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Coresearch

A monthly publication for CSIRO staff

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Dr ALAN WALSH TO BECOME INDUSTRY CONSULTANT

Dr Alan Walsh—scientist, inventor and entrepreneur—retired from CSIRO on 5 January after 30 years of research, and 15 years as Assistant Chief, at the Division of Chemical Physics. The Division has arranged a buffet dinner in his honour at the Monash University Club on Saturday 26 February to which staff, their husbands/wives, and friends have been invited.

'I've been to so many farewell dinners recently that I'm beginning to acquire a taste for wine,' Alan said, a little overwhelmed by the fuss being made of his departure.

And Alan makes the point that he is not retiring from work. He intends taking a holiday for three months to recharge his batteries and then become a private consultant to industry.

Dr Alan Walsh

For unlike many other scientists Alan enjoys mixing with the captains of industry and talks their language.

'My family was steeped in the traditions of the Lancashire textile industry. I was brought up in the real world—where one went out to make a quid', he said.

This attitude, and a need to show that his scientific theories were correct, led to CSIRO's best-known money spinning invention—the atomic absorption spectrometer.

The instrument—described as 'the most significant advance in chemical analysis this century'—can measure minute traces of a metal in substances as diverse as oil, soil and blood.

Its accumulated benefit to the Australian economy has been estimated at more than $200 million at present day prices. Its manufacture in this country provides employment to some 400 people.

But use of the spectrometer in hospitals throughout the world has given Alan more satisfaction than all the dollars it has earned.

'What does making money mean compared with helping to save life and improving standards of health?' he asks.

Tributes

CSIRO's Chairman, Sir Robert Price—a colleague and friend of Alan Walsh for many years—spoke in glowing terms about Alan's research work.

'Alan's contribution to science, to the application of his discoveries, and to CSIRO itself has been enormous', Sir Robert said.

'Despite the indifference and scepticism with which so many scientists greeted his ideas on atomic absorption, Alan's ability to persuade instrument makers in Melbourne of its worth gave Australia a head-start over the rest of the world in the technique.

'This was especially important during the minerals boom of the 1960s when the mining industry needed a method for rapidly analysing ores for metal content'.

Dr Lloyd Rees, Chief of the Division of Chemical Physics and a colleague of Alan for 30 years, also paid tribute:

'Alan Walsh's contribution to science, industry and human welfare has been considerable. But, in spite of his great distinction, he has never found it necessary to develop eccentricities or affectations—and he enjoys life.

'He could be said to be the totally successful migrant, were it not for the fact that after 30 years he still supports England in cricket'.

Scientific freedom

Alan came to Australia in 1946 after gaining his degrees at Manchester University and spending five years as a research physicist at the British Non-Ferrous Metals Research Association.

Equipment that he devised during this period for use in emission spectroscopy instruments is still in production and forms an integral part of many modern spectrographs.

Alan thought that he had gone as far as he could with his line of work and opted for a change—to Australia and what was then the Chemical Physics Section of the CSIR(O) Division of Industrial Chemistry.

He recalls that things were lively in those days:

'At 30, I was the second oldest bloke in Chemical Physics when I arrived. We were allowed to develop research programs in our own way and had much more freedom than scientists do today'.

Alan concedes that the research conducted by most CSIRO Divisions is, of necessity, problem-oriented. But he maintains that once a top-class scientist is recognised as such, and given freedom of work, practical benefits will always flow from what he does.

As for CSIRO of the future, Alan confesses to being worried by the increasing bureaucracy.

'Inquiries and rearrangements seem to go on for ever. The Organization is doomed if its scientists feel obliged to justify every stage of their research.

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Honour

The Chairman, Sir Robert Price, has been made an Honorary Member of the Royal Society of New South Wales.

This brings him into a very small and select group of distinguished people on whom the honour has been conferred.

The number of honorary members never includes more than 20 people

Sir Robert's membership was conferred on him 'for eminent learned attainment'.

New Chief for Tropical Crops and Pastures

Dr E.F. (Ted) Henzell has been appointed the new Chief of the Division of Tropical Crops and Pastures.

He will take up his new duties on the retirement next month of the present Chief, Dr Mark Hutton.

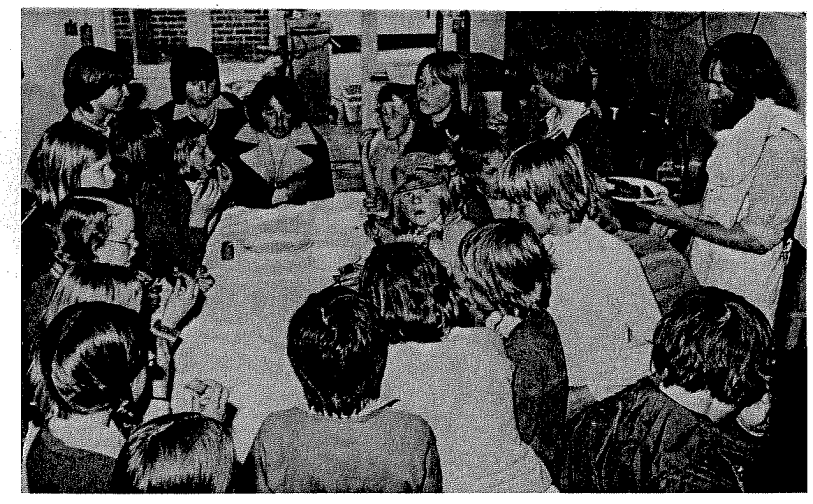
Dr Henzell, who has been the Division's Assistant Chief since 1970, graduated B.Agr.Sc. from the University of Queensland in 1952.

In the same year he was awarded a Rhodes Scholarship and undertook research work at the Department of Agriculture, Oxford University. This culminated in the award of the degree of D.Phil. in 1955.

Before joining CSIRO in 1956 he gained extensive farming experience in the Roma district of Queensland.

Dr Henzell's wide spheres of interest in the Division have included agronomy, physiology, soil fertility, plant nutrition, biochemistry and advanced mathematical techniques.

He is recognised both in Australia and overseas as an authority on plant and soil aspects of the nitrogen cycle.



Twenty five children from Waimea Heights School now know a lot more than most Australian children about the production of fish fingers.

The children visited the Tasmanian Regional Laboratory and while there were shown how experimental fish fingers are made, beginning with the mechanical separation of the fish into minced flesh and bone.

They were also told how the minced fish was frozen into blocks of a suitable size, later to be cut up and made into the fingers.

After the mechanical separation demonstration, the children sampled some of the fingers which had been made up by the staff from two pieces of fish — ocean perch and frost fish.

On hand to talk to the children and serve them their samples was Allan Bremner. Photo: A. Vall

CSIRO staff in honours list

The services of a number of CSIRO staff have been recognised in the recent New Year Honours list and in the Australia Day Awards.

They included:

New Year Honours

Knights Bachelor

William Joshua Vines CMG, of Darling Point, NSW, for distinguished service to primary industry. (Part-time member of CSIRO Executive)

Companion of the British Empire

Victor Dudley Burgmann, of Deakin, ACT, for service to science. (Member of CSIRO Executive)

Order of the British Empire

Miss Helen Alma Newton Turner, of Roseville, NSW, for service to primary industry. (CSIRO Honorary Research Fellow)

Member of the British Empire

Kenneth John Prowse, of Ainslie, ACT, for public service. (Regional Administrative Officer, Canberra)

British Empire Medal

Harold Kendall King, of Carlingford, NSW, for public service. (Senior Laboratory Craftsman, Division of Animal Production).

Australia Day Award

Member in the General Division

Hector John Lee, of Fullarton, SA, for services to science, (particularly animal research). (Until January on the staff of the Division of Animal Nutrition.)

Knight for a day

As congratulations poured in for members of CSIRO's staff who were named in the New Year Honours list, few people received more attention than did Mr Victor Burgmann, a member of the Executive on whom the Queen bestowed the CBE.

By becoming a Companion of the British Empire, Mr Burgmann has joined a distinguished group of people but somehow the Canberra Times thought it also conferred upon him a knighthood.

In a front page story on 1 January, it made references to CSIRO's new 'knight' with the result that 'Sir Victor' and 'Lady Burgmann' have come in for their share of additional congratulations.

The new 'knight' and his 'lady' were among friends and colleagues who dropped in to the home of Regional Administrative Officer Ken Prowse, on New Year's morning to congratulate Ken on being awarded an MBE.

Everyone took the opportunity to pay due homage to 'Sir Victor' and to speculate to what heights he might be elevated by the following week.

Dr Ken Myers has resigned from his position as Chief Research Scientist with the Division of Wildlife Research in Canberra to take up a Professorship of Biological Sciences at the University of Guelph, Ontario.

Ken was leader of the Division's work on rabbits for 15 years. Just before his departure for Canada he was awarded the degree of Doctor of Science from the University of Sydney for his published works on the biology of the rabbit in Australia.

In his citation during the presentation ceremony, the Dean of the Faculty of Science said: 'All Dr Myers' examiners agree about the excellence of his work, his international repute and the great contribution he has made to his subject.

On a recent field trip to north-western New South Wales to set up experiments on control of rabbits in arid areas, members of the CSIRO rabbit research team took time off to buy pastoralist friends a drink and to thank them for their continued support: left to right: Ken Myers, Bill Price, Harold Bults, Greg Richards, Malcolm Stanger, Bruce Parker with Mr and Mrs Alan White of Wonaminta Station ('Blue Hills') and John Libke. Front: Don Wood and N. Day (Calindary Station).

Death of former librarian

A little over three years ago CSIRO said its official farewells to its Chief Librarian, Betty Doubleday.

From everywhere in the Organization and throughout library circles in Australia came good wishes for a long and happy retirement.

It was not to be. Betty died at her home in Melbourne in December.

