Division of Wildlife Research Laboratories at Helena Valley, W.A. (Mr I.C.R. Rowley, acting to 4.8.75)	

Policy circulars

75/10	Annual leave loading - revised arrangements	24.2.75
75/11	Salary adjustment - research scientists, experimental officers, engineers, and scientific services officers	17.3.75
75/12	Salary adjustments - accounting machinists, clerical assistants, computer operators, data processing operators, supply and transport officers, teleprinter operators and typists and related staff; Intermediate Certificate rates	18.3.75
75/13	Clerical and administrative appointments	19.3.75
75/14	Salary adjustment - drafting staff; Leaving Certificate rate	
75/15	Salary adjustment - printing tradesmen	
75/16	Salary adjustment - translators	

Engineers meet at Highett laboratories

THE DIVISION of Mechanical Engineering recently hosted the 97th meeting of the Engineering Group Committee at Highett.

The Committee was established more than 30 years ago to provide meetings for heads of government laboratories at which common engineering problems and the work of member laboratories can be discussed informally.

Four CSIRO Divisions and four Government establishments are

involved.

The Minister for Science, Mr Bill Morrison, addressed the meeting on the new Australian Science and Technology Council and the organisation of engineering research.

While he was at the Highett site, Mr Morrison paid a brief visit to the Dairy Research Laboratory and inspected the solar energy exhibit at Mechanical Engineering.

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 226, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.

Faster appointments

ADMINISTRATIVE officers and clerks who are appointed to positions following internal advertisements, will now only have to wait a maximum period of four weeks between confirmation of their promotion and the date of their release from their existing positions, providing that is, there are no appeals.

This move has been determined by the Executive as a solution to a chronic staff problem associated with the internal appointment system.

In the past there has sometimes been difficulty in securing the release of appointees before their replacements take up duty.

This has particularly been the case with senior appointments which under the old system could involve several appoint-

ments at progressively lower levels and resulted in many months of delay.

Under the new arrangement when appeals are received, the release date will be not later than four weeks after the Executive has decided the outcome.

For further information see Policy Circular No. 75/13.

Address

WANTING to get in touch with the new Centre for Animal Research and Development at Bogor in Indonesia? Write to the Officer-in-Charge (Dr L.J. Lambourne), CSIRO, Centre for Animal Research and Development, P.O. Box 123, Bogor, West Java, Indonesia.

CSIRO sports news

THE CSIRO Socceroos, the Head Office soccer team, have entered the Australian National University's soccer tournament.

The first match was played against ANU's Nuclear Physics squad with a nil all draw.

'Coresearch' is led to believe no player's name was recorded in the ref's black book but we hear coach Henry Moulis' excitement was mentioned in despatches.

Head Office sporting types are reported to be watching the Organization's representatives in an otherwise all University competition with considerable interest.



CSIRO Socceroos line up for the ANU competition in Canberra. From left - back row: Kris Zanins, Rene Padovan, Peter Erskine, Brian Sprake, Brian Johnson, Charles Pearmain. Front row: Martin Smith, Bob Dent (captain), Peter Pharaoh, Graham Brill and Henry Moulis (coach).

Science and radio

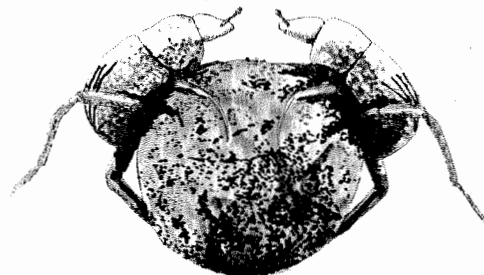
THE Australian Academy of Science and the Australian Broadcasting Commission are sponsoring a two-day seminar and workshop during 22-23 August at the ABC's Television Studios, Gore Hill, Sydney, to discuss science broadcasting.

Interested scientists are invited to apply to attend. Successful applicants will be offered assistance with travelling and accommodation expenses if their institute is not able to sponsor them.

Applications setting out age, qualifications, current position and interest in science broadcasting should be addressed to the Secretary, Academy of Science, P.O. Box 216, Civic Square Post Office, A.C.T., 2608.

Applications close 23 May.

DUNG DOWN UNDER



'Thank you but I prefer to roll my own'

Correction

WE made a 'blue' in the April issue in the caption to the picture showing Dr Paul Wild, Chief of the Division of Radiophysics signing the minutes of the first meeting of Russian and Australian radioastronomers held under the USSR-Australia Science Agreement.

We had the co-signatory as Dr I.A. Timoffjev. It was in fact the leader of the delegation, Professor V.S. Troitsky, who signed the minutes for the USSR.

When CSIRO's 'Dung Down Under' exhibit was being set up for 'Australia 75', the science and arts festival held recently in Canberra, the organisers spread the word abroad that some cartoons would not go amiss.

Professor A.J. Birch, Chairman of the Festival Science Committee, believed that 'in order to see the world the right way up you should occasionally stand on your head.'

The idea was passed on to the Central Communication Unit. Newly-appointed journalist, Graeme O'Neill, who'd been greatly intrigued with the dung beetle story, had a line for one in a second. Designer John Wedlick didn't take much longer with the drawing.

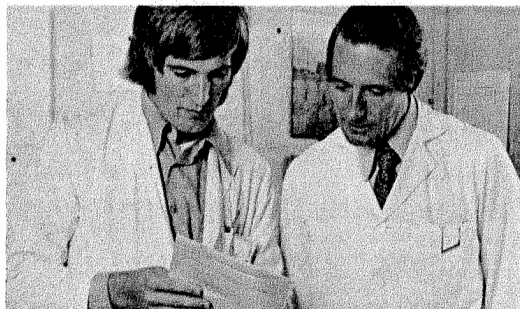
The cartoon aroused a lot of amusement at the exhibition and there were so many requests for copies, it was decided to reproduce it in 'Coresearch.'

CORESEARCH

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Produced by the CSIRO Central Communication Unit

June 1975



Mr David Colquitt (left) and Dr Jim Scroggie planning their new industry liaison service.

To liaise with industry

THE Division of Protein Chemistry in Melbourne has appointed a liaison officer for its leather research group.

He is David Colquitt who has worked in the group for seven years.

David will be providing a two-way communication between industry and the research group so that ideas from the group will be satisfactorily transmitted to the industry and problems arising in the industry will at the same time be brought to the attention of the scientists.

This will involve regular visits

to the members of the Leather Research Association though it is not intended that David's going to them will replace entirely their calls to the Division, but rather will supplement them.

While the research group is not intending to provide a trouble shooting service, the experience gained in the Division may help with some of the individual problems. If it becomes apparent that such problems are of wide interest or importance, they could be considered as topics for future research.

Cont'd on page 4

CSIRO extends trials of flexible hours

CSIRO's Executive has agreed in principle to experiments with flexible working hours being extended throughout the Organization. All experiments will be arranged within the parameters adopted by the Executive.

The milestone decision was made at a recent Executive meeting after it had studied a lengthy report on the two flexitime and two nine-day fortnight experiments conducted within CSIRO so far.

The evaluation report showed that there are advantages to be gained by the individual from the introduction of a system of flexible working hours, without incurring any significant detrimental effects on the operational efficiency of the Organization.

The Executive decided against conducting further experiments with the fixed hours nine-day fortnight scheme tried at the Divisions of Building Research and Chemical Technology.

As this edition of Coresearch goes to press, Head Office has

contacted each Chief to seek his comments on the concept of flexible working hours and the applicability of the experimental scheme to his Division. It is anticipated that a number of formal proposals for the introduction of flexible hours experiments will be submitted to Head Office as a result of this approach.

While the Executive decision opens the way to further trials, the actual start of the trial schemes proposed by Chiefs is expected to take a little time because of the administrative arrangements involved, including liaison with staff associations.

Report

The evaluation report considered by the Executive identified several benefits to staff working under a system of flexible hours.

Perhaps the major advantage was the relative freedom to vary working hours consistent with accommodating other interests and work commitments.

Additionally, the right to accumulate credits could provide more time for leisure activity, travel and career development.

The most favourable change associated with the trials with flexible working hours was the improvement in staff morale.

Other less significant advantages included a likely reduction in commuting time and 'peak hour stress', the disappearance of the 'guilt' complex associated with late attendance and the ability for manpower to adapt to the workload.

From the management viewpoint, several peripheral advantages could be derived from flexitime.

These included the emergence of a more satisfied workforce because of improved morale, a reduction in short duration leave absences, and a possible improvement in efficiency in the use of capital resources.

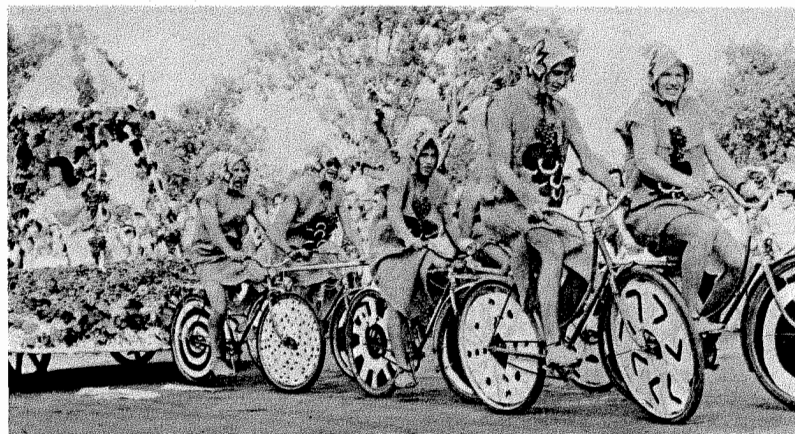
The report disclosed that there had been no discernible decline in staff productivity.

Trials

The experiments with flexible working hours were conducted at the National Measurement Laboratory in Sydney and the Pastoral Research Laboratory, Armidale. Both schemes included the right to work an optional nine-day fortnight.

Within the bandwidth of 8 a.m. to 6 p.m. the National Measurement Laboratory scheme involved two core times during which attendance was mandatory and three flexible periods, including a flexible lunch break. The daily arrangements in the scheme are illustrated below.

Although the two trial schemes with flexible working hours incorporated the right to accumulate credits towards working a nine-day fortnight, only 57 per cent of staff at NML and 28 per cent of staff at Armidale elected to regularly work a nine-day fortnight.



A FESTIVE AFFAIR AT GRIFFITH

THE 1975 Griffith Vintage Festival may be over but it will be some time before the Division of Irrigation Research forgets the weekend of festivities in honour of the humble 'grappa.'

For the previous six months the Division's Social Committee was active in extracting funds from staff and town folk alike through lunchtime barbecues, raffles, a stall, garden party and a vintage ball in an effort to have their Baccante entrant crowned festival queen.

Tried they did but their \$2000 odd wasn't quite enough to set the crown upon the head of Liz

Lewis (right).

Nevertheless they did win the crowd's applause as their float slowly wound its way through Griffith in the procession.

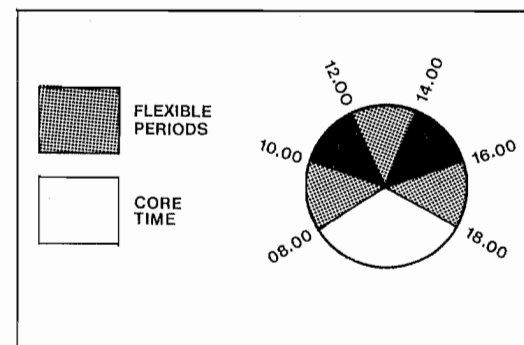
Fifty thousand people saw the festivities and the Division felt that it had once again taken part in the local activities of the town, something it has always been noted for.

The Bagtown theme (the Research Station stands on what used to be Griffith's first settlement - Bagtown) was portrayed by a magnificent bell-shaped float adorned with fresh flowers, vines, grapes and a radiant Liz who



unmercifully drove her 'horses' (from left) Alistair Low, Hank Muskens, Paul Johanson, Peter Cary (hidden), Michael Mackay and John Blackwell, most of whom hadn't seen, let alone ridden a bike, since childhood.

Pictures by Len Gallagher.



Flexible periods

Commencing time

8 a.m. to 10 a.m.

Lunch break

12 noon to 2 p.m. (minimum 30 minutes)

Finishing time

4 p.m. to 6 p.m.

Core times

10 a.m. to 12 noon

2 p.m. to 4 p.m.

Public can 'listen to the stars' at Parkes

CSIRO's newest public relations venture, the \$25,000 audio-visual program 'Listening to the Stars,' made its debut before a very impressed audience of official guests at the Parkes radio-telescope visitors' centre on 30 April.

The 27-minute program is basically a slide show, but the end result is as far removed from the average slide show as is the magic lantern from a modern movie projector.

The first audience was made up of CSIRO representatives, officers of Parkes and district local government and community organisations and other invited guests.

They saw what could legitimately be called Australia's most technically advanced and imaginative audio-visual display, and one which would compare favourably with any done overseas.

Produced by the Melbourne-based firm Sonagraphic Pty. Ltd., it uses a battery of carousel projectors and advanced visual effects to blend 600 slides into a cohesive, stimulating program.

The imaginative script is narrated by 'Division 4' star Gerard Kennedy against a background of electronic music by award-winning Australian avant-garde composer Bruce Smeaton.

The opening sequences are devoted to a CSIRO 'commercial' sketching the work of its numerous Divisions for Australia. This is followed by a brief history of radio-astronomy emphasising CSIRO's pioneering role, and rounds off with the story of the telescope's construction and use up to modern times.

Although work on the program began in earnest only late last year, the idea was conceived as far back as 1973.

The Parkes radio-telescope has been a tourist attraction since it was commissioned in 1961, and staff decided to hold weekend open days to satisfy the hundreds of demands to see it.

The idea became so popular that research programs were affected, so the visitors' centre was built and opened in 1968. The tourist flow has since built to an estimated 80,000 a year.

The growth of the Forbes-Orange-Dubbo region as a tourist area and the rising popularity of the Parkes telescope convinced the Division of Radiophysics that the visitors' centre facilities needed improvement.

CSIRO's Central Communication Unit and Sonagraphic's Lindsay Rodda made reports to the Executive on the possibility of an advanced audio-visual display attended by a full-time publicity officer.

The Executive gave the go-ahead, and Parkes technical assistant Les Fellows was appointed to the Central Communication Unit as a full-time Public Information Officer at the visitors' centre.

The Unit is now taking a major responsibility for running the centre.

The publicity for the new display should ensure about 100,000 people see 'Listening to the Stars' next year, rising to perhaps 300,000 by 1980.

The director and script writer for the program was Sonagraphic's Mal Sinclair, and much of the brilliant photography was by Paul Olsen.

Other photographic contributions came from Radiophysics' John Masterson and other CSIRO photographers around Australia.

Adults are being charged 40c admission to the audio-visual display and a range of slides, postcards, booklets and other souvenir material is on sale.

The income from sales will be used to pay the salary of the Public

Information Officer, to maintain the centre, and to upgrade the existing display.

The audio-visual display runs seven days a week, every hour between 9 am and 4 pm.

DEFINITION

'CORESEARCH' has its listening ears everywhere. One of our correspondents has just filed a report datelined in-flight between Melbourne and New York.

The ANAHL (Australian National Animal Health Laboratory) team was on its way to Amsterdam when the following conversation is reported to have taken place between the new O-in-C of the Laboratory, Bill Snowdon, and a Qantas hostess:

Hostess to Bill: 'And what do you do, sir?'

Bill to hostess: 'I'm a virologist with CSIRO'.

Hostess to Bill: 'How interesting - I never thought I would meet a real one. Of course, I've read Masters and Johnstone - gosh, you really mean you study the virility of people?'



Mr Tony Culnane (right) discusses a problem of administration with the Regional Administrative Officer in Canberra, Mr Ken Prowse.

Tony, who has been personnel officer in Canberra for the last 15 months, has been appointed interim Divisional Administrative Officer of the new Division of Forest Research.

Although CSIRO does not take over the Forestry Research Institute and the harvesting and mensurating research groups of the Forestry and Timber Bureau until 1 July, Tony has already begun work on the complex task of co-ordinating the records of the staff who will be transferring to the Organization.

He has also been preparing the way for the changeover of administration of day-to-day business from that of a Government department to that of CSIRO.

CILES proof-reader dies

MEMBERS of the Editorial and Publications Service in Melbourne have been deeply upset over the death of the woman who was indisputably the most popular member of the group, the editorial proofreader, Mrs Rhoda Hansen.

Sharp of eye and tartly witty of tongue, Rhoda Hansen presided over the group's proof correction activities for more than 16 years.

Before joining CSIRO, Rhoda had worked for financial and shipping newspapers so that the various languages of science were new to her.

She set herself to learn them to such good effect that over the years she acquired an uncanny store of knowledge concerning chemical, botanical and zoological terms.

One of the highlights of editorial life, much enjoyed by the older members, was watching her reading a page of intricate mathematics, or perhaps taxonomy, to a trainee editor, fresh out of university, who was hanging on for dear life trying to follow her breakneck-speed delivery, always enunciated with faultless clarity.

She held no man's reputation in awe.

She would snort in good-natured contempt at the misdeeds of some distinguished professor who had been careless with his punctuation or had badly set out a mass spectrum.

Authors who were literate and careful became her special proteges, and she would follow their career with interest.

Working with her was a joy, her colleagues said, because of the steady stream of wisecracks that would flow across the reading desk, and at least one member of the group recalls, moist-eyed, a hilarious session that once took place when Rhoda and he had to check the proofs of a learned paper on the love life of the elephant seal.

Her eye was just as sharp for the aesthetics of printing as it was for misprints. Young editors felt they had really arrived when they could win from her a curt nod of approval for a cleanly laid out table or a well arranged diagram.

And under her veneer of tartness she was the most delicately kind of persons. Whenever the dreaded moment arrived (as it must in every editor's career) when a disastrous error was discovered too late for correction, it was to her office the distraught editor would flee for reassurance.

Reading proofs for a scientific publishing house is a most difficult task. Rhoda carried it out with dedication, great skill and good humour.

No learned society will ever record her many contributions to scientific communication in Australia, but her work will live on in the reputation, which she helped so much to establish, of the Australian Journals of Scientific Research.

NML open day

The National Measurement Laboratory in Sydney will have a series of open days in August.

Monday 11 August will be given over to special visitors, Tuesday and Wednesday will be general sessions and Thursday will be devoted to school sessions.

For further information contact Alan Driver.

CSIRO i laik tok tankyu tru long Papua Niugini lain

SINCE 1952 the Division of Land Use Research (and its forebears) has been engaged in a survey of the natural resources of Papua New Guinea.

Recently the program was completed but not before a lot of work was carried out by the small team of scientists and the numerous local people who supported them.

In the 20 odd years the team was in Papua New Guinea it made many traverses to map and describe the rugged country it was working in.

In early years movement was accomplished by the daily em-

ployment of between 100 and 150 carriers, although in more recent times helicopters superseded this form of transport.

The scientists also had the support of a regular group of men (a 'lain' to use the common pidgin phrase), composed of New Guineans from the Amele area of Madang.

The lain worked for CSIRO for between four and six months each year, with the men returning to their villages for the rest of the time to repair their houses and prepare the gardens.

These regulars were responsible

for the day to day organising of camp movements, rations and for providing technical assistance to the scientists.

The survey has been totally reliant on them and their competence and efficiency have made CSIRO a cause of envy by most other field workers in Papua New Guinea.

Two of the longest serving were Atei (21 years), the forest botanist's assistant, and Gabi (18 years), the bosboi (leader) of the survey party.

Atei's role was to name and collect all the different species of plants recorded during the surveys. The recording was done in his own language and only later were the translations to CSIRO's style of recording made in Canberra.

According to John McAlpine, a member of the team, Gabi fell into the 'most unforgettable character' class.

He saw the survey party through events ranging from attacks in uncontrolled territory to fire and flood in the camp.

He would cajole frightened and freezing carriers to go a little further up a feared and rugged mountain to refuel helicopters and help dismantle its rotor blades.

With the completion of the survey program, the Executive recently approved an ex gratia payment to be made to the long serving members of the lain in appreciation of the men's services, and to say thank you to them. Most of them will probably retire now to their villages.



A group of CSIRO New Guinea assistants with John McAlpine. Their leader, Gabi, holds a portrait taken 18 years earlier when he first joined CSIRO. This was presented to him recently. To his left is Atei, 'the tree namer.'

Cattle men turn out up north

THE field day at the National Cattle Breeding Station, Belmont near Rockhampton has been described by Mr B.H. Hughes, industry representative of the Australian Meat Board, as the main day in the Station's history.

The first to be held at Belmont for many years, the field day was an outstanding success.

More than 1000 people attended. Many of them travelled hundreds of kilometers to do so, while some came from as far away as the Northern Territory and Cape York Peninsula.

Mr Hughes, who chaired the proceedings, praised the farsightedness of those who had been involved in the Meat Board's purchase of Belmont in 1952, to provide facilities for research by CSIRO on the breeding of beef cattle adapted to the tropical and sub-tropical environments of northern Queensland.

Dr John Vercoe, Officer-in-Charge of the Division of Animal Genetics Tropical Cattle Research Centre at Rockhampton, said that the assistance given by local officers of the Queensland Department of Primary Industries in organising and publicising the field day had contributed greatly to its success.

He briefly described the Centre's work which, he said, was aimed at defining the make-up of animals that would produce beef most efficiently under northern Australian conditions.

He said that the approach had been to measure and compare the characteristics of contrasting breeds (Brahman and Africanders as tropically adapted breeds and Shorthorns and Herefords representing temperate breeds) and to determine the inheritance and productive significance of these characteristics when combined in cross-breeds.

The information so gained, and its testing in the Belmont breeding program, gave the scientist and the breeder a view of the strengths and weaknesses of different types and a guide to combining and selecting for different attributes.

Dr Vercoe said that the work was particularly concerned with characters involved in adaptation to the stresses offered by the northern environment such as heat, parasites and low quality feed.

At the same time it was also concerned with those characters

such as fertility and growth rate which were important for productivity.

An important aim of the work was to measure how such things as heat, cattle ticks and worms affected productivity, to determine the variation between different animals and breeds in reaction to these stresses, and to measure how production could be improved by selecting for adaptation.

Exhibits

'Sideshow Alley,' a series of booths containing displays on the work of the Tropical Cattle Research Centre attracted a lot of interest.

The booths, which were each manned by the staff included displays on:

- effects of selection on growth rate
- factors affecting fertility (with the Division of Animal Health)
- carcass characteristics
- tick, dung beetle, and buffalo fly (Division of Entomology)
- nutrition and growth
- intestinal worms
- effect of heat and tick stress on beef production
- computer breeding simulation (with the Division of Computing Research)

In giving a description of these to the visitors, Mr John Frisch made mention of the Division of Entomology's work on dung beetles being centred in Canberra where there was a particular concentration of dung. This drew an appreciative laugh not only from the audience but also from a kookaburra up a nearby gum tree.

Visitor

Shortly after the crowd had dispersed for morning tea and to tour 'Sideshow Alley', a six-foot snake decided to take advantage of the lull in proceedings by emerging from its resting place among the bales of hay which a few minutes earlier had provided front row seating for visitors.

A short but triumphant chase by a dozen or so enthusiasts en-

sued and soon demolished the snake's chances of creating any further excitement that day.

Following an al fresco lunch of 4X and salad, the open day resumed with an address by the President of the Central Coastal Graziers Association, Mr G.E. McCamley, who put the cattle-men's point of view.

The geneticist's point of view was then put forcefully by Dr George Seifert who told his audience: 'A good bull not only needs a pen to write with but also the ink to leave its signature on the herd'.

A series of cattle driven into a central yard were used to illustrate a major theme of the field day — that breeders should select cattle on performance not on 'eyeball assessment'.

'You can't expect a cow that performs well in the northern environment and produces and rears a calf every year to look any bloody good,' said Dr Seifert.

He then quoted one grazier who claimed that before trying performance testing his cows looked better than his bank balance. 'After performance testing, however, his cows didn't look so good but his bank balance was certainly a lot healthier'.

Mr Tom Rudder, Extension Officer of the Beef Cattle Husbandry Branch of the Queensland Department of Primary Industries outlined some of the results from Belmont that had been accepted by commercial producers and discussed more recent results which had commercial application.

A lively panel discussion followed to enable cattlemen to quiz those who had spoken during the day about the work at Belmont, and Mr K.R. Coombe, Manager of the Waverley Brahman Stud, gave his summary of the day.

As the sun and the remaining contents of the wet canteen went down, the local CSIRO staff, their State Department colleagues and Canberra visitors celebrated a long but rewarding day with a barbecue.

Dr Greig Turner, (right) Division of Animal Genetics, explains to a group of visitors at the field day how coat type can be used as an aid to selecting tropically adapted cattle.



For your information

Information circulars

75/27	Division of Forest Research	10.4.75
75/28	Appointment of Counsellor (Scientific) — Tokyo	1.5.75
75/29	(not yet issued)	
75/30	Acting Chief, Division of Chemical Engineering	29.4.75
75/31	Acting Director, National Measurement Laboratory	30.4.75
75/32	National wage case 1975	2.5.75
75/33	Queen's birthday holiday 1975	6.5.75

Elected to Academy

TWO of CSIRO's scientists have been elected to the governing council of the Australian Academy of Science.

They are Dr K.H.L. Key, Division of Entomology, and Dr A.M.C. Mathieson, Division of Chemical Physics.

Of the nine other scientists elected to Fellowship of the Academy in recognition of their outstanding research contributions in the natural sciences, three were from CSIRO.

They were:

Dr H.J. Frith, Chief of the Division of Wildlife Research for his work on the ecology of a number of birds and mammals.

Mr M.D. Hatch, Plant Industry, for his contribution on the pathway of carbon dioxide fixation in plants.

Dr D.H. Solomon, Chief of the Division of Applied Chemistry, who has made many important contributions to basic and applied polymer chemistry.

Perhaps the pig was called Alice

THE staff of the Alice Springs Field Centre recently received a rather rude shock.

The old house in Gregory Terrace, which was the Field Centre headquarters for many years and which is now the Centre annexe, has started to offer up (or down!) its secrets.

Part of the ceiling caved in, dumping half a pig carcass unceremoniously on the floor.

A number of theories have been advanced as to how it came to be in the ceiling, and one of them (from the pen of Perth librarian Doris Leadbetter, a fastidious historical researcher) is offered below as the good oil.

Writes Doris:

Some people still cling to the old belief that Alice Springs was named partly after a local source of water (on the assumption that it was once preferred to cider), and partly after Sir Charles Heavitree Todd, the Postmaster of South Australia, who, when asked to suggest a name for the place said: 'Well, Alice Springs to mind.'

In fact, a recent archaeological expedition to the Gregory Terrace office roof has vindicated those who hold to another traditional explanation.

Those of you who know someone who used to go to church may have heard that one of the rather more sophisticated saints used to fly around from business appointment to business appointment.

Not by 'plane, of course — not in the fourteenth century — by himself, as it were. In fact, there are several unexpected but well-known cases of flying saints, flying nuns (courtesy of the telly), flying saucers, etc.

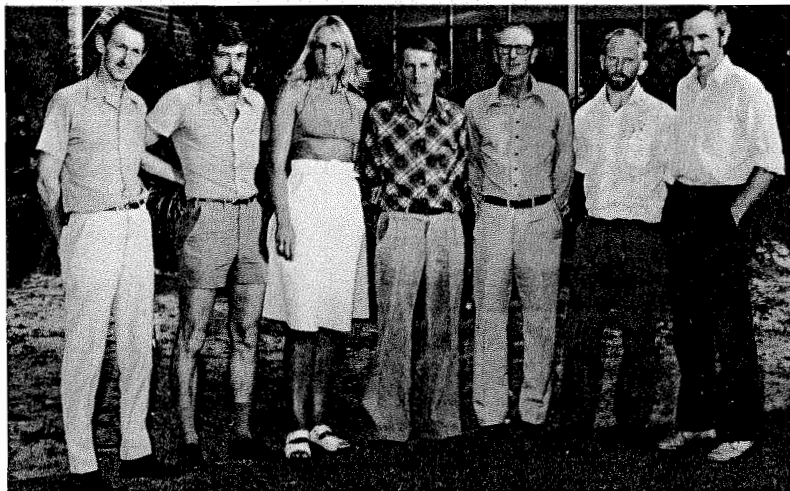
And once there was a pig, called Alice. Alice was rather too plump to fly, but by golly she could leap upwards astonishingly well.

'See how Alice Springs', the people would say admiringly. And so the town came to be named. And one day, Alice sprang so high, she vanished.

Now, 80 years later, the proof of her astonishing ability has come to light, as half her corpse fell down with the ceiling at Gregory Terrace.

Should you be wondering why only half her body reappeared, you should remember that Sir Charles Heavitree (Sweeney) Todd, the demon postmaster, was not averse to bringing home the bacon.

'Alice' staff visits W.A. labs.

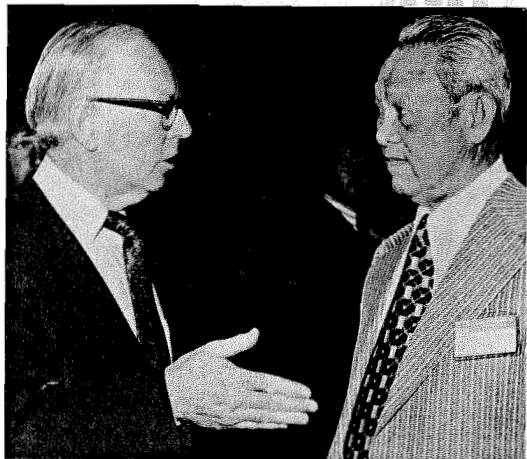


Staff of the Alice Springs Field Centre recently made their way to Land Resources Management Divisional headquarters in Perth for a review of their program of rangelands research in the Central Australian mulga woodlands.

Among the old, familiar male faces are (from left to right), Max Ross and Bill Low (both temporarily stationed in Perth), Bob Millington, Bob Winkworth (acting Officer-in-Charge), Peter Pavlov and Colin London.

A new feminine member of the staff is Margaret Friedel who joined LRM six months ago.

ASCA meets in ACT



Dr M.F.C. Day (left) a member of the CSIRO Executive talks to General Florencio Medina, leader of the Philippine delegation during a break at the ASCA meeting.

WHEN delegates from nine Asian countries and from Australia and New Zealand met in Canberra for the fourth conference of the Association for Scientific Co-operation in Asia (ASCA) they went a long way towards identifying scientific and technological problems facing member countries and defining the potential areas for collaborative projects.

Asian countries represented included: Bangladesh, India, Indonesia, Japan, Korea, Pakistan, the Philippines, Singapore and Thailand. Observers were also present from Malaysia, UNESCO and ESCAP.

The Australian delegation was led by the Minister for Science, Mr Bill Morrison, and included Sir Hugh Ennor, Secretary, Department of Science, and Dr M.F.C. Day and Messrs J. Kefford, R. Hill, J. Warner, R.N. Morse, C. Mardon, P.J. Judge, W.J. Land and G.G. Wines, all of CSIRO.

Representatives from the Departments of Health, Minerals and Energy, Housing and Construction, and Science, the Academy of the Social Sciences in Australia and the Australian Academy of Science were also included in the Australian delegation.

During the course of the meeting, a visit to the Division of Wildlife Research was arranged for the benefit of the delegates who expressed great interest in Australia's native fauna, particularly the red kangaroo.

In their technical sessions, the delegates considered topics ranging from family planning to corrosion, weather modification, non-conventional sources of energy, edible protein, medicinal and

aromatic plants, marine and natural resources and the forthcoming U.N. Conference on Science and Technology.

Chemical Physics visitors

TWO leading international workers in the field of environmental pollution control, Professor J.W. Robinson from Louisiana State University and Professor J.C. Van Loon from the University of Toronto, are at present spending periods as guest workers in the Spectroscopy Section of the Division of Chemical Physics, Clayton.

Professor Robinson, who was this year awarded a Guggenheim Fellowship, is on a world lecture tour during a six months sabbatical. About three months of this time will be spent in the Division.

Professor Van Loon is on a six months sabbatical from the Institute of Environmental Studies at the University of Toronto, where he is involved with the application of atomic spectroscopy to the analysis of environmental and resource material.

Both men have chosen to work in the Division with Dr Alan Walsh because of their involvement with the application of atomic absorption analysis to environmental problems. This method of analysis was first developed in the Division by Dr Walsh in the 1950s.

And in the words of Professor Van Loon: 'The Division is still the premier place in the world for atomic spectroscopy.'

Another guest worker to the Division, Dr R.C.G. Killean, Senior Lecturer in Physics at the Uni-

Bibliography of alternative technology

CSIRO has been swamped with requests from the public for information on 'alternative technology', particularly relating to energy - solar energy, methane, wind generators, fermentation - and associated technologies.

Up to date, responses have been in general ad hoc and probably not comprehensive.

To remedy this, Mr W.J. Land of Head Office in Canberra plans to write an annotated bibliography of the available reference material.

A start was made with the preparation of the working paper on non-conventional energy sources for the ASCA (Association of Scientific Co-operation in Asia) conference in April.

As part of this working paper, a bibliography was drawn up by the Information Service.

Suggestions and contributions from interested CSIRO staff would be welcome, as would any offers by CSIRO staff to do the job themselves!

The days of 'one man and Jessie' are over

THEY used to say around 314 Albert Street, the regional office in Melbourne and until 1971, the location of Head Office, that 'one man and a Ferguson could do almost anything.'

And when people said that, they weren't talking about the well-known ad for a tractor, but a human dynamo called Jessie Ferguson.

Jessie, who has recently been secretary to John Dunn of the Buildings Branch is retiring after 18 years with CSIRO.

In that time she worked with a number of senior staff in Head Office when it was located in Melbourne.

Who would willingly relinquish

the services of such a secretary as Jessie? Only circumstances beyond their control separated her from a succession of appreciative 'bosses' - Peter Butler (went to London), David Kimpton (to Queensland), Graham Sibley (to Canberra), Peter Trumble (to Adelaide), Brian McKeon (to Canberra) and Brian Beresford Smith (retired).

Between those assignments, Jessie was also secretary to Walter Ives, a member then of the Executive, and administrative secretary to the Executive.

This time it is Jessie who departs but she goes with the good wishes of her many friends in CSIRO.

In Canberra they wished her a happy retirement at a gathering where the Chairman, Dr J.R. Price made the presentation. Other colleagues held a farewell party for her in Melbourne.

Jessie's outstanding qualifications were recalled by some of those she worked for and perhaps it was only those people with whom she had a close association who knew that behind her mild and diffident manner was a woman with a lively sense of humour and a remarkable ability to get things done.

The men talked nostalgically about her sense of responsibility which never allowed her to be late unless her train was delayed and never absent unless she was seriously ill, fortunately a rarity in itself.

She was always concerned, they said, with the welfare of the men she worked for and the standards of work which passed through her hands.

In Jessie's philosophy, near enough was simply not good enough.

Has anyone here seen a wombat?

HAS anyone seen a missing Canberra wombat that won't come home?

A plaintiff note has been pinned to the notice board at the Division of Wildlife Research at Gungahlin. It reads:

Missing Wombat

A wombat has been missing from the water rat pens since 15 April. If any staff members see any sign of it or dung please contact John McIlroy or Eddie Gifford.

John says the wombat, one of three which live around the place, escaped one night when the scientists were away.

He is believed to be still on the premises, despite his wandering habits. John has already found traces of his travels and he's dug one burrow but to date he continues to be elusive.

versity of St. Andrews, Scotland, has recently completed his third visit in the same number of years.

Dr Killean, whose specialties are X-ray and neutron diffraction studies, has been working in the Division's X-Ray Diffraction Section with Dr A. McL. Mathieson.

Dr Mathieson returned to St. Andrews University with Dr Killean in May to take up a position as Honorary Visiting Professor for a four-month period, and to continue this three-cornered collaborative program.

He will also be engaged in research on X-ray diffraction from extended face crystals.

Industry liaison

Cont'd from page 1

David will also assist in industry trials of processes developed or suggested by the research group. This would be at the stage where a process has already been tested in industry by the appropriate members of the research staff and appears feasible for introduction to full commercial practice.

Another of David's assignments will be to distribute newsletters, annual reports and other literature of interest such as overseas publications and translations to the Association members.

HONOURS

TWO of CSIRO's staff were among those who were awarded degrees at the University of New England at its recent graduation ceremony.

They were Dr Ray Till of the Division of Animal Physiology who was awarded a PhD and Mr Jim Noble, of the Riverina Laboratory of the Division of Land Resources Management at Deniliquin who was admitted to the degree of Bachelor of Letters. Jim is at present on study leave in Wales.

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4478 or Wendy Parsons, 48 4227.

Dirty linen to be washed in N.Z.

THERE'LL be a strange cargo shipped off to New Zealand soon. It will contain about 50kg of used linen from the Royal Melbourne Hospital and will be addressed to DSIR in Wellington.

The story behind the parcel can be traced to Dr Tom Pressley in the Division of Protein Chemistry who for some years now has been a special consultant on laundry matters for the hospital.

Tom has been concerned at the repercussions which could follow if the hospital ever had a serious laundry fire.

'There've already been two there and two in Austin Hospital,' he said, 'and we've had to say they've been from "unknown causes." Some have looked like spon-

taneous combustion but pure cellulose is not supposed to ignite so we've been perplexed about them.

'If a really bad fire occurred at the Royal Melbourne there would be a serious problem in the city, because that hospital operates a laundry service for nearly 80 institutions in the metropolitan area.'

In making inquiries about causes of such fires, Tom found that there have been serious ones in Canada, the UK and Australia but so far none has occurred in New Zealand.

He discovered that DSIR in New Zealand were nevertheless the acknowledged specialists in the field of spontaneous ignition

and he had some discussions with them over it.

'Now out of the blue has come a letter from them offering to look into the Australian problem. It's something they're interested in because they're anxious to have all the knowledge they can build up and they'll do the work for nothing for us. All we have to do at this stage,' Tom said, 'is to send them used linen from the laundry.'

'We think it's essential that they work with our material since there could be some small but vital link with something in that particular laundry that would not apply to Melbourne linen washed say in Wellington.'



'Won't keep you a minute, Jackson - just like you to participate in the following decisions.'

From London Punch

CORESEARCH



Produced by the CSIRO Central Communication Unit

194

July 1975

CONTROVERSY OVER TRANSFER

The announcement made by the Prime Minister on 5 June that the Minerals Research Laboratories and Solar Energy Studies Unit were to be transferred to the Australian Department of Minerals and Energy sparked off the biggest row in which CSIRO has been involved since the late 1940s when political controversy was stirred up over the alleged incompatibility between the needs of scientific freedom and national security.

This led to CSIR being reconstituted as CSIRO, to the relinquishing of all secret or classified work of a military nature, and to the transfer of the Division of Aeronautics to the Department of Supply.

The present struggle has been one to prevent a precedent which could lead to the ultimate destruction of CSIRO.

It has also been a fight to resist having staff transferred to the Public Service to work under conditions which CSIRO believes are not conducive to good research.

Since he made the announcement, the Prime Minister has been besieged with protests against the move but at the time this edition of 'Coresearch' went to press (24 June) the situation remained unresolved.

It was pointless to speculate about the outcome—by the time the issue is circulated the whole affair is likely to have become part of CSIRO's almost-50-year-old history.

Whether or not the decision is reversed the events may have had several salutary effects.

The strong and spontaneous opposition that has been voiced both internally and externally has made almost every member of the staff realise that he or she is part of a large national organization and not just a member of a single Division.

It has brought Divisions, staff associations and Head Office closer together than any other event since 1949, and has made people very much aware of the pride Australians take in the achievements of CSIRO.

Since 'Coresearch' at this stage is not able to bring staff up to date with the outcome of the struggle, all it can do is recap events which happened up to 24 June in the hope that it can present some sort of overall picture.

Late on the night of Thursday 5 June the Chairman, Dr J.R. Price, received a telephone call from Mr Bill Dominguez, the CSIRO liaison officer in the office of the Minister for Science. Mr Dominguez had just read a press release issued by the Prime Minister which detailed ministerial

responsibilities following the cabinet reshuffle of that day.

The final sentence read: 'The Department of Minerals and Energy will take over responsibility for the Minerals Research Laboratories and Solar Energy Studies Unit.'

Because the letters CSIRO were not used to define the groups, the media did not then pick up the implication, but Bill Dominguez was immediately concerned.

His call to the Chairman was the start of a chain reaction that was to gather momentum over the next few hours and which had not stopped at the time of going to press.

The Chairman immediately consulted CSIRO's Executive Officer, Dr J.A. Allen, and the Secretary (Administration), Mr Gratton Wilson, but little could be done that night.

During Friday, 6 June, the situation was confused but as soon as enough information was available, Mr Wilson telexed a message to all Chiefs giving them what facts were known.

In it, the Chiefs were told there had been no prior consultation with the Chairman, the new Minister for Science and Consumer Affairs, Mr Cameron, or Mr Morrison, the former Minister, but the Chairman had contacted both of them already and was then endeavouring to get an interview with the Prime Minister. (As at 24 June, Dr Price had still not been able to do this.)