When she retired in 1973, Betty had been Chief Librarian for 18 years. She was widely known throughout the Australian library and information community but in CSIRO she had a special niche of her own – she was one of those special personalities that the Organization seems to attract, about whom people reminisce.

She was greatly respected for her professional ability but there were many others who remembered her for the many acts of kindness she performed, many of which remained unknown except to those involved.

In her work, Betty constantly reiterated her belief that the libraries of the Organization existed for one purpose only and that was, and is, to give the best possible service to the research staff.

Betty was responsible for the continued development of CSIRO's library service but as well her advice on library and related matters was widely sought and her services much in demand by Australian government and other bodies.

The contribution Betty made to CSIRO and the Australian community was fittingly recognised in 1972 with the honour of the OBE.

Manila conference leaves lasting impression

A member of the staff of the Division of Mechanical Engineering last year developed an interest in the Philippines and its people that he is not likely to lose in a long time. He is Bob Dunkle who took part in an international conference in Manila on 'The survival of mankind: The Philippine experiment.'

The conference was the first in a series of international gatherings to consider situations and formulate strategies and programs for the development and survival of mankind.

It was organised by the Philippine Government through a committee headed by the First Lady, Mrs Imelda Romueldez Marcos.

Conference topics included subjects such as food, energy, nutrition and health, population control and distribution, housing and urban development, environmental protection and other matters related to the problems facing the world today.

Bob found that the conference achieved its objectives successfully through well organised working groups, plenary sessions and informal discussions but said it had to be realised that the conference was only a small step towards finding solutions to the problems.

During his week-long stay in Manila Bob dined with either or both President and Mrs Marcos every night, attending a dinner at the Presidential Palace, the President's birthday party and cruising on the Presidential yacht to Corrigedor.

He was able to have several long discussions with Madam Marcos and returned to Australia filled with respect for the ability and dedication of the Philippine leaders.

Award

Bill Dall (Fisheries and Oceanography) who leads the team at Cleveland has been awarded the degree of Doctor of Science. The award was made by the University of Queensland in recognition of the quality of his published papers.

It's 'country night' in the ACT

The second half of CSIRO's century of achievement should get off to a monumental start in Canberra next month when members of the ACT Divisions, Regional Office and Head Office get together for a night out at the Ginninderra Field Station on 19 March.

The occasion is being staged to mark the beginning of the next 50 years (in place of a jubilee party to mark the first 50). During the festivities there will be an opportunity for Canberra staff to say goodbye to the Chairman, Sir Robert Price, and Lady Price. Sir Robert will retire on 24 March.

About 1200 members of CSIRO's staff work in the ACT and by all accounts a great many of them with their partners are planning to be present at the event.

It is also hoped that some of the 'oldies' who have retired from the Organization but who still live in Canberra will be able 'to return to the fold' for the occasion.

A committee drawn from the staff of Divisions, Head Office and the RAO is headed by George Williams, Manager of the Central Communication Unit, with Gary Garland as chairman of the smaller organising committee (Tony Culnane, Maureen Galiaway and Dorothy Braxton.)

Other committee members include Wendy Parsons, Kim Jansen, Gary Everett, Marie Sweet, Mike Connell, Ray Gorringe, Ken Prowse, Charlie Chan and Dudley Scullin. Site advisor is Peter Hutchings, Officer-in-Charge of the Ginninderra Field Station.

A small group of noted entrepreneurs comprising George Williams, Peter Butler, Ken Prowse, John Yates and David Kimpton, has been busy after being co-opted to the catering sub-committee.

As a result of their persuasions, it is believed that the food will be of an exceptionally high standard. This is coming in from different parts of Australia and various Divisions in Canberra with cold storage facilities are gradually finding unusual 'goodies' stacked up around the place.

It is hoped to limit the cost of the night to about $5 a head (confirmation of costs will be on the notice boards.) To achieve this the party is a 'bring your own' and that includes liquid refreshments, (other than coffee), something to drink out of and sit on.

If the Canberra weather behaves itself, the show will be staged mainly outside. A large barn which has a wide apron with an overhead roof and which has very conveniently just been completed, will be used, but for the most part it's going to be a country affair out in the open.

Tickets are available from committee members until 11 March.

CSIRO and its inventors

Good inventions come from the Organization each year, often as a result of a major research program, often simply because a member of staff is attuned to the needs of his colleagues. Some of this latter sort have recently come to light and are already being put to good use.

For instance, a technical officer at NML, Peter Smart, has appeared on the current ABC television program 'The Inventors' with his invention of a hydraulic lift apparatus for raising and lowering the Laboratory's heavy pedestal drilling machine without risk of injury.

Soon after NML took delivery of its new pedestal drilling machine it was apparent that it was a potential cause of injury. The machine weighs in at 22 kg (50 lb).

With the weight of a machine vice and the component for drilling added on, the total weight is over 26 kg (60 lb).

That's a lot of metal to hold up with one hand while the other hand is dealing with the clamp.

After a few near misses when people misjudged the weight and the work table either dropped with a thud or shot up in the air, Peter applied himself to designing a lift.

'I considered the methods normally used in these situations, that is a rack and pinion or lead screw, but rejected them as they are clumsy to operate and very slow', said Peter.

'Instead, I turned my thoughts to hydraulics and came up with a hydraulic lift. After a couple of minor modifications it worked perfectly.'

The table is lowered simply by opening a valve and letting the weight do the work. As the valve is progressive, the operation is always under the complete control of the operator.

Although Peter's invention was not chosen as 'Invention of the Week', his appearance on 'The Inventors' brought the apparatus to the attention of potential manufacturers.

As a result a Queensland firm has been in touch with him with the idea of producing the machine for distribution in the United States.

And back at NML, the regular users of the machine are delighted with it.

Another NML technical officer, Gil Russell, has invented a piece of office equipment, a typist's copy-holder, which alleviates back and neck strain.

Gil came up with the idea after attending a course at the University of Sydney on 'Occupational Health in Industry'.

He realised that many typists suffer from back and neck problems caused by unsuitable desks and chairs and lack of work aids.

'I was soon convinced that a copy-holder which holds the copy at eye level in front of the typist, eliminating the need for her to continually bend her neck sideways and downwards to read her work, would be well worthwhile and set about designing one', Gil said.

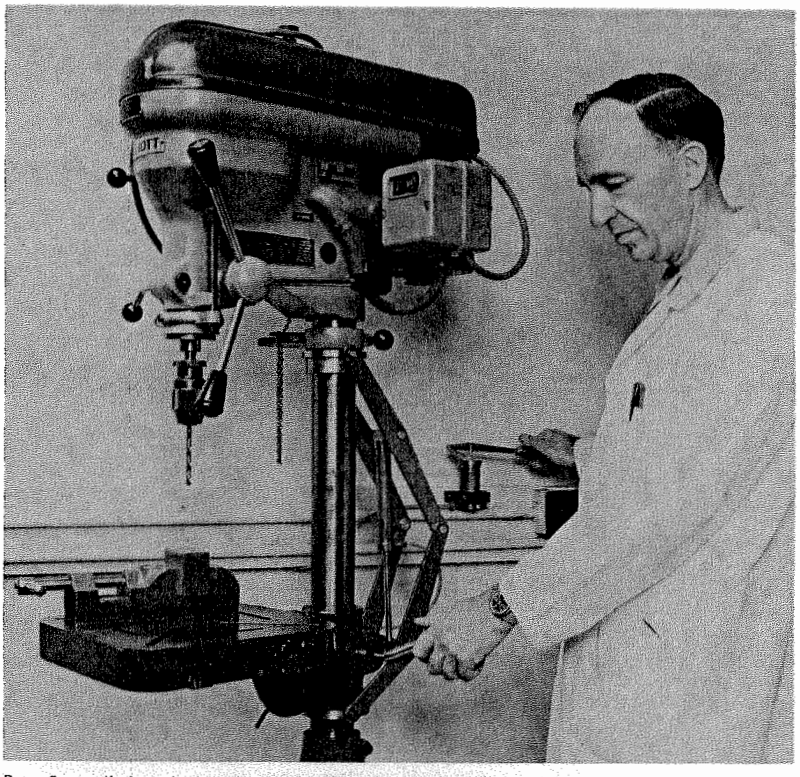
The version that he came up with rolls up the work sheet as typing proceeds. Several are now in use at NML and are proving very popular.

In addition, arising from his participation in the occupational health course, Gil has an extensive collection of books and notes on the subject, and can pass details on to any interested persons.

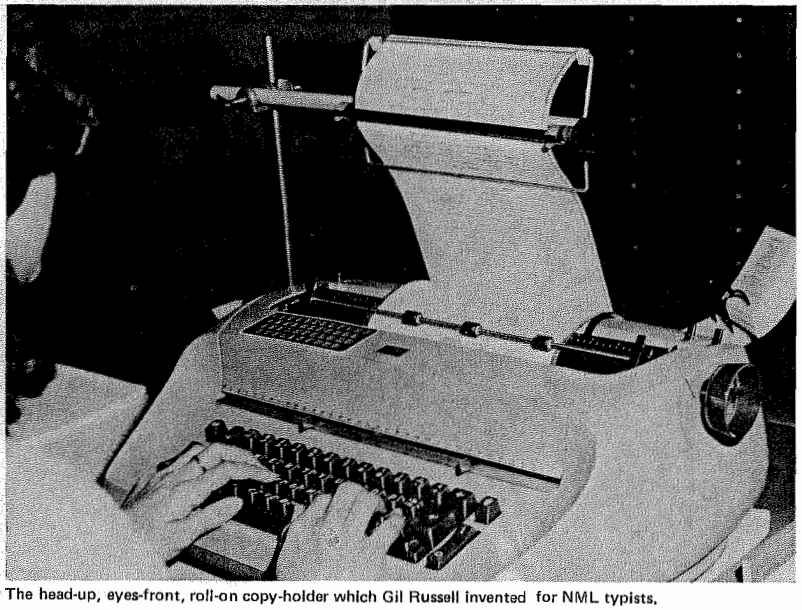
The foreman carpenter of Textile Physics, Jack Fleming, has designed and made a novel key rack to hold the keys of the Division's flexitime recorders.

The rack has a small round ceramic magnet set below each key hook. This holds the key in place even if people fail to make contact with the hook in their hurry to start work.

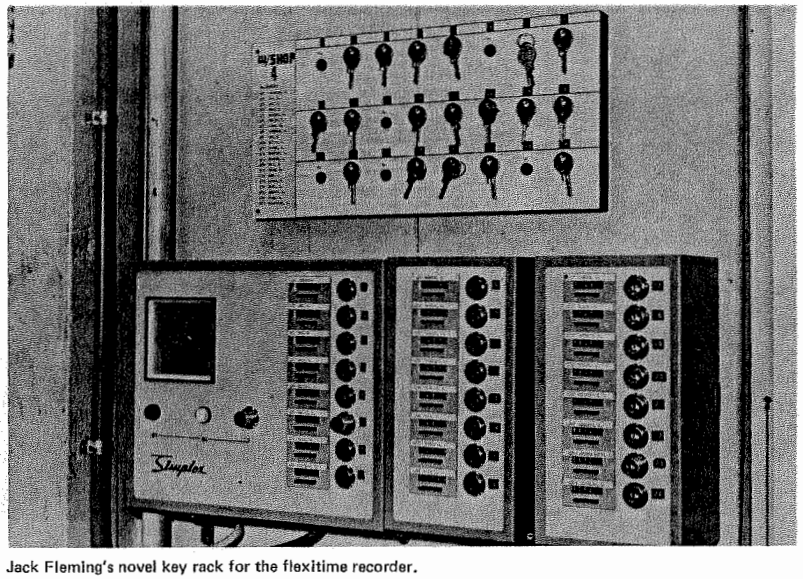
The Simplex flexitime recorders differ from the Hangstler ones installed in other Divisions in several respects but primarily in the fact that the key operating each recorder is removable both after 'clocking on' and 'clocking off'. The need for an adjacent key rack was therefore apparent and Jack came up with the below right idea.



Peter Smart displays the hydraulic lifting apparatus which won him a place on the television program 'The Inventors'.



The head-up, eyes-front, roll-on copy-holder which Gil Russell invented for NML typists.



Jack Fleming's novel key rack for the flexitime recorder.

New Fisheries Centre for Manila

A new international fisheries centre has been established at Manila in the Philippines.

Known as the International Centre for Living Aquatic Resources Management (ICLARM), it is an autonomous, non-profit, international scientific and technical institute similar to the International Rice Research Institute (IRRI).

Acting in their personal capacities the founding officials included a number of distinguished scientists and administrators including Dr Max Day, Chief of the Division of Forest Research and a former member of CSIRO's Executive.

The aim of ICLARM is to stimulate and conduct research, training and development to increase the production of fish.

Its initial interest will be in South East Asia where fish is an important food.

ICLARM will develop links with fisheries centres throughout the world with the idea of forging research networks designed to increase fisheries production and improved resource management.

Open days continue at laboratories

Events of 3 and 4 December last year will be long remembered by many Sydneysiders. Some will recall the scorching westerly winds which sent temperatures close to 40° and bush fires close to their homes. Others will have vivid memories of their trip to CSIRO's Division of Animal Production during its series of open days.

Despite twin hazards of heat and petrol shortage, more than 6000 people found their way to the Prospect laboratories.

Once there, they were let loose on a trail of information and entertainment around the Division which took in sheep shearing, bandicoot behaviour, cattle breeds . . . and Norm Peck's ever-running tap.

The tap, suspended by a string from the roof of a building and with no apparent inflow, continuously gushed water into a barrel. Goggle-eyed children looked on incredulously; adults were heard to say 'That's just what we need!'

But Animal Production is all about animals, and the goats, lambs, guinea pigs and calf in the animal nursery came in for more than their share of patting, fondling and ear pulling.

Videotape displays showed how ewes recognise their own offspring, while for the more biologically-inclined, protozoa consumed starch and other protozoa in a five minute video clip.

For the leg-weary and heat-affected, Tom Dagg arranged screenings of a number of films in air-conditioned comfort, including the Divisional films 'Defleecing' and 'Pouch Life of Bandicoots'.

New Centre

One of the highlights of the festivities was the official opening of the F.C. Pye Industrial Liaison Centre. Mr A.J. MacKenzie, Federal Member for Calare, performed the ceremony on behalf of the Minister for Primary Industry, Mr Ian Sinclair.

Sir Robert Price and the Chief of the Division of Animal Production, Dr Trevor Scott, both paid tribute to Mr Pye's generosity in providing funds for the Centre – the third gift of this type made by him to CSIRO. (The first was the F.C. Pye Field Environmental Laboratory in Canberra, and the second the F.C. Pye Wildlife Research Laboratory in Darwin.)

The new Centre will be used by liaison officers at the Division for their program of seminars, discussions, lectures and for the general exchange of ideas.

Sir Robert felt sure that Mr Pye's confidence in the value of this kind of liaison work would be justified.

Family outing

The effective public address system not only gave a carnival atmosphere to the open days by providing music, but also in bringing aid to the entrance tent when it collapsed on its occupants in the gale-force winds.

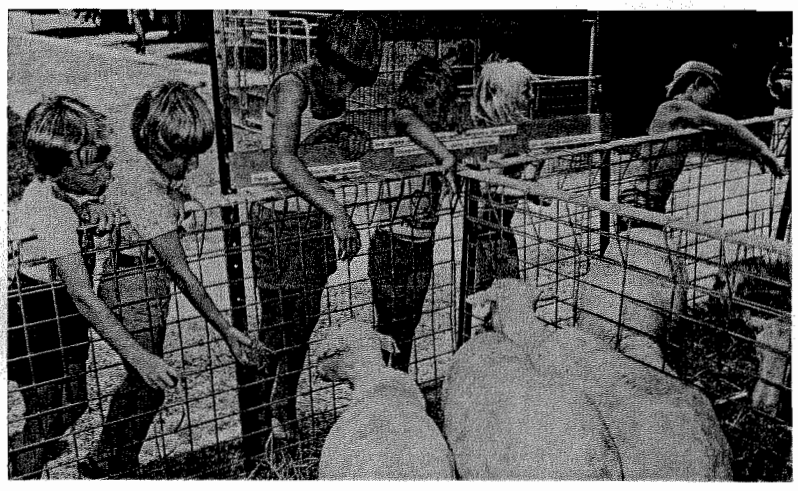
Still, the public did not seem to mind the weather. Cold drinks and cups of tea supplied by the Welfare Club helped many a visitor around the exhibits.

Carried away with enthusiasm for the occasion, phrases like 'worthwhile thing' and 'possible annual event' were soon being bandied around in the canteen. Without doubt, the mixture of well prepared displays, the animals, and good organisation turned a laboratory open day into a good family outing.

At Prospect

Mr F.C. Pye (left) is one of CSIRO's benefactors and donated the finance needed to build the Industry Liaison Centre which bears his name. The building was officially opened by Mr A.J. Mackenzie, MP for Calare (right).

Photos: Phil Potter and Tony Williams.



The shearing of sheep by both traditional and chemical methods was a feature of the Prospect displays.

Old timers return to Griffith Lab

Someone always has to do things in a different way and so it was with the jubilee celebrations. As conducted tours are a normal feature of daily life at Irrigation Research in Griffith, the Division decided to celebrate the jubilee with a staff reunion.

Several hundred invitations were sent out to places as far apart as Israel and Canada and despite the postal strike most of them reached their destination.

In all, some 280 former staff, present staff and invited guests attended a typical D.I.R. barbecue in the station grounds, and cries of 'It can't be you' echoed all night as former staff from 1924 to the present met again for the first time in many years.

Guest of honour was Mr Eric West, the station's Office-in-Charge from 1924, when it was known as the Commonwealth Citrus Research Station, until his retirement in 1956.

During the evening Mr West recounted the activities of the early days of the station when the staff consisted of only four people and the farm 'machinery' was a horse.

The twenties era was represented by Edith Martin, the station's first office girl, the thirties by Arnold Dreyer, Bert Gilliard, Stan Polkinghorne and Roy Stacy; the forties by Eileen Belford, Jack Cunial, Aston Combe, Harry Frith, Clive Gates, Al Grassby, Cedric Jones, Allan May, Lachy Myers, John O'Keeffe, Joan Ross, Bob Sidlow, Nan Simpson, Bob Williams, Ursula Wood and Ray Worthington, while those from the fifties, sixties and seventies were too many to mention.

To mark the occasion of the jubilee the former staff, through Henri Meijer, presented the Division with an original oil painting by Daphne Howie. This now hangs in the foyer of the main building.

Some of the former members of staff who attended the party included (from left) Mr and Mrs Bob Williams, Mr and Mrs Eric West, Mr Jack Hallam, M.L.A., Mr and Mrs Al Grassby, Mr and Mrs Clive Gates and Mrs Barbara Josling.

At Griffith

CSIRO budget for 1976/77 based on 'no growth' situation

The 1976/77 Budget provides a total amount of $155 692 908 for CSIRO's annual and capital expenditure, of which $131 964 200 will be provided directly by the Government, $15 121 567 by Rural Industry Committees and $8 607 141 by various other contributors.

Treasury Funds

Of the amount of $131 964 200 from Treasury Appropriation, $116 150 000 will be for salaries and general running expenses, $13 814 200 for capital expenditure and $2 000 000 for repairs to buildings.