The Chairman of MRL, Mr Ivan Newnham, flew to Canberra during the day for discussions with the Executive.

Late that night, the Administrative Arrangements Order was published in the Australian Government Gazette No. S104. This listed the responsibilities of the Minister for Science and Consumer Affairs under the Science and Industry Research Act 1949-73 'except so far as it relates to mineral and solar energy research.'

During the weekend and on Monday 9 June, members of the



Because this edition contains a special report on both the announcement of the minerals and solar energy transfer and the International Women's Year special coverage (see pages 3-7), other material for which there was no space has regrettably been held over until a later issue.

Executive met to consider what the implications could mean to CSIRO and to formulate the Organization's attitude.

In a statement issued later, the Executive said it was gravely concerned that a potentially far-reaching decision of that nature

could have been taken 'without prior consultation and detailed consideration.'

On Tuesday Dr Price had discussions with Mr Cameron, Mr Connor, the Minister for Minerals and Energy, and Sir Lennox Hewitt, Permanent Head of the Department of Minerals and Energy. Later Mr Newnham and Mr Roger Morse, Director of Solar Energy Studies, saw Mr Connor.

The price of protest

The Chairman also announced he would call a media conference at Head Office the next day.

This was attended by represent-

Members of the staff at the Black Mountain site in Canberra sign the petition that was later sent to the Prime Minister. About 300 members attended the protest meeting that was typical of others held around the country.

Picture: Chris Lourandos.

atives of almost every major Australian newspaper represented in the Parliamentary Press Gallery, and by television and radio journalists to whom Dr Price later gave individual interviews.

The Chairman confirmed there had been no prior consultation or discussion and gave reasons for CSIRO's strong criticism of the decision.

CSIRO was one of the finest, if not the finest, government research organisations in the world, he said. This enabled it to recruit on a world-wide basis.

Continued on page 2

IWY-AND ALL THAT

The Australian Government sees International Women's Year as a means of focusing attention on the achievement of women and the need for continued efforts to remove discrimination against them.

It also hopes International Women's Year will provide an opportunity to assess what has already been achieved towards removing discrimination.

The Government feels that legislation and other government action is not enough to ensure 'a full and free opportunity for men and women to develop and participate within society'.

It believes that women, individuals and groups outside Government must work to effect changes which will allow them to develop as individuals 'by creating an awareness among women them-

selves of their inadequacies in areas of social, economic and cultural discriminations and deprivations.'

As part of the efforts to mark International Women's Year, 'Coresearch' decided to devote an issue mainly to the women in the Organization, not just to the research workers who are usually in the forefront, but also to the many others who are in support areas.

It was decided to take a look at whether women in CSIRO's workforce suffered from any form of discrimination or felt they lacked opportunities for promotion or recognition.

With this in mind, the editorial staff wrote to and talked to many of the staff, both male and female.

The opinions that have been expressed on the following

pages do not constitute a 'survey' where definite sampling procedures are followed.

What the editorial staff does believe is that they represent the thinking and attitudes of a cross-section of the staff ranging from Perth to Brisbane, from Canberra to Merbein and Hobart.

We talked to scientists, technical staff, and clerical and administrative workers, to information officers and those involved in printing and publishing and public relations.

We may have missed people with views which oppose or endorse some of those expressed. If this is the case, we would be grateful to have them as letters to the editor.

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MINERALS CONTROVERSY

Continued from page 1

If it was splintered, it would not be able to attract such staff, its integrity would be threatened, and the morale of its staff severely damaged. The last mentioned, he added, had in fact, already happened.

Although he knew of no other plans to further dismember the Organization—and the recent transfer of forestry research from the Government to CSIRO was a reversal of the present situation—Dr Price admitted the Government's action could set a precedent which could, if taken to a conclusion, mean the Organization's complete destruction.

He revealed that in an effort to keep the Organization intact, Mr Cameron had suggested to Mr Connor that he should take over CSIRO completely, but this Mr Connor had rejected.

Splintering the Organization, Dr Price added, was contrary to the views expressed in the OECD's report—a report requested by the Government itself.

Journalists wanted to know why CSIRO felt it offered a better environment for research than the Public Service and were told that scientists needed to be free of political interference; that CSIRO offered scientists opportunities for inter-Divisional consultation and collaboration, and that CSIRO's merit promotion scheme provided conditions not available under the Public Service.

The conference sparked off extensive media coverage and a great deal of public support for CSIRO's stand.

This included editorials, news stories and interviews, the publication of letters which came from staff groups and individuals such as Rohan Rivett, journalist son of Sir David Rivett, CSIRO's first Chief Executive Officer.

Included in those who spoke out strongly on radio against the transfer were scientists of the calibre of Sir Mark Oliphant, Governor of South Australia and Sir Philip Baxter, former head of the Australian Atomic Energy Commission.

Protests

From the time the implication of the Prime Minister's announcement was first realised by the staff and outsiders, there was strong backing for Dr Price's stand and the Executive's attitude to deplore the decision.

First to make protests were the CSIRO Technical Association and the CSIRO Officers' Association. Working through their national President, Mr Mal Franklin, and their Executive Officer, Mr Dick Desmond, the members of CSIRO's Executive issued a press statement which was critical of the move.

Association members worked quickly behind the scenes to get support within the ranks of the Australian Labor Party, spoke to the Ministers involved, sent telegrams, helped to organise staff protest meetings and then on Friday, 20 June, at the request of the Prime Minister, sent him a written submission on their views.

Similarly, the Officers' Association took a strong stand. Following an emergency meeting in Canberra, their national President, Dr E.W. Radoslovich, held a press conference at Parliament House at which he revealed the association had retained a barrister to test the legality of the transfer of the

officers concerned to the Public Service.

Later the association took out a writ in the High Court seeking an injunction to restrain the Government from its action.

In Canberra, Mr Bruce Cook, the Chairman of the ACT branch of the CSIROOA, and his colleagues organised a protest meeting at the Black Mountain site. They were supported in this move by the local branch of the Technical Association. Among the speakers was Mr Ken Fry, (ALP), Member for Fraser, and the meeting was chaired by Mr Terry Healy of Head Office, a former science liaison officer on Mr Morrison's staff.

Afterwards staff were invited to sign a petition which was then sent around Australia. Although there was only a week to gather names a petition bearing some 3600 signatures was sent to the Prime Minister on 20 June.

In the meantime emergency meetings of the Advisory Council and the Chiefs were organised. Both groups unanimously supported the Executive and the Chairman. Press statements were issued after each and messages sent to the Prime Minister.

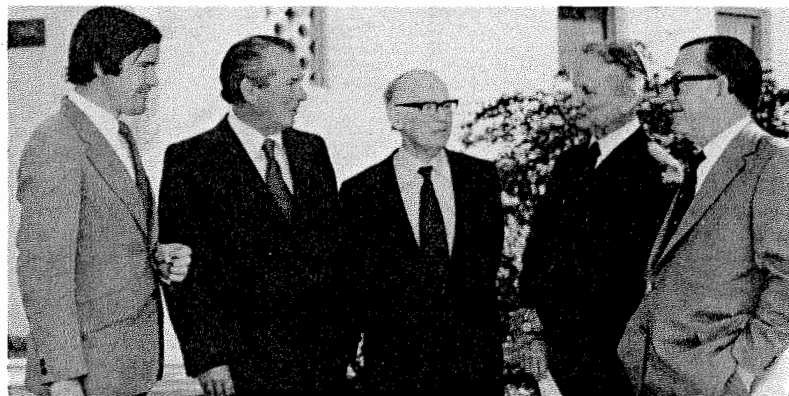
Protest meetings were held by the staff in Sydney, Melbourne and Perth, the latest of these at the time of going to press coming from a group of Fourth Division officers at 314 Albert Street.

At this, staff in this category met to express their wish to be dissociated from an earlier statement made by the General Secretary, APS Association (4th Division Officers), Mr Bob McMullan, who had said his association would welcome the opportunity to have its CSIRO members come under the APS.

The Albert Street group said their views had not been adequately canvassed, that they felt Mr McMullan was confusing the cause of working conditions with the dismembering of the Organization and they wanted it known that they supported Dr Price's move to keep CSIRO intact.

A similar message was received by the Chairman from Fourth Division officers at MRL, Ryde.

Members of the Laboratory Craftsmen expressed their feelings against the transfer when their President, Mr Ron Shearstone, telegraphed the Chairman. They also congratulated Dr Price on



An historic occasion—the new Acting Chief of the Division of Forest Research, Dr M.F.C. Day (centre), talks with (from left) Mr Tony Culnane, interim DAO; Dr Phil Carne, Officer-in-Charge; the Director General of Forest and Timber Bureau, Dr D.A.N. Cromer, and the Chairman, Dr J.R. Price. Picture: Alan Edward.

the way he was fighting to keep CSIRO intact.

Similar letters and telegrams of support have poured in to Head Office from all over the country, with many personal messages of congratulations to the Chairman for his stand. Within a fortnight these filled three large folders.

Among those who sent such messages were the State Committees, the Australian Academy of Science, Australian Conservation Foundation, heads of departments of university faculties and other members of their staff, politicians, industrialists, representatives of companies with whom CSIRO has been associated, and individuals who said they had long respected the work of the Organization. A great many came from members of CSIRO's own staff.

Support

On the departure of Mr Cameron on an overseas trip to fulfil engagements previously made by Mr Morrison, Dr Moss Cass became

the acting Minister for Science. He proved to be an ally of CSIRO and urged the Prime Minister to reverse his decision.

Among other politicians who were outspoken on the subject were the Leader of the Opposition Mr Fraser, and the Shadow Minister for Science, Mr Robinson.

Mr Fraser promised that a Liberal Government would protect CSIRO from any further Government sabotage.

'CSIRO has always been responsive to the wishes and policies of the Government of the day and we know it will continue to be so.'

'We will not allow one of the world's great scientific institutions to be made the plaything of Ministers and departments.'

ALP members meeting at their Victorian and New South Wales State Conferences condemned the move to splinter the Organization and the Premiers of Queensland, Mr Bjelke Petersen, and Victoria, Mr Hamer, joined Sir Charles Court, Premier of Western Australia, in his opposition.

The Division of Mineral Chemistry in Melbourne in 1971 formed a social club that has enjoyed considerable success with both its social and sporting activities.

A male soccer team was formed and it went on to score some notable victories.

This season a new dimension was added—a women's soccer team was formed. In their first game, the girls held the powerful Regent LFC (Malvern) combination to an exciting 1-1 draw.

A photograph of the successful team which has been sent to 'Coresearch' shows the members including some males who seem to have volunteered for some extraordinary team responsibilities.

The group lining up for battle from left (back row) is: Karen Taylor, M. Jones (rubber-down), Bertha Wilson, Val Dew, Sue Foster, Tricia Smith, Beryl Coe, Julie Rundle, W. Madden (chaperon). Front row: P. Naef (liniment applicator).



ACTING CHIEF NAMED

Dr M.F.C. Day has been appointed Acting Chief of the Division of Forest Research.

Dr Day has been a member of the Executive since 1966 and was previously Assistant Chief of the Division of Entomology.

Because Dr Day was leaving almost immediately on an overseas visit, the Executive appointed Dr Phil Carne of the Division of Entomology as Officer-in-Charge until Dr Day returns at the end of this month.

He will also remain on for a period after Dr Day has taken over.

The announcement was made at Forest Research by the Chairman, Dr J.R. Price.

'It has always been part of the Organization's philosophy,' he told the staff, 'to appoint the best possible Chief and staff and have the best possible facilities.'

The Executive was deeply concerned that CSIRO should do its best to get the new Division off to the best possible start. It was therefore advertising for its Chief on a world-wide basis and while Dr Day was overseas he would take the opportunity to publicise the position 'in the right quarters.'

In a brief speech, Dr Day said that while he didn't come to the Division as a forester, he had had a long experience in CSIRO—he joined the Organization in 1938—and during that time he had been associated with many of the problems related to forestry.

'I will need your help to look at the requirements of industry and the ways the Division can assist it,' he said.

Dr D.A.N. Cromer, Director General of the Forest and Timber Bureau, in welcoming the CSIRO staff said that the appointments indicated the high regard the Organization held for the new Division.

While he is acting as Chief of the Division, Dr Day will be released from his duties as a member of the Executive.

Medibank

Have you instructed your RAO what you want done about your medical insurance deductions? If you contribute through your salary you MUST read information circular 75/48.



QUESTIONS HANG OVER MATERNITY SCHEME

The maternity leave scheme is beginning to have a backlash against women in the CSIRO, according to inquiries made by 'Coresearch' around the Organization.

While it was generally agreed that the scheme was, as one staff member expressed it, 'two steps forward' it is also being seen as 'one step backwards' for women.

The Maternity Leave Act was introduced a little over two years ago.

Its provisions were extended to CSIRO and give women the right to take 12 weeks' maternity leave (six weeks before and six weeks after the birth of a baby) on full pay and up to 12 months' leave of absence all told.

Some women have taken time off without pay to achieve longer than their 12 weeks. Others have added long service, sick, and recreation leave to give them several months off work.

During this time, their positions must be held for them, but their jobs can be filled during their absence by temporary staff.

While some women are returning to work as soon as their leave entitlement is up, others are resigning as soon as they have waited out the period.

How extensive the backlash might be is still in doubt, but inquiries among a number of both male and female staff suggest that resentment is being built up, not so much against the scheme itself but against some of the abuse people believe it is getting.

It is interesting to note that the Women's Affairs Section of the Prime Minister's Department is also following with interest the effects of the Act's introduction.

The Joint Council, a statutory body comprising representatives of some Government Departments and staff organisations is also watching developments, the Council having as its terms of reference the review of the Act's operations. (It was also set up to report on any change, particularly in regard to maternity and paternity leave for adopting parents, which it considers should be made to the current provisions.)

The Act covering maternity leave specifically states that the possible or actual pregnancy of a woman 'shall not be grounds for discrimination against her' but this is a provision which is seemingly difficult to enforce.

Some women—and some of the men who are concerned—are aware that this is actually what might happen.

Others have gone further and declared that they have already reached the stage where they will seriously consider the consequences of appointing women who are 'pregnancy risks.'

A group of people in one CSIRO laboratory were discussing the maternity leave provisions. A question was raised by one young man which no one was able to answer.

'What would happen,' he wanted to know, 'if a girl gets pregnant and six of us claim paternity leave for the same baby?'

If some people think that the maternity leave provisions have a 'disruptive' effect on research and other work, there are others who are saying that the leave provisions in themselves are discriminatory and favour women.

'Why,' they are asking, 'should not fathers be given the same conditions and not just one week's paternity leave?'

As one woman told 'Coresearch': 'I operate a three-person staff... myself and two assistants. I took on one girl who must have been pregnant at the time of her appointment because soon afterwards she announced she would be going on maternity leave.'

'It was useless trying to teach her the complex system of the group's work so for six months I had a rather useless pair of hands around.'

'While she was away I employed a temporary woman whom I would dearly have loved to keep, but I had to let her go when my junior finally came back.'

'Just to wrench an extra tear from you, as soon as she had reappeared my other girl, who is a useful member of the team, announced that she was pregnant and would be taking time off.'

'By the time she returns to work, the first girl may well be pregnant again and the circle will continue.'

PREJUDICE

'Although I am expressly forbidden to allow maternity leave provisions to prejudice me when selecting staff I will bet you that only aged females and males will find their way in here in future.'

Similar views were expressed by a male who has a fairly large staff of women in his area.

'I have a great deal of sympathy for the women, but I also know I have a responsibility towards the Organization in that a service has to be provided. It is becoming extremely difficult to provide this service with qualified staff and keep a high standard of continuity.'

'I'm sorry to say it, but I think the time is coming where if I have two candidates for a position, one male and the other a female who is a pregnancy risk, and there is nothing to choose between their qualifications, I will appoint the male.'

This same staff member added that he was surprised at the feeling that was being expressed by some people in the Organization who said they were 'incensed' by the provisions of the scheme which allowed women in this bracket to take their accumulated sick leave, while others who were either older or single women or males could not take theirs on retirement.

This same feeling that maternity leave was discriminatory against other members of the staff was

raised at a recent meeting of the women members of the Victorian Branch of the CSIRO Technical Association.

Looking at issues surrounding the scheme, the women said that one solution to offset possible discrimination was that there should be a qualifying period before maternity leave could be taken.

This opinion is endorsed by other staff members, some of whom have suggested that one way round the potential abuse of the situation was for the 'golden handshake' principle to be applied.

'If the women plan to leave anyway at the end of say six or 12 months you're better to know it at the beginning,' one person said. 'If you give them cash in hand and let them go, you can replace them immediately and get on with the work.'

An argument against that suggestion, however, was the chance that a woman might lose her baby and would want to return to work, but would have committed herself if she accepted the money beforehand.

One man who first raised the issue of the possible consequences of the maternity leave provisions with 'Coresearch' as long ago as June of last year canvassed the staff of the laboratory in which he works and reported that no one there seemed to be in favour of the scheme as it stood.

The main irritation, he found, was the 'locking up' of a position for up to 12 months which, while it represented no great administrative problem, could be 'dis-

ruptive' in a clerical office. The discrimination against those who could not take their accumulated sick leave entitlements might be selfish, but was nevertheless strongly felt, he reported.

He was concerned that women on the staff were worried that they felt there might be employment discrimination against females as a result of the provisions.

'This seems to me to be the most regrettable aspect of the whole business,' he wrote.

WICKED?

'I would like to think of employers as being fair minded, employing women if they were well suited to the job and stoically accepting pregnancy in some of their employees as a natural rather than a contrived and wicked trick by vindictive femmes.'

A technical officer who said she had seen how disruptive it could be to a research program if an assistant went off for long periods wrote: 'Until she returns or resigns one or more temporary staff have to be brought in. I've seen cases where as many as six temporaries have filled one position over 12 months.'

But while some staff are concerned over the problems, there are others who feel equally strongly that there is nothing wrong with the situation.

They told 'Coresearch' that there was no difference in a woman going off on maternity leave than in men taking up to 12 months' leave from a Division on an overseas visit.



Roma Cocking



Doris Leadbetter

INFORMATION PLUS...

Two of the powers and functions of the Act under which CSIRO was established are the 'dissemination of science and technical information' and 'the publication of scientific and technical reports.'

These responsibilities resulted in the setting up of the Central Information, Library and Editorial Services, the Central Communication Unit embracing the Media Liaison Office, the Film and Video Centre and the Writing and Production Services Group.

In addition science writers are employed to produce 'Ecos', 'Rural Research' and 'Industrial Research News', and others as Divisional information officers.

They are all areas where a growing number of women are being employed.

Doris Leadbetter is one of CSIRO's best known library personalities. No-one could interview her better than herself—which 'Coresearch' left her to do in her office suite at the WA labs.

(It was exposed beams, amusing decor, flowers arranged according to the exact and ancient rules of Mitsubishi—so right for her.)

'What special services do we provide in the library? You might well ask,' she said.

'Firstly, and probably most importantly, we have long recognised the need for personal service. It is no longer necessary for the simple ingenious scientist to come to the library, puddle his way through the catalogue, find the reference he wants and actually read it.'

'It is part of our philosophy to provide real in-depth service. We take the publication to him, by appointment of course, explain the pictures, and read it aloud.'

'This service has made a great change in the lives of our research colleagues, particularly those who find reading a little beyond them.'

'Our second innovation is connected with the copying machine installed in the library.'

'We have to be very conscious of the limitations imposed on us

by the copyright laws, as you know, so all copies made are produced under my personal supervision.'

'I can therefore guarantee that every duplicated Raquel Welch and twenty dollar note is of excellent quality.' (Send orders, with cash in low denominations, to The Chief, Division of Mineralogy, Perth).

'The profits from this enterprise, CSIROLOLLY, pay for the rather unusual facilities at the WA laboratories: swimming pool, Olympic-size barbecue pit, and extensive wine cellar.'

Roma Cocking never had any intention of going into the world of printers and publishers.

'I went to a school' she said, 'which is now classified by the National Trust as "a unique piece

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International recognition for scientists

A number of CSIRO's women scientists have been involved in work that has earned for them an international reputation in their particular fields. They include women such as Dr Helen Newton Turner, Dr K. Rachel Makinson, and Dr Nancy Burbidge.

Dr Makinson, Division of Textile Physics, is a senior principal research scientist. She has been employed in CSIRO since 1944 with three breaks necessitated by conditions formerly governing the employment of married women.

Rachel has been involved in research into wool felting friction and shrinkproofing. In the last few years she has concentrated on the unusual frictional properties of wool which are responsible for felting and on ways of modifying those properties to prevent felting.

So far as records show, Rachel is the only woman in CSIRO who has even held the position of Acting Chief of a Division.

Dr Newton Turner is a CSIRO Honorary Research Fellow. When she retired after 41 years' service with the Organization, she had earned the reputation of being one of the world's leading authorities on sheep genetics.

Formerly an SPRS with the Division of Animal Genetics, Helen still has an office in the Division in Sydney and in fact, her 'retirement' has made little difference to her working life, except that she no longer has administrative duties and she has ceased to direct research experiments.



Dr Helen Newton Turner, CSIRO Honorary Research Fellow and one of the world's leading authorities on sheep genetics.

Helen has been closely associated with all the major sheep breeding programs undertaken by CSIRO and has been a consultant on many overseas projects.

She has been invited to many countries to lecture and as long ago as 1965 was a guest in China to discuss research programs and to lecture.

Dr Nancy Burbidge is one of Australia's most distinguished botanists.

She joined CSIRO in 1946 when she was enticed away from Perth where she had been awarded her Doctorate of Science from the University of Western Australia.

Her earlier research work on Australian plantlife was done in Western Australia and South Australia.

In Canberra Nancy became the curator of the Herbarium Australiense, but more recently she has been directing work on indexing the names used for Australian plants in preparation for a new account of the flora of Australia.

Nancy is the author of three books on Australian grasses prepared for people without special technical knowledge and has written several booklets on plants to be found in the vicinity of Canberra.



Dr K. Rachel Makinson, a senior principal research scientist and the only woman to have occupied the position of Acting Chief of a Division.

SMOOTHING THE WAY-TYPISTS AND CLERKS

A few months ago the suggestion was made that a workshop be held at Head Office for typists. Although for a variety of reasons it was never held, 'Coresearch' has it on good authority that a number of the men for whom the girls worked, cried out in alarm: 'But I couldn't spare her for that length of time'.

Which if nothing else proves the value of women working in secretarial capacities. Equally, statistics point to the reliance CSIRO places on women in the clerical area.

Robin White, whose office on the Fifth Floor of Head Office is labelled Executive Services, is one of this group.

Being in charge of the office gives Robin the responsibility for processing all correspondence between CSIRO and the office of the Minister for Science.

It also means organising Executive and Advisory Council meetings, in between a thousand other on-the-spot jobs for the men on the floor.

Robin's co-worker, Inge Hansen, provides her with clerical and diplomatic support.

Robin feels that the job does require a woman's touch — an understanding approach which might be absent if a male occupied the position.

'The men I work for are gentlemen of the old school, brought up to be polite to women.'

'They're far less prone to blow up when a woman is present and I suppose in this way I have the traditional view of a woman's role operating very much in my favour.'

'I consider myself more fortunate than other people (not just women) in clerical positions in CSIRO.'

'Inge and I have been able to shape the office system ourselves and this isn't always possible in other jobs.'

'We're not just rubber stamps — we can begin a task, follow it through and see the end result.'

'I treat this job with respect because I'm frequently called upon to do many things outside the usual clerical areas. It's a trusted position because of the important policy matters channelled through Executive Services'.



Robin White

Women in CSIRO have at times had it rough, as they say.

The story is told in Canberra, for instance of a storeman (male), formerly a very proper World War II Royal Navy Officer, who guarded his premises jealously.

He let it be known—politely at first—that people did not enter the precincts and help themselves. Repeated offenders met with certain verbal abuse and dire threats.

When one steno-secretary refused to heed the warnings she found he meant what he said—she was summarily dealt with. The ex-RN officer put her across his knee and soundly spanked her.

It would never be tolerated today, Sir.



INTERNATIONAL WOMEN'S YEAR



Two of CSIRO's tea ladies in their more relaxed moments: Judy Cochrane (Right) samples her own wares while Kit Corney shows what tea ladies are really made of...ex bunny girls.

Tea and sympathy rules supreme...

Regarded by most people in CSIRO and the Public Service as almost indispensable, it's even said in some offices in Canberra that if you want to know what's happening around the place just ask the tea lady.

And if large scale retrenchments ever became necessary, among the last women to be put off would be the tea ladies.

And in that context, Judy Cochrane is probably the most influential woman in CSIRO.

She has the key to every door on the Executive floor at Limestone Avenue.

And that's because Judy knows exactly what her men like. White with one, black with none, muddy with half, dark with a drop.

She brings a ray of hope where there seems none to the work-worried gentlemen.

So what's it like being a tea lady 'up there?' 'Very enjoyable', says Judy. 'I came here for a month and have stayed four years so far.'

'It gets me out of the house. I like the free and easy atmosphere, and mostly the company. There's only my son and I at home now'.

Judy says her customers share their good and bad times with her, and she listens to their worries.

'I really enjoyed the time we gave the Chairman a birthday cake at an Executive luncheon. All the men were like big kids bringing over their plates for a slice of cream cake'.

The day the Shah of Iran visited Head Office probably goes at the top of Judy's list of 'memorable visitors'.

A person who believes in punctuality she usually has a travelling clock ticking away in her basket — tea must be on time if you want to keep your men happy.

Security guards, being particularly cautious on behalf of the Iranian leader, checked even the kitchens on all floors at Limestone Avenue.

It gave them quite a start to hear a familiar tick coming from Judy's basket. What? A time bomb at Head Office?

For a while, things were rather tense, but the discovery of the clock produced giggles of relief, especially from its owner.

Judy's son owns a greyhound which she and the family follow avidly.

She used to own one, too, but now racing tips are her speciality for the staff (for both dogs and horses) and she's nearly always spot on.

And talking of tea-ladies... ever in the forefront to brightening up the scientific campus, the Minerals Research Laboratories at Ryde, Sydney, employ a former Bunny Girl in their canteen, Mrs Kit Corney.



It's been a few years since Kit was employed in a night club, but she was still prepared not so long ago to get into the act and turned out complete with bunny ears for an annual meeting of the Laboratories Credit Society.

According to a 'Minfo' report, those attending the meeting claimed the innovation was a great improvement to the normal program.

Kit indicated she was prepared to consider approaches from Directors and Chiefs for their next meeting in Sydney — or Canberra on an all-expenses paid basis — while Ryde colleagues are adamant that in no case will transfer offers be considered.

IN THE FIELD AND IN THE LABORATORIES

Science is the name of the game and CSIRO revolves around the scientists who carry out the research programs. But the professionals are the first to admit their reliance on their support staff and many women are employed in the technical side of the Organization's workforce.

Their jobs vary from the assistance required with electrical equipment in Radiophysics to handling delicate instruments in the National Measurement Laboratory or the field work that is part of an assignment in a Division like Entomology.

Sheila McAlpine, for example, spends most of her working day working with dung and dung beetles.

That's one way to describe her job as a technical assistant with the Dung Beetle Unit in the Division of Entomology in Canberra.

As far as Sheila is concerned it's work she enjoys among people she likes and with dung beetles for whom she has a lot of respect.

As for the dung side of it, well, she's a country girl at heart and the smell of it is not something that's offensive.

Sheila started work with CSIRO nearly five years ago. Originally she was in a clerical position

with the RAO in Canberra, then she transferred to the administrative side of the Division.

'Paper work just wasn't for me', she said. 'I was bored with it but I didn't want to leave the Division. I'd become genuinely interested in the work that was being done there'.

An advertisement for a TA in the Dung Beetle Unit changed her working career.

She applied for the position, and although there'd never been a woman in the Unit before, leader Paul Ferrar couldn't see why there shouldn't be a 'first'.

She has had no regrets, the team have welcomed her as one of the gang and have since appointed another woman, Carol Marshall.

No concessions are made just because they are women.

'There are no bars to women going on field trips in our Division', Sheila said. 'It's not something we've had to fight for... we were just asked if we'd like to go.



Although there are no women employed in CSIRO as laboratory craftsmen there are several who have become laboratory assistants. The Division of Radiophysics has three of them...two of whom, Sadie Bryant (left) and Anne Taylor, are involved in the intricate work of wiring up printed circuit boards. Along with a third lab assistant, Joyce Sherar (right) who is responsible for winding all the coils and transformers used in the lab, the women have been associated with the extensive production drive on the electronics for the Culgoora radiotelescope.



The roasting of rocks, the salting of animal hides and the analysing of oysters are just some of the fields CSIRO's women scientists get involved in.

Although a comparatively small number of women are employed by CSIRO as research scientists, the field in which they work are diverse.

The following stories illustrate just how varied those fields are and the importance of the role of CSIRO's women scientists.

Ever stuck your nose out the door, wrinkled it and said: 'It smells like rain'? It's a smell you pick up more clearly in the bush or out in the paddocks.

Animals are aware of it, too. In drought stricken areas parched cattle sense approaching rain long before the first drops fall on dry, scorched earth.

Elephants trumpet the first smell of a distant storm. Others head for water holes or for shelter.

This same smell of rain which poets have written about for years has also intrigued the scientific minds of many people.

Last century it was thought that it came from residues of dead plants surviving in dried-up soil.

Earlier this century another investigator thought it due to the presence of so-called myxobacteria surviving in the earth, while others claimed it came from fungus spores.

Two Australian scientists, Miss Joy Bear and Mr G.R. Thomas of CSIRO's Division of Mineral Chemistry in Melbourne, decided to try to sort out once and for all the origin and chemical composition of the strange odorous compound which they designated 'petrichor' — the essence of stone.

They soon found the others were wrong. By taking a wide variety of rocks and stones — basalt clinker from the core of an extinct volcano in Victoria, granite gravel from an area near Melbourne, material from quarries, spoil from mining operations — and roasting them, they made sure no smell came from fungus or dead vegetation.

They then spread all the samples out on perspex trays and exposed them to the Australian sunshine for anything up to a year.

At the end of this time each one was distilled in steam and from each distillate oily globules could be separated.

No matter what kind of earth or rock was used, the oily essence always possessed the aroma of petrichor — the smell of rain falling on dry ground.

The amount of petrichor recovered depended on the area of the surface exposed to the sun and the length of time it was exposed.

Using modern scientific aids such as gas — liquid chromatography, infra-red spectroscopy and the like — Joy Bear and Richard Thomas were able to identify some — but not all — of the components.

They began then to collect information about the origin of these substances and found that they were similar to those which make up the blue haze that shimmers over the countryside on a summer's day.

Other workers have shown that the summer haze is made up of volatile essences from leaves and grass and have estimated that over the whole world the vegetation must liberate into the atmosphere about 440 million tonnes of such plant volatiles each year.

Joy and Dick concluded from their research that these compounds are absorbed into pores on the surface of rocks and soils,

Looking for the answers

during dry periods, where some of them may undergo oxidation of transformation.

Subsequently, with the increase in humidity of the atmosphere on the approach of rain, moisture displaces the more volatile of these compounds from the pores of the rocks or soils into the atmosphere to give the characteristic odour we know as the 'smell of rain'.

They always remained cautious about their deductions but the implications of their research led them to question whether the less volatile of these compounds absorbed on the surface of the earth and rocks, could become, through a long process of geological time, the petroleum for which the advanced nations of the world are prepared to make great sacrifices.

'How neatly', said one commentator, 'this would explain the abundance of oil in the sandy desert places of the world'.

Joy Bear and Dick Thomas couldn't spend a lifetime working in this area of research. There were other things which required their attention.

Dick Thomas retired in 1961 and died 13 years later. Joy, although she occasionally has cause to extract the samples for various reasons, has moved to other fields of a more orthodox nature.

The more important of these have included a study of the normal sulphates of zirconium and hafnium, the preparation of electrodes for the direct electro-winning of metals from sulphide concentrates, and the development of a method for treating lead sulphate residues from metallurgical processes.

'It's better to have half a slice of the cake than none of the cake at all.'

That's the way one of the Organization's leading scientists has described the appointment of women to part-time positions.

Dr Jim Scroggie, who heads the leather research group at the Division of Protein Chemistry, is one male who entirely agrees with the sentiment.

Since 1966 he has had Mrs Catherine Money working in the group, for the first two years or so on a full time basis and since then in a part-time capacity.

Catherine opted for the latter after she had had her first child and now with a family of three she still manages to put in two full days a week and two part-days.

'It wouldn't have been possible to continue my research', she

said, 'without the co-operation of my co-worker, Udo Adrinis. And I've had encouragement from my husband, Rob, who has shared family responsibilities with me.'

'I've been very impressed that CSIRO has allowed me to continue in this way'.

Catherine's first research project was to improve the preservation of hides. This involved visits to many Australian meat-works where she was often asked what made a woman take on that sort of occupation. 'My answer was: "Why not?"'

She is now well-known in the industry and is often consulted on matters concerning skins and hides.

As well as investigating the salting of hides, she has developed short-term preservation methods which are used to avoid salting resulting in considerable savings to the industry.

'The conventional lime-sulphide method of unhairing hides results in an effluent problem and I've looked at alternate methods. The best answer seems to be to recycle the lime-sulphide liquors.'

'I'm at present helping tanneries adapt the method for use in various circumstances and am working on the utilisation of the hair waste which accumulates'.

Even with her family commitments, Catherine is still able to visit interstate tanneries.

'I enjoy my work and feel I make a better part-time rather than a full-time mother', she said.

'I believe it's wrong though, that many women who are happy to be full-time mothers are made to feel guilty that they aren't working'.

Towards the end of last year the staff at 'Stowell' in Hobart welcomed back to the fold Dr June Olley who had been overseas for 13 months.

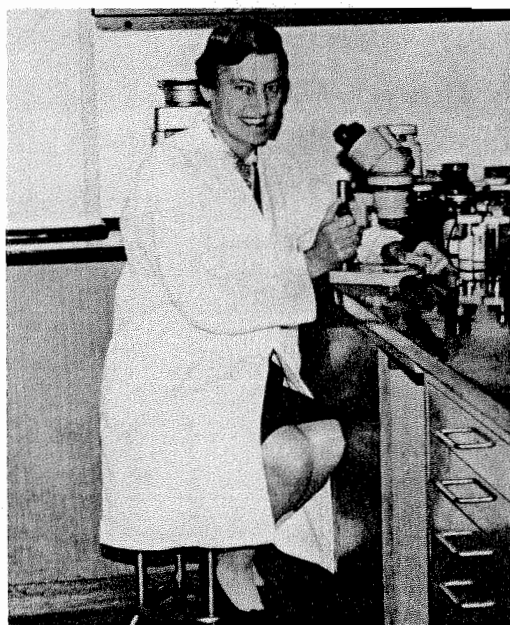
To her colleagues June's return meant more than simply the end of someone's leave. The laboratories were once again 'complete'.

A softly spoken English woman, June Olley heads the Tasmanian Unit of the Division of Food Research.

June has a Doctorate in both Science and Philosophy and has earned for herself an international reputation as a food expert, especially in the field of fisheries.

She first came to Australia in 1968 at the invitation of the Tasmanian State Fisheries to give a talk on the feasibility of a fish-meal industry.

The subject was one she knew well — she had worked on fish-meal at the Torry Research In-



stitute in Aberdeen and later became scientific secretary to the International Association of Fishmeal Manufacturers.

There was another reason that brought her to Australia—she also had to decide whether to combine a career with marriage.

The end result was a happy one for all concerned—Mr Cumbræ-Stewart, the State's Deputy Parliamentary Counsel, (recently retired) won his bride, and CSIRO gained a distinguished scientist.

'A State Fisheries scientist took me to Margate to see if I could tell them why their abalone was tough,' June said. 'I needed to measure its pH and went to CSIRO to borrow a pH meter. I came away with the offer of a position—subject to the result of an interview with the Division in Sydney.'

In the six years she has had with CSIRO, June has worked on many aspects of food research in Tasmania but fish, she says, take priority.

She spent five years working on abalone technology with David James, a Food Research colleague, and they probably know as much as anyone in the western world on that subject.

Another of her interests has been the utilisation of protein waste from meat and fish by making silage from it.

'We started that program because the local rubbish tip wouldn't accept abalone waste,' she said. 'We took it and showed how it could be made into pig and poultry food.'

June's experience in this work led her to visit laboratories in Europe who are working along similar lines and in London during her recent trip overseas she collaborated with the fisheries section of Tropical Products in their program to develop dried silages for developing countries.

June has a strong awareness of the problems of pollution and a current project is to check on the effects of heavy metals found in Tasmanian oysters when they are fed to rats.

The program June undertook during her 13 months away would be enough to scare even the most energetic and enthusiastic travellers. While much of her work concerned the fishing industry, she was also interested in dairy and meat institutes.



Top: Catherine Money, an authority on the commercial treatment of skins and hides and (above) Joy Bear who helped answer questions on how humans and animals 'smell' the approach of rain.

For several years scientists and engineers have looked at ways to utilise whey, a by-product of the manufacture of cheese and casein, to see how it can be converted from a serious pollutant to a profitable source of protein.

One of the team involved in the work at the Dairy Laboratory of the Division of Food Research at Highett is Mrs Jane Markotits.

In the past whey has traditionally been fed to pigs or has been allowed to run to waste as a polluting effluent and what little was recovered in a dried form was used for pet foods.

This meant that thousands of tonnes of high quality proteins and lactose and substantial quantities of vitamins were not only being wasted but were also causing serious disposal problems.

One of the aspects Jane has been looking at concerns the complementary effect of wheat and whey products when they are used together.

'Early research shows us that this may be better than wholemilk and wheat together,' Jane commented.

Whey might also prove to be useful in foods such as custards, and one variety of the protein concentrate could be used to replace egg whites in cake mixes.

Whey might also be useful for the whitening effects in soft drinks, she said.



Equality: its been a gentle victory

You can walk down the corridors of CSIRO's labs and offices and it's unlikely you'll find groups of truly militant women.

Nor are there any picket lines to be seen marching on Head Office in Canberra.

For the most part women in CSIRO are reasonably content with their working conditions, especially those in the professional areas, but according to a number of the staff 'Coresearch' talked to, that doesn't mean that there isn't room for improvement.

The Organization, they felt, should not feel too complacent about the situation because in some areas they would like to see some changes made.

These they believed would improve the working conditions of women members of the staff—and in some cases, those of their male colleagues—and would improve the overall image of CSIRO as an employer.

Every woman to whom 'Coresearch' spoke in the research area said she enjoyed equality with her male colleagues. Some even felt there were advantages in being female of the species.

There were those who felt it might be true to say they had achieved qualifications and status before coming to Australia and were not convinced that Australians necessarily always gave women their rightful place in society.

Women members of the Victorian branch of the CSIRO Technical Association who discussed relevant matters at one of their meetings felt that there could easily be discrimination against men as well as women in some areas of work which traditionally were considered to be more suited to one or other sex.

People, they said, should be allowed to attempt any work, regardless of such concepts.

There was some suggestion that women were denied the right to work in the field, and this was a criticism repeated by some technical women. Against that, others have said that in their particular Division, field work was accepted a normal part of the program.

Women in the technical areas were not so sure that they were on an equal footing with their male counterparts. While some felt they had achieved the equality their qualifications merited, others found that promotion was slow.

One woman who had found her climb up the ladder had been monotonously held back, finally achieved an additional rung. When asked by the members how she'd managed it, she said: 'You bug them to death.'

The greatest dissatisfaction was expressed by women in the clerical/administrative areas who felt that women should be given greater opportunities to reach higher ranks.

Many said they felt that women were conditioned by society to believe they should fill only the lower positions, but since they had much to contribute they should be encouraged to seek higher responsibilities.

While it was fair to say some women were in the work force just to have 'a job' and had little personal incentive or inclination to improve their status or financial situation, it was equally true to say that others were looking for a career and were prepared to accept responsibility.

TRAINING

The question was asked: What percentage of women are invited to participate in the staff training workshops and seminars?

'Coresearch' posed that question to the Head Office Staff Section and was told that as far as the course on an induction into administration was concerned, all those involved attended, whether they were male or female.

The Section admitted that women might have been scarce in numbers in some of the other courses held in the past, but this seemed to be improving.

At the last 'Human Factors in Management' workshop held for senior staff there were two women among the 16 participants.

A workshop for technical staff has been started and while there were no women present at the initial seminar, the participants were mainly workshop supervisors and there are no women employed in that capacity.

The second of these is now being organised and it is expected that women will be included in it.

CONCERN

Some of the participants in the inquiry said they viewed with concern that more women were not appointed to positions in CSIRO. They felt that when there were female applicants for a position, a senior woman staff member should be present.

Asked for reasons for this, they said—but admitted they could not prove—that there could be a policy on the part of some men to want to employ only other males.

Several women raised the issue of a senior woman personnel officer and said they felt one should be appointed to look at the special problems of women in the workforce.

This was a suggestion that was backed up by some of the men whom 'Coresearch' interviewed.