The allocation for salaries and general running expenses represents an increase of $13 782 453 over the actual expenditure in 1975/76. This is an increase of 13.5 per cent over the actual expenditure under this category in 1975/76.

While this budget is again based upon a 'no-growth' situation, it does include provision for inescapable and unavoidable increases in salaries and operating expenditure and for certain other fixed commitments. By redeploying non-recurrent funds, the Executive has been able to provide limited assistance to some Divisions for high priority work.

The inescapable increases sought by the Organization for 1976/77 amounted to $14 182 453. A reduction of $400,000 was applied by Cabinet to salaries and operating funds, following a reduction of 50 in the staff ceiling. A further reduction of 25 has been applied to CSIRO's staff ceiling since the Estimates were agreed upon and the Organization will be expected to make a saving of a further $100 000 in this regard.

The capital allocation from Treasury sources is divided into three categories: works under the control of CSIRO, those controlled by the Department of Construction, and those handled by the Department of Administrative Services.

Funds provided for capital expenditure under the control of CSIRO total $2 500 000, of which $700 000 will be spent on work of a developmental nature and $1 800 000 on major items of laboratory equipment.

The second category includes $12 250 000 which provides for building projects under the control of the Department of Construction.

It is estimated that $10 000 000 will be expended during 1976/77 on buildings and works, while a further $2 000 000 will be spent on repairs and maintenance of existing buildings and $250 000 on the purchase of furniture and fittings.

The acquisition proposals which are handled by the Department of Administrative Services include a site for the Division of Chemical Technology, Lower Plenty, and a property adjacent to the existing CSIRO site at Cleveland for the Division of Fisheries and Oceanography.

Other Funds

The joint Commonwealth-Rural Industry Funds provide a large part of the finance available to CSIRO from non-Treasury sources In 1976/77 the total amount available from these sources will be $15 121 567, most of which will be utilised for wool and meat research.

Other expenditure from grants and donations from commercial enterprises and Government departments will amount to $8 607 141. This will cover a wide range of collaborative projects.

A summary of Estimates and Expenditure for 1976/77 is as follows:

How it's being spent

Summary of Estimates of Expenditure for 1976-77

	Estimates 1976/77 $	Expenditure 1975/76 $	Increase $
Under CSIRO control:			
Salaries and general running expenses	116 150 000	102 367 547	13 782 453
Buildings, works, plant and development items	2 500 000	2 306 101	193 899
Total under direct control of CSIRO	118 650 000	104 673 648	13 976 352
Under Department of Administrative Services control:			
Acquisition of sites and buildings	1 064 200	306 350	757 850
Under Department of Construction control:			
Buildings and works	10 000 000	17 058 897	−7 058 897
Furniture and fittings	250 000	193 195	56 805
Repairs and maintenance of buildings	2 000 000	1 682 205	317 795
Total CSIRO – Treasury Funds	131 964 200	123 914 295	8 049 905
Other Funds			
Contributory funds:			
Salaries and general running expenses	19 537 685	19 231 390	306 295
Buildings, works, plant and development items	4 191 023	4 235 587	−44 564
Total funds CSIRO – all sources	155 692 908	147 381 272	8 311 636

New edition of SSAL published by Printing Unit

The final pages of the newly updated 'Scientific Serials in Australian Libraries' came off the press of the Printing Unit in Melbourne at the end of last year.

It was a major achievement for all concerned, especially the editor, Jean Conochie, and the Printing Unit staff.

SSAL, as it is commonly called, is a looseleaf catalogue in three volumes of some 60,000 scientific and technical periodicals and serials holdings in 480 Australian libraries. It is intended to provide the research worker with an up-to-date finding list, but, because of its high bibliographical standards, has been used as a bibliographical tool not only within Australia but, increasingly overseas, as its outstanding merits have been gradually recognised.

The authors of a recent French thesis on union catalogues had this to say about this work: 'SSAL is seen to be a valuable identification and research instrument and is distinguished from other collective catalogues...by the extremely precise nature of the entries... Nowhere else is it possible to establish more precisely the genealogy of corporate entries...' This major updating exercise has taken almost three years to complete and there was good cause for celebration when relevant members of CILES staff met at the Printery to mark the occasion.

Members of the Printing Unit staff, (from left) Joe Spinozolla, Ralph Judd and Reg Sutton watch the final print run of SSAL with the editor, Jean Conochie, and the Chief Librarian, Peter Dawe.

Soils produce latest Divisional newsletter

Soils is the latest Division to produce its own newsletter.

The first edition hit the streets last month.

According to a foreword from the Chief, Dr Arnold Martin, the muscle behind the venture is Kevin Handrek, the Division's information officer, John Coppi was responsible for the title, 'Profile,' while Penny Cody, described by the Chief as a 'draftsperson in our drawing office' designed the cover.

Soils is a Division which is geographically scattered and 'Profile' aims to act as a medium of communication among the staff whether they are located in Adelaide, Canberra, Townsville, Hobart or Brisbane.

Even in this, the first edition, the material covers activities of staff from several parts of the country.

For instance, there is news of Alistair Spain, John Holt and Steve Bailey who are studying the flow of energy and nutrients in three rainforests in northern Queensland.

The men have to contend with leeches, mosquitoes, march flies, tangled vines that trip them up, stinging bushes, barbed tendrils on bushes that tear their clothes and eyes, falling black bean pods, torrential rain, mud and the occasional python.

The compensations? According to 'Profile', these include a magnificent profusion of living things: trees with enormous buttress roots and festooned with vines, under-storey shrubs and trees, multi-storeyed displays of flowers, hundreds of species of small animals and insects living on or in the forest floor litter, and the rich smells of perfume from flowers, rotting vegetation and damp earth, not to mention panoramic scenery of Hinchinbrook Island and Passage on the way to the experimental sites.

There is also news of Ian Little, a chemist in the Brisbane Regional Laboratory, who has scooped a first, at least as far as the Division is concerned.

This month Ian moves to WA for one year to work in the Institute of Agriculture of the University of WA.

'This is a sort of sabbatical leave,' says 'Profile', 'but without the overseas component usually associated with sabbaticals.'

In part, Ian plans to continue his studies of the development of soils and the chronology of the sand masses of Fraser Island, using some facilities in Perth not available in Brisbane.

Siroforum

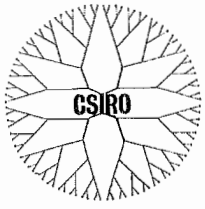
CSIRO logo

Miss M. Vickery of the Division of Radiophysics has taken up the challenge of producing a logo for CSIRO. In her accompanying letter she writes:

The logo represents the layout of the 96 aerials and the transmission lines connecting each of the aerials with the main observatory building. Each of the outside dots represents an aerial; the transmission lines are 'stacked', groups of lines being carried on common supports until, 130 m from the observatory building, the system is reduced to two groups of 48 lines each. These two groups form the letter 'I' in 'CSIRO'.

The design would be improved by progressively strengthening the lines to indicate the 'stacking' process and to add depth to the design itself.

I think this logo has the merit of being an actual layout of an installation, although inevitably it thereby emphasises only the particular Division concerned.



L.F. Cross' logo (December issue) does not recognise the gains made by the women's movement. A more appropriate logo would be:

R.W. Hinde
Chemical Technology

The Division of Land Resources Management in Perth has been using a logo for some time ... simply the letters CSIRO. It may not be generally known that this, in fact, is what many areas of the Organization, including Head Office and the Canberra RAO, have been doing. The Division of Soils has its own logo, a symbolic drawing and the letters CSIRO underneath.—Ed.

Former Assistant Chief dies

The death has occurred in Melbourne of Mr C.S. Elliot, an Assistant Chief of the former Division of Forest Products.

Mr Elliot died in the Royal Melbourne Hospital after a long illness.

'Sib', as he was known to his friends, joined the Division's Timber Seasoning Section in 1930 after graduating from Melbourne University. Between 1932 and 1941 he was Officer-in-Charge of the Section and played a major role in improving the standard of timber seasoning in Australia.

He was appointed Assistant Chief in 1942—a post he held until 1963 when he left the Division to become the Australian Scientific Attache in Washington.

Mr Elliot retired in 1965 after returning from Washington. During his 33 years with the Division he became well known to members of the timber industry and State Forestry Departments. He also earned a reputation overseas for his wide knowledge of the industry and his appreciation of the value of forest products research.

American award to Dr D F Kelsall

Dr D.F. Kelsall, Chief of the Division of Chemical Engineering, has been awarded the Robert H. Richards Award for 1977.

This prestigious award is presented annually by the American Institute of Mining, Metallurgical and Petroleum Engineers for achievements in the field of mineral processing.

It is the first time that the award has been made to a scientist who is not an American citizen and is also the first time that it has been received by a scientist working in a government department or agency.

Dr Kelsall received the award for 'his outstanding contributions to minerals processing in the theory, operation and development of equipment in at least three areas: analysis of the performance of hydro-cyclones and development of the cyclosiser, pioneering control and modelling of grinding circuits and the simulation of flotation circuits'.

The cyclosiser is manufactured in Australia and has become standard equipment in laboratories both here and overseas for the precise and rapid sizing of very fine particles.

Dr Kelsall has been invited to receive his award at a ceremony in Atlanta, Georgia, next month.

Forest Research has said goodbye to Bruno Monteleone who worked in the Division and its predecessors for 24 years.

Bruno was a research worker on the outdoor staff of the Genetic Section and was responsible for planting many thousands of pine trees for progeny trials and other experiments.

A farmer in Italy before coming to Australia, Bruno is an active member of the Italian community in Canberra

In his retirement he plans to continue his horticultural experiments on a smaller scale — tending his own garden and making wine from his own grapes.

The Division marked the occasion with a farewell party at which the Chief, Dr Max Day, (left) made a presentation to Bruno and his wife, Guiseppina.