It was felt that if such a woman was appointed she should be a person in authority, she should be personally mature enough to deal with possibly difficult situations, and practical enough to have an understanding of her role.



LYN: OUR BREWING CHAMP...

The North Ryde males existed in a state of shock for several days last year, as the news got around that the site home-brewed beer champion was none other than the only female entrant, Lynette Thorn, from the NML library in Sydney.

Our reputation for factual and accurate reporting forces us to record that Lynette actually came second, the judges' first choice being the beer of one Mr D.A. Toohey, who was promptly disqualified as his entry had a strong resemblance to Resch's Pilsener.

The three hardy judges were Jim Corbett (analytical qualifications), Taffy Evans (consumption qualifications) and Ian Smith (as President of the Social Club he undertakes anything, well almost), who sampled the assembled entries of grog.

Champion Lynette was presented with an inscribed beer mug which was immediately used. *Extract from 'Minfo.'*

INFORMATION PLUS...

Continued from Page 3

of Victoriana" and where they'd have had the vapours if any girl suggested she wanted to work.'

Contrary to expectation, Roma did find herself in the workforce but it was a chance advertisement she saw in a newspaper that took her into CSIRO's printing unit.

'That was in 1959 when we were then at Head Office with our headquarters at 314 Albert Street, Melbourne,' Roma said.

A year later the Unit shifted to 19 Rokeby Street where Roma found herself one of a staff of 19 women and 21 men. 'The Unit has grown since then but the ratio of men and women has changed considerably so that now we have 40 men, including four new apprentices and only 13 women,' she said.

Today Roma heads the staff of women still left at the printery and supervises the mailing lists of CSIRO publications, liaising with Divisions all round the country that want new ones set up, old ones revised and the hundred things that crop up in relation to them.

Margaret Walkom who is editor of general publications in the Editorial and Publications Service in Melbourne is one of the principal matchmakers in the marriage between science and aesthetics that the Editorial Service represents.

Occupying one of the senior positions in the group, Margaret is the one who presides over the transformation of a monograph from an idea in the author's mind into a well laid out, tidily printed book.

She came to the service from the Division of Radiophysics and since then has played a leading role in the shaping of most of CSIRO's semi-popular publications.

ART/SCIENCE

Editing is an art-cum-science, according to Margaret. It requires considerable intellectual nimbleness and this is particularly true of an editor of monographs who may be supervising the production of a treatise on soil analysis, reading proofs of books dealing with botanical taxonomy and editing a

brochure on astrophysics all in the same day.

Margaret, say her colleagues, is a storehouse of information on the symbols used in the various branches of science and in a crisis always knows which expert to consult.

She is one of the few editors who manage to preserve the confidence of authors, the respect of printers and the friendship of graphic artists.

Alice Bugge, film editor in the Film and Video Centre has been described by the Officer-in-Charge of the Centre, Stan Evans, as a 'perfectionist.'

'Ninety-nine per cent just isn't good enough for Alice,' he said.

And Alice herself admits to much the same thing. In the 15 years she has been working for the Organization, all of them in the same area—she has set for herself and the Centre a high standard.

Alice had edited a number of the Centre's assignments and has made compilations—edited versions of films—which are used by people to illustrate talks.

She has also scripted and directed some of the films and handles inquiries about footage from Australian and overseas television companies.

CSIRO's Media Office links the science administrators with the ominous world of press, radio and television. As Media Information Officer, Wendy Parsons is part of the link.

'It's sometimes a rather hair raising task,' she says.

'CSIRO stories for the media need to be both accurate to please the scientists and readable to avoid the WPB files of the media people.'

'The compromise is extremely difficult to reach.'

'I find that being a woman is an advantage, and admit freely to using certain feminine wiles to convince some of the more dour gentlemen of science that they really can afford to accept readable versions of their weighty statements.'

IWY-AND ALL THAT

Continued from page 1

CSIRO employs about 7000 people.

At the end of April there were 1764 women on the staff of whom 1062 (60 per cent) were married.

The percentage of women on the staff today is slightly less than it was 20 years ago—
1975 — 24.8 per cent
1965 — 24.9 per cent
1955 — 25.5 per cent
(Figures are not available before 1955)

Only 2.3 per cent of the research staff are women but 11.3 per cent in the experimental officers category are female.

There are 11 women who earn as much as Second Division officers in the Australian Public Service. Three are senior principal research scientists—Dr Rachel Makinson (Textile Physics), Dr J. Koch (Animal Genetics) and Dr Nancy Burbidge (Plant Industry).

The other eight are classified as principal research scientists.

In all there are only 27 women employed as research staff and they are to be found in 15 of the 36 Divisions (the newly-formed Division of Forestry Research was excluded from this exercise).

There are, however, almost 150 women in other professional positions spread throughout all the Divisions with the exception of Atmospheric Physics, Environmental Mechanics, Horticultural Research, Mineral Physics and Textile Industry.

The relatively small number employed in research positions is, according to Head Office Staff Section, largely determined by factors outside CSIRO—comparatively few women are graduating from the universities with degrees appropriate to the Organization's requirements or qualification standards.

In the technical areas 3.3 per cent of the ST02s are women, 39.6 per cent are classified as TA2 and 48.2 per cent TA1.

In all but the TA2 classification, where there is an increase of nearly four per cent, there has been a slight drop in the percentage of women employed in the research and technical areas since August 1974. (See 'Coresearch' 185).

There are four women at AO1 and AO2 level and one at AO3 (clerk class 7) level and none in higher clerical areas. At AO4 level there are 34 males, AO5 19, AO6 9 and AO7 5.

There are far more women employed as clerical assistants than males however. At CA3 level for instance there are 118 women but only 14 men. There are 12 men on CA5 and 21 women. At the top of the range, CA6, the situation reverses for the first time with 12 men on that grade and six women.

HONORS

A member of CSIRO's staff at the Riverina Laboratory has been named Deniliquin's Citizen of the Year.

He is Mr Alex Scott, who has been groundsman at the lab for many years.

For the last 20 years Alex has worked to raise funds for children's playground equipment in Scott's Park, located opposite the White Lion hotel/motel.

In 1962, Alex made a request to the local council for improvements to an area of Windy Park. The area was then fenced off and arranged by him as a playground for the youngsters.

Equipment of well over \$10,000 is now in the park, an effort which has taken up thousands of hours of time and effort, which the Council says, could never be calculated in terms of money.

The patrons of the hotel have supported Alex in his drive for funds which began years ago when he saw the need to provide amenities to amuse the children.

He conducts a hamper draw at the hotel on Friday and Saturday nights and for 20 years has never missed a weekend.

Apart from providing the sole maintenance and equipment for the park, Alex sees to it that the local children have a party there each year.

In his 'spare' time Alex is a member of the Deniliquin Bowling Club and the RSL.

RSNZ

Dr Alan Walsh of the Chemical Research Laboratories at Clayton has been elected an Honorary Member of the Royal Society of New Zealand.

The honour is confined to 30 of the world's eminent scientists. Elections take place only when a vacancy occurs.



Dr Max White

Dr Max White (above) of the Division of Textile Industry has been awarded the Research Medal of the British Worshipful Company of Feltmakers.

The award was made to Dr White and Dr J. Rippon of the International Wool Secretariat in the UK, for their research on the application of shrinkproofing agents (polymers) to wool from dry-cleaning-type machines.

Dr Rippon worked with Dr White at CSIRO on research into fundamental and practical aspects of this new shrinkproofing process.

Many aspects of Dr White's work have been taken up by Australian and overseas manufacturers and have led to higher production rates with improved safety margins and garment performance.

The work was also a key factor in the successful development of the Division of Textile Industry's permanent-press process for wool.

The Worshipful Company of the Art and Mystery of Feltmakers is one of the old-established Livery companies of the City of London, and their Research Medal has been awarded on only three occasions in the past 20 years.

NEW LABORATORY- AND NEW VINES...

The Division of Horticulture celebrated the opening of its \$60,000 Wine Grape Quality Laboratory at Merbein on May 30 with a tasting of wines made from hybrid grapes from the Merbein breeding program.

The CSIRO Co-operative Credit Society Limited is urgently seeking increased investment in the Society, whether it be by deduction from salary or by lump sum investment.

The interest rates currently being offered are: Deduction from salary 9% p.a.

Lump sum investment, Less than 12 months: 9% p.a.

More than 12 months, but less than 5 years: 10% p.a.

More than 5 years: 10 1/2% p.a.

Application forms are available from your Divisional Administrative Officer or from the registered office of the Society at 314 Albert Street, East Melbourne.

Don't fritter away your tax refund cheque. Let the Society mind it for you. You will be glad you did!

FOR YOUR INFORMATION

Information Circulars

75/29	Officer-in-Charge, Division of Tropical Agronomy, Davies Laboratory, Townsville	19.5.75
75/34	Acting Officer-in-Charge, Division of Animal Physiology, Armidale	20.5.75
75/35	The Edgeworth David Medal 1975	19.5.75
75/36	Australian Meat Research Committee Awards for Postgraduate Study at Australian Universities or Overseas	19.5.75
75/37	Head Office Directory (amendments)	19.5.75
75/38	Chief, Division of Mechanical Engineering	
75/39	Acting Regional Administrative Officer, Melbourne Scientific Representation, Australian Embassy, Moscow	28.5.75
75/40	Division of Forest Research (Acting Chief and Executive Arrangements)	28.5.75
75/41	Compensation Leaflet	29.5.75
75/23	Policy Circulars	
75/24	Salary Adjustment - Librarians	12.5.75
75/25	Salary Adjustments - Animal Attendants, Assistants (Food Service), Caretakers, Cleaners, Farm Assistants, Gardeners, Labourers, Lift Attendants, Stores Supervisors and Telephonists	16.5.75
75/26	Salary Adjustments - Film Production Staff (not issued yet)	16.5.75
75/27	Industry Allowance	19.5.75
75/28	Safety Statistics and Accident Reporting Procedures	19.5.75
75/31	Superannuation - New Scale of Units of Pension	30.5.75

Among the guests were the then Minister for Science, Mr W.L. Morrison, the CSIRO Chairman, Dr J.R. Price, and key officials of organisations representing Australia's wine and brandy industries.

Mr Morrison opened the new laboratory and launched three new hybrid wine grapes and a new type of currant, for commercial testing.

Two of the new wine varieties, Goyura and Tarrango, have a promising future if reactions among guests are any indication.

Goyura is a clear white wine with a strong bouquet and good flavour, while Tarrango is a red with a distinctive, soft taste. Both are ready for drinking soon after vintage.

Tullillah is another white, with a neutral flavour, suited as a base for sparkling wines or for blending with headier varieties.

The Carina black grape could revolutionise Australia's currant market if problems with fruit-set can be overcome. It is slightly larger and more tasty than the Zante currant, entire terrible of dried fruits growers.

Zante currants are highly susceptible to rain damage, a deficiency corrected in the Carina.

The Wine Grape Quality Laboratory is probably the most modern wine making facility in Australia, and is being used to evaluate the wine-making potential of new grape hybrids.

Staff at the research station mounted a series of displays on the work being done at Merbein, including the culture of crops which have been traditionally regarded as being suited only to the tropics.

Merbein now grows some of the best avocados in Australia, not to mention macadamia nuts, pistachio nuts, walnuts, mangoes, guavas, Chinese gooseberries and numerous other crops.

New Member

'Coresearch' has a new member on its editorial staff. A scientist-at-large called Ciro, he plans to drop in on various Divisions and offices and will report his findings back to his master, Brian Gosnell, a graphic designer with the CCU in Canberra.

Journalist Graeme O'Neill is likely to be the inspiration for much of Ciro's research into staff activities.

Keeping his priorities straight, Ciro this month turned his attention to the role of women on the staff.



Dr M. Lipson, Chief of the Division of Textile Industry, Geelong, (centre) recently visited Russia as one of the Australian team which finalised a program of co-operation in textile technology between the two countries.

The program is part of the USSR-Australian Science Agreement.

Dr Lipson's colleagues are (left) Dr B.E. Golovastikov, Director, Central Research Institute of the Soviet Wool Textile Industry and Dr V. Zaritovskiy, Director, Sheep and Goat Research Institute, Stavropol.

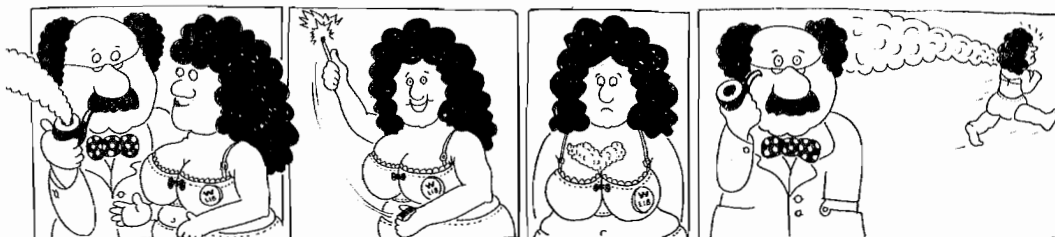
'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2702, Tel. 48 4478 or Wendy Parsons, 48 4227.

Ciros the Great



Woman: 'Got a match Ciro?'

I'm sure she was supposed to take it off before she burnt it?

The USSR is the latest country in which there will be a scientific representative at the Australian Embassy.

The Executive has called for applications for the new posting and it is expected that the appointee will travel to Moscow towards the end of the year where he/she will have full diplomatic status.

The officer appointed will have the task of promoting scientific liaison and co-operation between Australia and the Soviet Union and advising Australian authorities on relevant work which is proceeding in that country.

Script by Graeme O'Neill. Drawing by Brian Gosnell

coresearch

Produced by the CSIRO Central Communication Unit

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August 1975

TWO BRANCHES BECOME ONE

Following the resignation of Mr John Shelton, Secretary, Industrial and Physical Sciences Branch, there has been a reorganisation of the Head Office Secretariat. As from 23 July the two Science Branches — Industrial and Physical Sciences and Agricultural and Biological Sciences — have become one entity to be known simply as the Science Branch.



Mr Shelton

SECRETARY TAKES NEW POST

Mr John Shelton who has been Secretary of the I and P Sciences Branch at Head Office since 1966, has left CSIRO to take up a position as First Assistant Secretary of the Division of Policy Co-ordination in the Department of the Environment.

Mr Shelton joined the Organization in 1947 after working as a research chemist in private industry.

His first position was as a research officer in the Division of Industrial Chemistry in the section that has since become the Division of Chemical Physics.

Between 1953 and 1955 he was Scientific Liaison Officer in London after which he returned to his Division. In 1964 he transferred to Head Office as an Assistant Secretary.

In 1966 Mr Shelton took up his present position, but for 12 months in 1973-74 he was seconded to become leader of the Government's Task Force on Consumer Standards and then the Executive Officer of the Interim Commission on Consumer Standards.

Since 1963 Mr Shelton has travelled extensively for CSIRO both within Australia and overseas.

He has also served on a number of committees, boards of Directors, institutes and councils as the Organization's representative, and is Secretary to the CSIRO Patents Committee.

Mr Shelton was farewelled by staff and colleagues at several functions in Canberra before he took up his new position.

The Branch will be under the leadership of Mr A.F. Gurnett-Smith, who formerly headed the A and B Branch. His title will be Secretary (Research).

The Senior Assistant Secretaries are Mr P.F. Butler and Mr S. Lattimore and the Assistant Secretaries will be Messrs K.L. Avent, A.W. Charles, H.R. Webb and Drs J.B. Allen and J.R. Yates. Mr Lattimore will deputise for Mr Gurnett-Smith in his absence.

The single Science Branch will take over all the existing functions of the two former branches with the exception of the Patents and Licensing Group.

This Group has been transferred to the Administrative Branch and will absorb general advisory responsibilities for legal matters. The Group will remain under the leadership of Mr Grant who will report directly to Mr L.G. Wilson, Secretary (Administration).

The Executive Officer, Dr J.A. Allen, will act as adviser and consultant when there are special considerations or where there are major implications of an unusual kind. The input from program arrangements and priorities will be developed by liaison between Messrs Grant, Lattimore and Butler and appropriate Divisions.

The Administrative Branch will remain under the leadership of the Secretary (Administration), Mr Wilson. The Senior Assistant Secretaries will be Mr J. Coombe and Mr R.W. Viney and the Assistant Secretaries will be Messrs H.C. Crozier, (Mr L.C.R. Thompson Acting), J.V. Dunn, P.A. Grant, G.D. McLennan, J.R. Warwick, and R.C. McVilly, who on retirement will be replaced by Mr F.J. Whitty.

Mr Wilson will continue to deputise for Dr J.A. Allen in his absence, and Mr Coombe for Mr Wilson.

New committee

Because it has been felt for some time that there is a need to have effective machinery at a senior level to ensure that optimum use is made of the communication output of the Science Branch, the Central Communication Unit and the Information Section of CILES, a Communication and Development Committee has been formed.

The members of the committee are Mr G.R. Williams (Chairman), Mr Lattimore, Mr Butler and Mr C. Garrow.

The committee will be free to co-opt temporary members when particular items are being considered in a development context.

TWO MINISTER ARRANGEMENT

It now seems certain that CSIRO will remain intact and will not lose its Minerals Research Laboratories and Solar Energy Studies Unit.

At the time of going to press with this edition of 'Coresearch' it appeared that the Executive would be responsible to two Ministers in the administration of the Science and Industry Research Act.

In a message to staff, the Chairman, Dr Price, said that having regard to all the alternatives with which the Organization had been confronted he felt this could be regarded as 'a satisfactory result'.

Dr Price said that thanks were due to many people for their support and forbearance and trusted that affairs would now return to normal throughout the Organization.

The Executive is now working out the detailed operational changes involved in the two-Ministerial Administration.



APPRENTICE WINS AWARD

Terry Kinder of the National Measurement Laboratory in Sydney has won the first Arthur Frost Memorial Award.

The award is one which the CSIRO Laboratory Craftsmen Association and the Executive agreed to establish last year in memory of the late Arthur Frost who was foundation NSW secretary and, at the time of his death, general secretary of the CSIRO/LCA.

The award is given to the CSIRO apprentice judged to have achieved the most significant improvement in all-round performance during his final apprenticeship year.

Terry completed his apprenticeship in March and is now a laboratory craftsman at NML.

The presentation of the award — \$100 to be used to purchase tools of trade or technical reference books — was made to Terry by Mrs Frost.

Above: Terry discusses with Mrs Frost a mount which he made for some of the accessory equipment for one of the telescopes at the CSIRO Solar Observatory at Culgoora.

New shows look at science

Two new science programs are to start at the end of the month on ABC Radio 2.

The first will be called 'The Science Show' and will be a 45-minute program of news and discussion. It will begin on Saturday 30 August from 12.45 to 1.30 pm. Country listeners can hear it from 7.15 — 8 pm.

The program will be presented by Robyn Williams and the first edition will come from the Pacific Science Congress held in Vancouver which Robyn Williams is attending for the ABC.

The second series will be a collection of talks by Dr Jacob Bronowski entitled 'Voyage round a 20th century skull,' and will be broadcast at 10.45 am, starting Sunday 31 August.

The program surveys the central ideas and discoveries which now make the essential thinking of 20th century man.



Training schemes begin

Above: Members of the Technical and Trade Staff Development Advisory Committee recently met with the Victorian Committee at the Division of Building Research, Highett.

Those attending were (left to right) Mr Harold King, Mr Kevin Hodges, Mr Jeff Watson, Mr John Miles (standing), Mr John McAlpine, Mr Norman Bass, Mr Alan White (standing), Mr Don Gwynne, and Miss Pamela Hodge (minutes secretary).

Not pictured: Mr Russell Hill (Division of Building Research and representative on Victorian Committee).

The Executive last year endorsed the report of an Advisory Committee on the training of technical and trades staff under the chairmanship of Dr J.R. Anderson, Chief of the Division of Tribophysics.

The report recommended that a program of supervisory training, technical exchange of information, industry visits, in-house courses, and the establishment of a counselling service for technical staff on their education and careers should be implemented.

The report also recommended the establishment of an advisory committee to assist in the development and implementation of the scheme.

This committee has since been established under the chairmanship of Mr Don Gwynne, Senior Staff Training Officer and comprises: Mr Norm Bass (NML) CSIRO representative; Mr Harold King (Animal Physics) LCA; Mr John McAlpine (LUR) A and B Divisions; Mr Jeff Watson (Textile Industry) I and P Divisions.

Two meetings of the committee have been held, both in Head Office in March and April, and at the invitation of the Chief of the Division of Building Research (Dr R.W. Muncey) the third meeting was held at Highett in June.

Victoria

A Victorian regional committee was established at the June meeting to assist in determining needs and available resources of Divisions in the Victorian region.

Members are Mr Jeff Watson, Chairman, (Textile Industry), Mr John Miles (Mineral Physics), Mr Kevin Hodges (Animal Health), Mr Alan White (Applied Geomechanics), Mr Russell Hill (Building Research), and Miss Carole Popham (Film and Video Centre).

Representatives from Tasmania, South Australia and Western Australia will be co-opted to serve on the committee as required.

As part of their program a course in 'Training the Trainer' will be conducted in the CSIRO Printing Unit, Rokeby Street, Collingwood, under the auspices of the Department of Labor and Immigration and the Printing and Allied Trades Federation.

Eight staff will receive instruction on how to instruct over a period of eight weeks in-house training.

It is anticipated that more programs of this nature will be arranged in the near future throughout CSIRO.

Human relations

The Advisory Committee has now staged two courses in Human Relations in Supervision.

The first, held in Canberra in April was attended by 20 technical, trade and administrative supervisors.

The second one was held at Leura, NSW, in July and the third will be conducted in South Australia in late November. Supervisors from 30 Divisions, RAOs and Head Office will have participated in these courses during 1975.

The Advisory Committee has also embarked on a program of industry visits for all technical and trade staff.

A NSW regional committee will be established at a meeting in the Division of Food Research, North Ryde on 18 August and the ACT committee will also be established this year.

Technical and trade staff are invited to contact committee members and discuss their training needs. The overall supervision and responsibility for this program is provided by the Central Training Unit, who will discuss with and seek approval from Chiefs of Divisions for all activities.

BENEVOLENT FUNDS KEEP UP SERVICE

When the CSIRO Benevolent Funds held their combined annual meeting last December, it was decided that in spite of the call on money for the Brisbane floods and inflation there were enough financial reserves for the immediate future without asking for an increase in members' present contributions—10 cents a week.

In the annual report issued last month, however, attention was drawn to the fact that since the meeting the Darwin cyclone had occurred and that it might be necessary to re-open the question among the Funds before the 1975 general meetings of the individual Funds.

The meeting, attended by three Chairmen and representatives from all the Funds, discussed matters of common interest and compared the slightly different activities of each individual group.

While there was no intention of making the Funds operate in the identical way, it was decided that if the rate of contribution was to be increased in the future it would be best for all of them to make such a move at the same time.

Flood

In their report, the Chairmen stated that the Benevolent Funds collectively received their first financial test as a result of the Brisbane flood in January 1974.

It was obvious that a disaster of that magnitude would require more expenditure than the resources of the Brisbane Fund could provide.

The management committees of the other Funds were quick to offer help to Brisbane and from the comments received it was clear that Fund members entirely approved of this action to help CSIRO colleagues in misfortune without quibbling over geographical demarcation boundaries.

The Southern Region gave \$4000 and NSW \$2500 (for technical reasons explained in the NSW Report this appears as a loan in the balance sheets) and Canberra offered help if it was needed.

These gifts were additional to those CSIRO members contributed by a general appeal and through their Associations, and demonstrated one of the Funds' particular attributes of being able to provide assistance quickly without red tape.

The Brisbane management committee also demonstrated the advantage of having a permanent and experienced organisation in existence before an emergency occurred in that it was given the responsibility of making recommendations to the appeal organisers on the disbursement of the moneys collected.

It played a very real part in relieving the emotional distress of the people involved in flood losses particularly during the period of confusion when the extent of Government assistance was unknown.

The report stated that in the past all-Fund management committees had consciously aimed at building up asset reserves and it was believed that the reaction to the Brisbane flood strikingly demonstrated the necessity of such a policy.

Membership

Approximate figures are given for the membership of the Funds expressed as a percentage of the total staff: Brisbane 60 per cent, Canberra 52 per cent, NSW 75 per cent, Southern Region 64 per cent.

These percentages vary from time to time, tending to drop gradually and then surge up after a recruiting drive.

Thanks

The Chairmen took the opportunity of recording their gratitude and thanks to all the individuals who so willingly gave their time and effort to promote the objects of the Benevolent Funds.

They also thanked the Chairman and the Executive of CSIRO for their encouragement, their willingness to allow staff to spend time on Fund business and for the practical assistance which enabled their 'administrative expenses' to be kept so low.

Finance

The figures below are as of December 1974 and do not give a final picture because the Brisbane flood payments had not all been completed.

Total expenses include benevolence and minor amounts for administration.

The figures in brackets are the corresponding sums for 1973.

Income and expenditure			
Fund	Income (\$)	Expenditure (\$)	
Brisbane	10166* (1104)	4894 (107)	
Canberra	2528 (3131)	1256 (3591)	
NSW	4740 (3629)	4614 (1770)	
Southern Region	6356 (5823)	10414 (4405)	
*Including loan			
Assets			
	Investments and Cash (\$)	Loans (\$)	
Brisbane	6604 (2468)	1135 (nil)	
Canberra	4961 (3375)	993 (1308)	
NSW	11970 (11045)	491 (604)	
Southern Region	8537 (12597)	Nil (nil)	
	32072 (30385)	2619 (1912)	

New Service

CILES has released news of a retrospective search of scientific literature which is expected to be a useful addition to what they already offer the scientific staff.

From now on when they begin investigating a new subject or when they want to review a continuing research program in any of the eight categories involved, scientists will be able to quickly get a rundown on the recent literature.

The subjects covered are: GEO REF (Geoscience), CAIN (Agriculture), CHEMCON (Chemical abstracts), MATRIX (Communications, Ecology and Urban Planning), COMPENDEX (Engineering Index), CRA (US Government Reports Announcements), POLLUTION (Pollution Abstracts), SSIE (Current Research in Progress).

Generally the files provide citations back to 1970 with the exception of GEO REF (1967), CHEMCON (1972) and MATRIX (1973).

The service has been put into operation with the co-operation of Dr E.G. Bowen and Mr J.H. Whitten at the Office of the Counsellor (Scientific) at the Australian Embassy in Washington, and with the assistance of Peter Henley of the Information Service.

Interested staff should contact their Divisional Librarian or the Information Service for further details.

STAFF HEADING HOME AGAIN

After several months in southern regions of the country, northern staff of the Division of Wildlife Research are gradually returning to Darwin.



Mike Ridpath

CRECHE CLAIM

Staff on the Black Mountain CSIRO campus in Canberra are looking for ways to have a creche established somewhere handy to the laboratories.

A questionnaire was recently circulated among 780 members of the staff by the Staff Associations' Site Committee with a response rate of 80 per cent. Of those who answered the questions, 80 per cent indicated approval of the establishment of a creche, eight per cent disapproved of the idea and 12 per cent 'didn't care.'

According to the convenor of the committee, Graham Yapp, the questionnaire suggested that creche facilities would be used by 24 pre-school children and by 12 infant school children.

It is believed that if a creche was established in Canberra, other parents working for the Organization in the ACT would be interested in using it if it was not confined to Black Mountain staff.

'The result of the survey has been forwarded to Head Office for their comments,' Graham told 'Coresearch.'

The idea of CSIRO creches is not confined to Canberra, however.

In the course of making inquiries on the working conditions for women in the Organization for its IWY edition (July 1975), 'Coresearch' was told by a number of staff that the location of child-minding centres on or near laboratory or office sites had considerable support.

While some staff members felt that people should be able to organise their domestic lives in such a way that they didn't intrude on their professional work, others felt it was important to help those parents with family responsibilities where this was practical.

Having a working mother on the staff might cause some minor disruptions at times, but as one scientist put it: 'It's better to have even half a good cake than none of the cake at all.'

Provision of child-minding centres was also seen as a way of helping solo parents (and that included fathers as well as mothers), not just married couples.

Trevor Redhead and Mick Gill and their families went north in May and Juliet Burrell hopes to get back to her home in a few weeks' time.

Others are expected to follow as soon as suitable accommodation becomes available.

The Division has acquired some emergency housing and located it at the laboratory. This includes two small houses and a transit bunkhouse which can accommodate eight staff members without families.

'We've had a lot of co-operation and understanding from Head Office,' Mike Ridpath, the Officer-in-Charge, told 'Coresearch' when he was in Canberra last month.

'No one has been told he has to go back. Each person has been entirely free to make the decision for him or herself and any family that might be involved.'

'In most cases, the family wishes have been the determining factor and at least two of the decisions to return were made because the wives even more than their husbands wanted to go.'

Very few of the staff have so far resigned.

Dr Reg Barrett, however, has left to take up a teaching-research post with Professor Starker Leopold, at University of California at Berkeley. One member has transferred to another Division and three have left for personal reasons.

Research

While the staff has been down south they have been busy writing up much of their research completed up to the time of the cyclone and have been working out their new research program.

This will be aimed at studying the relationship between nine selected species or groups of animals and their relationships with the vegetation.

For this, the Division has acquired the use of a new study area of 400 km² between the West and South Alligator rivers. Called Kapalga, it is on the coastal plains, west of Arnhem Land and is about 290 km by road from Darwin.

The study is what the Division originally hoped to accomplish when it established a laboratory in Darwin but work areas which have been available in the past have always been used for outside purposes as well.

'This inhibited our research,' Mike said, 'but now we have a location where, subject to a few acceptable conditions, we can expect to be left alone for about 15 years.'

During this time the scientists and their support staff will monitor first the effects of the animals as they exist now on the vegetation. Then they will see what happens if the balance is changed by removing or controlling various predators or prey.

By simulating changes such as might happen in field conditions through land use or management, much valuable information should become available which will give the authorities data on which they can base their development programs.

When the Chairman, Dr J.R. Price (centre) and the Executive Officer Dr J.A. Allen (left) visited Japan recently they were entertained in traditional style by members of the Mitsubishi Corporation (standing).

They were joined by Mr E.E. Adderley, Scientific Counsellor at the Australian Embassy in Tokyo (right). Geisha girls added colour to the occasion.



CAST AROUND AND YOU SHALL FIND

Can anyone come up with a multidisciplinary study that will let CSIRO research scientists sample plankton in a corn patch?

No, no one's gone out of their tiny minds.

It's just that the WA laboratories of the Division of Fisheries and Oceanography has a special problem.

According to Dave Rimmer in Perth, in the summer of 1973-74 the men working on the western rock lobster project were casting around in search of a depressor suitable for use with the plankton nets being used under water to sample rock lobster larvae.

While looking through the literature a reference to a likely device was unearthed.

A request was duly sent to the librarian in April 1974, quoting the inventor's name and data—J.D. Isaacs 1953, the title of the invention, a 'Kite-type cable depressor', and the source, 'United States Patent Office Design 168,999,3p.'

It seems that somewhere in the 'system' the design number became abbreviated to 168,999, possibly because a librarian had assumed the 3p referred to a document comprising three pages, a fact well known to every librarian, and as such, the 3p was obviously irrelevant and should be omitted.

It seems likely that the 3p actually designated a series number of the patent, or something similar. In any case, the order was typed and sent to the US Patent Office with the abbreviated design number.

Thirteen months later, in May this year, the lab's request was faithfully fulfilled with the arrival of the 'relevant' documents.

The "system" should be applauded for its persistence in carrying the task through to completion,' said Dave.

'However, we are now faced with the problem of how to attach a shovel cultivator with an improved fender to our array of plankton nets.'

'It seems that US patent number 168,999 dated 19 October, 1875,

is the invention of one Mr Orin W. Hoyt, of Coldwater, Michigan.

'His invention is a "new and useful machine to be attached to the common shovel and wheel cultivators and other cultivators in use, and to be used in cultivating corn, potatoes and other crops..."'

Baffled though they may be, Dave and his colleagues are grateful to a 'system' which may have revealed an entirely new technique in fisheries research—if they ever find a use for the design.

Action on Radiation Protection

Forty radiation protection officers, representing a wide cross-section of the profession across Australia, have unanimously agreed to the formation of the Australian Radiation Protection Society.

The participants met at the University of Melbourne and included representatives from universities, colleges of advanced education, the Australian Atomic Energy Commission, the Australian Radiation Laboratory, State radiation laboratories and CSIRO.

Professor D.E. Caro, Deputy Vice-Chancellor of the University of Melbourne, spoke about the desirability for more effective communication between radiation protection personnel in Australia.

Mr D.J. Stevens, Director of the Australian Radiation Laboratory who gave the keynote address, discussed the current work of the International Commission on Radiological Protection.

A range of technical papers was presented and these will be published in a special edition of the Society's newsletter.

Office bearers elected were: President, Dr R. Rosen (University of NSW); Vice-President, Mr J.E. Button, (AAEC Research Establishment); Hon. Secretary, Mr F.P.J. Bobotham (University of Melbourne); Hon. Treasurer, Mr T.N. Tan (Monash University).

THOSE FARAWAY PASTURES

Staff of the Brisbane-based Division of Tropical Agronomy frequently commute to and from work by air.

Not out of a desire to escape their city's peak-hour confusion, but because many of them are working on field trials at Narayen, a research station 470 km north-west of their Cunningham Laboratory.

Too far away to be reached quickly by road, Narayen is in the heart of the Burnett cattle district.

Charter flights get the men in early on a Monday morning and they have the option of returning late that afternoon or coming out again when the plane flies back in on Fridays.

In the early 1960s the then Chief of the Division, Dr J. Griffiths Davies, felt that the Division needed a large tract of land to extend its research on pastures suitable for the sub-coastal speargrass and brigalow country of Queensland.

At that time Hawkwood Station was being subdivided and seemed ideal for the purpose. CSIRO acquired one of the blocks of 9100ha, 5100ha of which was speargrass country while the rest was brigalow country, so called because of the acacia trees which grow over it.

About half of the latter had been cleared and was well suited to pasture experiments.

Contrast

It also had the desired range of soils and climatic conditions which contrasted with other research stations.

The first residential members of staff moved on to the property in 1966, making their headquarters in a 6x4m hut, a tent and a caravan.

Today there is a small village on the station with an administration block, houses, and a street lighting and road system that gives it almost the appearance of suburbia.

Twenty members of the staff, about half of whom are married, are now resident there, living either in three and four bedroomed homes or the single men's quarters. A hostel is available for visitors.

Seven years of station life has lost none of its appeal for David Coates and his wife, Claire, whose two children have been born since they went to live there.

Like the other married women, Claire now finds herself coping with the problems of getting her older child to school in the nearest town, Mundubbera, 64km away.

Driving

Claire recently learned to drive a bus and having gained her licence for this type of transport, now takes her turn with the other women to drive the station's school vehicle.

And like other outback mothers, she spends much of the rest of her day supervising a pre-school infant when radio and television educational programs are scheduled.

The person with the most unwanted assignment around the station is Alan Bell, a clerical assistant whose task it is to regularly ring through the orders for food supplies to Mundubbera.

On Tuesday and Friday mornings these arrive with the local mail service and each Monday and Thursday night Alan offers up a silent prayer that he didn't forget someone's bacon or someone else's bread.

The mailman's arrival in the

village is the signal for the women to appear with a variety of handcarts and wheelbarrows to take delivery of their goods and a chance to say 'hallo' to a neighbour.

Gardens

Most of the families grow their own vegetables and some of their own fruit, but gardens have to be well fenced as protection against inquisitive wildlife that lives in the iron bark forest and the nearby scrub areas.

A social club functions at the station, there is a tennis court and the river has a good swimming hole.

For the scientific, technical and farm staff — whether they are residents or Brisbane-based — life tends to revolve around the research programs. To get some understanding of what these are about a tour of the property is a quick way to get an insight into how complex these can be.

The range of the experiments is wide and in some areas the trials are conducted in small plots; in others they may be on large blocks with cattle from the two Narayen herds grazing on them to study animal-pasture relationships.

The herds themselves are of interest. One is composed of Herefords and the other of Belmont Reds, (half Africander, quarter Hereford and quarter Shorthorn) a breed developed by the Division of Animal Genetics at Belmont, Rockhampton.

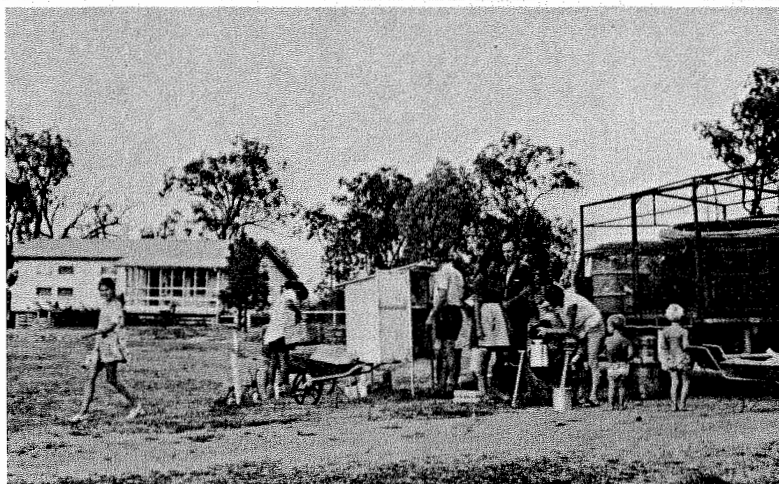
On one part of the property a visitor may see water experiments being undertaken...this may well be work being done by the Division of Soils to record the effect of use of the land for agricultural purposes as it undergoes different management trials.

Do such experiments affect the catchment area, the water table?

Does it make any difference to the water situation if trees are clear-felled or killed by chemical injections?

Similarly, how do the pastures react when sown on land that has previously had trees on it which have been killed by chemical methods?

Conversely to that aspect of the Narayen story, the visitor will see areas where the forests have been kept as they were when the station was first taken over.



Top: Len 't Mannelteje inspects some of the cattle on an experimental plot at Narayen.

Above: Families collect their twice-weekly supplies after they have been delivered by truck in handcarts or wheelbarrows.

Right: David Coates, Officer-in-Charge at Narayen.



This allows the scientists to always have a place where they can monitor the impact of man and science on the land. It also, of course, has an aesthetic value.

In one of the long-term experiments being undertaken, native pasture is taken and to it are added legumes such as Siratro and Townsville Stylo.

In other paddocks, the trees and native pasture are cleared and a fully sown pasture is established.

Cattle are then grazed on the fields at set rates of stocking, fertiliser is applied in controlled quantities and the results monitored.

From this work, information on the long-term productivity and stability of a range of pasture systems on soils which are derived from granite is obtained. The researchers can also study what effect animals have on the pastures, and what effect the different pastures have on the cattle.

Pasture

As David Coates put it: 'We've found that on native pasture you can run one beast to four hectares of land and it'll take five years to get fat.

'But on sown pasture you can run one beast on just over one hectare and it will be fat in two and a half years and at that age it will be a better beast than the five-year-old one.'

Inter-divisional co-operation is typical of many aspects of the work at Narayen. Frequently staff of Tropical Agronomy will seek the co-operation of scientists in different areas of CSIRO, while other Divisions may equally ask Tropical Agronomy if they can work with the Cunningham Laboratory staff at Narayen to carry out their experiments.

Trials

This sort of joint effort has been the case particularly with Soils, Animal Health, Animal Genetics, Land Use Research and Land Resources Management. The Division of Wildlife Research has also conducted experiments on the station.

Experiments in trials with different kinds of crops such as wheat and grain sorghum can be seen and so can alternative crops such as black mung beans and cowpeas which are being investigated for use in Tropical Australia.

Reports

While the Division's main role is research, the results of the work are made known through scientific papers and reports so that extension officers may use them to help cattle producers and seed breeders.

Field days for grazier associations are held and the men often find that information is passed on by word of mouth.

'We might have grazier associations out here and the men will go home and try out some of our ideas,' David Coates said.

'The farmer over the fence may not be too impressed with what he thinks white-coated boffins are coming up with, but when he sees his neighbour's progress, he begins to change his mind.'

The result, however it is achieved, has been to the benefit of many producers in what is one of the major centres of beef production in northern Australia, but which, the Division is confident, can be made more productive as more becomes known about its potential.



PRAWNS IN FOR CLOSE STUDY

A small group of international scientists working from headquarters in the Queensland coastal town of Cleveland, near Brisbane, has begun a comprehensive biological study of Australia's tropical prawns.

According to their leader, Dr Bill Dall, it's a subject about which—surprisingly—comparatively little is known.

The team, which includes scientists from Australia, New Zealand, the United States and Canada, as well as its support staff, is enthusiastic about the new program.

'They're bright young men, with bright new ideas,' Bill said, 'but they won't just be sitting around behind desks. There's more Chiefs than Indians in the group so everyone will be getting both his hands and his feet wet and dirty.'

The team, part of CSIRO's Division of Fisheries and Oceanography, will continue to do some of the work previously undertaken by the Northern Prawn Project but in a reorganised form, and by the East Coast Prawn Project which is being wound down.

Bill Dall (left)

The studies on population dynamics of both the old projects will, however, be continued.

While the emphasis is being placed on tropical crustaceans, particularly the banana and, to a lesser extent, the tiger prawn, Bill is also hoping that the group can at some time in the future look at sand and mud crabs and possibly other invertebrates such as scallops, and the tropical rock lobster in Torres Strait.

Uncertain

Just what the future is for the prawning industry in the north is not yet certain.

In the past with the other prawn projects the accent has been on exploration or management, but in the new program the scientists will be concentrating much more on the fundamental biology of the prawns.

This may give the answers to some of the questions which perplex the fishing industry.

Because comparatively little is known about what makes the prawns 'tick' no one has been able to explain with 'scientifically-determined specificity' why after the first year prawns were found in large numbers in the Gulf, then decreased alarmingly for a season only to return in huge numbers the following year.

The prawn populations are still subject to similar fluctuations but in studying their life cycle the scientists may well gain an understanding of why such variations occur.

The team is not setting out with the intention of looking either for new fishing grounds or new species of prawns.

'I doubt it we'll find any more new species in exploitable numbers,' Bill said, 'unless they're in deeper waters than are now being worked.'

'It's one thing to find them in an exploratory trawl. It's another to get them in economic quantities, but I believe the industry will be expanded by the location of known commercial species on new grounds in the territory outside the Gulf.'

Leader

Bill took over leadership of the new program in July last year after being with the Western Rock Lobster Project in Perth for six years. A scientist who has worked in the field of crustacean research all his academic life, his particular interest lies in crustacean physiology.

He has been joined by Peter Rothlisberg from Oregon, USA, who will concentrate on a study of the prawn larvae, Derek Staples from New Zealand who will study juveniles, and Jim Redfield from the University of British Columbia who will work on adult prawns.

Some of the staff have come over from the other prawn projects. They include David Vance who was Officer-in-Charge at Karumba, John Stalini, Peter Crocos and Chris Jackson.

Keeping a watchful eye over them is Eddie Johnston who returned to his native Queensland sometime ago after being house-manager at Head Office in Canberra.

At present the team is working from temporary quarters in the shopping centre at Cleveland on the coast, a few miles from Brisbane.

SELLING MEAT TO THE MIDDLE EAST

Seeing three felons receive 80 lashes of the cane in a square in Jiddah for being found drunk and being stranded near Khorramshahr in Iran are just two of the experiences Denis Roberts can recount after working in the Middle East.

Denis, who has been attached to the Australian Meat Board from the Meat Research Laboratory of the Division of Food Research, is based in Perth.

For some time he has been assisting the Board in a program with the Iranian Government Meat Organisation on correctly handling and de-freezing frozen lamb and hogget carcasses.

In other Middle East countries he has been working in conjunction with the Board and has given technical advice in discussions with government and private meat importers. This year as well as Iran, Denis has visited Dubai, Bahrain, Kuwait, Lebanon, Cairo and Jiddah.

During 1974-75 Australia exported between 30,000 and 40,000 tonnes of meat and about one million live sheep to the Middle East.

Local traditions put difficulties in the way of selling the commodity in the normal manner.

'The traditional method of handling meat in the Middle East is to slaughter the animal during the night or early morning. The meat is eaten the same day,' Denis said. 'Sometimes the animals are slaughtered and the meat is sold immediately. No part of the animal is wasted, with the exception of the blood.'

'These traditions fit in with the Islamic "anti-carrion" strictures that require, among other things, that an animal to be used for food must be alive when its throat is cut. Similarly consuming blood is forbidden.'

'The animal should be killed by a member of the "faithful" and killed in the name of God—all beliefs that put difficulties in the

way of persuading individual households in the region to buy processed, especially frozen, meat'.

Denis has also found that Middle East housewives are no different from those in Australia and are suspicious of meat that is different from what they are accustomed to.

For instance, Australian merino meat has a good deal of subcutaneous fat while their fat tailed sheep have almost none. Middle East sheep also have a distinctive flavour in summer and autumn which, Denis says, seems likely to come from the plants they eat—onion, rosemary, thyme, dill and other strong smelling plants.

Jokes

Until recently much of the frozen sheep meat which has been exported from Australia has not pleased the Middle East consumers and last year it was even the subject of nightclub jokes—somewhat unfairly, Denis said, since some of the meat was also being imported from New Zealand.

The Australian program has since overcome many of the problems. Working in Iran at an Australian-built cold store, and with a highly qualified Iranian veterinarian, Denis was able to introduce a system of controls so that within a 48 hour loading to unloading cycle, they were able to produce 'beautiful thawed carcasses, almost indistinguishable from fresh ones. They were of excellent colour, of prime importance in the Iranian market, no drip was lost and there was minimal shrinkage.'

In company with the Iranian officer, Denis visited almost every retail outlet which will receive the defrozen product in the future and briefed the staff on its handling and its properties.



Denis Roberts

In the other countries, Denis looked at the market situation and gave technical advice on handling the product.

'In nearly all the countries, even Saudi Arabia, meat is subsidised. With the exception of Egypt where the first preference is for beef, young sheepmeat is the first choice for meat—beef and camel are towards the end of the line.'

While he has been travelling and working in the region, Denis has learned to speak enough Farsi to explain what he wanted (but not necessarily get it) and to carry on small talk socially. His Arabic, he says, is confined to making greetings and farewells.

'I've found the Arabs extremely gracious, hospitable and friendly,' he said.

Stranded

On the night Denis found himself stranded near Khorramshahr, he enjoyed the hospitality of an Arabic-speaking Iranian family.

'During the evening numerous hookahs which use a resinous type of tobacco were smoked on a community basis. I can confirm

New Master

Mr John Weeks has been appointed master of the research vessel, *Kalinda*.

A 70 ft prawn trawler built for the East Coast Prawn Project the vessel has been working out of Moreton Bay for the last two years. It will leave for Karumba in a few weeks' time where it will be involved in the Tropical Prawn Project of the Division of Fisheries and Oceanography.

John is a former accountant company secretary. After establishing his own practice in costing and management accounting he switched careers to become the owner/master of a 45 ft prawn trawler.

For eight years he worked mainly off the coast of Queensland and then last year was appointed engineer/mate of the *Kalinda* and became master in November. In March he obtained a Master's Certificate grade 3.

The Division has also appointed Mr Don Gillies as their vessel superintendent.

Don has had more than 30 years experience in marine engineering at sea and in recent years ashore. Before joining CSIRO he was chief engineer at Sydney Hospital.

the tobacco was opium free and rather pleasant. At the same time numerous cups of sweet tea were drunk and the family's best reserves of nuts and sweets were offered.

'The people were quite poor but it is extremely bad manners to refuse or to offer recompense at the time.'

Denis found breakfast included large sheets of Arab bread and a stew which contained a sheep's head, sheep's feet, intestines and various lentils—the enjoyment of this is probably an acquired taste,' he remarked.

The day Denis spent with the family was the one on which King Faisal of Saudi Arabia was killed and he had noted with interest the high regard the Iranians held for the King.

Greatly taken with the Iranian people (population about 34 million) and their mountainous countryside, Denis has made something of a study of their food. 'Every meat seems to include one rice dish and one kind of their beautiful bread. They also use fruit skilfully and meat will be cooked with the fruit or juice of peaches, pomegranates, oranges and apricots.'

HILDA TODD - SHE LED THE WAY...

In 1946 a letter postmarked Brisbane landed on the desk of the Chief Executive Officer of CSIRO, Sir David Rivett.

It was from Miss Hilda (Billie) Farrow Todd asking him to increase her salary. She had by that time been on the staff for 30 years, during the last 20 of which she had received increases totalling only 100. The Council responded by raising her salary to £388 a year.

Miss Todd remained with CSIRO for another eight years during which time she was, happily, given further monetary rewards. A few weeks ago Brisbane staff were saddened to learn of her death.

Billie Todd was an extraordinary woman in many ways, not the least of which was her very long association with the Organization. This started in 1916.

In that year Miss Todd became a part-time clerk to both the Commonwealth Munitions Committee and the Queensland Committee of the Commonwealth Advisory Committee.

The latter Committee was one which preceded the formation of the Institute of Science and Industry, which Miss Todd subsequently joined, and both were the forerunners of CSIRO, which in its turn in 1949 became CSIRO.

Miss Todd's files, held in Head Office and now slightly yellowing and rather tattered, reveal a little segment of the history of CSIRO, especially its growth in Queensland, and certainly documents one woman's devotion to her job and the Organization for which she worked.

It also gives a picture of the conditions under which women worked in days gone by, when even to get a reclassification or an increase in a lowly salary were matters to be put before the Minister.

The first document on her file is dated 3 September 1917 when permission was sought to employ her full time as a clerk on the staff of the Queensland Committee at £158 a year.

Four years later she took courage in her hands and sought an increase in remuneration, recording that she would like this to take effect from 4 February 1921, 'the date on which the basic wage award was first paid in Queensland.'

Increase

She detailed then—as she was to do on subsequent occasions when she felt she was worthy of more money—what her duties

were and it is these that give some idea of the gradual increase in the work of the Brisbane office.

At that time for instance, she listed secretarial duties to the Commonwealth Prickly Pear Committee and the Woollen Manufacturing Industry in Australia Provisional Sub-Committee.

Miss Todd mentioned in passing that when the various committees met until 5 pm and still wanted the minutes on hand first thing in the morning, she would work back at night to have everything ready for them—and this also involved having all their correspondence ready to sign and send out 'so that there would be no delay.'

Both before and during World War II Miss Todd had charge of the Brisbane office and represented CSIRO in Queensland.

At the time she was described as 'the only female officer in the Commonwealth to have charge of a Commonwealth office in an administrative capacity anywhere in the country without a superior officer in the same building.'

Over the years her duties grew. In 1943 an application for leave was turned down because she couldn't be spared at the time... too many people were visiting the State and the Cattle Tick Committee was just getting under way.

She had to deal with civilian and service personnel and one responsibility is listed as 'having to visit the US Air Transport Command to discuss with their officers the importance of the removal of insects from planes during fumigation.'

Duties

Miss Todd looked after administrative arrangements for the various places where CSIRO had activities in Queensland, she arranged inspections for second-hand cars that were to be purchased for the Council, bought furniture and trained typists and clerical assistants for two or three weeks when they were first appointed to Council offices near Brisbane.

She seldom took sick leave and it was with much concern that she reported to the Council in 1948 that she had been forced to take three days off—she had sprained her ankle when she slipped while on her way to inquire about a truck for Dr Len Webb to use while collecting drug plants in North Queensland, she wrote.

Shades of the recent crisis in Canberra show up in a letter she

sent to Sir David in March 1949 when she said she was looking forward to seeing him in Brisbane again.

'I feel however, that force of circumstances may prevent you coming north. Things seem to be in a state of unrest everywhere and CSIRO is certainly not escaping the result of such conditions. I'm afraid there are going to be many changes which we won't appreciate.'

When she reached the age of 60 Miss Todd requested Sir David's permission to keep on working rather than retire. Once this was happily given, she refused to let up and started conducting free shorthand classes for stenographers to help them pass their 100 and 120 words per minute tests.

She also began what she classified as her 'welfare work,' though it had probably been going on for many years.

This took the form of visiting other women members of the staff in the area 'to ensure harmony and that the prestige of the Organization is kept up-to-date.'

'This makes for harmony among the staff and pride in their association with the Organization,' she wrote. She may, in fact, have been in this way, CSIRO's first woman personnel officer.

In March 1954, Miss Todd resigned and her file includes copies of telegrams from Sir Ian Clunies Ross and other colleagues, all of whom showed great appreciation of her work.

Illness

In later years her former colleagues did not desert her and some of them kept in touch with her throughout her long illness and confinement to bed until the time of her death.

Brisbane Regional Administrative Officer, Dave Thomas, and his wife kept a friendly eye on her as did Mrs Davies, wife of the late J. Griffiths Davies, Chief of the Division of Tropical Pastures.

'She always maintained her cheerfulness and her interest in CSIRO' Dave said.

Miss Todd is survived by her sisters, Ella, one time Administrative Officer at Homebush Food Laboratory in New South Wales and Dolly, wife of Lin Cuvet, one time Administrative Officer at the Parasitology Laboratory at Yeerongpilly in Queensland.



A delegation of Soviet earth scientists has been in Australia looking at various scientific activities and installations. Their tour was arranged under the USSR-Australian Science Agreement and returned a visit made by Australian earth scientists to Russia last year.

The Division of Mineral Chemistry was host to the delegation while it was in Melbourne and took the party sightseeing through the Central Highlands of Victoria and to the reconstructed mining town of Sovereign Hill at Ballarat.

Enjoying a look at some of Australia's past are from left: Dr N.M. Kisselev, Department of Foreign Relations, USSR Academy of Sciences; Professor Yu. D. Boulanger, Institute of Earth Physics, USSR Academy of Sciences; M.H. Jones, Dr D.A.J. Rand, Division of Mineral Chemistry, Melbourne; Professor A.A. Geodekyan, Earth Sciences Section, USSR Academy of Sciences; Academician B.S. Sokolov, Institute of Geology and Geophysics, Siberian Branch, USSR Academy of Sciences.

FOR YOUR INFORMATION

Information Circulars

75/43	Acting Chief, Division of Fisheries and Oceanography	6.6.75
75/44	Acting Chief, Division of Entomology	10.6.75
75/45	Claims for taxation concessional allowance in respect of dependants (cancelled)	12.6.75
75/46	Acting arrangements — Head Office	9.6.75
75/47	Introduction of Medibank — adjustment of health fund contributions	23.6.75
75/48	1975/75 income tax returns	23.6.75
74/49	Acting Chief, Division of Applied Organic Chemistry	
75/50	Acting Chief, Division of Tropical Agronomy	7.6.75
75/51	Introduction of Medibank — withdrawal of medical benefit cover by health funds	1.7.75
75/52	Queen Elizabeth II Fellowships — Physical and Biological Sciences (closing date 5.9.75)	2.7.75
75/53	United Nations appointments	7.7.75
75/54	Divisional telephone number alterations	8.7.75
75/55	Tobacco Research Institute, Mareeba	8.7.75
75/56	ANZAC Fellowship Scheme — New Zealand award (closing date 8.8.75)	10.7.75

Policy Circulars

75/33	Reprints from Australian Journals of Scientific Research	2.6.75
75/34	Classification appeals by staff pursuant to Paragraph 11 of the T & C of employment	24.6.75
75/35	Salary scales	24.6.75
75/36	Control of dangerous drugs	4.7.75

APPOINTED

Mr Victor Burgmann who has been a member of the Executive since 1970 has been re-appointed by the Governor-General for a further term of five years.

FELLOWSHIP

Dr P.G. Baines of the Division of Atmospheric Physics has been awarded a Fellowship by the National Environmental Research Council of Great Britain. The Fellowship will enable him to work at Cambridge for six months and to apply his theories concerning internal tides in the ocean and their generation over continental slopes to particular situations such as that off north west Africa.

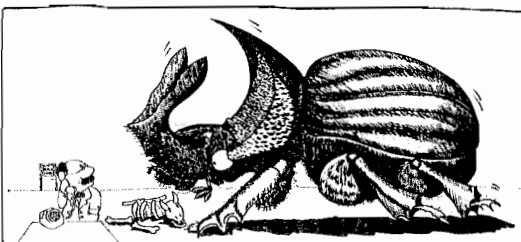
Ciros the Great



Doug? The new beetle shipment is just in from Africa



And I think we've finally got one to lick the cattle dung problem...



...right at the source.

The Division of Chemical Technology has won the 1975 Forest Products Laboratory's golf competition. In the ninth annual match held at the Patterson River Country Club, nearly 100 members of CSIRO and people working in allied forestry industries took part in the golf tournament.

This was followed by a dinner at which the Muncey Cup was presented to the winners. This year's proud holders are (from left) Tony Sioumis, George Davies, Bill Raper and Alan Logan.



Meteorology

Mr Peter Berwick, technical and scientific secretary of the Division of Atmospheric Physics, has returned from a two months visit to Mauritius.

Peter's trip was made at the invitation of the Government of Mauritius and was sponsored by the UN (World Meteorological Organization).

While he was on the island, Peter advised the Government's Meteorological Services on the establishment of a micrometeorological unit and the application of meteorology to problems of economic concern to the country such as water resources, utilisation of solar energy, and diversification of agriculture.

AWARDS

Dr Don Casimir of the Food Technology Section of the Division of Food Research has been awarded a PhD by the University of New South Wales for his thesis 'Technological aspects of the production of concentrates of passionfruit.'

Make your money work

The CSIRO Co-operative Credit Society Limited is urgently seeking increased investment in the Society, whether it be by deduction from salary or by lump sum investment.

The interest rates currently being offered are as follows:

Deduction from salary 9% p.a.
Lump sum investment:
Less than 12 months 9% p.a.
More than 12 months

but less than 5 years 10% p.a.
More than 5 years 10 1/4% p.a.

Application forms are available from your Divisional Administrative Officer or from the registered office of the Society at 314 Albert Street, East Melbourne.

Don't fritter away your tax refund cheque. Let the Society mind it for you. You will be glad you did!

LETTERS: MATERNITY LEAVE

To the great credit of the present and preceding Australian Governments, we reached International Women's Year already freed from official discrimination in Australian governmental employment (except for a few residual areas like work in the Antarctic) and with adequate provision for the special problems of women.

It is clear that the Maternity Leave provisions have caused some unofficial backlash against women in CSIRO, but it is a pity that the issue has been exaggerated in the media since the problems are nothing more than teething troubles such as one would expect to encounter during the introduction of any radical change.

It is time now for the staff associations in CSIRO and the Public Service Unions to discuss the question with our Executive and other relevant employing bodies and to put forward constructive suggestions.

I should like to put one forward for the particular case of CSIRO.

In CSIRO the backlash is due mainly to the scientists' dislike of interruption to their research programs.

The departure of one woman is not so bad in itself, although a nuisance; what is much more troublesome is the fact that her particular position has to be preserved and she has to be carried on the payroll of the individual Division.

This means that only a temporary employee can be appointed to replace her.

The appointment is normally approved automatically for the period for which the woman who is to be replaced has applied for maternity leave, but during the period when there was a ceiling on the growth of the Public Service, it was not always possible for the Executive to approve the appointment of a temporary replacement.

Budget

Even now, although the ceiling has been removed, the Division may not be able to appoint a replacement, simply because the necessary funds have to come from the Division's own budget.

In this Division (Textile Physics) funds have not been sufficient to permit temporary employees to

be appointed to replace all the women currently on maternity leave.

Finally there is a problem in that good prospective employees are unlikely to be attracted by the offer of a very temporary position with no prospects.

For this particular problem I would like to suggest a simple solution which is that a woman going off on maternity leave, unless she indicates a firm intention to return within say four months, should be transferred to an 'unattached list' (like the one used in the Army) and should be paid directly from Head Office during her absence.

On returning to work she should if possible be returned to the same position she previously occupied, but if this was not possible she should be returned to its nearest equivalent. Occasionally this might mean to a different Division but it would have to be geographically close because a woman with a young baby is in no position to be leaving her home to work in a distant place.

If the woman, on beginning maternity leave, indicated a firm intention to return to work within the four months, it should not be necessary to transfer her to the unattached list, and her position should be held for her as at present until the stipulated time had expired.

I have discussed some less radical palliatives for this problem with a few people, but they seem less satisfactory.

Since many women do not intend to return to work unless they lose the baby, they could be encouraged to resign after the confinement by being allowed to take their maternity and sick leave payments in a lump sum if they resigned. (This is already permissible for recreation leave).

This, however, would be putting pressure on women who might wish to return but needed the

money urgently, to sell their birth-right for a mess of pottage.

It would go some way towards defeating the objects of the Maternity Leave Act.

Another suggestion is that there should be a minimum period of service before paid maternity leave would be made available. This would prevent some of the alleged 'abuses' but would defeat one of principal objects of the Act (Section 10).

Reform

I would like to make a few comments on attitudes to this question.

The Maternity Leave provisions were obviously much needed reforms and, although generous in Australian terms, in fact fall short of those applying in some other countries. The silent majority probably approves them.

There has been some righteous indignation about alleged 'abuse' of the provisions.

Stop press

Dr Rachel Makinson has been appointed a part-time member of the Interim ASTEC. She joins the Council in her own right and not as a member of CSIRO. Dr Makinson becomes the first woman member of the Council.

I have been told that one woman, when applying for a position in CSIRO, denied all intention of having a baby, when she was already three months pregnant. (Since she should not, legally, have been asked the question, who can blame her?)

Whether this and other claims are 'abuses' of the system depends entirely on your point of view—it is common for men, too, to take full advantage of the legal provisions governing their employment.

The degree to which a sense of responsibility towards the Organization may be sufficient to prevent them from doing so tends to

increase with status, for both men and women, as one might expect. However one cannot demand that anyone should forfeit his or her legal rights.

In fact, it is the responsibility of the administrative personnel to advise staff of their rights, and to the best of my knowledge they do so.

Annoyance at the loss for an indefinite period of, for example, your technical assistant is quite natural. An initial reaction not to take the risk of its happening again is also natural. But is it right or fair?

We have had to get used, in the past, to the idea of preserving the rights of men called up for the Army, or volunteering for it.

So long as society still needs at least some women to have some babies, this is surely a closely parallel case. We should be trying to see how the problem can be resolved without depriving the women of the rights which they have so recently acquired.

I feel tempted also to advise the women that they still have to be a little bit more dedicated to their work than the men if they are not to provoke hostility of this kind—but I will not, because this attitude ought to be dead. If it is not, I hope it soon will be.

K. Rachel Makinson,
Division of Textile Physics, Sydney

Division of Textile Physics,
Sydney

Appointed

Mr Peter Judge, who was appointed Officer-in-Charge of CILES last year, has been elected a Fellow of the Institute of Information Scientists London in recognition of his 'considerable contribution to the profession of science.'

TOP MARKS

Mr John Crowley of the Division of Textile Physics was among students who received prizes at the Strathfield Technical College at the end of last month.

John, who maintains the machinery at the Division's mill, received the top marks in his Stage II course at the College's School of Textiles.

Officer to Afghanistan

Dr Graham Harrington of the Riverina laboratory at the Division of Land Resources Management in Deniliquin has been in Afghanistan for nine weeks to plan the range management component of the Herat Livestock Development Corporation's project in western Afghanistan.

The project is World Bank funded and broadly aims at obtaining a meat offtake from nomadic sheep herds.

The range lands are degraded and urgently require an improvement involves sociological as well as ecological problems.

An interesting aspect of the environment is that virtually all the precipitation falls as snow.

IF ONLY THEY KNEW

I write to convey my thanks, through you, to all those who contributed to the Darwin Cyclone Appeal Fund. I have since resigned from CSIRO as a result of the disruption caused by cyclone 'Tracy' at Christmas in Darwin.

Nevertheless I feel that my experiences while working for the Division of Wildlife Research and the generosity of fellow workers throughout Australia will stay in my memory for a long time to come.

Once again—thanks.
D.N. McPhee
Ivanhoe, Vic.



The lady with an eye on the sky is Pat Wilson, also from the Division of Animal Physiology...she goes ballooning in her spare time.

Girls go Flying and Galloping



Women members of the staff of the Division of Animal Physiology at Prospect, Sydney, aren't necessarily all they seem to be—scientists dedicated to the health and production of sheep and cattle.

For five days a week for instance Pat Wilson keeps her feet on the ground and concerns herself with her work of the protection of sheep by immunisation.

But on the other two days you'll probably find her out following one of her other interests—flying high with her husband Graheme in a balloon, bush walking or pot holing.

Then there's Anne White. Her professional interests lie in the nutritional problems associated with lamb growth, but away from work the great love of Anne's life is horses.

By the time most members of the staff arrive at their lab, Anne has already put in several hours of work, helping train racehorses at the nearby Rosehill track.

A Queenslander with a rural background, Anne has ridden horses ever since she can remember. Her sister started Queensland's first pony club and Anne became its first member.

She later became an instructor-examiner and has judged dressage events in both Queensland and NSW. She has enjoyed pony camping holidays and pony trekking and has taken club members out on expeditions.

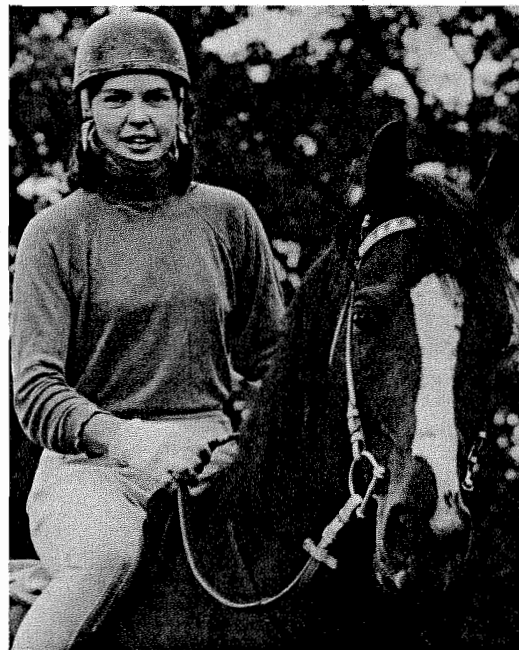
Some years ago Anne had a working holiday in Europe and for seven months was employed in Ireland as a stablehand, gaining experience in handling hurdles and steeplechasers.

When she moved to Sydney a trainer she knew asked her if she'd give him a hand with his racehorses at Rosehill. She jumped at the opportunity and ever since has been going out to the track most mornings of the week.

Early

That means getting up at 5.30 am, getting over to the stables and joining forces with one of the men to take up to four horses over to the course. Usually she concentrates on the younger gallopers.

'I do some of the pace work but leave the fast work to the jockey who'll be riding them,' she said. 'I haven't tried riding any in



Above: Anne White of the Division of Animal Physiology at Prospect NSW pictured during one of her early morning gallops. Before work each morning she helps train racehorses at the Rosehill stables.

events—I don't feel I'm good enough for that.'

After their workout, the horses are hosed down and then returned to the stables by 7.30 am where they're cleaned down, groomed and fed.

At that point Anne switches off from horses to sheep and gets across to Prospect where her professional interests take over.

Pat and Graheme started their ballooning back in 1966 and became members of Sydney's Aerostat Society, with Graheme becoming its president and Pat the treasurer.

'In those days we used to build our balloons and fly them as an attraction for the Royal Easter Show,' Pat said. 'The flights were always tethered ones...DCA wouldn't allow us to free fly over Sydney.'

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Highest

When the Wilsons wanted to free fly they would take off over the mountains by car to Canowindra about 200 miles west of Sydney where DCA felt they were in no danger of entangling with aircraft. 'The highest I've ever managed to reach is 3000 ft,' Pat said.

In 1971 the Wilsons went to England and became involved in the British Balloon Club and on one occasion went to a 'balloon

meet' where 24 balloons from Europe and the United Kingdom were taking part.

Since their return Pat and Graheme have helped friends make their balloon which was successfully launched last year.

'The sport is not all that strictly controlled here,' she said, 'possibly because not too many people are involved. We have to advise the Department of Transport of our activities, but we don't need to be licensed.'

'We do have to carry an emergency parachute and do a certain amount of parachute training. It's advisable to know how to operate one just in case...'

Pat divides her spare time among her interests and says caving has as much interest for her as flying. 'I no more fear getting lost underground,' she said, 'than I worry about my ability to control a flight.'

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

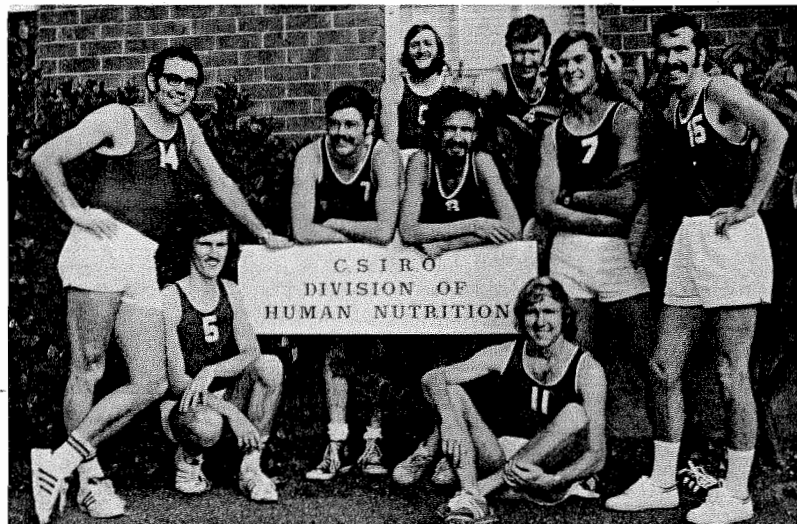
Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4477 or Wendy Parsons, 48 4479.

Caesars: the Conquerors

A change in name and professional activities has made little difference to the sporting interests of the Division of Human Nutrition. For the past six seasons their basketball team has taken part in the district competition in the Adelaide area.

On three occasions the team has won the trophy for minor premiers in their particular division. However, they have so far failed to make the semi-finals and finals and the major premiership has evaded them. For all that they win honours for enthusiasm.

The players are from left: Colin Chandler, Paul Rogers, Phil Harrip, Mel Hopgood, Ian Record, Spencer Knowles, Stephen Ellis, Rick Illman, and Geoff Francis (in front). The team plays under the name the 'Caesars'.



CORESEARCH

Produced by the CSIRO Central Communication Unit

196

September 1975

JUBILEE PLANNING GETS UNDERWAY

CSIRO is to celebrate its golden jubilee next year. The occasion will mark the foundation of CSIR in 1926 and its successor, CSIRO, in 1949, spanning the 50 years of the Organization's scientific research in Australia.

Already a number of events are being planned to mark the occasion. These will include open days to be organised by several Divisions and the publication of a jubilee book.

Towards the end of last year the Chairman, Dr Price, invited suggestions from the Divisions for the jubilee celebrations.

All the replies were considered in detail by the Jubilee Planning Committee, and have formed the basis of a series of submissions to the Executive.

The Executive has been anxious to develop jubilee activities in such a way that they do not involve major expenditure and have the effect of diverting substantial funds from normal Divisional programs.

For this reason no elaborate events are being planned, either in Canberra at Head Office or in other areas.

Open days

The Western Australian Laboratories in Perth are planning to hold their open day—or open week—in April and the Cunningham Laboratories will hold open days, tentatively in the same month.

April will also see open days at the Division of Tropical Agronomy research stations at Landsdowne, Narayen and Katherine and in the following month at Samford.

The Minerals Research Laboratories are planning an open week at Ryde probably in August and the Division of Applied Geomechanics will stage a similar event in Melbourne in October.

Symposium

A commemorative ANZAAS symposium to mark the jubilee of both CSIRO and DSIR in New Zealand will be held on the afternoon of the opening day (10 May) of the 1976 ANZAAS Congress in Hobart. Details of the program and speakers are not yet finalised.

The David Rivett Memorial Lecture which would normally be held this year, has been held over until 1976. It will be given on 11 May during the ANZAAS Congress by Dr Walter Mertz, Chairman of the Nutrition Institute, Agriculture Research Service, US Department of Agriculture.

Jubilee book

Work on the jubilee book is now well under way. The Executive earlier this year invited the former Chairman of CSIRO, Sir Frederick White, to become editor of the publication and since then Mr Andrew McKay, a well-known Melbourne writer and journalist has been commissioned to write the manuscript.

The book is being designed and illustrated by Mr Robert Ingpen, one of Australia's most distinguished design consultants, and a former CSIRO officer.

Dozens of suggestions for topics for the book have been suggested and Sir Frederick has the unenviable task of making the final selection of the 20 topics to which the book is limited.

Work on the writing should be completed by November and it is hoped it will be on sale by about August next year.

Designs for special jubilee letterhead paper are expected to be available soon. They involve a small modification to existing letterheads and the addition of an overprint for the jubilee reference.

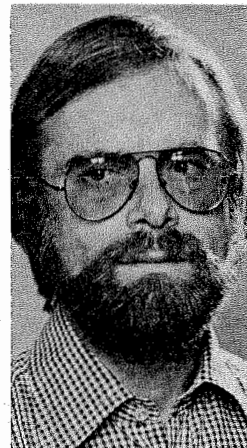
Special edition

In June a special edition of 'Coresearch' will be published and the editor invites suggestions for this as well as contributions from both the present and former members of staff.

A number of other proposals are still being explored. These include a special function in Canberra which may involve some form of exhibition and audio-visual display. A festival of CSIRO films is among the other ideas being considered.



Sir Frederick White, former CSIRO chairman who has accepted the Executive's invitation to edit the jubilee book.



Mr Andrew McKay who has been commissioned to write the manuscript for CSIRO's jubilee book.

New Chief named

A man who has a special interest in Aboriginal health, in particular the malnutrition of babies, has been appointed the new Chief of the Division of Human Nutrition.

He is Professor Basil Stuart Hetzel, who at present is the Foundation Professor of Social and Preventive Medicine at Monash University, Victoria.

He will take up his new duties in February.

Professor Hetzel, a leading authority on social and preventive medicine, has worked in the field of human nutrition for the past 20 years. Recently his department, in collaboration with the Australian Department of Health, and the Central Australian Aboriginal Congress, launched a pilot project designed to improve the nutrition and health of the rural Aboriginal community of Central Australia.

Professor Hetzel is a consultant to the World Health Organisation (Western Pacific Region) and this year was a Vice-President of the Seventh International Thyroid Conference held in Boston, USA.

WHO has recommended a method of iodised oil injection for correction of severe iodine deficiency developed in Papua New Guinea by the Professor's research group originally based at the University of Adelaide and subsequently at Monash.

Effective

In Papua New Guinea the group demonstrated the effectiveness of the method of preventing the brain damage which results from this deficiency.

Another area of research undertaken by the new Chief has been the investigation into the way the eating and drinking habits of young Australians might affect present and future general health trends. His findings are discussed in his book 'Health and Australian Society', published last year.

As the new Chief of the Division, formed in January this year, Professor Hetzel will have the responsibility of recommending areas of research to the Executive.

In general, the Division's programs are expected to encompass the study of human nutritional processes, including biochemical aspects of nutrition in relation to growth and development.

Research could include:

- The study of minerals, vitamins and trace elements
- Assessment of nutritional status and energy metabolism under varying environmental and socio-economic conditions
- Impact of technological and social developments on dietary patterns and alcohol intake
- Nutritional values of foods, and nutrition in relation to growth development.

PRAISE FROM MINISTER

Important new developments in atomic spectroscopy, which confirmed Australia's position as a world leader in this field, have been announced by the Minister for Science and Consumer Affairs, Mr Clyde Cameron.



Dr Alan Walsh

Mr Cameron said that Dr Alan Walsh of CSIRO's Division of Chemical Physics, had announced a new version of one of the Organization's best-known inventions, the atomic absorption spectrophotometer, in his chairman's address to the Fifth International Atomic Spectroscopy Conference held last month in Melbourne.

The new version has eliminated the necessity for the present model's most expensive component, a light-filtering device called a monochromator, and might put swift, accurate chemical analysis within the financial reach of developing countries, small factories and educational institutions, Mr Cameron said.

During the five-day conference at Monash University, other members of Dr Walsh's research team at CSIRO's Division of Chemical Physics gave details of further innovations which could lead to:

● An atomic absorption spectrophotometer capable of analysing metals in solid samples without requiring them to be dissolved in solutions.

● Another version capable of analysing powders without dissolving them in solutions.

Mr Cameron emphasised the fact that the new ideas were still being developed and said that while they were very promising, they might not see commercial production in the immediate future.

Much would depend, he said, on the response of potential manufacturers who had sent representatives to the conference.

The original atomic absorption spectrophotometer, Mr Cameron said, had been hailed by scientists in many disciplines as the greatest advance in chemical analysis this century.

In the past decade it had revolutionised chemical analysis, allow-

ing analyses which formerly took days of painstaking laboratory work to be carried out within minutes.

Some of its applications included detection of mineral deficiencies in blood, analysis of ore samples, soils, plant and animal tissue, and sampling motor oils for the presence of metal particles which indicated motor wear.

The atomic absorption spectrophotometer also played a big role in consumer protection, being used by the food and drink industry to detect such things as corrosion in canned foods, mercury and zinc levels in seafoods, and metal contamination of other foodstuffs.

Mr Cameron said a CSIRO cost-benefit analysis had estimated the invention's net value to the Australian economy through earnings, savings to industry and contribution to employment would be at least \$120 million by 1978.

A report of the conference will be included in the October issue of 'Coresearch'.

Gottstein Fellow

The 1974 Gottstein Fellow is Mr Neill T. Baker (right) of the South Australian Woods and Forests Department, Mt Gambier, who was presented with his cheque by the Chairman of the Gottstein Trustees, Mr R.W. Page. With them is Mr J.A. Pattison, Honorary Secretary of the Trust.

The Fellowship commemorates Joseph William Gottstein, a scientist with the former CSIRO Division of Forest Products who was killed in Papua New Guinea in 1971.

At the invitation of the Australian wood-using industries an educational trust was established to commemorate his memory.

In the course of the presentation at Mt Gambier, Mr Pattison said that the value of the Trust was \$75,000 and the Trustees were now confident that the original objective of reaching \$100,000 would be achieved.

Their immediate concern, however, was to infuse in the thinking of all sectors of the industry that Gottstein Educational Fellowships were now advertised annually and would be used to develop the abilities of individuals for the general benefit of the forest products industry.

The scheme was open to candidates in all related sectors of the industry and Government, he said, and the Trustees hoped to develop a vigorous and representative annual competition for the awards.

Batten the hatches

Brisbane colleagues should start battenning down the hatches, getting out the waterproofs and checking on the availability of rowboats.

The Division of Building Research is about to descend upon the city to stage their seminar 'Keep your roof on', and if history repeats itself the city can expect to have some wild weather about the same time.

Designed to give people in industry and related areas an idea of what can be done to build for storm protection, similar seminars have been held in Adelaide, Melbourne, Sydney and Perth.

Just in case there are sceptics in the invited audience, the Division has always been able to organise a fairly good storm about a week beforehand—'You could call it a softening up process,' Les Armstrong, one of the staff involved in the seminar, commented.

And for good measure, just to make sure that the correct impression is left behind, the cities to date have so far had a decent-sized, impressionable storm afterwards.

In July for instance, shortly after the seminar had been staged in Perth, the western city was buffeted by strong winds which lifted roofs off in no uncertain manner and proved a few of the Division's points in a more practical way than the seminar team could.

'We wouldn't want to scare anyone in Brisbane,' Les said, 'but going on past experience...well, we'd say a week beforehand and about a week or so afterwards, they can expect some rough weather.'

2



THEY TURN BOOKS INTO MONEY

If you've been wondering what to do with those old books and magazines, bundle them up and take them along to the Community Aid Abroad Group at the National Measurement Laboratory in Sydney next time you're going that way.

The group sells them off to raise funds for their various activities which so far have ranged from providing a room and rearing house for 4000 chickens on Marangu Farm School, at Moshi in Tanzania, to a village irrigation project at Hamirpura in Gujarat State in India.

The CAA group at NML was formed in March 1971 and since then has grown steadily in both numbers and income. They now have 84 financial members out of a total staff of nearly 400 at the laboratory and in the four years of their activities have raised just over \$3500.

CAA is a non-governmental, non-denominational organisation which specialises in aid for specific self-help projects on a practical people-to-people basis and seems to appeal to CSIRO staff, judging by the number of groups around the country.

The NML members being a

work-based group don't have many social functions but lunch-hour talks and slide shows keep up their interest.

Informed

John Birch, who was largely responsible for starting CAA-NML and who is now NSW State Chairman, is an effective liaison officer and enlists speakers from Sydney University, where NML is located, and elsewhere to keep members informed about what is happening in developing countries.

A number of theatre parties have also proved successful ventures.

This year the members discovered a new money spinner—books and magazines. 'Other CAA groups have had great successes with book fairs, but this posed a problem for us...how to house and display great masses of books in an already overcrowded

laboratory,' said the group's Chairman, Anne Jack, an NML librarian.

'Instead of one big fair once a year we have been having a continuing book sale in our canteen each week (about 25 books and 40 magazines).

'Our supplies come from all sorts of sources. People who are glad to get rid of their cast-off paper backs, out-dated text books, hoards of "National Geographics" and "Scientific Americans" are encouraged to bring them in to us a few at a time.

'We price them very modestly; so far there has been little residue and we are managing to net at least \$10 a week with very little effort entailed. In fact, some of the items sold are now being recycled.

'We have the advantage of being on the university campus and having a canteen which attracts students. Now we're finding the book sale is arousing the interest of the students as well.'

Projects

One of this year's efforts for CAA-NML is helping another village irrigation project in India. The total cost of the project is \$6478. The cost has been divided into 41 units of \$158 each and NML's contribution of \$631 represents four of them.

Their second project will support a CAA scholarship for Adivasi students in India's Maharashtra State.