Picture: Alan Edward

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

Editor. Dorothy Braxton

Mr Ray Isbell, Regional Soils Officer at the Davies Laboratory of the Division of Tropical Crops and Pastures, has been awarded the 1976 Medal of the Australian Institute of Agricultural Science for his outstanding contributions to agricultural science.

Ray (right) was presented with the medal at a Townsville function by the President of the Queensland Branch of the Institute, Mr Gordon Purss.

Members of the North Queensland branch of the Institute and colleagues from the Davies Laboratory attended the function.

Alan Walsh retires

Continued from page 1

'In addition, restrictions placed on scientists travelling abroad to conferences will cut them off from the outside scientific world—to the detriment of CSIRO', he said.

He regards CSIRO as still the world's best governmental scientific research establishment, but warns that its high reputation abroad should not be taken for granted.

Honours

Many of the numerous honours bestowed on Alan Walsh in recent years have come from overseas.

In 1969, he was elected Fellow of the Royal Society and a Foreign Member of the Royal Academy of Sciences, Sweden. More recently, he has been elected an Honorary Fellow of the Chemical Society (London) and an Honorary Member of the Royal Society of New Zealand.

Within the past few months he has received the Torbern Bergman Medal from the Swedish Chemical Society and a Queen's Gold Medal from the Royal Society in London. The citation to the Royal Medal mentions Alan's early work on emission spectroscopy, a fact which pleases him greatly.

He has been a Fellow of the Australian Academy of Science since 1958, and is a Founder Member and a former President of the Australian Institute of Physics.

With the honours, however, came many invitations to lecture at home and overseas, and Alan now feels that he has earned a rest—to renovate his house, play some golf and swim a little.

He sees himself very much as a product of his Division in that its 'free-wheeling' approach to research enabled him to achieve so much.

The success of the atomic absorption spectrometer has already entered CSIRO folklore, as Andrew McKay showed in 'Surprise and Enterprise'. Alan Walsh's own account will appear in a book being compiled by Professor A.J. Birch of the Australian National University.

'Don't tell me your troubles. I'm an endangered species.'

213##1977

Coresearch

A monthly publication for CSIRO staff

March 1977 213

CSIRO's new Chairman appointed

Mr Victor Burgmann to take over from Sir Robert Price

Mr Victor Burgmann CBE, who has been a full time member of the Executive since 1970, has been appointed Chairman of CSIRO for a 12 month term.

The appointment was made by the Governor-General and announced by the Minister for Science, Senator J.J. Webster.

Mr Burgmann will take over from Sir Robert Price when he retires on 24 March.

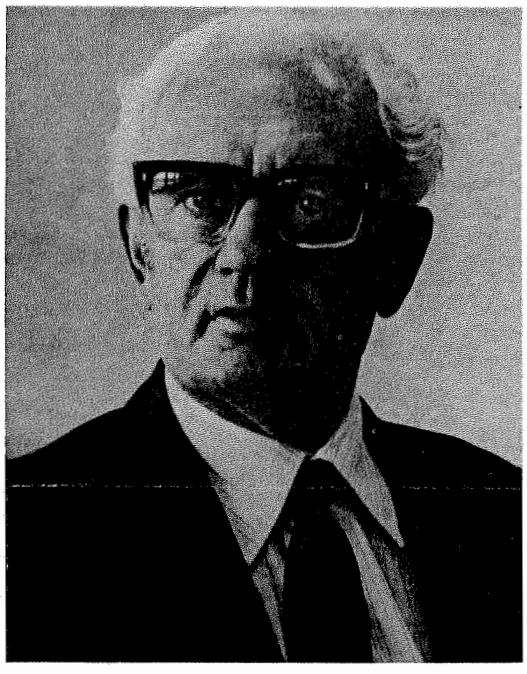
'His appointment has been for the 12-month period rather than for the customary longer term because it would be inappropriate to make longer term appointments until the government's Independent Committee of Inquiry has completed its reviews of the Organization,' Senator Webster said.

'Mr Burgmann, as the fourth Chairman of CSIRO, has a broad background of scientific experience in Australia and overseas,' he said.

'He has been particularly involved in two fields which have brought many benefits to Australia and overseas countries.

'One was the war time development of radar and then later the development of Distance Measuring Equipment (DME) as a navigation aid for civil aviation.

'The second field in which Mr Burgmann made a significant contribution was that of the objective measurement of wool—now an internationally accepted practice.'



Mr Victor Burgmann—CSIRO's new Chairman

National workshop held

The CSIRO's emerging involvement in problems relevant to human nutrition last month took another major step forward when the Division of Human Nutrition in Adelaide convened and hosted a national three day workshop on human nutrition research.

A group of 31 scientists from 16 different research organisations from all States around Australia met to consider ongoing nutritional research, future priorities and methodological challenges.

The opening sessions, chaired by the Chief of the Division, Dr B.S. Hetzel, stressed the growing awareness of the fundamental role of dietary factors and nutritional status in health and disease.

With increased research attention now being paid to this area, methods of co-ordinating research strategy and standardising data collection techniques were particularly emphasised.

The Division plans to assist in co-ordinating future nutrition research in Australia, and perhaps in holding similar workshops in future years.

The sound nutritional status of participants was secured with lunches of high fruit content and a convivial dinner (washed down with a little wine).

Dr Keith Boardman for the Executive

Dr Keith Boardman, a chief scientist with the Division of Plant Industry, has been appointed to the Executive for a term of 12 months.

Making the announcement, the Minister for Science, Senator J.J. Webster, said Dr Boardman would fill a vacancy which had existed on the nine-member Executive for some time.

'Dr Boardman joins the Executive with a distinguished research career in biochemistry, biophysics and plant sciences,' he said.

Reappointment

The Minister also announced that Mr Victor Jennings who has been a part time member of the Executive since 1974 would continue his term of office for a further three years.

Dr Keith Boardman

US honour

Dr Dal Swaine of the Division of Mineralogy has been admitted to membership of the Society for Environmental Geochemistry and Health. He is the first Australian to receive this honour.

Dal has also been invited to be the guest lecturer at the society's annual conference in June in Columbia, Missouri.

Sir Robert retires from top CSIRO post

Sir Robert Price, Chairman of CSIRO since 1970, retires from the Organization on 24 March. During his 32 years with CSIRO, Sir Robert has been, in turn, a research scientist with the former Division of Industrial Chemistry, Chief of the former Division of Organic Chemistry, and a member of the Executive. His period as Chairman has coincided with some of the most severe financial restrictions in the public sector in recent years, and with a growing mood in political circles for CSIRO to justify the money spent on its research.

'The most worrying single incident during the past seven years was the minerals crisis in 1975 when the Government of the day decided to remove minerals research from CSIRO,' said Sir Robert.

'However, one of the major changes which has accelerated in emphasis during the period has been the increasing contact with government and with the Minister in particular.

'This situation has arisen in part because of changing economic circumstances but a major factor has been the progressive development from being responsible to a Minister nominated by the Prime Minister to a Minister for Education and Science and latterly a Minister whose exclusive interest has been science.

'Naturally this has made greater demands on the Chairman as the principal spokesman for the Organization.'

Sir Robert believes that CSIRO is one of the best—if not the best—governmental research organizations in the world, giving enormous value to the country in terms of the money and resources put into it.

'Nothing has given me greater satisfaction while I have been chairman than the research achievements of our scientists.

'The Organization has more than fulfilled its role in areas as diverse as animal breeding, energy research, the development of an aircraft landing system, and conservation of native plant species', he said.

Plant research

Sir Robert's research career as an organic chemist began at the University of Adelaide where he graduated in 1932. He was awarded a D.Phil. at Oxford in 1937. He joined the John Innes Horticultural Institute in London that year and began to develop his interest in chemical aspects of plant research.

After a four-year spell working on propellants and explosives for the Ministry of Supply during World War II, Sir Robert returned to Australia in 1947 as a research officer in the CSIR Division of Industrial Chemistry.

Continued on page 2.

Sir Robert retires

Continued from page 1.

CSIR had already made a modest beginning at obtaining useful materials from native plants and Dr Len Webb had been appointed to start the botanical side of a survey of Australian plants. Sir Robert (or Dr Price as he was then) joined Dr Webb on the survey, focusing his attention on the chemistry of plant alkaloids.

As the years went by, the survey became more comprehensive by involving many university students until it reached national status as the Australian Phytochemical Survey. Extracts from all the plants examined were subjected to pharmacological testing and the survey itself has led to the publication of many hundreds of research papers.

Sir Robert was awarded a D.Sc. by the University of Adelaide in 1954 for his scientific work and the H.G. Smith Memorial Medal of the Royal Australian Chemical Institute in 1956. He was elected a Fellow of the Australian Academy of Science in 1959.

Sir Robert became Chief of the newly-created CSIRO Division of Organic Chemistry in 1961 and was appointed a full-time Member of the Executive in 1966 with particular responsibility for the chemical Divisions and those concerned with minerals research.

'When I joined the Executive I never expected to even be considered for the job of Chairman,' Sir Robert recalls.

Nevertheless, he became CSIRO's third Chairman in 1970 and received the KBE in 1976 for services to science and government.

Divisions/Head Office

In these days of accountability, Sir Robert believes that CSIRO's scientists have a duty to inform the public about their work.

'One of the responsibilities of CSIRO as laid down by the Act is the dissemination of scientific information—and this means more than publishing in journals.

'However, the scientist must speak responsibly and in his official capacity should confine himself to his area of expertise. On matters outside his specialised knowledge, he should speak as a private citizen and not as an officer of CSIRO'.

On the subject of Divisional/Head Office relationships, Sir Robert believes that some differences are inevitable in a large organization.