Students, who are tribal people, can attend Kosbad Hill, an agricultural institute which specialises in teaching the tribal children at primary and secondary levels. Cost of the scholarship to CAA-NML will be \$165.

The officers of the group are: Chairman, Anne Jack; Secretary, Frank Wilkinson; Treasurer, Ken Hall; Auditor, Ray Jack; Committee, John Shaw, Jim Mouttoui, John Birch, Tony Ammann, John Macfarlane, Hugh Mair, Jim Gosling, Ed Layton and Charles Franchimon.

Letters

While I enjoyed reading about the role of women within CSIRO I did not enjoy Ciro's cartoon comment on women. It exposed, perhaps, one reason for the existence of International Women's Year—to combat the hostility of some men towards women.

The undisguised animosity shown in the cartoon is the concept of a woman as a fool was unpleasant and unfunny.

Margaret Annis,
Wildlife Research,
Canberra

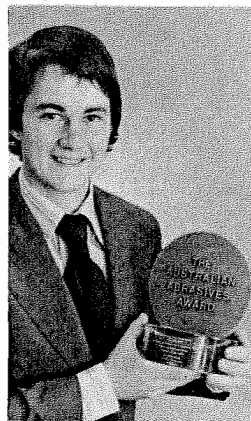
Mal A. Prop, Chemical Physics: Pseudonyms may be used in letters to the editor but as a token of good faith and for contact reasons, writers must also give their names. This will not be published if such a request is made. — Editor.

AWARD

Grantly Douglass of the National Measurement Laboratory, (above) proudly displays the trophy he won recently as 'the most able fitting, machining, or toolmaking apprentice in Australia'.

The award is presented annually by Australian Abrasives Pty Ltd, and the winner is given a five week round-the-world tour. Grantly will probably be setting off on his overseas trip next month and will have the chance of seeing the best industrial practices in other countries.

He has been an apprentice fitter and turner with NML for the last two years, and is doing a fitting and turning course at the Sydney Technical College.



Laboratory for W.A.

A new marine research laboratory is to be built at Marmion WA for the Division of Fisheries and Oceanography.

The WA members of the Division at present share facilities owned by the WA Department of Fisheries and Fauna and have an administrative office in a nearby shopping centre.

The new building, to be completed next year, will be known as the Western Regional Laboratory.

It will initially house the staff of the Western Rock Lobster Project but later is expected to have staff working on other fisheries and marine environment programs.

EXERCISE GETS GIRLS SUPERFIT

Is it possible for a young woman just slightly fitter than average to become extremely fit in just three weeks?

According to CSIRO scientist Dr Margaret Anderson the answer is a definite 'yes'.

Dr Anderson, of CSIRO's Division of Land Use Research, helped the Australian National University Health Service study the effects of three weeks' strenuous exercise on 45 young women in their teens and early 20s on an Outward Bound course in the rugged Brindabella Ranges near Canberra.

The women led fairly sedentary lives as office workers or tertiary students and usually limited their exercise to weekend sport.

After 10 days of preliminary exercises, including jogging, they spent another 10 days canoeing, swimming, rock-climbing and bushwalking.

Special equipment used by the ANU Health Service to check their progress showed the group became extremely fit in this short period.

The girls' average heart rate dropped dramatically, and the ability of their lungs to convey oxygen to the muscles, the primary indicator of fitness, rose sharply. In spite of healthy appetites and a normal diet, the girls dropped an average of 2kg in bodyweight.

Dr Anderson said the group started out reasonably fit by Australian standards—the average oxygen intake for Australian women would be only about 30 ml/kg per minute. The group's final figure was similar to that found in women athletes.

Backyard perfectionist

In the back garden of her home in Haberfield, Penny Riley has built a pottery studio in which she 'pots away like crazy every spare minute I get.'

Penny, who for 12 years was secretary to Dr R.G. Giovannelli before he retired from his position as Chief of the Division of Physics, is one of Australia's potters who not only holds her own exhibitions but who teaches her craft as well.

Her interest in potting and ceramics goes back more than 13 years.

She was trained by Molly Douglas who inculcated into her the need for perfection in her art, an attribute which Penny herself does not necessarily demand from her own students, but which she carries over into her work.

'Rather, I believe people need a creative outlet, and how well they succeed in doing whatever it is they have taken up is purely a personal matter. The main thing is to be doing something.'

Useful

Penny has specialised in what she calls 'useful' things like casserole dishes and she prefers to wheel-throw her pots rather than to make them by hand.

In her studio she has an electric wheel and three kilns and since this is more than she needs for her own requirements, she is happy to let others share her facilities.

'About 30 people in all use the

studio,' she said, 'but I do the firing for all of them. This means that I have to baby-sit the kilns and I'm often up between three and four o'clock in the morning taking batches of pots off the kilns, or putting new ones in. The timing is important.'

Each November the members of a co-operative group to which Penny belongs hold an exhibition of their work and sell their pots. As well, Penny contributes to other exhibitions.

To further her interests in pottery and improve her own work Penny has joined a number of study tours.

These have led her through Asia, New Zealand and more recently through Mexico.

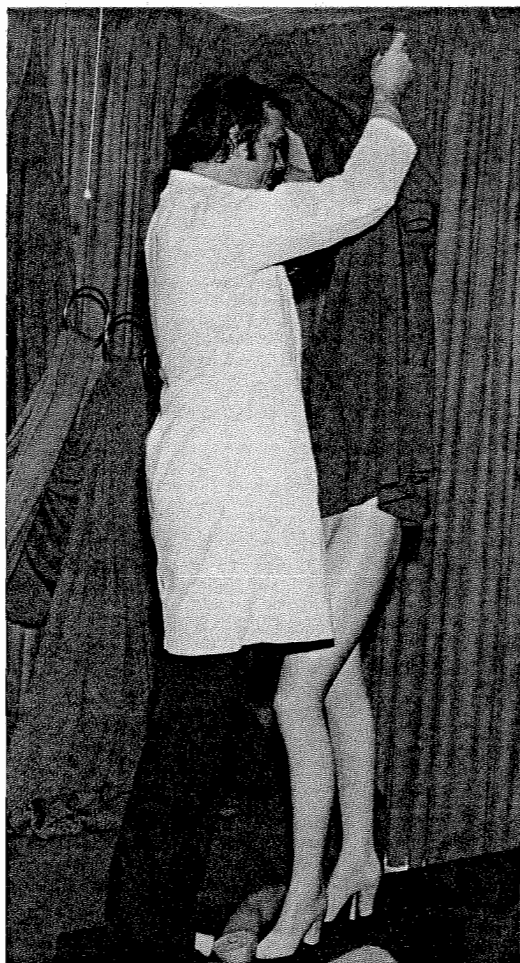
Learning

'You learn a lot from these,' she said. 'Not just about clays, glazes and techniques but so much about the cultural history of a country.'

'You get a fresh approach, too and friends tell me they now see an Asian influence in my pots—an unconscious reflection, no doubt, of my studies in that area and an admiration for their handicrafts.'



Above: Penny Riley (right) with one of her students, Susan Gillett, wife of Harry Gillett, the photographer at the National Measurement Laboratory.



Above: It takes two to tango—Mr Stan Boston the Division's Information Officer is caught unawares dressing (undressing?) a model in the garment and fabric display arranged for the launching of 'Selfil'.

Top right: Mrs Ann Stokes explains the workings of the early Selfil laboratory machine to (left to right) Miss R. Hill and Mrs J. Jennings.



PRAISE FOR CHIEF

The Chairman of CSIRO, Dr J.R. Price, took the opportunity at a special conference at the Division of Textile Industry last month to pay tribute to the retiring Chief of the Division, Dr M. Lipson.

The conference was staged by the Division to launch Selfil, a new spinning system for knitwear yarns.

Opening the conference which was attended by several hundred representatives of the textile and garment industry, Dr Price paid high tribute to Dr Lipson's contribution to the textile industry.

Dr Price said the conference would mark the last public appearance of Dr Lipson at a similar function... 'unless the Division has something up its sleeve.'

'Dr Lipson, who has been the Chief of the Division of Textile Industry since it was established in 1958, is retiring after a long and distinguished career in which he has piloted the Division on a course which as you know has led to many 'world firsts'.

'It was under Dr Lipson's leadership and direction that the Division convened earlier conferences such as this one, which unveiled to Australian industry techniques and processes which have since been adopted world-wide.

'Dr Lipson, or Pip to those of us who know him well, began work in the textile industry after leaving Sydney University with a Bachelor of Science Degree in 1935. He worked for two years with F.W. Hughes Pty. Ltd., the wool textile manufacturer, on the problems of mill production.

'In 1937, he joined what was then CSIR where he was involved in research dealing with the problems of sheep and wool production.

'He was transferred to the CSIR's Division of Industrial Chemistry when it was established in 1939 and began investigating methods of shrinkproofing wool,' Dr Price said.

'During the period from 1939-1945 he was chief chemist with the Central Wool Committee which was responsible for the sale of the Australian wool clip overseas.

'In 1946 he was awarded an International Wool Secretariat Research Fellowship and he stud-

ied at Leeds University in Britain where he worked with the late Professor Speakman on the formation of polymers in wool fibres.

'It was at Leeds that Dr Lipson gained his doctorate in philosophy.

'He returned to Australia in 1948 to start up the CSIRO's wool research activities in Geelong.

'That early establishment was known as the Wool Textile Research Laboratory which, in 1958, became the Division of Textile Industry.

'Since then, the Division, under Dr Lipson's direction, has grown from a staff of fourteen to more than 200. The Division has become the source of Australia's, for that matter, the world's, major advances in wool technology, and it is a Division of which we are especially proud,' he said.

Dr Price added that Dr Lipson would continue to work at Geelong's new University as a Research Fellow on problems of the wool industry.

OUR FORESTS-A PRECIOUS RESOURCE

1975 has been declared the year of the tropical rain forest—the year in which people around the world have pledged themselves to support a campaign to try to save the tropical rain forests from further destruction.

According to Dr Len Webb and Mr Geoff Tracey of CSIRO's Division of Plant Industry, two of Australia's best known authorities on the subject, the tropical rain forest is the most complex ecological system on earth.

'Within this ecosystem under natural conditions, there is always a delicate balance between the producers (the green plants), the consumers (animals, large and small), and the decomposers (mainly fungi and bacteria which ensure that waste products do not accumulate and are recycled).

'The role of rain forests, such as in the Amazon basin now being cleared and penetrated by highways, is of great ecological importance in the water, oxygen and carbon dioxide budget and balance of our planet,' says Len.

Apart from their economic value (under proper management), their importance as catchment areas, the habitat they provide for animals which are at risk, and the aesthetic and other reasons for retaining them, the forests represent an immense storehouse of genetic material—'They're a living museum of biological information', Len said.

Our forests

Australia has a unique kind of tropical forest in that it exists alongside, and competes with, the sclerophyll forest, two types of vegetation which are botanically and historically unlike.

Concern for what is happening to the remaining tracts of the forest in Australia has been strongly expressed by Len and Geoff who alone make up the Rain Forest Ecology Section of the Division.

Located in the Long Pocket Laboratories at Indooroopilly in Brisbane, both men have dedicated much of their lives to the subject, both within and beyond their working hours.

'Research on our forests is important, not just to Australia, but also to the tropical countries further north,' they said.

'Some of the vegetation in Papua New Guinea and in the South East Asian region is closely related to the forests here, and Australia can do much to help the other countries where there are comparatively few people with the scientific knowledge necessary to identify the plants and problems relating to the forests.'

The last...

According to Len the tropical rain forest is the last vast area—along with the hot and cold deserts—to escape transformation by man.

'Large scale clearing for food production, timber industries and agricultural purposes is however, highlighting both ecological and social problems.

Right: The ring tail possum is one of the many animals that live in the tropical rain forest. Photo: Ed Slater.

'One of these problems is the decline in soil fertility after clearing. Most tropical rainforest soils are ancient and leached of plant nutrients—the exceptions are alluvia and areas of recent volcanic activity with rich soils.

'While the rich soils can remain productive under continuous cropping, the majority of cleared rainforest land initially grows good crops, but does not continue to do so without the application of expensive fertilisers, particularly nitrogen.

'Tropical rain forests are the most complex of all plant communities and the forest ecosystems are at best extremely fragile.

'Their disappearance and degeneration, greatly accelerated through modern technology, has attracted international scientific concern,' Len said, 'and we must now consider the irretrievable loss of world genetic resources and possibly detrimental effects on global climate.

Estimates

'Trying to get any reliable estimates on how much is destroyed each year is almost an impossibility,' Len maintains. 'For instance, Professor P.W. Richards, an international authority on the subject, told a seminar in Papua New Guinea organised by Man and the Biosphere earlier this year, that the felling rates are so great that figures change annually.'

Realising this, a number of organisations and institutions are now urging all the governments of the tropical and subtropical world to take effective steps to increase the protected areas of their natural rain forests.

Next month the World Wildlife Fund (WWF) and the International Union of Conservation of Nature and Natural Resources (IUCN) will organise programs designed to encourage the safeguarding of adequate and representative parts of the world's tropical rain forests.

The campaign will be the subject of an international conference to be held by FAO.

As part of their efforts IUCN is commissioning a survey to identify

those areas, whether typical or unique, which have been unaffected by human exploitation, and hopefully to stimulate action that will have large tracts declared national parks or reserves.

UNESCO is playing a major role by bringing together as much information as is available on the different types of rain forest, their locations, the kinds of plants and animals which exist in them, the timber and other forest products they contain, their capacity to produce a sustainable yield and their potential for stable agriculture.

Projects

Other efforts will be launched by the United Nations Environmental Program and Man and the Biosphere (MAB).

Len is closely associated with the MAB Project No. 1 in South

East Asia which is looking at the ecological effects of increasing human activities on the tropical and subtropical ecosystems and has already made several trips into the region.

'Northern Queensland has now been approved by MAB as a study area and it is hoped that when Papua New Guinea becomes an independent nation and is admitted to the United Nations, an area around Madang, where a woodchip industry is being established, will become another one. This would make an important contribution to the program,' he said.

'We will be working with the Woodland Ecology Unit of the Division of Land Use Research on the Queensland study, but don't anticipate beginning the work until next year,' he said.

VEGETATION MAP TO AID FOREST STUDY

A vegetation map of the wet, tropical part of Queensland has been drawn by Dr Len Webb and Mr Geoff Tracey of the Rain Forest Ecology Section of the Division of Plant Industry.

Drawn to a scale of 1:100,000 it should assist authorities to do an accurate stocktaking of the forested area of their State.

The map has taken three years to make, but is now, with the assistance of the cartographic facilities arranged and supervised by Mr Bill Goodwin of the Woodland Ecology Unit, LUR, in the final stages before its publication.

The completed map will measure 3.6 m x 1 m and cover an area from Cooktown to Ingham and west as far as Herberton.

Along with an explanatory ecological text which is expected to be published towards the end of the year, it will be the first production in Australia to put biological priorities on an equal footing with other well established

productive values on a scale detailed enough for future resource-use planning and management.

Once the map is available there should be no excuses for ill-informed decisions being made on land use which involves forest-covered areas, especially where conservation issues are at stake, the men say.

As an example of how it can be used, Len and Geoff cite the reversal recently of a decision to start a woodchip industry in a particular belt of forest.

'Our map showed conclusively that the forest types involved were on a long, narrow strip, a kilometre or so wide, and on the western fringe of the rain forest.

'It was not big enough to support an industry of the size planned, and moreover, it contained a

forest type classed as "rare" in northern Australia.

'We must know how sensitive a particular ecosystem is to irreversible damage, and whether we are setting in train an irreversible process when we plan to clear land.

'Detailed land-use planning is needed on a regional basis with the maximum number of options kept open on any particular part of the landscape,' the men said.

In preparing the map, Len and Geoff have had the assistance of the CSIRO Division of Soils in Townsville, the National Parks Section of the Queensland Forestry Department who helped in the cartographic work, and Dr Jiro Kikkawa of the University of Queensland who provided valuable information on the fauna of the area so that data are available on the habitats of wildlife.

Survey

The Department of Defence also provided helicopters to survey inaccessible areas (the Army is involved officially with CSIRO in a tropical rain forest conservation project at Tropical Trials Establishment areas in northern Queensland.)

'We would like to think that maps such as this gradually become available for the whole of Australia with priorities given to those parts of the continent where decisions on future land use are still to be made and public demand is increasing for land alienation,' Len said.

Right: Geoff Tracey, one of the comparatively few rain forest taxonomists in Australia.



IT GROWS TO MEET A GROWING NEED

An unusual feature of the Long Pocket Laboratories at Indooroopilly in Brisbane is a rain forest arboretum. Established in a gully at the entrance to the property, the 'artificial' forest contains about 300 species.

The arboretum grew out of the need of the Rain Forest Ecology Section to have an area where they could grow and identify seedlings as well as adult trees (in some cases the juvenile plants can look quite different to the adult trees).

The Officer-in-Charge of the Laboratories, Dr Harry Wharton, an enthusiast for native plant species, encouraged the establishment of the arboretum and the experience Len Webb and Geoff Tracey had gained in their studies of rain forest ecology was put to practical use.

At the time, the late Bill Jones, a bushman and botanist of wide experience, was working in the Phytochemical Unit with Len and Geoff, and his enthusiasm and knowledge of handling plants helped get the project started.

Today a lot of the work of gathering plants for it and maintaining them falls on George Pitkin of the Laboratory Services Group, and Vince Moriarty and

Jack Woodward of the Phytochemical Section of the Unit.

Vince and Jack for instance, have collected plants from as far north as Thursday Island, from all over Queensland and down to Nambucca Heads in New South Wales.

Jack is the son of a bullocky and claims the forest is his natural habitat. He spent most of his early life in the bush and worked in forestry for a time before joining CSIRO 12 years ago.

Collection

Since then he has been responsible for gathering many of the plants which have been investigated as possible sources of drugs and at the same time he brings in plants for the arboretum. He is primarily responsible for the maintenance of the project which is a formidable task, especially in the growing season when weed and grass growth tend to smother the young trees.

Vince has the responsibility for the germination and growing of the young seedlings and maintenance of the bush house and he has used the arboretum to grow plants of phytochemical interest which need taxonomic study.

One such genus is *Cordyline* and the present work has picked up at least one new species, while described species of *Solanum* have been grown to provide good herbarium specimens for the first time.

George, on the other hand, has a background in both horticulture and agriculture and has done courses in this work at the Thame Agriculture College in the United Kingdom.

A gardener at Nuffield College at Oxford before he came to Australia in 1970, George joined the Organization two years ago and has already become very involved in studying Australian plants.

Like every person on the staff who has had anything to do with the arboretum, Jack, Vince and George have found that not all the rain forest plants are to be taken as simply trees of beauty.

The tree for which they have perhaps the greatest respect is, they say, the poison walnut. At one time or another every member of the staff who has had anything to do with collecting bark samples of it has been hospitalised—which some might say is taking the furtherance of knowledge and devotion to duty a shade too much to heart.

Close study

The arboretum is proving its value in many ways.

If ecological surveys of the rain forests are to be anything like complete it is necessary to make taxonomic studies of the plants within the forest communities.

Comparatively few people are involved in this work professionally in Australia but Geoff Tracey has made this his major interest.

While much of his time is spent out in the forests themselves—and he has made surveys in some of the most isolated country in tropical Australia—he is now able to do a considerable amount of his research in the arboretum.

A substantial collection of seeds has been built up for growing in the gully, some of which have also been made into herbarium specimens to build up a reference collection in the Queensland Herbarium.

As well, it is giving Len and Geoff a chance to study living specimens of little known plants, often undescribed species which may be found only in remote places and which are difficult to reach.

Other 'bonuses' which have come from the arboretum include the way staff from the Division of Entomology are able to make use of the artificial rain forest to study insect predation as the complex ecosystems begin to develop.

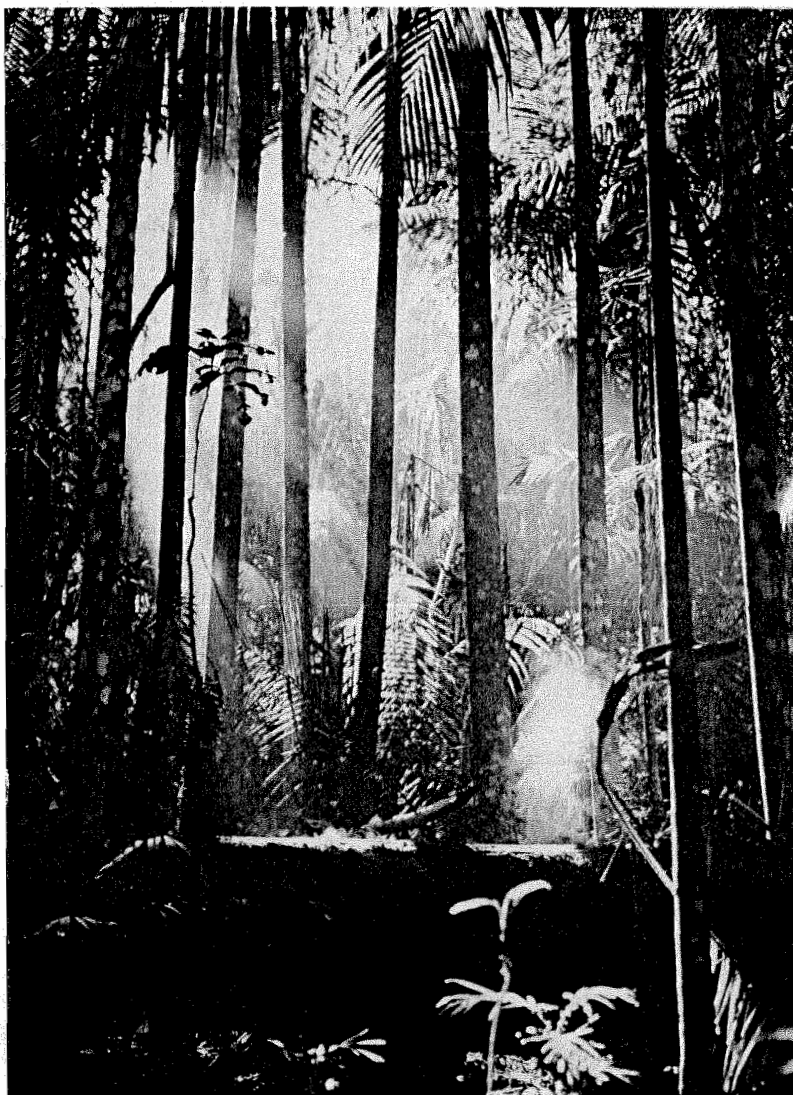
It has already become a seed source locally of many beautiful trees as yet untried in cultivation for planting up parks, creek banks and rubbish dumps.



Above: Much of the work of looking after the arboretum at the Long Pocket Laboratories in Indooroopilly, Queensland, falls on George Pitkin (left) and Jack Woodward.



Len Webb, one of Australia's best known authorities on tropical rain forests.



The tropical forest in Tamborine Mountain in Queensland. Photo: Ed Slater

CONGRESS PLANNING PAID OFF

A small group of people from the Division of Building Research were rewarded recently for 18 months of devoted work when they saw the success of the Fifth Australian Building Research Congress.

The Congress was organised by a committee drawn from the Hightett Division headed by Dr Lex Blakey, who at present is on secondment to the Department of Housing and Construction.

More than 200 delegates from Australia and New Zealand with a delegate each from Iran and Hong Kong, attended the conference which was held at the Convention Centre, Exhibition Building, Melbourne.

Despite all the efforts that went into it, at one stage the show looked like having a last-minute hitch and seemed about to become a congress in search of a Minister.

Replacement

Mr Whitlam, who had been scheduled to open the event, was unable to attend and the Chairman Dr Price, took over. The Minister for Science and Consumer Affairs, (Mr Clyde Cameron), and the Minister for Urban and Regional Development, (Mr Tom Uren), were to have spoken but had to cancel their plans.

However, the Minister for Housing and Construction, Mr Joe Riordan, was able to be present on the second day and was the guest speaker.

Title for the Congress was 'Building for Urban Australians' and the 36 papers presented fell into the three main categories of resources, consumer requirements, and planning and construction.

Perhaps one of the most talked about papers was by Dr Frank Bromilow, who made the startling pronouncement that the increase in interest rates over the last decade from five per cent to 10 per cent had reduced the pro-

portion of individual wage earners capable of financing land and house under maximum loan conditions from more than 90 per cent to 17 per cent.

Top: Maureen Wishart (left) and Jan Habel of Building Research register delegates for the Congress.

Below: The Chairman (Dr Price) talks to Helen O'Neill of 'The Age', Melbourne, after opening the Fifth Australian Building Research Congress.



—Photographs, Peter Lee.



DSIR MAN RETIRES

CSIRO staff may be interested to learn of the retirement of Mr J.A.D. Nash, a science administrator at the Head Office of New Zealand's DSIR.

Mr Nash was involved in international science progress for 30 years and is described as 'one of the architects of New Zealand's policy to increase technical help to less developed nations.'

He was NZ's first Scientific Liaison Officer in Melbourne and later served in a similar capacity in Washington.

In 1973 Mr Nash was the NZ delegate to the ECOSOC Committee on Science and Technology for Development in New York and to the meeting of the Association for Science Cooperation in Asia in New Delhi last year.

Among the activities Mr Nash will be remembered for was work to establish a career structure for DSIR technicians complementary to that of scientists.



Mr J.A.D. Nash

Science writing dull?

A lot of scientific writing is dull because the people who write it are dull.

That's the opinion Professor G. W. Milton, Professor of Surgery, has expressed in the University of Sydney News.

'Oscar Wilde said that to be understood is to be found out,' Professor Milton said. 'Just because something is obscure doesn't mean it is something worthwhile.'

Professor Milton finds writing very difficult. His Jacksonian Prize essay—Malignant Melanoma of the Skin and Mucus Membranes—took six months of 'on and off' writing to complete and he joked that the 50 pounds prize was the 'hardest 50 I've ever earned.'

'Writing gets a bit easier as the years go on. But it's rather like golf. The longer you go on, the more your standard goes up.'

Professor Milton is head of the Melanoma Unit at Sydney Hospital and his essay was based on the treatment of over 1000 patients.

He said the essay suffered from being written by only one person and he is inviting other authors to help him expand the work into a book.

The essay discusses the causes, diagnosis and treatment of malignant melanoma, the psychological care of patients suffering from it and the similarities and differences between the disease and other cancers.

Communication

A five week course on 'Communication for Supervisors' conducted by the Printing and Allied Trades Employers' Federation has begun at CILES Printing Unit in Rokeby Street, Melbourne.

Staff involved have been attending every Wednesday and representatives from the outside printing industry have been invited to participate.

The Victorian Committee for Management Seminars last month conducted a seminar on interviewing techniques at the Division of Mineral Chemistry, Garden City.

Election

The International Academy of Wood Science with headquarters in Austria, recently elected its officers for the next three years.

The names of two members of the staff of the Division of Building Research at Hightett are among the new appointments. They are Dr W.E. Hillis, who is the Vice-President of the Academy and Dr J.D. Boyd, who will be Chairman of the Asia-Pacific Group.

FOR YOUR INFORMATION

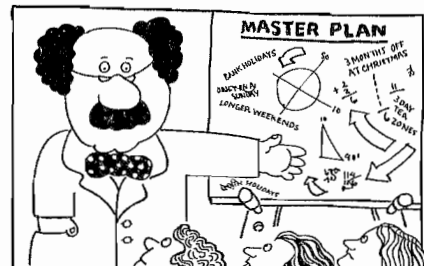
Information Circulars

75/57	(cancelled)	
75/58	Division of Forest Research — contacts and addresses	21.7.75
75/59	Order of Australia	22.7.75
75/60	Divisional telex numbers and postal addresses	29.7.75
75/61	Authorised holidays 1975	24.7.75
75/62	Head Office re-arrangements	28.7.75
75/63	(not issued yet)	
75/64	Staffing arrangements — Head Office	31.7.75
75/65	Telephone and telex alterations and additions	4.8.75

Policy Circulars

75/37	Committee of Inquiry — election of representatives of officers	28.7.75
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Ciros the Great



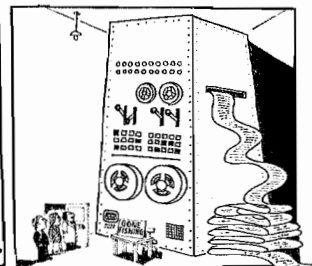
As you know gentlemen I've been asked to make a study of flexible working hours throughout the Organization...



taking in such factors as staff productivity, capital resources, accumulated credits etc...



I've devised a system which will give maximum operational efficiency and suit the needs of everyone.



Drawing by Brian Gosnell

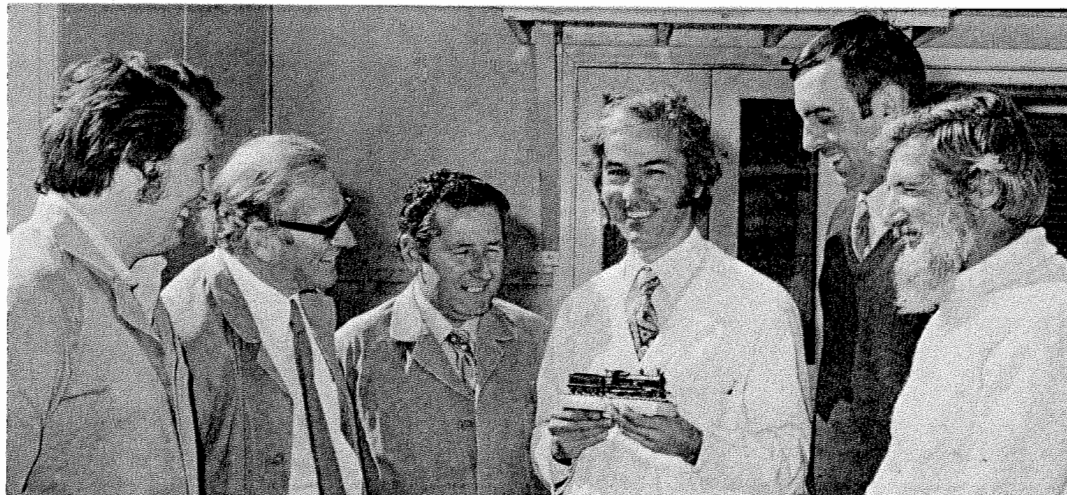
Benevolent Fund

CSIRO's Benevolent Funds are looking for more members. They point out that if they could get 100 per cent membership among the staff, the income of the Funds would be almost doubled...at present membership stands at 65 per cent of the staff.

The Chairman of the Southern Region Fund, Tony Nicholson, points out that it costs only 10 cents a fortnight to become a member and this amount can be deducted from members' pay so that people don't have to be bothered with the business of handing five cents a week to a collector.

'In these days of inflation and unemployment it's more than ever important for the Funds to have comfortable reserves,' says Tony.

Anyone wanting to join one of the Funds should speak to his Divisional or Office Administrative Officer.



Photograph: Harry Gillett

YES-IT'S CATCHING

At the National Measurement Laboratory in Sydney there's been an outbreak of ferroequinology among the staff.

We're assured it's nothing to get alarmed about. It simply means that a number of people have succumbed to the lure of the steam locomotive and its preservation.

Those involved range from workshop apprentices to research officers, and their hobbies include the building of finely detailed sub-miniature models similar to those found in train sets, the building of live steam models large enough to haul one or more persons on a small outdoor track, and preservation work on the real thing

at the NSW Rail Transport Museum.

The present elimination of steam from Australian railways is resulting in the fast disappearance of skilled professional personnel to maintain, in good working order, those locomotives at the museum that are still trafficable, the men say, and a program of training unpaid volunteers in this work is being undertaken.

John Smith, a laboratory craftsman at NML, is one such volunteer and as such spends most of his weekends 'working' to keep alive

this aspect of the Australian heritage.

Kevin Loughry and Peter Betts, of the technical and experimental staff respectively, are well known modellers on the miniature side. Both have won competitions for their efforts, the latter being the present holder of the Australian Model Railway Association's trophy for model locomotive building.

Bob Driver, on the experimental staff, covered a lot of ground journeying on locomotive foot plates in the dying years of steam and is well known for his contributions to railway history journals.

He is at present collecting historical information for inclusion in a book dealing with NSW private colliery railways where steam locomotives are still in use.

Several others, too modest to have their names revealed, are either preservationists in this field or spend part of their lunch hours indulging their interest by making models.

'The steam engine, probably more than any other man-made device,' the men say, 'has captured the imagination of people for its closeness to being a living thing. Its disappearance from everyday life has caused many people, like those of us at NML, to indulge in spare time activities which in effect are saying "Gone but not forgotten".'

RETURNING

Dr Ron Giovanelli, formerly Chief of the Division of Physics, who has been abroad for almost twelve months since he relinquished the position in order to concentrate on full-time research in solar physics, will return to NML at the end of September.

Since his departure in August last year he has spent time in research at the University of Honolulu, Hawaii; at the Kitt Peak Observatory, Tucson, Colorado; and at observatories in Utrecht, Paris and Florence.

STRONG CSIRO LINKS

When the new Academy of Technological Sciences is formally incorporated within the next few weeks, there will be a solid core of present and former CSIRO staff among its 60 foundation Fellows.

These will include Dr J.A. Allen, Mr C.S. Christian, Dr J.H.B. Christian, Dr L.W. Davies, Dr D.L. Ford, Dr H.J. Frith, Dr E.G. Hallsworth, Dr M. Lipson, Dr R.W.R. Muncey, Mr I.E. Newnham, Dr Helen Newton Turner, Dr June Olley, Mr R.A. Perry, Dr D.H. Solomon, Sir Henry Somerset, Dr K.L. Sutherland, Mr M.V.

Tracey, Professor E.J. Underwood, Dr J.R. Vickery, Sir Ian Wark, Dr D.E. Weiss and Mr F.M. Wiltshire.

Other Fellows will include Sir Philip Baxter, Sir Walter Bassett, Sir Robert Blackwood, Sir Maurice Mawby, Sir Ian McLennan, Dr R.G. Ward, Dr J.A.L. Matheson and Mr L.W. Weickhardt.

As yet the new Academy has not elected its President and Executive. This will be done when it holds its first meeting following formal incorporation.

In the interim however, a Council for an Australian Academy of Technological Sciences has been

formed with Sir Ian McLennan as President.

Dr K.T.H. Farrer is Chairman of the Executive Committee of the Council and Dr H.K. Worner is Secretary.

The Executive Committee includes: Dr J.A. Allen, Mr P.R. Brett, Dr W.A.A. Butement, Mr C.S. Christian, Dr L.W. Davies, Sir John Holland, Mr L. Stern, Dr K.L. Sutherland, Dr R.G. Ward, Dr W.I. Whitton, Mr H.A. Wills, Dr A.R.W. Wilson.

Until the Academy is able to acquire its own headquarters, it will meet in the Clunies Ross House in Melbourne.

APPOINTED AS ASTEC MEMBER

Dr K. Rachel Makinson, a senior principal research scientist in the Division of Textile Physics, Sydney has been appointed a part-time member of the Interim Australian Science and Technology Council (ASTEC).

The appointment was announced last month by the Chairman of the Council, Dr J.A.L. Matheson, and was included in a 'stop press' announcement in 'Coresearch' 195.

'Dr Makinson's appointment was approved by Cabinet on the recommendation of the Minister for Science and Consumer Affairs, Mr Clyde Cameron,' Dr Matheson said.

Most of Dr Makinson's research work has been carried out at CSIRO's Division of Textile Physics where she has concentrated in particular on the study of felting and shrink-proofing of wool, and the frictional properties of wool fibres.

Born and educated in the United Kingdom, Dr Makinson is married and has two sons and two grandsons.

She came to Australia in 1939 and worked as a research assistant in the School of Physics, Sydney University. She became an assistant lecturer in radio training courses for servicemen during the war.

Wool research

In 1945 Dr Makinson joined the

Division of Textile Physics to work on the problem of felting in wool fibres and her work has contributed to the understanding of shrink-proofing techniques for wool fabrics.

Dr Makinson was awarded her Ph.D. for published work by Cambridge University in 1970.

ASTEC will have 12 members who will advise the Australian Government on priorities for science and technology.

She is the only woman to be appointed to the Council and the only member of CSIRO's staff on it.

She does not, however, represent the Organization since ASTEC members are appointed as individuals and are chosen to represent a balance of expertise and experience from academic fields, industry and government.

Postscript: Dr Makinson wishes to disclaim all responsibility for reports appearing in some newspapers that she invented the chlorination of wool. This process in fact was first used about 1896 and she claims to be not quite that old!



The F.C. Pye Field Environment Laboratory of the Division of Environmental Mechanics at Canberra has held its 1975 Donor's Dinner.

This is an annual event in honour of Mr F.C. Pye, the NSW grazier whose benefactions to CSIRO enabled, among other things, the building of the Laboratory. Un-

fortunately, Mr and Mrs Pye were unable to attend this year.

Head Office guests at the function included Mr L. Lewis, Dr A.E. Pierce and Mr L.G. Wilson, and their wives, and Mr H.C. Crozier, Interim Secretary of ASTEC.

Members of the Division also welcomed the Chiefs of two other Canberra-based Divisions—Dr J.M. Gani of Mathematics and Statis-

tics, and Dr H.J. Frith of Wildlife Research.

The latter Division also has links with Mr Pye—its Darwin outpost is located in the F.C. Pye Wildlife Research Laboratory.

Guests at the dinner included—(from left) Mrs Kay Thurtell, Mrs Fay Philip, Mrs Rosemary Denmead, Dr Tom Denmead, Dr George Thurtell.

Paper aeroplanes: not just for the kids

The work of the Division of Building Research at Hightett is well publicised. Industry is kept in touch with new developments, the public can read articles which are prepared by the Division's Information Section and sent to magazines and other publications, and conferences and symposia are organised to further promote interest in research programs.

But while staff members are kept well and truly occupied during their working hours, they sometimes make time outside their professional activities to indulge in another interest—the making of paper aeroplanes.

If you think that's a lot of frivolous nonsense, the sort of thing schoolboys play around with, you are completely wrong.

In 1966-67 the first International Paper Airplane Competition was staged in New York. It attracted 11,851 entries from 28 countries and was conducted by that eminently respectable journal 'Scientific American'.

Talk about 'those magnificent men in their flying machines'—that contest had nothing on this one.

Sub-competitions to find the best entries for the qualifiers were held by the big aircraft companies like Lockheed, Grumman and Douglas, by educational institutions, including Harvard and Columbia, and by American Airlines and the London Daily Sketch and San Francisco Chronicle.

Kite flying

A year or so ago the staff at Building Research became interested in aerodynamics. First they went into kite flying and

from it developed the competition that brought the kids from a nearby school in their droves to watch the lunch-time fun.

Then they turned their attention to paper planes and successfully staged a competition that aroused enough interest to attract an article in Ansett's 'Panorama' magazine.

In the competition, the rules were simple—construction materials were limited to paper (maximum sheet size was 61 cm x 61 cm), glue and paper clips for ballast. All planes had to be launched from a 6 m tower.

The competition was divided into two sections—elaps flight time and distance travelled. There was a further prize for the plane landing nearest a given point.

Some of the staff entered original designs. Others copied designs entered in the 'Scientific American' competition. Contrary to predictions the winner of the elapsed time event was a helicopter which reached a height of 33 metres—it caught a thermal updraft—and took 44 seconds to land on the right spot to win the extra award.

While the first flush of enthusiasm for paper planes has now worn off, at the drop of a hat—or a piece of paper—some of the staff, at the first sign of interest from

visitors, will still show you what it's all about.

Bob Couper, the Division's Information Officer, for instance, and one of the competition organisers, still likes to design them and has had a lot of fun passing his skill on to others.

Just in case you think the Division's interests are directed to on inconsequentials, 'Coresearch' hastens to point out that the staff normally concentrates on serious research into development of the built environment, community planning and urban design; systems research; physical performance of buildings in relation to the well-being of occupants; building operations and economics; structural design and engineering; conversion of forest products for the production of wood-based building elements; design and improvement of building components and systems; and the development, processing and properties of building materials.

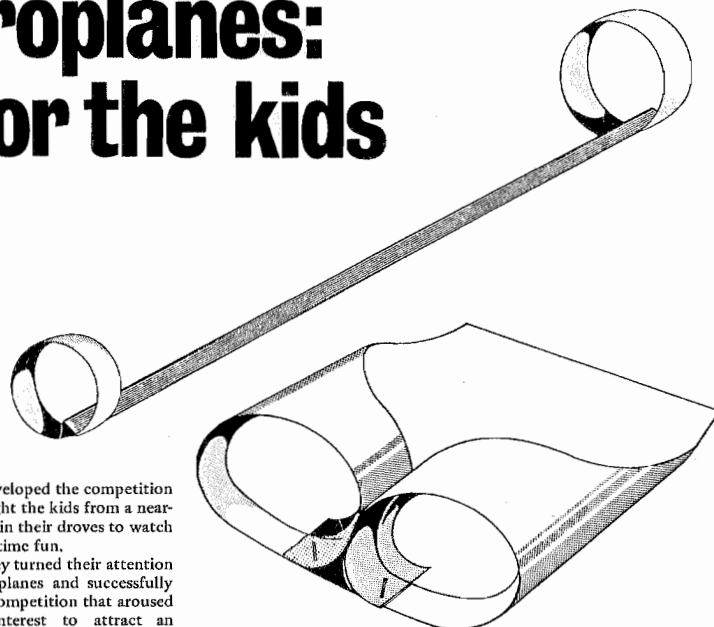
CSIRO
sport

The model in the centre picture is one of Bob's original designs. It should be launched from a height with a brisk toss of the arm, with the rings at the rear of the 'machine.'

Another model, a helicopter, should be dropped from a height whereupon it should twist its way dramatically to the ground.

The other designs, and more like them—they will fly gently if released from upheld arms—were copied from a booklet published by Ure Smith Ltd who hold the Australian reproduction rights for models originally published in 'The Great International Paper Airplane Book.'

Ure Smith have given 'Coresearch' permission to reprint the illustrations.



KITE FLYER



Above: Rob Schuster taking off in his delta kite for a flight along the River Murray in South Australia.

Rob Schuster, a draughting officer in the Publications Section of the Division of Soils in Adelaide, has just had a four-year-old dream turn into a reality with the win he and his team mates notched up in the BP 100-mile marathon.

The event was held at Murray Bridge and it was the fourth time Rob and his colleagues, Rob Poole, Max Lindsay and Kevin Poole had tried for the honour.

In 1972 with their boat, Moonraker, they took sixth place, the following year they made it to third; they ran into trouble last year but with a new boat, Shockwave, they made a successful bid for this year's title.

Rob, according to a local sportswriter, is the very capable and level-headed driver of Shockwave who 'showed superb boat handling and control.'

He is also an efficient water skier who has represented South Australia in State and national barefoot water ski championships around the country.

While water skiing is one love, his other exciting hobby is kite-flying—the kind that's done behind a boat. With the same colleagues, he finds it an exhilarating experience to get out behind the boat and then take off with the kite.

'We get up to speeds of about 45 mph,' he said, 'and with a 500 ft rope we can fly to 200 to 300 ft before releasing the rope.' From then on it's mostly a free-fly down to hopefully land on the single ski they use.

'If you land properly you can then stay up—the kites have floats on them—and hook back onto the boat again,' Rob said.

The sport is one which doesn't have a large number of followers, especially now that some of the exponents have given it away for hang gliding.

The cost? If you build your own kite, Rob says, it's about \$150. To buy a kite, the cost would be around \$500.



The likely lads above are the members of the 'undefeated' (their description) Wildlife Walllopers who beat the CSIRO Socceros (Head Office) in Canberra 3-0 in a recent match. The normal habitat of the Walllopers is the Division of Wildlife Research at Gungahlin. Their back row is (from left) Peter Catling, Peter Hanisch, Harold Bults, Brian Green (captain), John McIlroy, Charlie Kogan (coach), John Hansen and Tony Sinclair. Those lining up in the front row are Mark Clayton, Gary Garland, Dick Williams and Frank Knight.

Tony Sinclair was playing his last game for the Walllopers before leaving the Division for Canada. Tony, one of the scientists who survived Cyclone Tracy in Darwin and then drove south in the CSIRO convoy to Canberra, left Australia last month with his wife, Anne, and family to take up a position with the Institute of Animal Resource Ecology at the University of British Columbia.

CORRESEARCH

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Produced by the CSIRO Central Communication Unit

October 1975

'MINISTERS' AGREEMENT FINALISED

The administrative arrangements by which CSIRO will function under two Ministers have been finalised.



Mr Clyde Cameron

Agreement has now been reached between the Minister for Science and Consumer Affairs, Mr Clyde Cameron, the Minister for Minerals and Energy, Mr R.F.X. Connor, and CSIRO for a working procedure.

This brings to a conclusion the dispute which arose in June when, for a time, it looked as though CSIRO would lose its Minerals Research Laboratories and its Solar Energy Studies Unit.

From now on, under the Administrative Arrangements Order, published in the Australian Government Gazette No. S128 of 1 July 1975, the Minister for Science and Consumer Affairs will administer the Science and Industry Research Act 1949-1973 except insofar as that Act relates to mineral and solar energy research.

The Minister for Minerals and Energy will administer the Act insofar as that Act relates to mineral and solar energy research.

No transfers

The Order was elaborated on in a press release issued on 1 July by the Prime Minister, which stated:

'The Prime Minister said he wished to make it clear that the fact that the Minister for Minerals and Energy was responsible for those aspects of CSIRO's research work did not entail the transfer of CSIRO staff concerned to the Public Service.

'These staff would remain employed under the Science and Industry Act and it is not proposed that they would be transferred.'

Under the new agreement, the Executive as the governing body of CSIRO, will continue to exercise its role of management of the Organization as a single entity but instead of being responsible to one Minister as before it will now be responsible to two.

A policy circular giving details of the arrangements under the two-Minister agreement will be circulated to Divisions in the coming month.



Mr R.F.X. Connor

CRITICAL

CSIRO's 37 Chiefs last month criticised the cuts in research funds made available to the Australian Research Grants Committee and the National Health and Medical Research Council for the support of scientific and medical research in Australia.

The Chiefs were in Canberra for their annual meeting.

In a statement made from their conference they expressed their dismay at the extreme severity of the cuts.

'We believe,' the Chiefs said, 'that it is essential that a viable level of research financed by these bodies be maintained to ensure the future health of science in Australia and indeed of the continued development of the nation.

'We urge the Government in the strongest and most urgent terms to provide funds to these bodies to at least a level adequate to maintain the current research effort.'



The half-tonne air conditioning plant partly subsided through the roof can be seen in the centre. Photograph by Paul Tollis of Textile Physics.

Fire causes \$190,000 damage

Fire caused damage estimated at \$190 000 to the Division of Textile Physics in Sydney at the end of last month.

The outbreak is believed to have started through an electrical fault in the laboratory occupied by Mr John Connell, a scientist working on a new method of determining vegetable matter in wool.

A small quantity of solvents in the lab at the time helped to feed the fire which must have started about 4 am.

It spread to the upper storey of the building and with little to impede the flames at that point it moved rapidly.

The blaze was discovered about 5.15 am by the acting caretaker Mr Ted Homeyer who had checked all the labs about 9 pm the previous evening. The fire brigade was on the scene six minutes after being informed.

A telephone call from Mr Homeyer aroused Mr John Platt, the Division's Technical Secretary, and it was while they were talking that the explosion of an oxygen bottle occurred. One of the firemen outside was blown off his feet and it was at this stage that Mr Homeyer decided that the conversation should be brought to an abrupt conclusion.

The oxygen fanned the blaze and the heat was so intense in the area of the explosion that the

glass in the windows turned to icicle-like droplets. The explosion also damaged windows in nearby homes.

By 6 am the brigade had the fire under control and had contained it to the upper level with the exception of two small self-

extinguishing fires on the ground floor. This area, however, was extensively damaged by water.

As this edition was going to press, the Division was still assessing the losses the fire caused, not just to equipment but to research material.

CHIEF APPOINTED

A leading British metallurgist has been appointed Chief of the newly-formed Division of Process Technology.

He is Mr Anthony Vernon Bradshaw who for 12 years has been Professor of Applied Metallurgy at the Imperial College of Science and Technology, London.

The new Division has been formed from the Sydney sections of the Melbourne-based Division of Mineral Chemistry. It will have its headquarters in Sydney as part of the Minerals Research Laboratories.

The Division of Mineral Chemistry will continue to operate in Melbourne.

CSIRO's 38th Division will carry out research into methods of deriving alternative fuels from

Australian coal resources, especially through the application of pyrolysis techniques for producing heavy furnace oils.

The established studies of the Sydney group on pelletisation of iron ores for export, and experimental work on direct reduction of iron ore to metal will be continued under Mr Bradshaw, an expert in this field.

The Sydney group will also continue to apply the benefits of mineral chemistry research to the environment.

In this area it has been studying Sydney's smog, ways of reducing sulphur dioxide emissions from smelters, reduction of fly ash emissions from power stations, methods of disposal for coal washery waste, and incineration of industrial liquid wastes and sludges.

Mr Bradshaw has had wide experience in industry.

He is an expert in the planning and development of research programs required for large scale processing of minerals.

His London Department is one of the world's foremost in research into the application of engineering principles to the study of metallurgical processes.

Seminar report submitted

The report of the Staff Relations Seminar has been submitted to the Executive for its consideration.

At the time of going to press, it was understood that the Executive would discuss its contents at their meeting on 30 September. All participants and the staff generally will be advised of the outcome.

Advance copies of the report have already been sent to five staff associations and it is expected

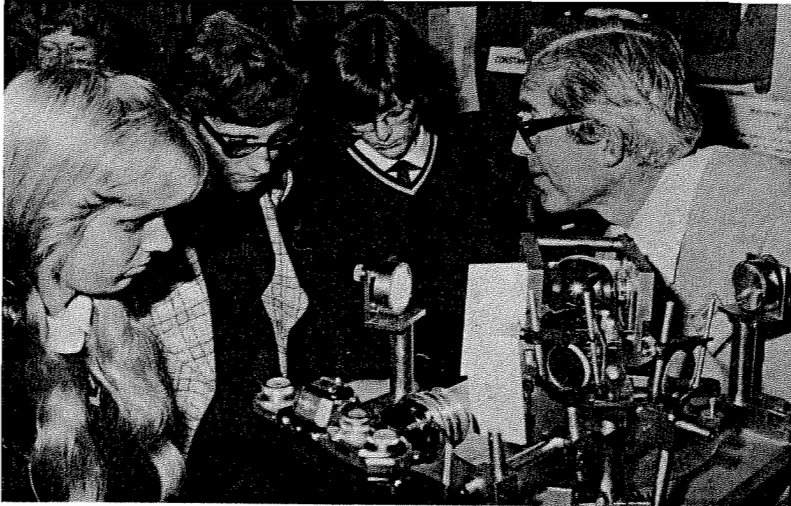
that bulk supplies of it will be available in a few weeks. These will be distributed to Chiefs and Officers-in-Charge so they can be read by all interested members of the staff, as well as to each participant.

The seminar was held in Canberra at the end of last year and was attended by 36 delegates from all over the country.

In its preliminary consideration

of the seminar conclusions in March, the Executive requested that the conclusions be circulated to Chiefs for their comments.

Action is already in progress on a number of the conclusions. These include the provision of information concerning appeals, staff counselling, training programs and the seminar's recommendations with respect to clerical assistants.



Mr J. Patterson explains to visitors the use of some of the scientific equipment in use at the National Measurement Laboratory during NML's Open Days.

5,000 VISITORS

More than 5000 people flooded into the National Measurement Laboratory at the Sydney University when the staff there staged their recent 'Open Days'.



RETIRING AFTER 41 YEARS

Mr Vin Leonard, of the Melbourne RAO, retired last month after 41 years of service to the Organisation.

In this remarkably long association he worked in almost every section of Head Office and at the former Division of Aeronautics before his appointment in 1963 as leader of the RAO Supply Group.

Vin is widely known throughout CSIRO as a sound advisor and ready helper in both official and personal areas.

He will always be remembered for his able leadership of social activities in Melbourne, and especially for the part he played as inaugural Secretary of the CSIRO Benevolent Fund—Southern Region.

He will be continuing his activities as a radio 'ham' and Justice of the Peace, hopefully devoting more time to his Bench responsibilities.

However, his wife, Pat, and 12 fond grandchildren will ensure that he takes time to enjoy life at their seaside holiday home.

His colleagues suitably marked his retirement with a social gathering.

They included about 130 special guests who were shown the work of the laboratory on the first day, the 2500 people who attended the general sessions on the next two days, and the 2600 fifth and sixth form students who visited the laboratory on the final day.

A number of the visitors came from industry and had the opportunity to discuss matters of mutual interest with the staff and see the research work and equipment.

This was as satisfying to the staff as it appeared to be to the guests—a reward for the many hours of hard work put in by the organising committee and those who contributed in many ways to the success of the venture.

In the issue of the NML Newsletter published soon after the event, however, some of the lighter moments of the exercise were reported.

We quote so that other labs preparing for open days next year can be prepared to handle similar questions:

One of the first questions asked by one of the first visitors was 'Which way to the bar?'

An elderly gentleman peered into a room, noticed a scientist

with a short beard, and asked an attendant: 'Is that Professor Messel in there?'

A high-school student, after enquiring about the film, called to his companions, 'It's not worth the time, it's only in black and white.'

One of the most popular exhibits appeared to be the flexi-time recorder outside Room G47.

During the students' visit, the sign K.V.D. Calibrator, sitting on top of the Laboratory's newest instrument, was twisted so that the 'K' disappeared.

And since open days are being planned in a number of areas for the jubilee celebrations next year, it's perhaps appropriate to remind Divisions of a minor problem experienced at the Deniliquin lab in 1973.

Conscious that a proper traffic flow would make the whole exercise go much more smoothly, the organisers of that particular venture carefully marked out with arrows the proper course to be followed by guests. All worked well until some bright young students managed to quietly turn the arrows round the wrong way.

BEING FIRED WAS PART OF THE JOB

Imagine the scene. You're away out from Mt Isa, miles (you thought) beyond the black stump. The bloke who's sitting in the front seat of the vehicle with you isn't in the greatest frame of mind. It's been a rough trip.

Suddenly you hit the black stump you thought you'd long since left behind. You know instinctively what's happened. You know you've torn the backside out of your petrol tank.

The bloke you're with is even less amused. He fires you.

Well, there's not much good protesting about your rights out in the desert, so you might as well have a bit of a sit and think. Give you time to find out how good a mechanic the other guy is.

Give him some time to think about it, too, because you both know it's a long hike back to town.

So.....before long, you're back on the payroll. It isn't everyone in CSIRO who gets fired and hired in the same day.

It reads a bit like a scenario, but it's just one of the stories they tell around the Division of Entomology about Bert Wetherly.

Bert joined CSIRO in 1931 when he was 15 years of age. The other day he retired from the Organization. Forty-five years of your life isn't a bad contribution and now he's 60, he's got other things to do.

Bert began working for the Council as an office boy for the joint administration of the Divisions of Plant Industry and Entomology, when Canberra's Black Mountain site was still fairly new.

In 1936 he joined the termite section of Entomology as a lab assistant and apart from a break during the war years, he remained in that group throughout his whole career.

Survey trips

In those early days, the section was led by Mr G.R. Hill and he and Bert often went off on long survey trips.

On one of these trips, when they were making the long haul across country from Townsville



Bert Wetherly.

to Katherine, the pair ran into mechanical problems, resulting in Bert being fired and hired once again. Gerald Hill then realised how much he needed someone who could handle almost anything to do with a vehicle.

In 1938 Bert left CSIRO to join the Commonwealth Serum Laboratory but two years later returned to the Council on the staff of the then National Standards Laboratory.

During the war years, work had stopped on the termite program but in 1946 Mr Frank Gay was asked to restart it.

He was looking around for competent staff to help him and the person he most wanted was Bert.

Before long, Bert was back in the section, this time as a technical officer.

Along with two other lab assistants, the group expanded the research program considerably, making many surveys into remote areas of the country.

In 1970, Frank Gay retired and his place as section leader was taken over by Dr Tony Watson who, like both his predecessors, found Bert's help was invaluable.

When the time came last month for Bert to retire, the Division presented him with 'Bert's Almanac', a photographic collection of 350 pictures which had been processed and mounted by some of his colleagues and which covered his long service with the termite section.

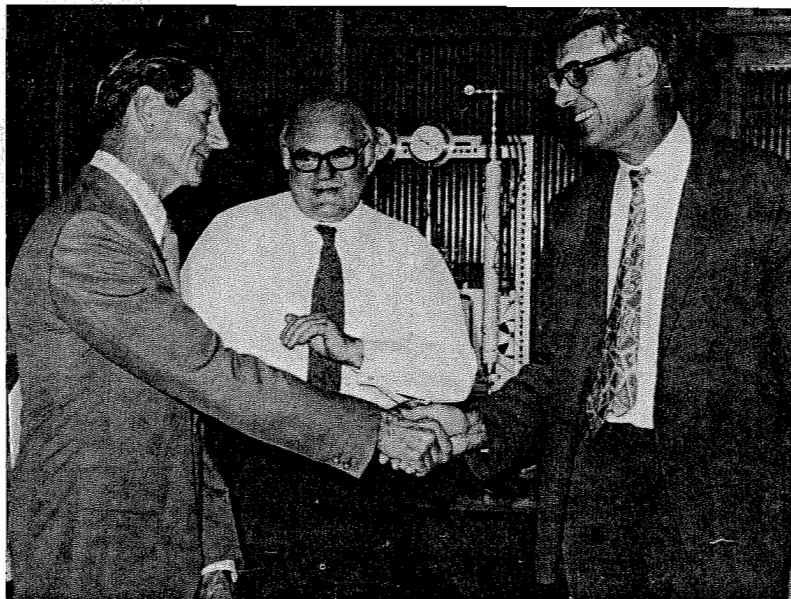
After the official Divisional farewell, he was entertained at Tony Watson's home where he was presented with an occasional table.

This had a special significance for Bert. It was one made from jarrah wood, a timber which has featured prominently in the section's research programs.

Many friends and colleagues gathered at the National Measurement Laboratory on 19 August to say farewell to Mr Graham Norton, seen here with the Director, Mr F.J. Leahy (centre), and Dr W.H. Steel (right).

Most of his 25 years' service was spent in the Solar Physics Group, where he specialised in the development of sophisticated astronomical equipment for the Fleurs Field Station and, more recently, the Culgoora Solar Observatory.

Graham deserves special tribute for the devoted contributions he made as a member of the CSIRO expeditions sent to observe the total eclipse of the Sun in the Cook Island in 1965 and Western



GETTING IDEAS ACROSS

Communication was the name of the game when 80 CSIRO officers involved in the dissemination of information attended a conference last month at the Division of Building Research, Highett.

The idea of the conference stemmed from a suggestion by information officers and was organised by CILES and a number of Divisions.

Apart from information and publication officers and librarians, the participants included representatives of Head Office groups and other staff concerned with handling information inquiries.

The Chairman was Mr Peter Judge, Officer-in-Charge of CILES who in his introduction spoke of the increasing volume of inquiries CSIRO was receiving.

These, he said, now amounted to 133,000, but the estimate could be on the low side. Many more inquiries were received and answered directly by individuals so that the present figure could be nearer 150,000.

He would expect it to reach the quarter million mark within the next two or three years.

Head Office representatives who outlined the roles of different Head Office groups included the Manager of the Central Communication Unit, Mr George Williams, and Mr Keith Avent, an Assistant Secretary of the Science Branch.

Mr Basil Walby, Mr Peter Dawe and Mr Clyde Garrow spoke on the different aspects of the work of CILES, covering the editorial, library and information services.

Two working sessions were held. In the first, Mr Bob Couper, Information Officer, Division of Building Research, posed the question of whether CSIRO publications were suitable for information purposes. In the second, Mr Walby discussed the sale and distribution of CSIRO publications.

Similarly three workshops were held. The first covered editorial matters and the preparation of publications (moderator: Mr J.B. Davenport of the Reserve Bank of Australia and a former CSIRO staff member), while the second dealt with Divisional information activities (moderator: Dr C.K. Coogan, Division of Chemical Physics).

The third took the form of a full session when the referral of information requests was discussed.

During the conference, participants were addressed by the Minister for Science and Consumer Affairs, Mr Clyde Cameron.

The Division of Building Research turned on its customary hospitality for the participants who took full advantage of the informal occasions to discuss matters of mutual interest.

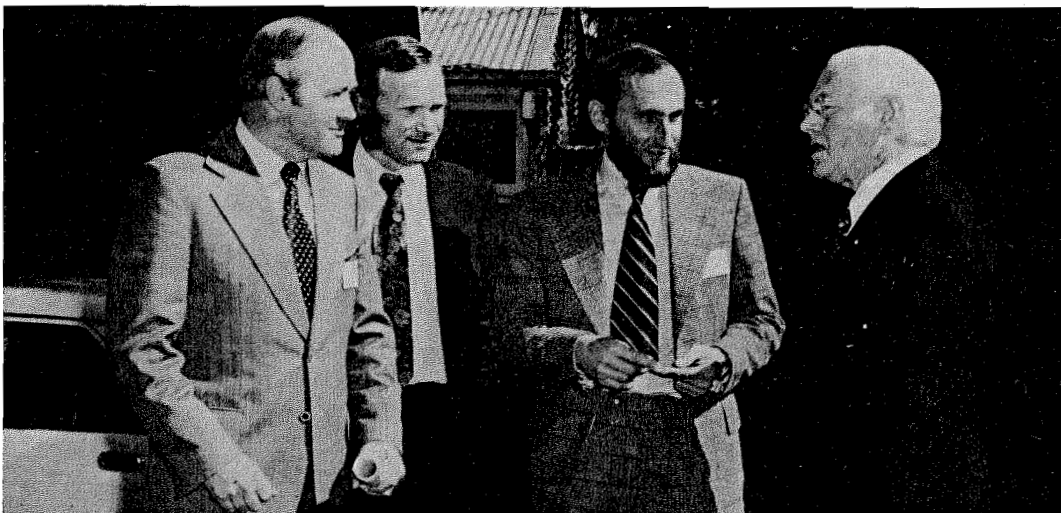
ELECTED

Two of CSIRO's Queensland staff were recently elected to the Council of the Australian Conservation Foundation.

They were Dr Len Webb from the Rain Forest Ecology Section at Long Pocket Laboratory in Brisbane and Dr Peter Springell from Animal Genetics Tropical Cattle Research Centre at Rockhampton.

Dr Webb, a foundation member of the ACF, unfortunately had to resign almost immediately because of pressure of work.

Dr Springell is the foundation President of the Capricorn Conservation Council as well as an office bearer and member of several local, state and national conservation bodies.



The Minister for Science and Consumer Affairs, Mr Clyde Cameron, discusses ideas on communication with (from left) Mr Peter Judge (Officer-in-Charge, CILES), Mr Bill Dominguez, (private secretary to the Minister), and Mr Bob Couper (Information officer, Building Research). The Minister was at the Division of Building Research for the conference of information and publication officers.

'SCIENCE': A STORY WORTH TELLING'

'Science and technology will never receive the budget allocation it deserves while scientists and technologists behave as though their work can only be understood by scientists living in their own little cocoon', the Minister for Science and Consumer Affairs, Mr Clyde Cameron, told participants at a conference of CSIRO information and publication officers last month.

'Laymen are not expected to master the intricate details of research techniques, but if we are to expect seven million voters who make and break governments to back us, we have to convince them that our business is their business,' he said.

Mr Cameron told participants of his own 'conversion to the cause' after his initial reluctance to take on the portfolio. At the beginning, he said, he thought this would be the 'most boring and unexciting' ministry that anyone could have thrust upon him.

'I now want other laymen like me to be given the same opportunities of discovering the excitement of science,' he said.

'We, who either administer or work with CSIRO, owe it to ourselves. And we owe it to our fellow Australians to publicise the imposing record of our really great Organization. That is your job. For my part, I intend to do everything that is humanly possible to back up your efforts.'

The story of research, Mr Cameron said 'must find its way into every trade union magazine, weekly suburban newspaper, specialist journal and through special pamphlets and publications aimed at special audiences.'

'It should be seen on television and heard on radio so that all who wish to do so may read, see and hear what science is doing for the benefit of mankind.'

Community

Mr Cameron said he was particularly pleased to learn that CSIRO's information network extended to all sections of the community—to scientists, technologists, industry, commerce, school children and the general public.

The development and maintenance of an adequate information communication system was a formidable task. The amount of information was vast and called for heavy outlays in equipment and a great demand for skilled workers who were in short supply.

He felt that CSIRO had led the field in Australia in providing special techniques for the retrieval

of scientific information and had made its costly computer research service available to people outside the Organization on the same basis as it did for its own scientists.

'The physical side of storage and retrieval of scientific information is a matter for the experts. My concern lies in the use that is made of the system.'

'I want it used to provide information to the people who don't have the backing of large organisations.'

'The people who need the kind of scientific information which CSIRO can provide can be found on the farms, on the building sites, and in the schools in the many thousands of separate localities that constitute the Australian nation.'

'Only a drop'

Mr Cameron spoke of the volume of inquiries for information which CSIRO handled each year, with CILES itself handling 1000 every week. He thought this was a 'tremendous achievement'

but suggested it was only a drop in the ocean of information that existed.

'There are many people in the community who need information but who don't even realise that CSIRO stands ready to give them the information they require.'

'CSIRO needs to do much more to help people learn how to use the magnificent system which is freely available to them. As the Australian Minister for Science I intend to become more directly involved in the dissemination of this kind of material than has been the case hitherto.'

'When CSIRO makes a major breakthrough in science and research, I want to be the one, in association with the scientists responsible, to make the announcement.'

Mr Cameron spoke of the achievements of CSIRO which he said made absorbing reading but he wondered whether members of the public understood and appreciated what these scientific advances meant to them.

People should know about them and effective communication methods could be used to translate the complexities of science and technology to the man in the

street—'the man whose taxes pay for Government-funded research work.'

As public interest developed, he said, so would political demand for government-funding of CSIRO activities.

BOOKLET

The fourth booklet in the series being published by the Division of Food Research's Consumer Service has been issued.

This time the subject is prawns and the booklet deals with ways to select, handle and store the crustacean.

Announcing the publication, the Minister for Science and Consumer Affairs, Mr Cameron, said that its appearance was 'most opportune.'

'With the summer and the prawn season about to begin consumers who wish to enjoy seafood delicacies in their own homes will find this booklet of considerable value,' he said.

Copies of the Consumer Service publications are available free from Government Bookshops and from the CSIRO Division of Food Research, P.O. Box 52, North Ryde, N.S.W. 2113.

Science at work



'We've got to stop meeting here'.

AN ATMOSPHERE OF WORLD CO-OPERATION

Two hundred international scientists have been taking part in the Air Mass Transformation Experiment (AMTEX) over the east China Sea.

The Australian contribution was made by a team from CSIRO's Division of Atmospheric Physics Air-Sea Interaction Group.

In 1974 the team comprised Dr J.R. Garratt, (leader) Mr P. Hyson and Mr G. Grauze and this year Dr R.J. Francey replaced Mr Hyson.

AMTEX was part of the Global Atmospheric Research Program (GARP) and was organised by the Japanese Meteorological Agency.

Ground stations were located in the south-west islands of Japan and while the Australian team found the scientific aspects of the work engrossing, they also discovered that the islands had some interesting distractions.

'The aim of AMTEX was to clarify the physical processes by which energy is transferred from the ocean, through the atmospheric boundary layer and into the free atmosphere in conditions of rapid air mass modification,' Dr Garratt said.

The East China Sea was particularly suitable for such a study because of the frequent winter-time cold air outbreaks which bring cold continental air over the warm ocean.

'Depending on conditions you can get a development and intensification of medium scale mid-latitude depressions—referred to in the area as the 'Taiwan Low'. These often produce high winds and heavy snowfalls in the densely populated south east region of the Japanese mainland.'

For the Australians, their expedition began when they left Sydney with three huge bags of unaccompanied baggage containing their scientific instruments.

In Tokyo they had to obtain additional items necessary for their work, meet their interpreter and Embassy officials, and arrange transport to the south-western islands.

'Our Counsellor (Scientific), Mr Otto Adderley, gave us a lot of assistance and he and his wife, Judy, proved great hosts,' Dr Francey commented.

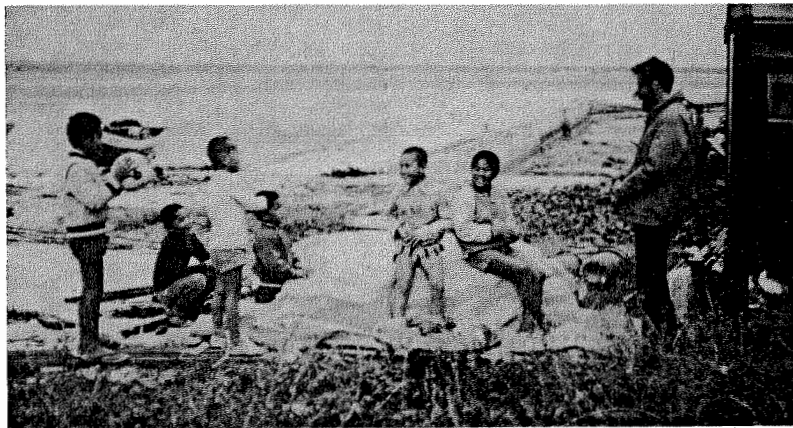
Headquarters

The team flew from the capital to Naha, the administrative headquarters of the AMTEX operation and the main point of contact for them with the scientific directors and other participants.

'It was here too,' Dr Francey said, 'that the lifestyle became distinctly Japanese, with Japanese meals and chopsticks, ricepaper wall partitions, sleeping mats, floor level toilets and rinsing baths.'

From Naha, the team travelled out to the three experimental sites, each of which was on an island and each of which offered a different living situation.

On Hentona, Mr Grauze assisted in the erection of a tower about 300m offshore. The island had a population of only about 1000 people and the best method of transport was by bicycle or by bus with a kilometer walk at the



end of the road.

Miyako, on the other hand, was a bustling seaport of about 50,000 inhabitants. At the site, the men found they could get some relief from work by swimming in sub-tropical waters and exploring cliffs along a headland.

'A fascinating discovery here,' the men said, 'was finding the caves were strewn with skeletons—the habit of disposing of the dead by exposure to the elements ceased only 15 years ago.'

At Tarama-jima ('island without water'), there was a population of about 3000 in a village only 300m from the site across a band of dense tropical forest. Sugar cane appeared to be the main industry of the people but fishing and vegetable farming contributed to their welfare.

'Life on Tarama was peaceful and primitive. The coral reefs, sandy beaches with their unusual star-shaped sand grains, beautiful butterflies, leafy secluded shrines and burial tombs were among the distractions to work,' the men said.

'A soccer ball, purchased in Miyako, proved a major diplomatic coup, with both the Japanese scientists and local children showing considerable enthusiasm for the sport.'

By the time the team was ready to return to Australia, we all had memories of the great friendliness and hospitality shown by our Japanese hosts and some of us at least had a decided admiration, even a preference, for the Japanese life style.'

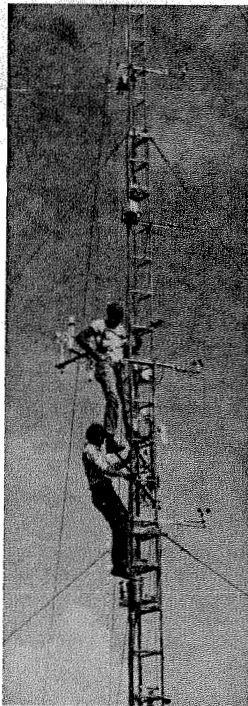
Conferences

Preliminary results from the experiments have now been presented by most of the participating groups in two study conferences held in Tokyo.

The main task facing researchers now is to interpret the whole spectrum of the data from surface (tower, ship and aircraft) measurements to extensive satellite data on cloud systems.

'We are trying to understand, for instance,' Dr Francey said, 'why Taiwan Lows developed in both February 1974 and 1975

Above: Dr R.J. Garratt attempting communication with local village children on Tarama. A temporary instrument hut (later donated by the Okayama University to the village chief for use as a museum) is shown on the right.



Right: Mr P. Hyson shopping for kimonos in Tokyo.



Left: Mr G. Grauze and Dr R.J. Francey mounting instruments on the Miyako tower.

but created blizzards in Tokyo only in February 1974—our data indicate similar amounts of energy transfer from the ocean to the lower atmosphere on both occasions.'

During AMTEX several additional measurements were made relating to the Group's Australian research program.

'The opportunity of being em-

bedded in a vast observational network and the conditions extending the range of parameters normally obtained were of great interest to us,' team members commented.

Joint publications with a group from Okayama University in Japan on comparison of sensor performance will be another result of the experiment.

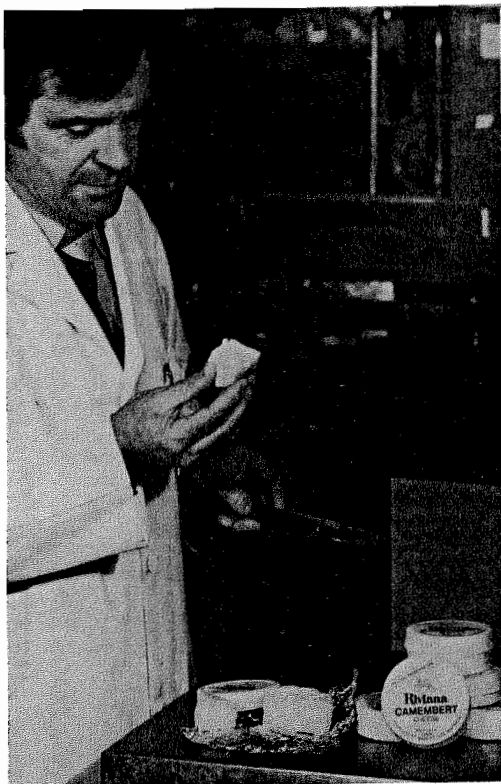


WATCH SILVER



Dr Martin Platt (left) and Mr John Bergh make final adjustment of light into the clouds over Melbourne.

AND CHURNING OUT CHEESES



Left: Les Hammond, Dairy Research Laboratory, Highett, examines a sample of Camembert cheese.

LAB CHALKS UP NEW CHEESES

Gotta Geta Betta Feta! That's the latest job for Dr Jozef Czulak of the Dairy Research Laboratory at Highett, Victoria.

Since Dr Czulak has already revolutionised cheese production all over the world, put the Australian cheese industry on its feet, and developed several new varieties of cheese, it seems only a matter of time before he succeeds in his search for a better Feta.

Feta cheese originated in the Balkans. Stored and matured in brine solution, it acquires a salty taste which goes down well with the people of Iran.

And that's a country which is looking for additional sources of Feta cheese and Australia would

like to be able to sell such a product to them.

The Iranians have become used to a white-coloured Feta imported from Bulgaria. Because Australian Feta is made from cow's milk instead of goat's milk, it is much creamier than the Bulgarian variety.

Dr Czulak, and his associate of 23 years, Mr Les Hammond, are therefore developing a Feta cheese to the particular texture and compositional requirements of the expanding Iranian market.

Mr Hammond recently took some samples of CSIRO's Feta to Iran to demonstrate the ability of the Australian cheese industry to produce and supply the cheese.

Centuries of expertise and knowledge lay with the European cheese manufacturers and Australia faced an uphill struggle in establishing a viable industry of its own. To help the industry, CSIRO appointed Dr Czulak as a research scientist to work exclusively on Australian cheeses.

He immediately succeeded in introducing new cheese starters—the cultures that convert sugar in the milk to lactic acid—for use in local manufacturing processes.

The Organization then set up (and still operates) a starter service to the industry through the State Departments of Agriculture. By 1952 most Australian cheese factories had switched to the Czulak cultures.

Dr Czulak's other task—the mechanisation of Cheddar cheese production—proved more difficult and has taken 24 years to perfect. European and British cheese experts in the 1950s said that even if mechanisation were possible, it would seriously impair the quality of the cheese.

'Cheesemaking is still an art,' asserted a former Professor of Dairy Science.

Proved wrong

With the help of engineers and technologists in his team, Dr Czulak proved the sceptics wrong.

By 1967 the first three stages in Cheddar cheese production had been mechanised commercially. The final stage, involving the pressing of 0.45 tonne of curd into a single block, is under test at the moment.

The team had shown that where there's a will there's a way.

As to the quality of the mechanically produced cheese—ask the manufacturers in New Zealand, Britain, Holland, the United States and other countries who now operate CSIRO's mechanised process!

Both Dr Czulak and Mr Hammond agree that those nights in the process building involved much hard work and precious little sleep. Even after the process was marketed Dr Czulak acted as an international trouble-shooter for three to four years.

The last word on CSIRO's cheesemakers must come from the man who spent nearly a quarter of a century developing Australia's cheeses.

'It was a challenge,' said Dr Czulak, 'and the success has been very rewarding. But it was more than a lot of hard work—I would have to think twice if I had to do it again.'

H FOR THE R LINING

Dr Martin Platt of the Division of Atmospheric Physics must surely be the only person in Melbourne who actually welcomes those dark rolling clouds in the early morning.

While the rest of the city grimly faces the prospect of yet another miserable day, Dr Platt hurries to his laboratory at Aspendale to switch on an optical radar called a lidar.

Recently designed and constructed to CSIRO specifications by the Stanford Research Institute, California, the lidar sends pulses of light into clouds passing over the laboratory.

A small fraction of the pulses which are reflected from the clouds or haze is gathered by a telescope, and the information travels through an automatic data logger and processor before being fed into a computer for final analysis.

The complex procedure gives the height of the clouds and information on their optical properties, plus their total thickness and density if they are high clouds.

The same information can be obtained by other instruments, but only after they have been taken right into the clouds themselves.

Apart from the high cost of sending up planes, a flight through clouds only collects average data. The lidar, on the other hand, automatically scans every cloud system crossing its light path.

Another asset of the lidar is its ability to differentiate from the ground between ice and water droplets in clouds. Ice crystals affect the linear polarised light from the lidar, while the water droplets do not.

Radiation

Dr Platt's interest in the properties of high clouds began in 1970 when he devised a method for studying the dual role of

clouds in controlling the world's climate—

- clouds trap infrared radiation from the earth, thereby keeping the earth warm.
- at the same time they reflect out a great deal of solar radiation.

The method uses an infrared radiometer to measure the quantity of infrared radiation absorbed by a cloud. The structure of a cloud and its ability to reflect radiation from the sun is examined by the lidar.

Before CSIRO obtained its own instrument, Dr Platt made use of a lidar at Adelaide belonging to the University of Adelaide. Studies of this kind are essential to research on global atmospheric conditions.

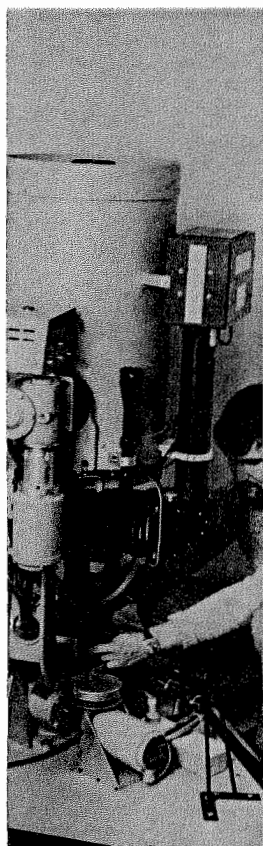
Dr Platt and his team can also monitor dust particles with the lidar—dust from urban pollution near the ground, and dust from volcanic eruptions which is thrown into the stratosphere where it remains for a considerable time.

Its presence may well affect normal climatic conditions.

The team will eventually look at cumulus clouds. By following the dust sucked up into the clouds, they hope to pin down the processes occurring at the cloud base.

Dr Platt regards his lidar as one of the most sophisticated in the world. It has by far the highest power and shortest pulse of the three in Australia.

At the moment the lidar is stationary. However, it may be moved around the country in the future to pulse away at cloud-types not found in Melbourne.



Left: Dr Martin Platt of CSIRO's Division of Atmospheric Physics examines the lidar before it sends pulses of light into the clouds.

Obituary

WORLD AUTHORITY

The death has occurred of Dr Don Norris, who retired less than three years ago from his position as chief research scientist with the Division of Tropical Agronomy.

As a world authority on tropical legume bacteriology, Don made a contribution of considerable significance to the agricultural development not only of northern Australia, but also of the tropical and sub-tropical regions of the world.

After obtaining his B.Sc.(Agric) degree, Don joined the Division of Plant Industry in 1938.

Over the next 15 years he carried out research on plant viruses, especially those infecting tomatoes and potatoes, and established a reputation for himself as an outstanding plant virologist.

During this period he worked particularly on the problem of tomato spotted wilt virus, but one of his major achievements was with potatoes—freeing the Carman variety from virus by applying a virus inhibitor to tissue cultures from the young sprouts.

For a research scientist who had already gained recognition for himself in the field of plant virology, Don took the unusual step of opting, in 1953, to move to the Division of Plant Industry's Brisbane Laboratory (now the Division of Tropical Agronomy) to carry out research into the bacteriology of tropical and sub-tropical legumes.

His pioneering studies in this field provided important new insights into the origin and development of symbiosis between legumes and the *Rhizobium* bacteria, and invaluable practical information on the inoculation of tropical legumes.

His concepts led to a radical change in the thinking of agricultural scientists, and were indispensable in developing legume-based tropical pastures.

In 1960 Don was awarded the Medal of the Australian Institute of Agriculture for his contributions to both plant virology and legume bacteriology, and in 1968 he was elected a Fellow of the Institute.



Don Norris

In some ways Don was a man of contrasts. He was a 'loner' in the sense that he preferred to work by himself, yet he greatly enjoyed relaxing with friends and meeting new people.