'Concern about the growth and role of Head Office is not a new phenomenon,' he said. 'As far back as 1951 in CSIRO there were records of this topic being an issue in the minds of Chiefs and even back in the late 1920s, in the early days of CSIR, there were often fairly strong "discussions" between Chiefs and their Divisions and Head Office.'

'The role of Head Office,' Sir Robert added, 'has changed and grown—if only because governmental needs require a central point of contact.

'When my predecessor, Sir Frederick White, moved Head Office from Melbourne to Canberra in 1971, I, along with a number of my colleagues, thought the move unnecessary. I am now 100 per cent convinced that Sir Frederick was right', he said.

Sir Robert is naturally reluctant to discuss the qualities needed in his successor, but he holds strongly to the view that he should be a scientist.

'Any Chairman would be in a difficult position if he were not a scientist and had to rely on colleagues for advice on scientific matters,' he said.

However, Sir Robert's reticence does not extend to mentioning his own future plans. He intends moving to Melbourne to spend a little time each week at Albert Street pursuing a personal scientific interest, collecting information from the library, and a lot of time growing native plants on a few hectares of land at Red Hill on the Mornington Peninsula.

He and Lady Price—a botanist—have been collecting seed for a long time in readiness for their post-CSIRO years.

What friends and colleagues wrote...

'...Sir Robert Price is to retire as the Chairman of the Executive of the most significant scientific research organisation in Australia.

'Sir Robert has proved himself to be a great Australian. His contribution to the status of science research has been enormous—as an individual scientist, Chief of a Division of CSIRO, a member of the Executive and currently Chairman. He has obtained the highest honour by his dedication to duty and to his profession.

'Those achievements make him an outstanding man, and he is well supported by an equally outstanding wife, Lady Joyce Price.

'Sir Robert combined his elevation with genuine humility, a rare quality of great men.

'It has been my privilege to work with him and be counted as a friend.'

Senator J.J. Webster
Minister for Science
Parliament House
Canberra

'...It was Jerry more than anyone else who put the study of the Australian natural products on the international map. He contributed to organic chemistry in so many ways—not only by his own experimental work but by his fostering of Australian publications, his leadership in the Royal Australian Chemical Institute, the Academy, and the International Union. He is a great organic chemist, and a great man by any standard.'

Professor Geoffrey Badger
President
Australian Academy of Science

'...Quite apart from the scientific and other talents which made him Chairman of the Organization, the most outstanding impression of Jerry Price gained over more than 30 years is his enormous capacity for hard work.

'This impression was gained at first hand during 20 years of close association with him at the Division of Industrial Chemistry, when we were jointly involved in many activities, including founding and editing chemical journals, and planning and running an international scientific meeting.

'Hard work in his garden is the spare-time activity that he has most enjoyed, as I am sure it will be in his well-earned retirement.'

Dr Lloyd Rees
Chief
Division of Chemical Physics, Melbourne

'...Our working relationship began in a flurry of scrubbage and lawyer vine in a rainforest near Innisfail 32 years ago when Jerry arrived with a brand new copy of Henry's "Plant Alkaloids" under his arm.

'Jerry stimulated an exciting mix of chemists and biologists in a new kind of plant exploration and Henry was soon rewritten.

'It was a pleasant mix, too, and I remember many talkative evenings at the Price household in Melbourne when we all developed visions of Australiana, including Jerry's interest in growing native plants.....'

Dr Len Webb
Rain Forest Ecology Section
Long Pocket Laboratories, Brisbane

'...We met in the 1940s at the Chemistry Department of Melbourne University. Because of his interest in cricket, I used to get scores to him, not any easy feat in a building where radios were not permitted.

'Years later we met at Africa House. He asked me the Test score which I didn't know and he commented "I'm surprised. You always knew in Melbourne."

'This interest in cricket was surely an advantage when he had to bat on a sticky wicket in 1975.'

Dr Dal Swain
Division of Mineralogy
Sydney

Award

Britain's Royal Astronomical Society has awarded its prestigious Gold Medal to Mr John Bolton of the Division of Radiophysics at Parkes.

The citation says that the award is in recognition of John's outstanding contributions to both radio and optical astonomy, particularly for his studies of radio sources in space.

The Minister for Science, Senator J.J. Webster, announcing the award, said Mr Bolton had been one of the first to link a radio source in space to a known astronomical feature.

In 1948 he had discovered a number of isolated radio sources and soon after linked them to visible objects.

John, who lives and works at Parkes, is a member of the steering committee for the proposed Australian Synthesis Telescope project at Parkes, an instrument which when established will provide the first high resolution maps of the southern radio sky.

A royal occasion

Sir Robert and Lady Price relax outside Government House after Sir Robert had received his knighthood from the Queen.

Sir Robert, awarded the KBE in the Queen's Birthday Honours List, was one of the Australians to receive a knighthood from the Queen at a special ceremony at Government House, Canberra on 9 March He received the award for his service to science and government.

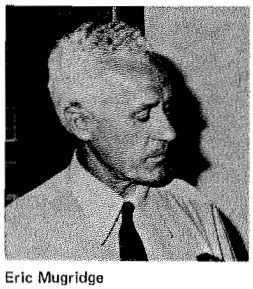
Old hands retire from NML

When Hazel Knight started work at the National Measurement Laboratory in 1942 she was employed in the optical laboratory. Five years later she transferred to another position—that of welfare matron for the laboratory.

It was in this capacity that Hazel spent the next 30 years, becoming widely known and appreciated for her kindness, wisdom and compassion. Last month the staff of NML met to say goodbye to her and to wish her well in her retirement.

The Director of NML, Dr F.J. Lehany, presented Hazel with a cheque towards her planned trip to the South Pacific and thanked her on behalf of the staff for the long service she had given to her colleagues.

Hazel Knight



Eric Mugridge

A retirement message evaporated onto a sheet of glass was one of the appropriate gifts made to Eric Mugridge last month at a function at the National Measurement Laboratory.

Eric has retired from the Organization after 21 years. He came to NML after a career which included five years in the RAAF and service with the Department of the Navy as an instrument maker at Garden Island Dockyard.

He is an expert in the operation of vacuum evaporation equipment and worked closely for many years with the late Dr Jack Ramsay in the development of coating for Fabry-Perot interferometers.

Along with his special gift message, Eric was given a cheque from his colleagues which expressed their good wishes for his retirement in his new home in the Blue Mountains.

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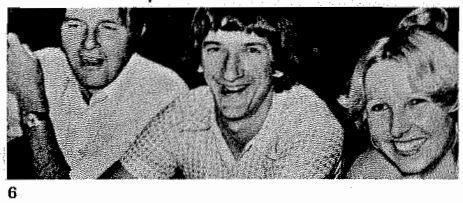


6

1. Dal Swaine (MRL) carrying out a new line of research. 2. Conference dinners are to be enjoyed. That's the philosophy of John McAlpine (Land Use Research), Maurie Woodward (Land Resources Management) and Bob Marshall (Head Office). 3. Three cheers for CSIRO—or something. Jack Chamberlain (Printing Unit) expresses his feelings to Wal Hastie (Building Research). 4. Eric Smith (Animal Health), one of CSIRO's most respected photographers. 5. Did you say *pose* for a picture? Howzis? Peter Lee (Building Research) and Ted Stephens (Applied Organic Chemistry) respond for Wal Hastie. 6. Neville Prosser and Paul Kightly (Chemical Technology) enjoy the company of one of CSIRO's few women photographers, Helen Niblett (Building Research).

Photographs: Wal Hastie

Photographers meet-24 years after proposal

Back in 1953 Mr Ken Prowse, the Regional Administrative Officer in Canberra, wrote to Head Office suggesting that a photographers' conference should be held. At this, he said, photographers could come together and discuss their mutual interests and their work.

Ken also thought that a central pictorial library should be established at Black Mountain so that people in the Divisions located there requiring photographic material for various purposes need visit only one area.

The library idea has never been taken up but at least, 24 years later, Ken has seen the conference idea come to fruition. Last month about 40 of the Organization's photographers met at Macquarie University in Sydney and for four days discussed many aspects of their work and their role in CSIRO.

The conference was organised by Bob Marshall of the Head Office Training and Development Group with the assistance of a syllabus committee that comprised John McAlpine (Land Use Research) a member of the Technical and Trade Staff Development Advisory Committee, Jack Cavanagh (Land Use Research), John Card (Textile Industry), Tom Dagg (Animal Production) and Roy Osmotherly (Minerals Research Laboratory).

The event brought together a group of people who share mutual interests but who for one reason or another have seldom had the opportunity to meet, even on one campus, to discuss problems, and exchange ideas on equipment or other matters pertaining to their job.

The conference was a live-in one and evenings at Dunmore Lang College provided the setting for one organised panel discussion and many less formal ones.

The importance of photography to research was the topic for the opening session of the conference, with Dr Dal Swaine of the Division of Mineralogy as the keynote speaker. Emphasising that the photographer was very much part of any research team, Dr Swaine spoke of the need to involve photographers at the planning stage of research projects so that from the beginning the photographer understood the team's requirements. In so doing, he was then able to provide the research group with a good photographic coverage of the work.

This was followed up by the lively evening panel discussion: 'The relationship between photographer and research scientist'. In the chair was Dr Ken McCracken, Chief of Mineral Physics and the panellists were Jack Middlehurst, (Food Research), John McAlpine, (LUR), Eric Smith (Animal Health), and Harry Gillette (NML).

Participants showed particular interest in new techniques and this was especially evident during a session when Dr P. Hariharan from NML explained and demonstrated the use of holography.

There was a similar response when several audio visual presentations were shown to demonstrate the way these could be used both as an aid for the research scientist or in public relations exercises.

Two members of the Land Resources Management Communications Group in Perth—graphic designer Maurie Woodward and photographer Bill van Aken—showed two of their presentations and were warmly applauded for the professional manner in which these had been made.

The subject was further explored by Mr Lindsay Rodda of the Melbourne firm of consultants, Sonargraphic Pty Ltd, who spoke on the different uses of audio visual presentations in the media of film, video, slide tape and film strips and how such presentations should be planned.

Cinematography was covered by Mr Bill Constable of the Film and Television School in Sydney and his address was followed up with an explanation of the role of CSIRO's Film and Video Centre by Alice Bugge. Its context within the Central Communication Unit was outlined by the Unit's Manager, George Williams.

Other subjects included in the program were aerial photography (Mr K. Wetton, South Australian Department of Lands), remote sensing (Andy Green, Division of Mineral Physics), photomicrography (Mr B. Schicht and Mr W. Loeb of Carl Zeiss Pty Ltd), colour processing and printing (James Spence, Kodak).

Considerable time was devoted to the role of photography in public relations. The importance of this was discussed by Dorothy Braxton from the Central Communication Unit, Maurie Woodward, LRM, and Mr Ron Freer, from Studio Commercial Pty Ltd, Sydney.

Jack Chamberlain, Manager of the CSIRO Printing Unit in Melbourne, followed this section of the program with a talk on printing of photographic material.

One of the most popular sessions was the ideas clinic where photographers brought along items of equipment they had devised to overcome particular problems which might easily have been applicable to other situations.

Happiness is having your own camera...

Everyone knows that in these days of stringent economy measures it's hard to get equipment but few participants at the CSIRO photographers' conference could really believe that Tricia Smith from the Division of Mineral Chemistry in Melbourne didn't even have a camera.

When her colleagues realised that Tricia really was in such a plight they were filled with compassion and concern and took up a collection to buy her one.

There is considerable truth in the rumour that Bob Marshall, Tony Culnane and John McAlpine organised the finances for this and that it was John McAlpine who volunteered to rush round in Sydney's heat and make the purchase.

It proved too difficult to find a suitable still camera so John settled for a movie one...it came in a bright blue plastic with the lens in red and the handle in white so that it would be truly distinctive.

Tricia was presented with the camera by Dr Dick Millington, an associate member of the Executive at the conference dinner, when he expressed regret that the economic situation had brought about such a plight.

P.S. Tricia later assured her colleagues that although she had been without a camera for six months or so, her Division had now made funds available for the purchase of one.

Picture: Tricia puts her new 'camera' to use by taking a picture of Dick Millington.

Australian scientist featured on medal

Dr Helen Newton Turner, a CSIRO Honorary Research Fellow, and former member of the Genetics Research Laboratories, has been invited by FAO to be an Australian representative on their CERES medals.

Ceres, according to ancient Roman beliefs, was the goddess who taught mankind how to work the land, plant seeds and produce food.

As a goddess of agriculture she protected the crops and kept people from need and want.

Today she remains a symbol to the world's hungry people as she takes the face of humane and distinguished women of modern times on a series of medals issued by FAO.

The women who have been invited to represent Ceres have all been prepared to go on public record as sharing FAO's ideal of a world freed from hunger and want, although not all are connected directly with food and agriculture.

Each woman whose portrait appears on a medal has distinguished herself in some way in her own field of endeavour and also has a reputation for personal kindness.

Helen joins a small list of other well known women who have become Ceres' representatives. They include Indira Gandhi, Olave Baden Powell, Mother Teresa and Margaret Mead.

Her medal will be sculpted in Rome and minted in Canberra. There are to be 30 medals in the series and they are available singly or in collections in gold, silver, bronze gilt and bronze from FAO.

DEGREE

The Council of the Victoria Institute of Colleges has conferred an Honorary Doctorate of Applied Science on Dr Lloyd Rees, Chief of the Division of Chemical Physics, Melbourne, in recognition of his valuable services to the community.

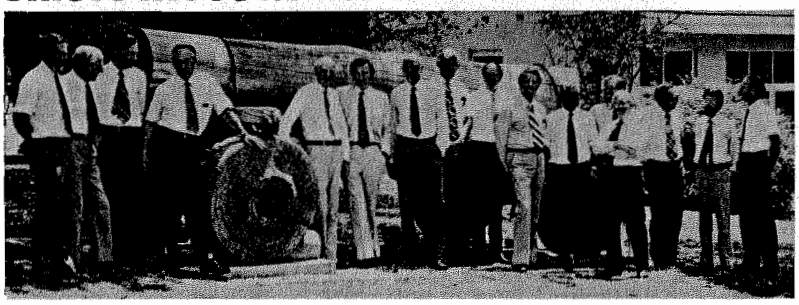
Dr Rees has an international reputation as a distinguished scientist with the honour of being one of the few Australians to become president of one of the unions of the International Council of Scientific Unions.

In Australia itself, he has contributed a great deal to the academic development of the Victoria Institute of Colleges.

Award

'Stowell', the historic building where CSIRO's Tasmanian laboratory is located, is set in attractive, well-kept grounds. Recognition of the way the gardens are maintained has come from the Corporation of the City of Hobart which has awarded the laboratory second prize in the public buildings section of its annual garden competition.

Chiefs meet at Forest Research



Chiefs talk communication—from left: Dr R.J. Millington, associate member of the Executive, Mr J. Calaby, representing Wildlife Research, Dr A.E. Martin, Soils, Dr R.W.R. Muncey, Building Research, Dr D.F. Waterhouse, Entomology, Dr L.T. Evans, Plant Industry, Dr E.G. Hallsworth, Land Research Laboratories, Dr D.E. Weiss, Chemical Technology, Dr B. Rawlings, Mechanical Engineering, Mr R.A. Perry, Land Resources Management, Mr J.J. Basinski, Land Use Research, Mr Harry Black, Central Communication Unit, Dr M.F.C. Day, Forest Research, Mr G.R. Williams, Central Communication Unit, Mr J. Burdett, Head Office, and Mr A.G. Brown, Forest Research.

Photo: Alan Edward

CSIRO research to the value of more than $6 million a year is of direct benefit or relevance to the forest industries.

This was one fact revealed when 10 Chiefs of Divisions whose research programs are relevant to the forest industries met in Canberra recently to consider measures for improving communication with the industries involved in this area.

Aware that the best research falls short of its target if it fails to get through to those who can put it to use, the Chiefs were concerned to strengthen communication channels with the forest production, harvesting and processing sectors of this important national industry.

Divisions represented were Building Research, Chemical Technology, Entomology, Forest Research, Land Resources Management, Land Use Research, Mechanical Engineering, Plant Industry, Soils and Wildlife.

The meeting was chaired by Dr Gordon Hallsworth, Chairman of the Land Resources Laboratories Committee.

Among the initiatives recommended by the Chiefs to improve the communication channels were the production of a special publication designed to reveal the wide spectrum of research, extending across a dozen Divisions, of potential benefit to forest production and forest technology in the short, medium or long term.

The publication will be distributed at management level across the whole spectrum of forest industries.

The three central Divisions in this field, Chemical Technology, Building Research and Forest Research, will produce the publication. Harry Black, Adviser, Community Relations at Head Office, will act as co-ordinator.

'CSIRO Forestry Research Newsletter' will be re-shaped to meet the communication needs outlined by the meeting. Dr Barry Shineberg, publications editor of the Division of Forest Research, will produce the publication.

Senior research staff from the Divisions will meet in Melbourne to discuss problems of common interest in research for the forest production and forest technology industries.

Farewell at DBR

The Division of Building Research feted Norm Tamblyn (left) before he retired. With him are Elijah Tauber (right) and John Nicholas and his wife.

Mr Norm Tamblyn, the man who is regarded as the father of Australia's wood preservation industry, has retired after 40 years with the Organization.

Norm a scientist with the Division of Building Research, is a world expert on timber preservation, a field he worked in for many years.

He joined CSIR's Division of Forest Products in 1937 as a junior research student. From 1974 until his retirement he was an Assistant Chief at Building Research.

During the war years Norm played an important role in developing variable pitch wooden propellers for RAAF aircraft—a precautionary measure taken in case shipments of imported metals were unable to reach Australia.

In 1946 he was appointed Officer-in-Charge of the Division's wood preservation section at a time when commercial users of timber were sceptical about the value of such research.

Norm is well known in industry circles for his development of several wood preservatives which have been of considerable economic importance to the timber industries in Australia and Papua New Guinea.

Science at work

'If you've gotta go, you've gotta go....'

Changes at Dairy Research

Brian McKeown

Mr Brian McKeown, who has been industry liaison officer at the Dairy Research Laboratory at the Highett complex since 1971, has retired.

Brian joined the Secretariat of CSIRO in 1964 after serving for many years in the Victorian Department of Agriculture as personal assistant to the Director of Agriculture.

While at Head Office he became well known to most of the agricultural and biological oriented Divisions of CSIRO.

Following the move of Head Office to Canberra Brian wished to remain in Melbourne for personal reasons and in 1971 took up his position with Dairy Research where his long association with the dairy industry proved of great value.

He will still maintain his connections with both the Dairy Research Laboratory and the industry in his retirement as an Associate Editor of the Australian Journal of Dairy Technology and as Secretary of the Australian Dairy Products Standards Organization.

Miss Helen Dornom has been appointed to DRL as information and liaison officer. Helen, a graduate in Agricultural Science from the University of Melbourne, has recently completed studies for her Master's degree.

At a staff function to say goodbye to Brian the opportunity was also taken to farewell Mrs Elsie Thorpe who has retired from CSIRO after many years' valued service at the Laboratory as staff clerk.

WA scientist seconded

Dr Graham Chittleborough who has been the Officer-in-Charge of the Western Regional Laboratory of the Division of Fisheries and Oceanography in Perth, has been seconded, initially for one year, to the Western Australian Department of Conservation and Environment.