He and his wife Mary kept open house, and many visitors from overseas as well as CSIRO and university colleagues will remember the warmth and friendly informality of the Norris home in Toowoong.

Though an innovator and a demolisher of shibboleths in the scientific field, Don was conservative in many other respects.

He was a friendly man and a good companion, but not one to sidestep an argument or let a statement he disagreed with go unchallenged.

His early retirement through ill health was a loss to legume biology, the field to which he contributed much that was new and significant.

His untimely death is a sad loss to his family and friends.

FOUNDATION MEMBER

With the death of Jack Thomas, the Pastoral Research Laboratory at Chiswick, Armidale, has lost one of its original and most respected foundation members.

Russell James Thomas, known to his colleagues as Jack, joined the then Division of Animal Health and Production in 1947 after five years in the RAAF as a mechanic.

Three weeks later, on 11 September, Chiswick was acquired. It comprised nearly 4500 acres of grazing land with only one small cottage on it.

Among Jack's earliest assignments was the erection of a large workshop, the first permanent building on the station and still the central point of the large complex of laboratories and service buildings that have since been added.

In those first months, which the original members of the staff love to reminisce about, Jack's workshop served as the main forward operation centre for the early research and development work on the station, where research and technical staff worked together to plan, set out and maintain various pasture and animal experiments.

As one of his colleagues expressed it: 'Often we'd all sit down until late in the night planning something. And in those days one room served as an admin office, laboratory, post mortem room—the lot.'

Jack's friendly advice of 'I don't think that will work' or his comment 'That's better,' was much appreciated many times.

As the supervisor of the workshop who kept the machinery going or pulled the unwary from the bogs which were abundant on Chiswick in the early wet years, he was indispensable, his colleagues said.

His outside interests made him a keen sportsman. He was a cricketer of some note and later became an umpire. He took up bowls and also became a fresh water fisherman with many a good story to tell.

His death occurred within a few months after his retirement from CSIRO. He is survived by his daughter, Bonnie.



Dr S.J. Stander, (left) a pioneer in chemical reclamation of sewage who was responsible for the world's first successful treatment plant at Windhoek, South Africa, recently visited Australia in connection with the organisation of a conference of the International Association on Water Pollution Research. This will be held in Sydney during 17-22 October 1976.

He is shown with Mr David Dixon (centre) and Dr Don Weiss at the Lower Plenty Research Station of the Division of Chemical Technology, discussing some aspects of the Division's water treatment and recycling research program. Photographer—N.A. Prosser.

MINISTER INSPECTS LABS

The Minister for Minerals and Energy, Mr R.F.X. Connor, made a visit to the Mineral Research Laboratories at North Ryde last month.

He was accompanied by his advisor, Professor H. Messel, and among those on hand to escort him around and answer questions were Mr Lewis Lewis, a member of the Executive, and the Director of MRL, Mr Ivan Newnham.

The party started its tour with a look at Mineralogy gossans, outcrops of rock which provide indicators to prospectors of mineralisation below the surface, and then moved on to see some of the large-scale equipment at Mineral Chemistry.

Mr Connor was shown flash pyrolysis of coal, production of synthesis gas, treatment of coal washery rejects, production of industrial carbons from brown coal, iron ore pellet induration and reduction, and the electrostatic precipitation rig.

Mineral Physics demonstrated their new computer technique for improving satellite photos and the large indoor tank used for the response of ore bodies to electrical stimuli.

Although Mr Connor was at the labs for two and a half hours, his interest was such that he did not see everything that had been planned for him. When he left, he said he would return to catch up on the rest so that he could get a feel for the variety of research activities carried out by MRL.

PLANT PATHOLOGIST WINS AWARD

Dr Ian Cruickshank (right) of the Division of Plant Industry has become the first southern hemisphere plant pathologist to win the prestigious Ruth Allen Award.

The award is made annually by the American Phytopathology Society for contributions to plant pathology and comprises a certificate and the income from the Ruth Allen Memorial Fund.

Dr Cruickshank won the award for his work in elucidating the role of antibiotic substances in plant-pathogen interactions.

His research group, which he claims shares much of the credit for his personal recognition, has identified a number of such substances, called phytoalexins, and the role they apparently play in plant resistance to disease.

Dr Cruickshank has headed Plant Industry's Phytoalexin Research Group for more than 10 years, and his work during this period met all the qualifications for the award—an innovative re-



search contribution which has changed or has the potential to change the direction of work in any field of plant pathology.

The comprehensive studies by the group, beginning in 1960, provided the major stimulus for today's interest in the role of host-plant compounds which inhibit fungus, compounds which result from the interaction between host plant and parasite.

FOR YOUR INFORMATION

Information circulars		
75/66	Divisional postal and telegraphic address changes	15.8.75
75/67	Australian Scientific Liaison Office, London—titles for Australian-based staff	11.8.75
75/68	The training of technical and trades staff	8.8.75
75/69	Head Office directory	18.8.75
75/70	Accommodation for visitors in the USA in 1976	19.8.75
75/71	Air travel	21.8.75
75/74	Flexible working hours	9.9.75
75/75	Administrative re-arrangements—Kimberley and Katherine Research Stations, Animal Research Laboratories	8.9.75
Policy circulars		
75/38	Higher duties allowance—minimum periods of payment	6.8.75
75/40	Terms and Conditions of Employment Paragraph 62—overseas visits	1.9.75
75/41	Canberra boarding allowance	1.9.75

Graduates

Ken Galbraith of the Division of Land Resources Management and John Wildman of the Division of Mineralogy have graduated as Bachelors of Applied Science from the Western Australian Institute of Technology.

Tony Tea of the Division of Mathematics and Statistics has completed his Bachelor of Science from Monash University.



Dr Alan Walsh of the Division of Chemical Physics talks to two of the Indian delegates at the International Conference on Atomic Spectroscopy.

INTERNATIONAL FLAVOUR FOR CONFERENCE

Members of the Division of Chemical Physics' Spectroscopy Section played leading roles both on stage and behind the scenes, at the Fifth International Conference on Atomic Spectroscopy which was held at Monash University.

The conference, sponsored by the Australian Academy of Science, drew over 200 participants, including scientists from 20 overseas countries.

It was the first time since this biannual series of conferences began in Prague in 1967 that a meeting had been held in Australia.

The series was initiated largely as a result of the expanding interest in atomic absorption methods of analysis over the years following the invention of the atomic absorption spectrophotometer by Dr Alan Walsh of the Division of Chemical Physics in 1953.

The first three conferences in the series were, in fact, devoted entirely to atomic absorption.

Dr Alan Walsh was chairman of the organising committee of this year's conference, while Drs Norman Ham and John Willis of the Chemical Physics' Spectroscopy Section acted respectively as deputy chairman and secretary.

Chairman

Members of the Section further served as chairmen and discussion leaders in the various scientific sessions of the conference, and Dr Peter Hannaford gave a plenary lecture on the influence of spectral line profiles in atomic absorption spectroscopy.

After Professor D.P. Craig, Vice-President of the Australian Academy of Science, opened the conference, Dr Walsh delivered the chairman's address in which he

traced the development of spectrochemical methods of analysis from the time of Kirchhoff and Bunsen to the present day.

During his address Dr Walsh made public for the first time an idea which he had been working on for the past few months and which he described as 'a new approach to the design of a general purpose atomic spectrophotometer.'

The suggestion is to use a shielded flame, into which a solution of the metal to be determined is sprayed, as a resonance detector in place of the more usually used monochromator.

'This system,' Dr Walsh said, 'has the advantages of simplicity and cheapness and it opens the way towards the development of a single instrument for making emission, absorption and fluorescence determinations of elements in solids and solutions.'

CSIRO patents

CSIRO has recently taken out patents on the use of a shielded flame as a resonance detector.

The wide range of topics discussed in the scientific sessions of the conference, including instrumentation, analytical techniques, and biological and environmental studies, illustrates how applications of atomic absorption methods have burgeoned since the time of their first proposal, when they were greeted with something less than enthusiasm.

The most significant growth area in atomic absorption applications in recent years has been environmental analysis, and two complete sessions at the conference were devoted to this subject.

A feature of the conference was the informality of the proceedings, and the lively discussion both during and outside of the scheduled sessions.

The organisation of modern scientific conferences is becoming an increasingly time-consuming and complex task, but, Dr Walsh maintains, 'the time and effort expended are more than recompensed by the benefits which stem from Australian scientists meeting personally and discussing their work with leading overseas workers.'



He will be continuing this type of fundamental work on fish processing while at the Division with Dr Olley.

June gave two lectures at the Gdansk Polytechnic last year during her 13 months leave from the Division and the Professor's visit is by way of a return invitation.

Professor Zdzislaw E. Sikorski has arrived in Hobart to begin a year's collaboration with Dr June Olley of the Tasmanian Unit of the Division of Food Research.

Professor Sikorski (right) is chairman of the Department of Food Preservation Technology and Technical Microbiology at the Gdansk Polytechnic, a technological university in Poland.

He has been Dean of the Faculty of Chemistry since 1973.

This position has kept him away from the laboratory for the first time in 20 years, and now he is eager to don the white coat again here in Australia.

Much of Professor Sikorski's work has concerned the smoking of fish.

He visited a number of food plants in Poland and Germany, and several Polish fishing vessels, to acquire the practical experience necessary for developing and patenting an electrostatic smoking process.

After a spell as a postdoctoral fellow at Ohio State University, Professor Sikorski returned to Poland in 1965 and started research into changes in the technological properties of fish proteins due to freezing and processing.

David Rivett medal: APPLICATIONS INVITED

Nominations and/or applications are invited from members of the research staff of CSIRO aged less than 41 years on 1 January 1976 for the award of the David Rivett Medal.

The award for 1976 is to be made for outstanding research in the field of physical sciences carried out over the past 10 years and is based upon published work. A substantial part of the work must have been performed while the candidate was an officer of CSIRO.

Each candidate must submit to the General Secretary, CSIRO Officers' Association, 314 Albert Street, East Melbourne 3002 (P.O. Box 25, East Melbourne, V. 3002), before 1 December 1975 the following documents:

- a statement of not more than 100 words setting out in general terms the nature of the candidate's work,
- a list of his papers published since 1965, or to be published before the award, and
- copies of these papers.

A committee appointed by the Council of the CSIRO Officers' Association will select from among these candidates (and from other officers of CSIRO at its discretion) a list of not more than 10 candidates for examination for the award.

The Council with the advice of the Australian Academy of Science, will appoint as examiners one or more Fellows of the Academy. They will examine the statements and published work of candidates on the list prepared by the committee and will recommend to Council, if they think fit, a recipient for the award from among the candidates.

The Medal will be presented by the President of the CSIRO Officers' Association on the occasion of the David Rivett Memorial Lecture to be held in Hobart on 11 May 1976.



Contract signed

Building work has begun on the Centre for Animal Research and Development (Pusat Penelitian dan Pertenakan or P4 for short) at Ciawi, near Bogor.

The Australian Ambassador to Indonesia recently signed a contract on behalf of the Australian Government for the building of the poultry complex.

The contract, let to P.T. Leighton, Indonesia for \$349 537, is for the first stage of the building complex and this should be completed early next year.

The contract for the second stage of the project, the complex which will house ducks and ruminants, is now out to tender and it is expected that the one for the administrative block will go to tender early next year.

Documents for the first contract were prepared by the Department of Housing and Construction, the constructing authority working with the CSIRO Building Section which is responsible for the planning of the complex buildings.

Mr Woolcott, the Ambassador, is seen (seated right) signing the contract with (seated from left) Mr I.R. Witchell, (Manager, P.T. Leighton, Indonesia); Mr A.Y. Mokoginta (a director of P.T. Leighton, Indonesia) and (standing from left) Mr P. Relf, (project architect, CSIRO); Mr J. Sanders (quantity surveyor, Rider Hunt, Levitt and Bailey); and Mr K. Conlan (First Secretary (Aid), Australian Embassy, Jakarta).

Photography Conference

Eleven photographers from CSIRO Divisions were among the delegates who attended the convention of the Institute of Australian Photographers held in Canberra.

Participants took part in various technical workshops and were addressed by specialists in particular fields of photography.

They had the opportunity to talk with a large number of equipment suppliers and were able to compare equipment which, they felt, was of considerable benefit.

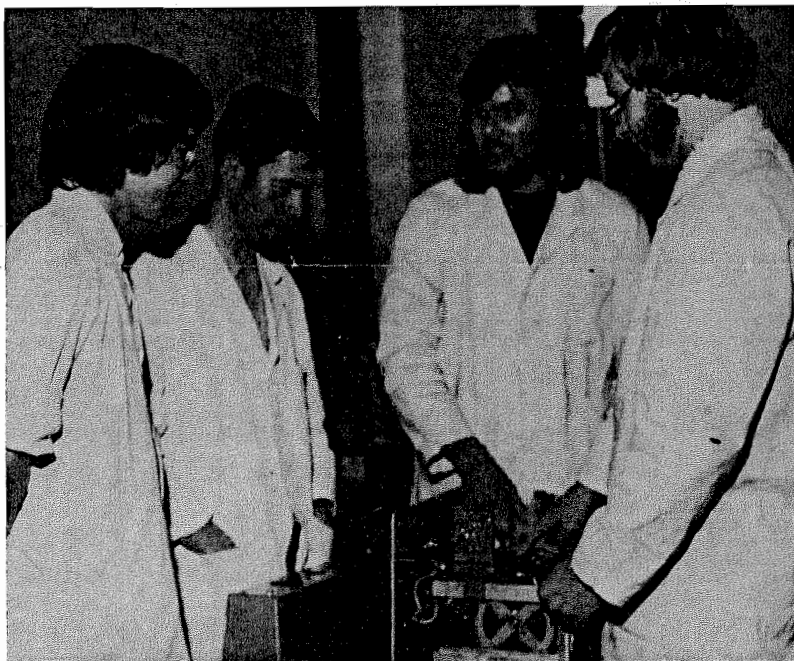
It also meant that the Divisional photographers had a chance to meet each other and discuss various aspects of their work.

Several of them also visited Head Office while they were in Canberra and met representatives of the Central Communication Unit with whom they have a close liaison.

Participants included Bill Van Aken (Land Resources Management), Bill Rushton (Food Research), Geoff Lane (Mineral Physics), Frank Lugton (Chemical Physics), Neville Prosser (Applied Chemical Technology), Chris Lourandos (Entomology), Emile Brunoro (Plant Industry), Alan Edward (Forest Research), John Evans (Forest Research), John Cavanagh (Land Use Research), John Card (Textile Industry) and John Wedlick (Graphic Design Section, CCU).

FOUR WIN AWARDS

Four apprentices at the Division of Chemical Physics gained top awards during the 1975 Victorian Apprenticeship week. Robert Cathie (second from right) won the bronze medallion for instrument making for constructing the mechanical movements and the dielectric container and delivery system for an electric discharge machine. Patrick Francis (second from left) received the bronze medallion in the optical finishing section for his exhibit of an eight-sided glass polygon ground and polished by hand. Greg Phillips (right) received a special honourable mention certificate in the radio tradesman section and Michael Pless (left) received an honourable mention certificate in optical finishing.



Letters:

Dr Rachel Makinson believes that 'the silent majority probably approves of the maternity leave provisions' (Coresearch 195). I would suggest that both the silent majority and the vocal minority should reserve their judgment on the maternity leave provisions until more facts become available.

While rabid women's libbers believe in maternity leave at any cost, the more reasonable members of CSIRO and the community may like to have some estimate of the cost of the provisions.

If it could be shown that 0.5 per cent of the CSIRO salaries budget was being spent on these provisions, then the silent majority may well approve of them.

However, if 1.5 per cent of the salaries budget is spent on maternity leave provisions, then the silent majority might not approve of the concept. To the cost of salaries must be added the cost to the Organization of interruption to research and administration, a cost not readily assessable.

If the CSIRO administration could supply figures for the true cost of maternity leave provisions, then both Dr Makinson and I

MATERNITY LEAVE

would be in a better position to evaluate them.

F.D. Shaw, M.C.P.
Division of Food Research,
Meat Research Laboratory,
Cannon Hill.

Response

I continually find it hard to believe that letters to Coresearch such as the one in the August issue on maternity leave do not evoke immediate response from readers. This whole subject, thought by me (and others) to be the greatest scandal thrust upon the general public, has been given the 'hush up' officially and employee groups are scared to expose it for the gross waste of money that it is except when some of its problems adversely affect their members.

Now to start with I feel correct in stating (1) 'That the policy of paid maternity leave was designed to keep married women in the work force, and give them equal opportunity for continuity of employment in the one position.'

Dr Makinson states when discussing backlash 'The issue (maternity leave problems) has been exaggerated in the media since the problems are nothing more than teething troubles.'

In my experience I have seen next to nothing in the media but have personally known of 20-30 cases where large lumps of maternity leave pay have been picked up with no intention on the part of the employee to return. In no case I know has one returned for useful employment.

Dr Makinson states: 'If a woman on beginning maternity leave indicated a firm intention to return to work...' and then discusses vague transfer offers.

If a woman does not have an intention to return, surely she should not obtain paid maternity leave.

Dr Makinson states: 'They could be encouraged to resign after the confinement by being allowed to take their maternity and sick leave payments in a lump sum.'

Firstly, this totally destroys the reason and design of maternity leave (see statement 1). Secondly, and this is what is being kept very quiet—do people realise just how much money is being gifted in this way. It is best if I quote a hypothetical case.

A girl of 17 joins CSIRO and states a night course for a diploma. After eight years she is successful and as sometimes often happens she is promoted to EO II, marries the SRS in the next laboratory and begins maternity leave after serving nine years and two months with CSIRO.

She receives 12 weeks' full pay, then 16 weeks only of sick leave credits (full pay—as she had used two weeks previously). Then she receives nine weeks' sick pay (from 18 weeks' half sick pay converted). After these 37 weeks she applies for the accrued recreation leave which is over two weeks on full pay, plus her annual leave loading.

At this stage she realises she has served 10 years and so applies for 12 weeks of furlough on full pay and dates her resignation at its end. She is then terminated with an extra week's recreation leave (accrued while on furlough). I add this up to 52 weeks on full pay and one annual leave loading. As her salary is approximately \$13,000 p.a. she is getting a rather large gift.

How equal can you get in CSIRO when the girl working in a private laboratory gets a bunch of flowers and the good wishes of the staff for having the same baby.

Bill Backlash
Food Research, Melbourne.

It would be interesting to hear some of the other 6996 CSIRO workers' opinions. Perhaps they may rate three paragraphs, not two as did the people who felt this benefit was no worse than officers going overseas for 12 months—maybe not to return.

As a point of interest I do not agree with all the provisions of the Maternity Leave Act, and also feel a qualifying period of two years should apply before a girl can take maternity leave.

However this and other criticisms of the Maternity Leave Act should be solved and altered at a Federal level and not develop into a bitter personal attack on the women so 'unfortunate' to be or become pregnant.

'Mrs Not Pregnant'

WA Laboratories

Editorial notes: Since the implementation of the maternity leave provisions, the editor of 'Coresearch' has, in the course of talking to people throughout CSIRO, received many comments on the provisions—both for and against. While the editor had no particular axe to grind on the issue it was clear that, although opinions differed widely, there was a body of men and women who were concerned that problems arising from the implementation of the provisions could result in a backlash which could be detrimental to the female cause. Accordingly when we decided to bring out a special issue of 'Coresearch' last July for International Women's Year we felt that some space should be devoted to the subject of maternity leave.

One woman, whose views on this subject were not untypical of those of a number of other people in CSIRO was quoted as saying, among other things that 'Although I am expressly forbidden to allow maternity leave provisions to prejudice me when selecting staff, I will bet you that only aged females and males will find their way in here in future.'

'Coresearch' took what it considered to be reasonable precautions to protect the anonymity of the woman quoted and those referred to in her statement. No names were mentioned, no locations were given, and the nature of the work of the persons concerned was not described. Unfortunately, at least one person in CSIRO felt that the reference in 'Coresearch', though inaccurate, had implicated her. If this is so 'Coresearch' apologises unreservedly for any embarrassment this may have caused her, or indeed any other member of the staff who may have felt implicated.

It was a pity, too, that in a newspaper article, and subsequent editorial based on the 'Coresearch' article, 'The Australian' should have taken upon itself to attribute the comments made by 'Coresearch's' unnamed source to a CSIRO personnel official.

We repeat, 'Coresearch' has no particular axe to grind on the maternity leave issue. Nevertheless we believe it is a matter of concern to many members of staff and we are therefore publishing further letters on this subject in this issue. The letters represent the views of the individuals concerned and not necessarily those of either 'Coresearch' or the management of CSIRO.

With reference to the final paragraph from the letter from 'Mrs, Not Pregnant', we should point out that 'Coresearch' has never at any time used the word 'unfortunate' to describe women who become pregnant nor was the article a 'bitter and personal attack' on pregnant women. — Editor.

FLEXITIME SPREADS

Flexitime has been introduced into Head Office in Canberra, the Regional Administrative Offices and the Central Information, Library and Editorial Section in Melbourne (with the exception at this stage of the editorial and publications groups.)

The scheme is to be on a trial basis for a period of nine months with a review to be conducted at the end of six months. This will bring these areas of CSIRO into line with the Divisions which have been operating in this way for some time.

The Sydney RAO trial will be slightly delayed until current accommodation re-arrangements are completed.

A bandwidth of from 8 a.m. to 6 p.m. will be adopted for each trial. Core times, the periods during the day when all staff will be on duty except when on approved leave, will be as follows:

Head Office, Canberra and RAOs
Brisbane, Canberra and Melbourne
10 a.m. - 12 noon
2 p.m. - 4 p.m.
CILES, Melbourne
9.30 a.m. - 12 noon
2 p.m. - 4 p.m.
RAO Sydney
First three months:
10 a.m. - 12.30 p.m.
1 p.m. - 4 p.m.
Second three months:
10 a.m. - 12.30 p.m.
1.15 p.m. - 4 p.m.

(Core times for the third period to be determined at the end of the first six months).

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication. Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4477 or Wendy Parsons, 48 4779.

Protest

In the past I have always looked forward to each 'Coresearch' issue as being a fair, unbiased general survey of life within CSIRO.

However, I must protest about the issue of July (194), particularly the article concerning maternity leave. The article appears to convey the quite obviously prejudiced and totally discriminatory views of only four people.

The paragraph designed to 'wrench an extra tear' from us did just what it asked. I felt most concerned and sympathetic for the women involved that they should have to work for someone so prejudiced against them and the Maternity Leave Act.

CORESEARCH

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Produced by the CSIRO Central Communication Unit

November 1975



Dr L.J. Lambourne



Dr D.W. Robinson



Dr I.D. Smith

STAFF MOVE TO P4 SITE IN INDONESIA

The Centre of Animal Research and Development which is being established at Ciawi near Bogor in Indonesia as an Australian foreign aid project is taking on definite shape.

Some of the buildings of the complex are now well on the way to completion and more will be started next year and staff are gradually arriving at the site.

CSIRO's involvement in the Centre—Pusat Penelitian dan Pengembangan Peternakan or P4 for short—is expected to last about 10 years.

In that time both the Australian and Indonesian Governments are hoping that many of the aims of the project will be achieved. Broadly these are to increase the supply of animal protein available to the Indonesian people and to increase the income of her livestock producers through the application of sound scientific research.

To achieve these aims, the Centre will study methods of increasing production from poultry, sheep, goats, cattle and buffalo by selection within local strains of livestock, by the introduction of strains new to the region, by cross-breeding, adaptation of modern feeding techniques, study of local feedstuffs and by improvement in the general standard of husbandry.

While this program is being put into operation, the existing Indonesian Animal Husbandry Research Institute will be upgraded. Where it is necessary, staff will be retrained so that the Institute can take over responsibility for important sections of the overall program such as feed analysis, livestock improvement services and shorter-term investigation and development work. This will be done in conjunction with provincial research and extension services.

Staff

The Centre will have about 12 CSIRO scientists and up to 25 supporting CSIRO technical, administrative and maintenance staff. Indonesian staff will work at

the experimental officer or research scientist level after post-graduate training in Australia and will be encouraged to assume leading roles in the research program.

Members of the professional Indonesian staff will receive training in Australia and other countries while the Centre's Indonesian technical and field research assistants will receive in-service training from their Australian colleagues. Up to 100 people may be trained over the 10 years of Australian involvement in P4.

Among the latest arrivals from Australia to take up his posting at the Centre has been the Officer-in-Charge, Dr L.J. Lambourne, who for the past few months has been based in Brisbane while he has organised the Australian end of the Centre's establishment.

He has now joined the interim Research Director, Professor David Robinson, who has been at Bogor since the beginning of the year, and the Centre's secretary, Mr Bevin Pope, who is on transfer from Head Office in Canberra.

Professor Robinson, who is on leave from the University of California where he holds the post of Professor of Animal Science, is on a two-year contract with the Centre. He is well known to CSIRO staff since he formerly worked with the Division of Land Use Research and was a member of the feasibility study team for the Bogor project in 1972.

The Research Director (designate) Dr Ian Smith, will join the expatriate community in Bogor next month. Another former employee of CSIRO, he has held posts at various Australian universities and agricultural colleges and since 1971 has been a National Health and Medical Research

Council Fellow in the Department of Obstetrics and Gynaecology at the University of Sydney.

During the last five years Dr Smith has been working on hormonal mechanisms associated with foetal maturation and the onset of the birth process in the human but his earlier studies were in veterinary science in which he has both a PhD and DVSc degree.

Research program

While important aspects of research will be undertaken at the Centre's headquarters, the staff expect to be taking part in co-operative programs throughout Indonesia.

Like many other countries, Indonesia is experiencing a population drift towards the towns but for all that, most Indonesians still live in small villages and about 57 per cent of them are employed in agriculture.

Most of the farming is done on a very small scale and much of it is at subsistence level. There is a shortage of accurate statistical information but it has been estimated that the per capita annual income is about \$US126.00 (UN statistics).

Expatriate members of the Centre's staff are all having to become familiar with local customs, culture and religion, all of which can vary from place to place, island to island, but have an important bearing on the attitudes of the people.

The animal industry is vitally important to the needs of the rural population and large ruminants, particularly buffalo, play a key role in rice cultivation. Oxen are essential for traction and trans-

Continued on page 2

FIRST WOMAN APPOINTED TO EXECUTIVE

An eminent Australian physiologist, Professor Mollie Holman of Monash University, has been appointed a part-time member of the Executive of CSIRO.

Making the announcement at the end of last month, the Minister for Science and Consumer Affairs, Mr Clyde R. Cameron, said that Professor Holman would be the first woman to be appointed to the Executive

Professor Holman, who is a Professor of Physiology at Monash, took up her appointment on 1 November when Professor Eric Underwood retired.

'Her work in the field of neuro physiology on the transmission of nerve impulses to muscles has brought her international distinction,' Mr Cameron said.

Professor Holman is a Fellow of the Australian Academy of Science, and is a recipient of the Edgeworth David Medal awarded by the Royal Society of NSW for contributions to the advancement of Australian science.

Committee and a member of the Advisory Council before joining the Executive in 1966.

'He took a leading role in the work which led to recognition of the importance of trace elements in the nutrition of plants, animals and man,' Mr Cameron said.

Professor Underwood has continued an active interest in this work and is the author of the internationally accepted standard text on trace elements in agriculture.

He has long been known as a man whose initiative, drive and scholarly output during a long career as an agricultural scientist, as a teacher and administrator, have had a powerful impact on both Australia and overseas countries.



Professor Mollie Holman

A Tasmanian, Professor Holman holds the degrees of Master of Science (Melbourne), Doctor of Science (Monash) and Doctor of Philosophy (Oxon.).

When she can find spare time, Professor Holman likes to put her academic interests at the back of her mind and take to the outdoors. She is a member of several ski clubs, likes bushwalking though she admits her activities in that direction have been curtailed through work for the last couple of years, and enjoys painting landscapes in water colours.

In succeeding Professor Underwood, Professor Holman replaces on the Executive one of Australia's most distinguished agricultural scientists.

Praising the contribution made by Professor Underwood, Mr Cameron said he was Chairman of CSIRO's West Australian State

Economy issues

For the last few months 'Coresearch' has appeared as an eight-page paper to cope with the increasing amount of material available for publication. However, as an economy measure it will be produced, over the next few months at least, in its old four-page form, except when a special occasion arises. The Editor regrets that some articles and pictures scheduled to appear in this and the December issue will have to be rescheduled to later issues.

Chairman's visit

During October and November, the Chairman, Dr Price, is speaking to staff in Brisbane, the ACT, Sydney, Melbourne, Adelaide and Perth on resource allocation and redeployment. A full report of the address will appear in the December issue of 'Coresearch' for the benefit of those staff members in locations not visited.

Happiness is a hygienic hen house

Dr Trevor Bagust of the Division of Animal Health in Melbourne breeds some of the cleanest and most pampered chooks in Australia.

Since most chickens are infected with at least one of the many pathogenic agents which cause poultry diseases, clean birds are not easy to come by.

Some of the diseases may simply put the bird off colour. Others, like Marek's disease, can affect the birds to such an extent that they eventually die.

The economic health of the poultry industry is linked to the physical health of the birds, so these diseases are a major worry to the industry.

Contaminated birds produce contaminated eggs, and this concerns the virologists who use eggs to prepare human and other vaccines. There is no positive evidence that a vaccine prepared in an infected egg has ever harmed anyone, but US authorities now insist that all vaccines are grown in specific pathogen-free (SPF) eggs.

Dr Bagust's work suffered a severe setback last year when the Melbourne floods reduced his flock of 150 SPF chickens to a mere 21 (Coresearch 182).

Part of the new flock, consisting of 10 hens and one rooster, is now housed in a specially designed multi-bird isolator under conditions that would be the envy of birds in a commercial poultry house.

It took Dr Bagust and Mr Arthur Jenkins of CSIRO's Building Section the best part of two years to develop isolators like the one shown in the picture.

Lighting and heating are adjusted for maximum comfort of the birds. Carefully filtered air, sterilised food and treated water cater to their inner needs. But the biggest advantage of the isolator lies in its ability to keep humans away from the chickens.

Handling of the birds by attendants may have caused the breakdown of several of the world's SPF flocks. In fact it is sobering to learn that poultry can be protected from a large number of pathogenic agents just by keeping Man at a distance!

With the flock firmly established, Dr Bagust hopes that it will serve as the nucleus of a national reserve for SPF poultry flocks. The reserve would enable other organisations to start up additional flocks or to re-establish their flocks in the event of contamination.

Dr Bagust and his small team are now in a position to investigate thoroughly the pathogenesis of poultry diseases—research that is impossible to conduct on poultry already infected with a host of microorganisms.

The progeny of the present SPF chickens will eventually increase the size of the flock to 300 laying birds through genetically-controlled breeding. These birds will be housed in 40 or so isolators

at a new holding facility now being built at Maribyrnong.

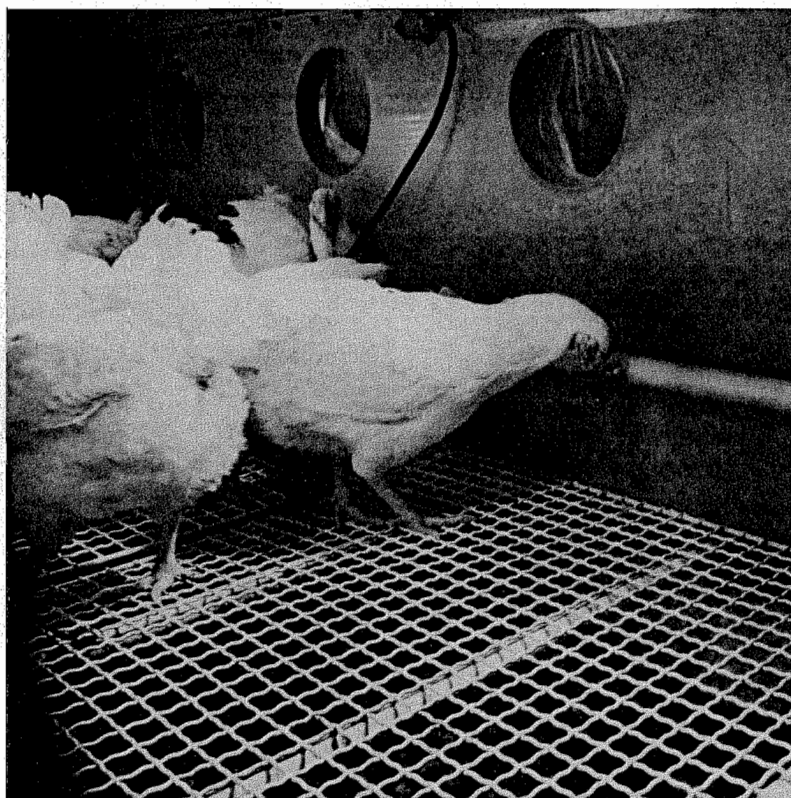
Dr Bagust is currently visiting similar facilities in Britain, and the United States to see for himself problems inherent in keeping such a large number of chickens free from infection.

The experience of the National Biological Standards Laboratories in Melbourne with their own flock of SPF birds has already been of invaluable help to the project.



Above: Appearances notwithstanding this poultry isolator unit is quite 'armless' and Jane Casey of the Division of Animal Health's Virology Laboratory is in no real peril.

Below: A bird's eye view of the poultry isolator unit from the inside. Pictures: Eric Smith



Continued from page 1

port and both are a source of food when finally slaughtered—all things which have to be considered in research programs.

There are several million sheep and goats in Indonesia, while pigs are another factor in the livestock industry of the country. The use of pork is influenced by religious scruples but pigs are in demand even in Muslim areas.

The poultry industry is one of the contrasts. Every village in Indonesia has its chicken population—most of them exist as scavengers and roost at night in the trees. While the production of meat and eggs from these kampung birds is low, they nevertheless are an important industry as they provide a source of protein at little cost.

Alongside the system that produces these ubiquitous kampung birds, though, is another which is much larger and more efficient and makes use of all the western hybrids and produces both eggs and broiler birds for the markets.

These birds require good disease control, a high level of nutrition and superior housing. Both sys-

tems will have to be investigated by the Centre if improvements are to be made.

Perhaps one of the most intriguing forms of agriculture surrounds the duck industry. The duck egg is relished as food and provides a ready cash crop for small farmers. In Java instead of being kept around a village like the other forms of poultry, large flocks of ducks are shepherded across the country through the rice fields after the harvest. The productivity of the system is probably low but it is one that requires no capital outlay, no land tenure, no feed costs and low overhead.

Each imposes different sets of criteria for the breeding and selection of stock in these areas by the Indonesian people. Whether these can be combined with quantitative productive characteristics without upsetting local customs and traditions remains an unexplored field for socio-economic study and one which the expatriate staff will have to consider along with the research programs planned by the Centre.

AWARD FOR EXECUTIVE MEMBER

Mr W.J. Vines, a part-time member of the Executive, has been awarded the prestigious City of Aachen Textile Award in recognition of his pioneer work in introducing marketing and promotional concepts for wool products and for initiating and

developing the woolmark program when he was Managing Director of the International Wool Secretariat. Mr Vines, who is Managing Director of Dalgely Australia Ltd, is the first non-scientific person to be given the award.

Training group

Following the meeting of the Victorian branch of the CSIRO Technical and Trades Staff Development Advisory Committee at the Division of Chemical Technology, South Melbourne, members of the committee visited the CSIRO Printing Unit and observed the participants of the Communication for Supervisors course in action.

The course, which is the second of a series organised by Geoff Stomann, Editorial and Publications Service Administrative Officer, was conducted by Jim Tutt, Manpower Development Officer with the Melbourne Chamber of Commerce. (Jim's wife Helen, is Librarian at the Division of Mineral Chemistry Port Melbourne.)

In addition to Printing Unit staff the course participants included John Hamlet and George Hughes from Dudley E. King Pty Ltd and Alex Cameron of the Division of the Animal Health Experiment Station, Maribyrnong.

SCIENCE OFFICE TO OPEN IN MOSCOW

Mr J.G. Downes, Chief of CSIRO's Division of Textile Physics, has been appointed Counsellor (Scientific) in the new Science Liaison Office which will open in Moscow early next year.

Announcing the appointment, the Minister for Science and Consumer Affairs, Mr Clyde R. Cameron, said the new office was being opened at the Australian Embassy in Moscow to strengthen scientific contacts with the Soviet Union, including arrangements for collaboration between the two countries under the USSR-Australia Science and Technical Co-operation Agreement.

Mr Downes, a world authority on the objective measurement of wool, has been Chief of the Textile Physics since 1969.

'Work by his research team', Mr Cameron said, 'led to the development of the wool sampling techniques and equipment which are now used for objective measurement of wool at sales around Australia.'

Mr Downes is also distinguished in the field of radiophysics and has published papers on electronics, radio communication and navigation. 'He has been Deputy Chairman of the Advisory Committee on Objective measurement to the Australian Wool Corporation, a member of the Australian Wool Testing Authority and of the International Wool Secretariat', Mr Cameron said.

Mr A.R. Haly has been appointed Acting Chief of the Division.

WARNING DON'T ROB OUR PAY CLERKS

That man in the iron frame isn't what you might think he is. It's really the paymaster at the Division of Building Research, Mark Rolfs, supplying a fortnightly transfusion of dollars in Laura Strawbridge while Harry Barfield awaits his 'fix.'

The Division has become security conscious since its staff has grown to around the 300 mark with the gradual invasion of staff from South Melbourne. With thoughts of modern day Ned Kellys uppermost in their mind, those in charge of security arrangements decided to recommend a tighter scrutiny of the Division's fortnightly pay and when their new building was being erected they incorporated into it a well protected pay office.

Staff have quickly become accustomed to the new arrangements and the paying facilities there have received favourable comment from both Commonwealth and Internal Audit groups.

Features of the office include four solid brick wall constructions, reinforced deadlocked door, bullet-proof pay window and a transistor intercom system.

The actual cost for the components to construct the facility was under \$400 and represents good insurance value from the Division's point of view.

With a similar thought in mind, the RAO in Canberra recently erected a 'strong room' for their pay office. Ever conscious of security, RAO Ken Prowse took every precaution to satisfy himself that the staff would be well protected should a gunman try a raid. He and other members of the staff went out with members of the Commonwealth Police to an ACT rifle range and tried out the effect of various weapons on different types of construction.

The result of the exercise determined the type of construction that went into the design of the office and gave the staff a feeling of confidence in their safety.

Ken is seen (at right) firing a Colt .45 pistol while behind him watching is Geoff Boswell, the collector of moneys. Anne McLennan on the left was then the assistant paymaster but is currently overseas on a year's leave of absence.



Former CSIRO man for USA

Keeping track of old friends? Dr R.A. Wooding who worked for CSIRO from 1963 to 1971, and who is now with the Division of Applied Mathematics of DSIR, Wellington, has accepted an invitation to visit Colorado State University, USA, for 10 months. He will be a geothermal energy scholar. While he is in the United States, Dr Wooding will carry out research and give seminars on geothermal energy.

FOR YOUR INFORMATION

Information Circulars		
75/65	Telephone and telex alterations and additions	4.8.75
75/72	Appointment of Chief—Division of Human Nutrition	22.8.75
75/73	(not issued yet)	
75/74	Flexible working hours	9.9.75
75/75	Administrative re-arrangements—Kimberley and Katherine Research Stations—Animal Research Laboratories	8.9.75
75/76	National wage case September 1975	26.9.75
75/77	Alteration of telephone number—Tasmanian Regional Laboratory	1.10.75
75/78	Science and Industry Research Act 1949-73—Operational arrangements (pursuant to Administrative Arrangements Order published in Australian Government Gazette No. 5128 of 1 July 1975—under two Ministers)	24.9.75
75/79	Confederation of British Industry Overseas Engineering Scholarships 1976	1.10.75
75/80	Appointment of Chief—Division of Process Technology	3.10.75
Policy Circulars		
75/39	Publication in CSIRO	18.9.75
75/40	T & C of Employment Paragraph 62—overseas visits (per diem rates)	1.9.75
75/41	Canberra boarding allowance	1.9.75
75/42	Class of travel	16.9.75
75/43	Classification appeals by staff pursuant to Paragraph 11 of T & C of Employment	19.9.75
75/44	Preservation of superannuation rights—transfer values—'Eligible' and 'Approved' Superannuation Schemes	2.10.75
75/45	Salary and wage adjustments and amendments to T & C of Employment—National wage case September 1975	10.10.75
75/46	T & C of Employment paragraph 62—overseas visits (per diem rates)	(undated)



RAO moves

The NSW Regional Administrative Office will be moving this month from Grace Bros. Building, Broadway, to the 13th Floor of the Remington Centre at 175-183 Liverpool Street, Sydney. This is centrally situated at the southern end of Hyde Park.

The telephone number will remain the same—211 3400.

Unless you feel like sitting in someone's lap, would-be visitors are warned off until the move is complete—Grace Bros. have already evicted the RAO from half of their space and the staff has had to double-up all round until the move is completed.

Others moving to the Remington Centre are the NSW Internal Audit Section, the NSW Information Officer and a small section of Head Office Buildings Branch. These units will be located on part of the 12th floor of the building.

The move has been necessary due to the expiration of the lease of the Grace Bros. premises. Office space for visitors, plus a conference room, is available for use by units. The exact date of the move will be advised by Head Office Circular.

'Coresearch'
'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities. Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication. Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4477 or Wendy Parsons, 48 4779.

STOP PRESS

Representatives of the major staff associations were to hold their first joint meeting with the full-time members of the Executive and the Secretariat on 23 October to discuss matters of common interest to all staff. The Minister for Science and Consumer Affairs, Mr Clyde R. Cameron, was to address the meeting. Full report next issue.

Wildlife artist designs stamps

Next time you use either of the two stamps in the Australian wildflower series take a second look at them...they were designed by Frank Knight, the artist at the Division of Wildlife Research, Gungahlin.

The two stamps, the 18c and 45c, were issued at the time of the new postal rates, the 18c to be used in domestic postage and the 45c to cover the new airmail rate to Europe and the UK.

The two flowers pictured on the stamps are rare species. The 18c stamp shows a *Helicrysum thomsonii* and is one of the family of 'everlastings'. A native of Central Australia, it is found mainly on rocky cliff faces in the MacDonnell Ranges.

Callistemon teretifolius, the subject of the 45c one, grows in the Flinders Ranges of South Australia and, less commonly, on the Mount Lofty Range near Adelaide. It is often known as the bearded bottle-brush.

Frank also designed the first day cover used for the stamps. The panel on it showed the type of environment of many Australian wildflowers and the flower that was depicted was a Simpson Desert

Calandrina remota, one of the more common varieties of wildflower, perhaps better known by its Aboriginal name, Parakeelya.

Frank is a Western Australian by birth and was probably born with a natural appreciation of wildflowers.

These are the first stamps that he has designed which have been printed but he is hoping more will follow. A lot of work goes into their preparation, however, and the series consumed a fair amount of his spare time.

Frank has worked for CSIRO since 1959, first as a technical assistant in the kangaroo section and then more recently as the Division's artist.

He has illustrated two books—one, 'The Kangaroos', was written by Dr Harry Frith, Chief of his Division, and Mr John Calaby, another member of the Division's staff, and a book published by the Department of the Capital Territory in Canberra called 'The Bush Families of Tidbinbilla'.



Frank Knight

ELECTED



Miss Margaret Crichton, (above) who works in the Research and Development Planning Section at the Division of Mineral Chemistry, was recently elected President of the Victorian Division of the Institute of Private Secretaries (Australia). She is a Fellow of the Institute and holds its Diploma.

The Institute is engaged in promoting and developing the profession of private secretary in all its spheres of operation—commerce, industry, professional organisations, government—and encourages and assists high standards of attainment and qualification among private secretaries. Members participate in residential conferences, seminars and discussion groups, and attend monthly meetings at which guest speakers are featured.

WHEY WORKERS MEET IN U.S.A.

Mr L.L. Muller and Mr S.C. Marshall of the Dairy Research Laboratory, and Dr B.R. Smith of the Division of Chemical Engineering and Dr R.D. MacBean of the Victorian Department of Agriculture, attended a Whey Utilisation Workshop at the University of Ohio, Columbus, Ohio, USA, last month.

The workshop, which was held under the auspices of the United States-Australia Science Agreement, was attended by about 30 scientists from Australia, USA, Canada, New Zealand and Ireland.

The Australians acted as discussion leaders for five of the nine topics, which covered the wide range of possible processes and products in the field of whey utilisation. Initial plans for more extensive collaboration in research between scientists from the five countries involved was an important outcome of the workshop.



The women get the credit at the NSW Laboratories Credit Union—from left Miss Donna Best, Mrs Joan Ryan and Mrs Una Potent.

Safety Notes

During the next few months, Safety Notes will briefly describe incidents which could happen in your laboratory. Make sure they don't!

Battery

Precharged motor cycle batteries (e.g. YUASA) instead of having ventilating holes in filler caps, have a side vent. This is sealed for transport. Subsequent removal of a filler cap without first releasing built-up pressure by removing the vent seal can result in an upward squirt of acid. It has happened in one Division where the officer concerned was very fortunate in not receiving eye damage.

Boiler

An emergency isolating switch fitted to a boiler was found to be inoperative as the mechanical arms on the side of the boiler had 'rusted solid'. Make sure all emergency equipment is in good operating order—it is frequently required in a hurry.

Gate lock

At one of our Divisions, the Fire Brigade answered a call during the week-end. Although they had a key to the main gate, the lock could not be opened from the outside. It was the practice for the gate to be locked and unlocked from the inside by the caretaker.

Make sure that all locks that may impede access in an emergency are operable from both sides.

Film

A very good safety film involving flammable solvents and fire has been purchased and is available from the Film and Video Centre, East Melbourne. It is entitled 'Nobody's Fault'.

J. Hallam
Safety Officer

MORE MEMBERS FOR CREDIT SOCIETIES

NSW ASSETS TOTAL \$1.5m

The NSW Laboratories Credit Union Ltd now has a membership of 1533 members, about 70 per cent of the staff in the NSW region. This, says their 21st annual report, reflects the importance of the Credit Union to CSIRO staff in NSW and the high regard they have for the Union and the need for its services.

Assets of the Credit Union total \$1.5 million. The continued growth of it is a tribute to the dedicated Board of Directors and the hard working office staff, Miss Donna Best, Mrs Joan Ryan and Mrs Una Potent (pictured below).

The Laboratories Credit Union was one of the earliest Credit Unions formed in New South Wales and it has taken a leading role in the remarkable growth of such societies in the State.

'SPLIT' COULD CAUSE PROBLEMS

The CSIRO Co-operative Credit Society Ltd has drawn attention in its annual report to some of the problems that could arise for its members if another move was ever made to split CSIRO and place some of its Divisions in a Government department.

Though the transfer that was announced earlier this year did not eventually take place, the consequences of such a transfer had it become a fait accompli was that under the present rules of the Society many existing members would no longer have been eligible to participate in the privilege of membership, at present open only to CSIRO personnel.

The Directors, added the report, were concerned that similar situations could arise in the future and decided that at the earliest opportunity members of the Society should be asked to amend the rules so that former members could still enjoy the privileges under certain defined conditions.

The Society now has 2536 members, an increase of 95 over last year. The membership now covers about 40 per cent of all CSIRO employees.

The total amount held on deposit at the end of the financial year amounted to almost \$3.5 million, representing an increase of more than \$300,000 over the level of the preceding 12 months.

It was interesting to note, the report added, that about half the total amount of monies placed on deposit was derived from savings through deduction from salaries.

The savings campaign conducted personally by the manager was now bearing fruit and indicated that this would be an important source of operating capital of the Society in the future.

She's our travel girl



When Jill Petherbridge, the Head Office and Canberra RAO travel officer, goes into bat she gives the game everything she has. Randall Scott of the RAO caught this picture of Jill when she took part in a cricket match that started out as a keenly fought affair between Head Office and RAO staff but somehow finished up with mixed teams. Since then Jill has had other things on her mind...she was recently invited by Qantas to fly to Papua New Guinea on their inaugural flight from Sydney to Port Moresby after Papua New Guinea declared its independence.

Jill spent three days in the capital and surrounding area and succumbed to the charms of the world's newest nation. In the all too brief time she had there, Jill visited the Sogeri area beyond Moresby, wandered around Koki market, spent some time at Ela Beach and took in the local points of interest around the capital.

Letters:

I read with some interest the several articles on 'the year of the rainforest' which featured as the centre two-page spread in the September issue of Coresearch.

I do not wish in any way to detract from the work being done by the Rainforest Ecology Section of the Division of Plant Industry but I consider it might have been a more balanced and representative coverage if the rainforest studies being conducted by the Division of Forest Research from its station at Atherton had been included.

I sincerely hope that readers of Coresearch do not think that CSIRO's efforts in the rainforest are limited to the work of the Rainforest Ecology Section of Plant Industry.

M.L. Benson
Resources Section
Division of Forest Research
Canberra

And we wouldn't like any of your staff to think that we had overlooked their efforts, either. We can assure you that the rain forest articles used in that issue were built around the work being undertaken at the Long Pocket Laboratory in Brisbane. No attempt was made to cover all the research that is done in CSIRO on rainforests. It is hoped to cover your activities in an article on the Division before long.—Editor

I was privileged to know and work with the late Bill Gottstein and I am pleased indeed to learn that the Joseph William Gottstein Memorial Trust Fund has appointed its first Fellow (Co-research No 196).

Your report, however, was in error in stating that the Fund was

established 'at the invitation of the Australian wood-using industries', although I acknowledge without reservation that the Trust owes its very existence to the generosity of the industry and its future to its support.

At a meeting on 31 March 1971, six days after Bill Gottstein's death, some 30 members of his staff carried a motion that 'some form of memorial be established in his honour'.

I was asked to convene a small committee to examine ideas, and the proposals put forward by us two weeks later are the basis on which the present Trust is founded.

This letter is an attempt to put on record the fact that the Joseph William Gottstein Memorial Trust arose from the realisation by his staff of the staggering loss that his death meant to us and to the industry he had served. It is an added tribute to Bill that his staff were moved to take the action they did in an attempt to perpetuate his work.

I would be very surprised if any one of his former colleagues did not feel some sense of achievement at the news that the scheme is under way and it would be a pity if their contribution was overlooked.

That the fulfilment of their ideas is entirely due to the good will and generosity of Industry is beyond question.

'D.H.P.'
Highett

The facts published were as supplied to 'Coresearch.' Thanks for setting the record straight.—Editor.

CORESEARCH

Produced by the CSIRO Central Communication Unit

199

December 1975

Election date is February

Staff to elect member of CSIRO Executive

The next vacancy on the Executive—one which will occur in March when the part-time member, Mr W.J. Vines, retires—will be filled by a person elected by CSIRO staff. The election notice was issued on 17 November. The announcement of this major change in policy in the management of CSIRO was announced by the former Minister for Science and Consumer Affairs, Mr Clyde R. Cameron, when he spoke to the first joint meeting of the representatives of the five major staff associations, the Executive and the Secretariat held at Head Office in Canberra.

The decision, Mr Cameron said, was a step in recognising the Labor Party's policy of encouraging closer consultation with employees.

'There has been a long standing provision in my Party's Federal Platform that adequate representation of trade unions should be provided on boards, commissions, trusts and similar Government-created bodies.'

While he believed there was a great deal of informal consultation going on within CSIRO, he felt that representatives elected by, and responsible to, the rank and file could give workers a greater sense of involvement and participation.

'I believe the presence of a representative of the employees will increase the awareness of members of the Executive to the needs, the problems, and to the aspirations of the people they employ.'

There were valid reasons why the person elected should be a full-time member, and he thought the Chairman, Dr Price, favoured such a move.

'But I don't think we can afford

the luxury of further delay in this matter.'

Mr Cameron said he was proposing that the person elected would fill the first vacancy there was and this would be a part-time one. Nominations for candidates did not have to be employees, but only employees who were members of an appropriate staff association or union could vote. Candidates would have to be nominated by at least 10 employees.

that was under discussion. He felt this could be solved in the same way as it was done overseas—the person concerned retired from the meeting when decisions were being taken on such a matter.

Arrangements

The person appointed would not, however, be marooned in his own Division so that he could not consult with people in other areas of CSIRO. He and the Chairman had already discussed arrange-

Ministerial quote:

Speaking on the mineral crisis.....' the staff got magnificent leadership from Dr Price and from the Executive, particularly from Dr Price, whose role in it I know personally because I was close to him and I had to restrain him from resigning at one stage. In fact he threatened to resign if it occurred and I admired him because he showed the same sort of reaction to something he didn't like that I have always shown to things I don't like and I like people who are like me.' — the former Minister for Science and Consumer Affairs, Mr Clyde R. Cameron.

Mr Cameron said he foresaw difficulties which could arise when a part-time member found he had two hats to wear—one as an Executive member and the other as a member of the staff of a Division

ments whereby it would be possible for the new member to get the views of the staff around the country. These would be announced at a later stage by the Chairman.

Mr Cameron added that he felt the decision which had been taken that day to involve the staff in the management of the Organization was one which would not be reversed by another government.

He felt that those involved in the meeting were taking part in an event of historical significance and one which would not only improve worker relationships within CSIRO but one which would bring science closer to the people of Australia.

Industrial safety

Mr Cameron said that he saw another dimension in the appointment of one of the staff to the Executive. While the achievements of CSIRO proved how the Executive had responded to the needs of the country, he feared that the great majority of the requests for assistance came from the more sophisticated and privileged sections of the community who knew where to go when they wanted information.

'They come from the management level of industry, rather than the shop floor. For instance, it's much more likely that the Organization will be approached by a foundry manager for assistance in improving the productivity and profitability of his processes than it would be approached by a foundry worker who liked to work in quieter, cooler or more pleasant surroundings.'

Conditions

On the subject of working conditions, Mr Cameron said that he would like to see the Organization more involved in research designed to improve worker satisfaction and industrial safety and he trusted he would have an ally in the new Executive member in pressing this view at meetings.

Publications

It's not widely known that staff may purchase CSIRO publications at a discount of 25 per cent off the recommended price. This means for instance, that staff can buy the recently published book 'A description of Australian soils' for \$7.50 and not \$10.00.



Dr J.A. Allen

CSIRO is to lose its Executive Officer, Dr J.A. Allen, who has been appointed Chairman of the Board of Advanced Education in Queensland. He will take up his new position on 3 February and plans to leave the Organization a few days before that date. Dr Allen joined CSIRO in 1971. How he feels about his work with the Organization will be the subject of an interview in the next issue of 'Coresearch.'

Animal Divisions reorganised

The Divisions of Animal Physiology and Animal Genetics, both of which have headquarters in Sydney, have been amalgamated to form a new Division of Animal Production.

The new Division will be responsible for livestock research programs.

The amalgamation will involve the creation of an independent research unit which will be concerned with basic genetic studies. This group was previously part of Animal Genetics.

The former Chief of Animal Physiology, Dr Trevor Scott, will head the new Division, while Dr J.M. Rendel, formerly Chief of Animal Genetics and a world authority on the genetic improvement of livestock, will work as a Senior Research Fellow with the new Division.

Animal Production, the new unit and Animal Health in Melbourne will constitute what is now known as the Animal Research Laboratories and will continue under the Chairmanship of Dr K.A. Ferguson.

The new Division will utilise the laboratories and field stations operated by both the former Divisions at Sydney, Rockhampton and Armidale while the unit will be located at Ryde.

Election arrangements page 3



The former Minister for Science and Consumer Affairs, Mr Clyde R. Cameron talks to Staff Association representatives at Head Office. From left: Jack Ikin, Dick Desmond, Mr Cameron, Don Banks, Ted Radoslovich, Mal Franklin and Phil O'Brien.

Financial difficulties ahead- Newsletter to be published

Chairman talks to staff across the country

CSIRO is facing difficult financial problems, particularly in respect of wool funded research during 1975-76. These are difficulties which will almost certainly continue during 1976-77.

To meet this situation the Executive has decided to reduce the number of staff employed on wool-funded programs by 20 per cent and to transfer a number of Treasury-funded positions to new or higher priority programs.

The Executive is planning to do all it can to make these changes without retrenching anyone but this will inevitably mean the redeployment of some people from one Division to another, and possibly from one locality to another.

This was the message behind an address which the Chairman, Dr Price, has given to staff during the last few weeks in a series of meetings in Brisbane, Canberra, Sydney and Melbourne.

Dr Price said that apart from the general financial situation there were three particular problems which the Organization had to meet. These were:

- the effective certainty that funds would not be available in 1976-77 to support the current level of research financed from the Wool Research Trust Fund
- the need, within the constraints imposed by the budget and the wool research problem, to provide resources for new high priority programs and additional resources for those with existing high priorities, taking the view that the difficult year ahead should not be regarded as being a one-off affair
- the imposition by the Government of a ceiling or limitation on staff numbers.

'Under such circumstances, it is clear that if CSIRO is to undertake new activities or to build up some of its existing ones, this will have to be at the expense of current lower priority programs,' the Chairman said.

Referring to the funds available to CSIRO, Dr Price said that in the current year contributory funds, mostly from rural industry funds, amounted to just over \$22 million and covered 1345 positions.

However, the bulk of CSIRO's funds came from Treasury and last year, 1974-75, a budget of almost \$90 million sustained 5559 positions with an additional 424 temporary or casual employees.

'The amount we sought initially for 1975-76 from the Treasury allowed for increasing costs due to inflation and for a modest expansion in the number of staff,

Although most of the staff in Brisbane, Canberra, Sydney and Melbourne heard the address given by the Chairman, Dr Price, and therefore know the contents of his speech, a detailed report of it has been reproduced in 'Coresearch' for the benefit of staff living outside those areas. Dr Price is hoping to talk to staff in Adelaide and Perth in the next few weeks.

with funds necessary to support that additional number.

'However, the decision taken by the Government was to implement a "no growth" policy and it has approved a budget of \$98.4 million.

'This does not allow as much as we believed necessary to meet the level of inflation that has already occurred.'

Ceiling

Looking in closer detail at the Treasury staff ceiling situation, Dr Price said that because of

resignations and retirements CSIRO always had about 250 positions unfilled at any one time. 'The Government's decision to fix a staff ceiling was not related to the number of positions but to the number of people actually employed in CSIRO (excluding contributory-funded staff) on 30 June 1975. The number also included casual and temporary staff.

Taking into account staff associated with the Division of Forest Research which came into being on 1 July after it was transferred from the Department of Agriculture, statistics showed there were:

Positions available	5804
Positions unfilled	257
People in positions	5547
Temporary and casual	431
To this, the Government added	35
positions without funds making the ceiling	6013

'This means that at no time during the current financial year can we employ more than 6013 people on Treasury funds, which in effect means we have lost the use of 257 positions during the year,' Dr Price said.

Discussing the wool funds, the Chairman said the situation there was not new in that during 1970-72 because of the low price of wool the number of staff employed on wool funds had had to be reduced, but that no one had been retrenched.



Dr J.R. Price

'Let me emphasise,' he said, 'that we have done, and will continue to do, everything we can to avoid retrenching staff as a means of meeting a financial deficit.'

Wool levy

The wool funds were dependent on the levy on the return from what was sold, and the price of wool at the moment was not sufficient to maintain the level of research in a time of rapid inflation.

Moreover, Dr Price said, the whole basis of the rural industry research funds—a levy on production to which the Government added a contribution, usually 1:1—was under review by the Industries Assistance Commission. The Commission had to make its recommendations by June 1976 so that it was expected that during 1976-77 a decision would be taken by the Government on their future.

'We now know that we will receive sufficient money from the Wool Research Trust Fund in the current year to maintain the existing staff on those funds until the end of this financial year—unless there is a considerable increase in the inflation rate. But we are faced with the effective certainty that next year we will be short of about \$3 million to maintain the same level of research.

Reduction

'The Executive has decided therefore that in the course of the

Keep-fit

NML staff have embarked on a keep-fit program. Joggers take to the Sydney University Oval at lunch time while others swim or play tennis or squash. They are hoping there will be adequate facilities at their new home at Bradfield Park.

Material held over

The editor regrets that a lot of material has had to be held over until a later issue because of restrictions on space and the need to use special material in this edition so that staff can be kept informed on matters of administrative importance.

'Coresearch'

'Coresearch' is produced by the Central Communication Unit for CSIRO staff. It is also circulated to some people outside the Organization who have a professional interest in CSIRO activities.

Members are invited to contribute or send suggestions for articles. The deadline for material is normally the first day of the month preceding publication.

Material and queries should be sent to the Editor (Dorothy Braxton), Box 225, Dickson, A.C.T. 2602, Tel. 48 4477 or Wendy Parsons, 48 4779.

Scientists at Moscow conference

When the XIVth International Congress of Refrigeration was held in Moscow, John Kowalczewski of the Division of Mechanical Engineering presented two papers from the Division and also addressed the Presidents of the Commissions on the forthcoming Joint Meeting of the Scientific Commissions to be held in Melbourne 6-10 September next year.

The Australian delegation to the Moscow conference also included Jack Middlehurst (Food Research), Bob Croll, Attache (Scientific) at ALSO, London, and Frank Vale, Chairman of the Australian National Committee for IIR. The Congress was attended by 2500 delegates.

The Melbourne meeting will involve IIR Commissions C2, D1, D2, D3 and E1 (Food Science and Technology, Refrigerated Storage, Refrigerated Land Transport, Refrigerated Sea Transport and Air Conditioning).

Papers are invited on subjects within the general conference theme: 'Towards an Ideal Re-

frigerated Food Chain'. Abstracts should be sent without delay to Mr J. Middlehurst, IIR Papers Subcommittee, CSIRO Food Research Laboratory, PO Box 52,

North Ryde, 2113. For further general details write to Mr F.G. Hogg, CSIRO Division of Mechanical Engineering PO Box 26, Highett, 3190.



Australian delegates to the International Congress of Refrigeration in Moscow included (from left) John Kowalczewski (Mechanical Engineering), Bob Croll (ASLO, London), Jack Middlehurst (Food Research) and Frank Vale (Australian National Committee, IIR).

Metallurgist appointed to CSIRO Executive

A distinguished Australian metallurgist, Professor H.W. Worner, has been appointed to the Executive. He will take the place of Mr Lewis Lewis who has been a full-time member of the Executive since 1968.

Professor Worner has been Professor of Metallurgy at the University of Melbourne since 1956. His distinguished career began when he graduated with a Diploma in Applied Chemistry from the Bendigo School of Mines in 1934. He gained his Master of Science Degree in metallurgy with first class honours from the University of Melbourne in 1938 and was awarded his Doctorate in Science from the same university in 1953.

During the period from 1940 to 1956 he was employed by the CSIRO as a research metallurgist.

While Professor of Metallurgy at the University of Melbourne he was also Officer-in-Charge of the former CSIRO Physical Metallurgy Section from 1956 to 1964.

Professor Worner was Dean of the Faculty of Engineering at Melbourne University during 1958 and 1959, and President of the Australian Institute of Nuclear Science and Engineering from 1963 to 1964.

Staff Associations meet Executive and Secretariat

The first joint meeting of representatives of Staff Associations, the Executive and the Secretariat was held at the end of October at Head Office.

The meeting was addressed by the former Minister for Science and Consumer Affairs, Mr Clyde R. Cameron.

He announced the proposal that the next vacancy on the Executive would be filled by a person elected by the staff who were members of CSIRO staff associations or other unions.

Among other matters he discussed was the desirability for CSIRO to undertake research on industrial accidents and diseases.

Outlining the agenda for the meeting, the Chairman, Dr Price

said he hoped this conference would be the first in a continuing exercise and suggested the next should be held in October 1976.

The agenda itself covered a wide range of topics including the two-Minister arrangement, the options for re-organising CSIRO, uniform hours of duty, standardisation of flexible working hours, CSIRO training programs, the Rural Industry Funds, the Staff Relations Seminar, access to personal files, use of private vehicles and Paragraph 11 of Terms and Conditions of Employment (appeals section).

Dr Price spoke to participants about some of the financial aspects facing the Organization during both the longer term of the next year or two and the shorter term when the problem of the con-

stitutional crisis and its effect could present difficulties with staff salaries.

Staff Association representatives at the meeting were: Dr B.W. Radoslovich and Dr G. Brown (CSIROOA); Messrs P.A.O'Brien and D. Scullin (ACOA); Messrs M. Franklin and R.T. Desmond (CSIROTA); Mr D. Banks (APSA-FDO); Messrs J. Ikin and D. Smith (CSIROLCA).

Members of the Executive who attended were Dr Price, Dr A.E. Pierce and Messrs L. Lewis and V.D. Burgmann. The Secretariat was represented by Dr J.A. Allen, and Messrs L.G. Wilson, A.F. Gurnett-Smith, J. Coombe, L.C.R. Thompson, K. Thrift and P. Kelly.

Ray McVilly ends 45-year-old link

When Ray McVilly joined the staff of CSIR on 7 July 1930, he turned up for his first day at work at 314 Albert Street in knickerbockers. He bought his first pair of long pants at a fire sale out of his first pay packet—and was mighty proud of them.

That day marked the beginning of a 45-year association with CSIRO, an association that formally ended last month. It also left on the staff, at least so far as is known, only two other members who were there when Ray started that day...his close friends, Jeff Foley of Animal Health and Phil Knuckey of CILBS.

Ray began his work as office boy and ended it as the Acting Senior Assistant Secretary (Finance and Properties). Somewhere, some would say, there ought to be a message in that but Ray is far too modest to talk about the secret of his success.

His colleagues, however, were more ready to talk about him. They were quick to mention how valuable his work had been, about his helpfulness to people, his friendliness, and always finished up saying: 'He's just a nice guy.'

At one of the several functions for him in Canberra, Ray opened up a little about his feelings for CSIRO.

One thing, he said, which had always impressed him was the way people treated their colleagues with an equality that had nothing to do with professional status.

That impression started when he was still the office boy. On one occasion he was carrying a heavy load of parcels over to the Post Office when a man appeared across the rocky and offered to give him a hand. 'It was David Rivett. That was typical of him.'

Admiration

Ray always had a great admiration for Sir David. 'He was a man of big ideals, devoted to CSIR and to what he believed the Council could do for Australia,' he said.

Ray was to work for four of CSIRO's five Chairmen and knew the first of the quintet, Sir George Julius, through his visits to Albert Street. He is also one of the comparatively few people left who worked there when it was first rented as CSIR's headquarters.

'It was originally a mansion known as "Airlie" owned by a Melbourne solicitor. Even in those days there was talk that we would be moved to Canberra. No one wanted that, so we bought the house to try to defer the shift.'

Ray recalls that originally it had stables at the back and these became the laboratories of the Division of Forest Products. Later the link building was added, then the wing, but he also remembers that during the war the courtyard was used for ARP exercises.

'I was in charge of fire precautions during that time,' he said.

In 1945 Ray was transferred as senior clerk (DAO now) to the then Division of Industrial Chemistry at Fishermen's Bend but returned to Head Office in 1952 in charge of the newly formed budget section.

That was his real beginning in financial management of the Organization, an area that has been an absorbing interest ever since. During 1963-64 he spent a year in Thailand where he and a former CSIRO colleague, Frank Nicholls, set up the Applied Scientific Research Corporation in Bangkok under a UNESCO and



Ray McVilly

Colombo Plan arrangement. Ray's job was to establish a complete range of administrative services.

Later, in 1972, he was involved in the preliminary studies that opened the way to P4 being established in Indonesia. At the same time he worked on a smaller project in Malaysia.

Autonomy

Ray was never slow to adopt new techniques and was quick to see that computers might have a place in CSIRO's administrative activities. He and Frank Whitty did an early feasibility survey and CSIRO was one of the first Government agencies to introduce them.

But as far as Ray is concerned, the most significant administrative exercise he was involved in was the introduction of the 1968 Science and Industry Research Act when the Organization was given financial autonomy.

'Now our budget appropriation is a one-line entry but before that our money was appropriated under about 40 different headings. The new Act allowed us to make our own financial rules—well, virtually, anyway.'

Ray has seen the Organization weather a number of crises and doesn't believe that the present economic difficulties will be any more difficult to recover from than others.

Where he does see a significant change is in the closer interest Ministers for Science now take in CSIRO activities.

'Up until Mr Gorton took over, most of the Ministers would generally rubber stamp our submissions. Mr Gorton started the change and this has been continued ever since.'

Ray has had no chance to quietly ease out of his office. As Assistant Secretary (Finance and Supplies) he was called on to take over from Ray Viney earlier this year when Ray took ill. At that stage he was on the verge of retirement but agreed to remain in office for another three months until Ray was fit enough to take over again.

Now he is looking forward to returning to Melbourne where he has a home in Chelsea, to getting his golf handicap down, seeing old friends and touring in his caravan.

At a farewell function Ray was presented with a portable television set and a large sheaf of messages from well wishers throughout Australia, expressions of friendship and good wishes which, he said, he would always value.

Election arrangements

Most members of the staff will now be aware that the former Minister for Science and Consumer Affairs has announced that the next vacancy for a part-time Member of the Executive will be filled by a person elected by members of the staff. This vacancy will occur when the current appointment of Mr W.J. Vines terminates on 12 March.

Discussions were held with the major staff associations in November and general agreement reached on the procedures to be used throughout the election proceedings. There have also been discussions with the Chief Australian Electoral Officer under whose authority the election will be carried out.

The Executive is anxious to ensure that:

- (a) the procedures adopted and the facilities provided by the Organization give equal opportunity to all candidates;
- (b) voters are given access to information which will enable them to make an informed choice and the maximum time in which

to decide how they wish to cast their votes;

- (c) security and confidentiality are maintained at all stages of the poll.

Eligible voters are those members of staff who are shown on the Head Office personnel records as being employed at the date of the close of the rolls and, in addition, are also financial members of a staff association or union registered under the provisions of the Conciliation and Arbitration Act, 1904-1973 as at that date.

Candidates need not be members of the staff of the Organization but must be nominated by at least 10 eligible voters.

Voting will be voluntary and the optional preference system will be used.

At the time of going to press the proposed timetable of election procedures had not been finalised by the Chief Australian Electoral Officer but it was expected that nominations would close on or before 31 December

1975 and that the poll would be declared early in March.

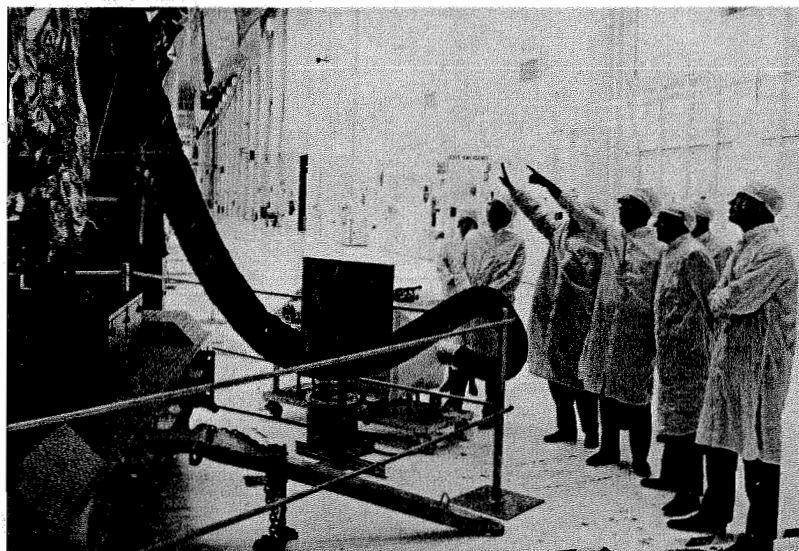
Candidates will be invited to submit a brief outline of their biographical details, policy and a photograph of themselves for a special election edition of 'Coresearch'. This will be published towards the end of January.

The material for this must reach 'Coresearch' by Friday, 2 January.

Provided that Ministerial and Executive Council approval of the appointment of the successful candidate can be obtained in time, the person elected will attend the meeting of the Executive on 8 April.

The new Member of the Executive, who will have the same responsibilities as other members of the Executive, will be given every opportunity to become familiar with those aspects of the Organization's work which are particularly relevant to the person's new responsibilities and about which he or she may not have an adequate knowledge.

SCIENCE AT WORK



'The female is prone to nervous breakdowns just before the mating season.'

Letters:

MATERNITY LEAVE

It is a pity that the demands of printing prevent one from replying in the next consecutive issue to items which have appeared in *Coresearch*. I am obliged to hark back in this December issue to correspondence in the October issue that replied to my letter that appeared in August. I am sorry to have to put so much strain on people's memories. The subject is the Maternity Leave Backlash.

I agree with F.D. Shaw that it would be helpful if the CSIRO administration could supply figures to show the direct cost of maternity leave. It is, however, the indirect costs which appear to be causing most of the adverse reaction, and it is these that I consider to be 'teething troubles' that we ought to be able to minimize. I should like to see some serious discussion of the practicability of the suggestion I made in the August issue of *Coresearch*, rather than more attacks on the basic concept of the maternity leave provisions, which is here to stay. Will Bill Backlash please note that by omitting the phrase 'within the four months' in a partial quotation from my letter, he has misrepresented my proposal.

I must also correct another misrepresentation of my position in the letter from Bill Backlash. The suggestion that women 'could be encouraged to resign after the confinement by being allowed to take their maternity and sick leave payments in a lump sum' is one which I discussed but explicitly did not endorse. In fact,

on this point Bill Backlash and I agree: such a provision would run counter to the objects of the Maternity Leave Act.

The same correspondent's 'hypothetical case' warrants closer examination. His hypothetical woman scandalously accrues the 'gift' of 52 weeks on full pay, with one annual leave loading. Of this, three weeks (with the leave loading) are for recreation leave and 12 weeks for furlough. Both of these are leaves which anybody is entitled to take; it is misleading to bring them into the argument. Only the remaining 37 weeks can possibly be opposed. Of these, 12 weeks are explicitly for maternity leave. If Bill objects to this component, then we must agree to differ; I consider it a socially desirable provision, for reasons which have been argued at considerable length in the United Nations and elsewhere.

The remaining 25 weeks are accrued sick leave. I find in discussion that what causes most resentment is the fact that women on maternity leave are allowed to take their accrued sick leave, whereas in general employees are not allowed to take it unless they are actually ill. There is scope for argument here, but to me it seems that Bill Backlash is totally ignoring the social reasons for the legislation.

While I am writing, I should like to take the opportunity to correct a false impression which may have been conveyed by my letter in the August issue. My original letter had to be condensed, and the revised version

was read back to me over the phone. Checking it in this way, I missed the implications of some omissions.

In discussing alleged 'abuses' of the system I referred in my original letter to stories that were circulating to the effect that (i) some women tried to obtain employment covered by the maternity leave provisions before starting their families, so that they could feel secure while having them; (ii) that some women had two babies in quick succession with maternity leave both times; (iii) that one woman untruthfully denied being pregnant when applying for a position. In the published version, (i) and (ii) were condensed to 'other claims', and only (iii) was printed as I wrote it. My comment 'Whether these...are "abuses"...depends on your point of view' applies more obviously and strongly to (i) and (ii) than to (iii), which was covered by my other comment that legally the woman should not have been asked whether she was pregnant.

Any woman who wishes to have a career and a family has a perfect right to choose a field of employment in which the combination is possible. Bill Backlash does not know of any woman returning to 'useful' employment after receiving maternity leave. I can tell him that some of us returned even without receiving maternity leave, and very difficult it was, too. If we overcame all the difficulties and succeeded in getting employment, most of us found that we lost money by working for the first couple of years after having a baby. It is perfectly obvious that many useful employees were driven out of employment by the weight of the difficulties they encountered.

K.R. Makinson
Textile Physics.

STAFF ELECTION

May I through the medium of your excellent newspaper comment upon the proposal to appoint a member of the staff of the CSIRO Executive.

While not commenting on the advisability or not of this appointment, I would say that I am very disturbed by the manner proposed for this election; that is, that although nominations are open to anyone, only members of Staff Associations shall be eligible to vote.

My point is that any person who is appointed to this type of office should and must be appointed on their merits and on their ability to use their experience and capabilities impartially and for the benefit of the Organization.

What is proposed here is that the appointee virtually by definition shall be an Association representative. Firstly it is a staff and not an Association nomination. Secondly, Association representatives can only represent the Association to which they belong.

The result will be that the other Associations will feel at a disadvantage and probably the election will resolve itself into which Association has the greatest number of voters.

If the 7,000 CSIRO staff members have got any spunk at all they should make it quite clear that any representative who is appointed must be elected by all the staff.

P.A.C. Thompson
Division of Tropical Agronomy
Brisbane.

When the Great Canoe Race was staged at the recent Narrabri Festival the honour of CSIRO was in the hands of two physicists, Graham Nelson who works at Culgoora, (right), and Ron Nelson, who is stationed at Epping. Both work for Radiophysics. Graham, a keen kayak owner, won the event in record time. Reports say he had an advantage over his colleagues because he did his homework on the course while Ron had to use a strange kayak and cope with unknown river snags.



Safety notes

Motor vehicles

Owners of vehicles seven years or older which have heaters operating from the cooling system, should check the heater hoses and connections.

On some cars of this vintage, the hot water hoses of the heater run inside the passenger compartment.

According to a recent article in the Australian Medical Journal there have been a few incidents where a hose connection has failed resulting in the driver being severely scalded.

Solvents down drain

Pouring organic solvents down the drain can be dangerous, particularly with newer type plastic plumbing.

In one incident, the trap plug was dissolved and some solvent went straight to the neutralising pit where a man was working. He fortunately recognised the smell of benzene. Happily, he was not smoking at the time.

Plastic containers

Several incidents have been reported of plastic containers, presumably polythene, becoming brittle and shattering. In two cases, the contents were water and aqueous sodium hydroxide solution. This 'embrittlement' has occurred after several months of shelf life even when not exposed to direct sunlight.

Mercury clean-up

The circular on mercury hazards (Information Circular 74/9), listed methods of cleaning up spilled mercury.

Two other methods have proved more satisfactory than those listed:

- (a) Freezing:** The droplets can be solidified by the use of dry ice, in conjunction with acetone if necessary. Sweeping up the frozen globules is easier if they are non-mobile.
- (b) Mercurisorb:** A commercial kit manufactured by Roth—which is very effective.

J.W. Hallam
Safety Officer

CHAIRMAN'S ADDRESS

Continued from page 2

1975-76 financial year, we must reduce the wool-funded research program by 20 per cent. This will mean reducing the number of people employed on wool funds by 160 by 30 June 1976.

'That can only be achieved by a significant redeployment of people not only from one type of work to another but from one Division to another.'

During the 1970-72 difficulties, people had been redeployed to new activities but few had to move to other locations. As well additional Treasury positions were made available for the transfer of staff from the wool-funded positions, Dr Price said.

'This year the problem is different—we have only a few new Treasury positions (35) and we can only make limited use of the 257 Treasury positions vacant at 30 June because of the staff ceiling ruling.

'For those staff whose work is supported directly by wool funds there is clearly a possibility that redeployment may be necessary for their continued employment in CSIRO.

'For those employed on other rural industry funds, there is uncertainty hinging on the IAC report, but not until the next financial year.'

Redeployment

These financial difficulties facing CSIRO would not disappear overnight. But if CSIRO, in the national interest, were to cope with new problems as they arose or to

foresee them in advance, it had to start new research programs in priority areas.

How could it do this under the circumstances?

'We believe we have to manipulate a substantial number of vacant positions as they arise and redeploy people into them to establish new activities and to build up existing important ones.

'This will mean people moving from one Division to another and possibly from one locality to another.

'While this is particularly true at the moment of people employed on wool funds it is not limited to them.'

Explaining the steps the Executive had already taken, Dr Price said that the first move had been to freeze all unfilled or vacant positions; the second had been to determine quotas of vacant positions which each Division would have to give up to provide a pool of vacant positions which would be reallocated by the Executive.

These would be reallocated to achieve two objectives:

- to transfer people from wool funds to other, non-wool activities to reduce the staff on such funds by about 20 per cent and to redeploy them to new or existing high priority programs;
- to transfer existing Treasury-funded staff or to appoint new Treasury-funded staff (within the limits imposed by the ceiling) to new or existing high priority programs.

Advertisements

The Executive proposed that most of the jobs that would have to be filled would be advertised only within the Organization, at least initially. Staff were being asked to look at these carefully and apply for any for which they felt they had the relevant qualifications.

This applied to all staff, whether they were employed on wool funds or not.

'You will have to make your own judgment on them but you should seek any advice you need from your Chief or elsewhere to help you assess the priority of the work you are doing compared with that of the positions advertised,' Dr Price said.

The Executive was tending to towards the view that a measure of movement between different work areas within CSIRO was desirable regardless of the immediate problems, he added.

The Executive was conscious that there was delicate balance between stirring people up, perhaps unnecessarily, and forcing them into trying to meet difficult objectives. It could err on one side or the other. However it had to get staff to appreciate the complexity of the situation.

'We must cut down our wool research programs, we must embark on new significant activities, we must do this within all the constraints I have mentioned and we must do it if we can without retrenchment of staff,' Dr Price said.

'If we are going to do these things a number of people in CSIRO will have to change their area of work. But if everyone assumes that it is the other fellow who will have to move, we could be in trouble.'

Appointments

Three members of the staff of the Division of Atmospheric Physics have been appointed to positions on international organisations. They are:

Dr A.J. Dyer, Assistant Chief—to the Executive Committee of the International Association of Meteorology and Atmospheric Physics.

Dr G.B. Tucker—member of the International Commission on Dynamic Meteorology.

Dr G.W. Patridge—member of the International Commission on Atmospheric Radiation.

LECTURE THEATRE OPENED

The Division of Atmospheric Physics recently staged a concert at its Aspendale headquarters to mark the opening of its new lecture theatre. The Division has a close relationship with the people in the area and on this occasion members of the Peninsula Light Operatic Society were among the performers. About 80 members of the staff, their friends and relations attended the function.