Graham will head a three-year study of Cockburn Sound, near Perth. In the first year he will work full-time setting up the project.

'Attempting to unravel some of the ecological, industrial and social problems involved in Cockburn Sound should present some challenges' he said.

Graham leaves just as the new Fisheries and Oceanography Laboratory at Marmion is being occupied.

His role as Officer-in-Charge has been taken over by Bruce Phillips, who has been with the Division since 1967. Bruce's main interest is looking at the larval and early juvenile stages of the Western rock lobster.

Strange

A quote from a letter written to the Division of Textile Industry in Geelong has left some of the staff wondering about their reputation outside the Organization. It reads: 'Due to the fact that you are principally research scientists (sic), it is comprehensible that you have not cleared up some doubts yets.....'.

In brief

Dr Don Martin, who recently retired from his position as Officer-in-Charge of the Tasmanian Laboratory, has been presented with a rare award by the Royal Society of Tasmania.

The society has given him their medal in recognition of his 'prolonged research of high merit'.

It is only the sixth time the society has awarded the mdeal since 1927.

Mr Basil Walby, Editor-in-Chief of CILES, has been elected President of the Imprint Society.

The society, which includes printers, graphic designers and book production experts among its members, encourages better standards of typography and production through its annual awards for book design in Australia.

Basil is the first person to be appointed to the position from the public section of the industry.

Mr Barry Smith of the Division of Plant Industry and his wife won the 1976 Canberra Gardener of the Year competition. Their prize is a return trip for two to London with Qantas, plus $200.

Stop press

As this issue was going to press news was received of the death of one of CSIRO's most respected scientists, Dr Nancy Burbidge of the Division of Plant Industry in Canberra.

At the time of her death, Nancy was working on a new 'Flora of Australia'. Before that she was responsible for the Division's herbarium. Under her guidance it became a major centre for studying Australian native plants.

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

Editor. Dorothy Braxton

214##1977

Coresearch

A monthly publication for CSIRO staff

April/May 1977 214

CSIRO supports establishment of ASTEC

The Federal Government has announced that it will establish the Australian Science and Technology Council as a permanent and independent body.

The announcement, made by the Prime Minister, Mr Malcolm Fraser, in the House last month, has been welcomed by CSIRO.

'The formation of ASTEC is an important event in the provision of machinery to give the Government advice on science policy', said the Chairman, Mr Victor Burgmann.

'We will be anxious to help ASTEC accomplish its difficult task.'

CSIRO would continue to advise the Government through its Minister in respect of its own areas of responsibility.

'The establishment of ASTEC does not alter that,' Mr Burgmann said.

The Council will have a part-time Chairman, Professor Geoffrey Badger, a research professor at the University of Adelaide, formerly its Vice Chancellor, and President of the Australian Academy of Science. He is a former member of the CSIRO Executive.

The deputy Chairman will be Sir Rutherford Robertson, Director of the Research School of Biological Sciences at the ANU. Sir Rutherford is also a former member of the Executive.

The other 13 members of the Council, who will also be part-time, are persons who have been selected for their individual qualities and on the basis of their ability to contribute to the work of the Council. They do not represent specific interest groups.

There are no Government scientists on the Council. ASTEC will, however, draw on staff of existing departments and agencies for the expertise, knowledge and assistance necessary to enable it to carry out its terms of reference.

The Council will report to the Prime Minister. Its small secretariat will be attached to the Prime Minister's Department.

Functions

The functions of ASTEC will be to advise the Government on science and technology, including:

—the advancement of scientific knowledge and the development and application of science and technology in relation to the national well-being;

—the adequacy, effectiveness and overall balance of the national effort in science and technology in government, industry, education and other sectors of the community;

—the assessment of gaps and overlaps in science and technology;

—the identification and support of new areas of science and technology likely to be of national importance;

—the practical development and application of research discoveries;

—means of improving efficiency in the use of resources related to science and technology.

Survey

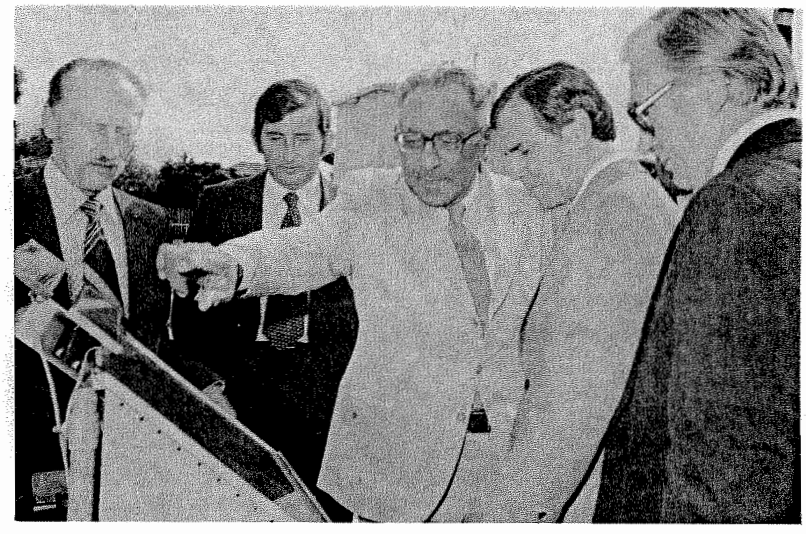
The Council's first task will be to prepare a report on the present state of science and technology in Australia, a move recommended by the Interim Council.

At the same time, however, the Council will also conduct investigations and provide advice on matters which are referred to it by the Government or which arise from its own initiatives.

Some priority topics on which the Council is likely to be involved in advising the Government include the balance between investment in government and industry research and development, and improved arrangements for technology transfer.

Quote:

'I am concerned for the environment primarily because I intend to spend the rest of my life in it.'—Professor Hans Kornberg, Chairman of the UK Royal Commission on Environmental Pollution.



The Premier of the Cook Islands, Sir Albert Henry takes a look at the technology of solar energy applications at the Division of Mechanical Engineering. From left: Dr J.J. Kowalczewski, Acting Chief of the Division, Mr Bill Baxter, Private Secretary to the Minister for Science, Sir Albert Henry, Premier of the Cook Islands, Senator J.J. Webster, Minister for Science, and Mr Wal R. Read, a Divisional scientist.

Cook Islands may use solar energy technology

The application of solar energy may be a solution to the increasing energy problems being experienced by the people of the Cook Islands.

To see how their abundant supply of sunshine might help his people, the Premier of the Islands, Mr Albert Henry, recently visited the Division of Mechanical Engineering at Highett for talks on the subject. Accompanying him was the Minister for Science, Senator J.J. Webster.

The Cook Islands lie scattered over about 850,000 square miles of the Pacific Ocean, east of Fiji. The population is about 20,000.

The main problems, according to Sir Albert, are fresh water and power supplies. At present the Islanders draw water from bores and wells. These do not produce sufficient water and easily become polluted, causing health hazards.

The Division suggested the Islanders consider solar desalination of sea water. This could provide fresh water throughout the year without needing back-up fuels.

Further, maintenance of the stills would not require skilled labour or expensive equipment. Technology for solar distillation was developed by the Division in the 1960s.

For power production, it might be possible to use the Islands' strong and reliable winds. Small wind-powered systems could generate electricity for lights and small electrical equipment in houses and groups of houses. Technology for small-scale power generation using wind-driven turbines is also well established in Australia.

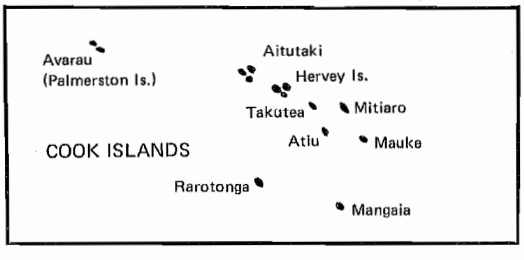
Detailed investigation of local conditions would be needed to determine the feasibility of both schemes.

Sir Albert intends to study the the possibilities more closely, and he may approach the Australian Government later for more advice and assistance.

Awards

Mr B.J. Rigby of the Division of Textile Physics, Sydney, has been awarded a D.Sc. by the University of New South Wales for his published work.

Mr John Calaby of the Division of Wildlife Research, Canberra, has been awarded the degree of Doctor of Science *honoris causa* by the Australian National University.



Inquiry Committee seeks staff views on CSIRO

Listening to the views of the Melbourne staff are (from left): Mr W.N. Hurst (Inquiry secretary), Sir Cecil Looker, Professor A.J. Birch and Mr R.T. Madigan (the Inquiry Committee) and Mr L.R. Wiggins (Inquiry investigator).

In the past few weeks a number of Divisions have been visited by members of the Independent Committee of Inquiry on CSIRO. In addition, meetings have been held in the main cities where staff have had the opportunity to express to the Committee their views on a wide range of topics relevant to the Inquiry.

In a statement issued to staff attending the meetings, the Committee said it had been set 'a daunting task' in having to inquire into and report on an organization as large and diverse as CSIRO.

The fact that the task had to be completed by the end of July made the problem even more difficult.

The main topics on which the Committee sought staff opinions were confined to:

—**The objectives of CSIRO . . .** could these be defined in relation to long and short term community needs?

—**The overall Organization as one institution or several rather independent units . . .** for example, separate authorities might deal with minerals and energy, rural industry, manufacturing industry. What were the arguments to justify the present monolithic system?

—**Mission oriented work . . .** how far should CSIRO be concerned with background work and how far with direct problem-solving? How were its activities in both areas to be desirably related to researches in Government departments (State and Commonwealth), CAEs, universities and other institutions?

—**Advice on social, economic and political objectives . . .** what mechanism should be set up to ensure that such advice and assessment was automatically fed into scientific programs?

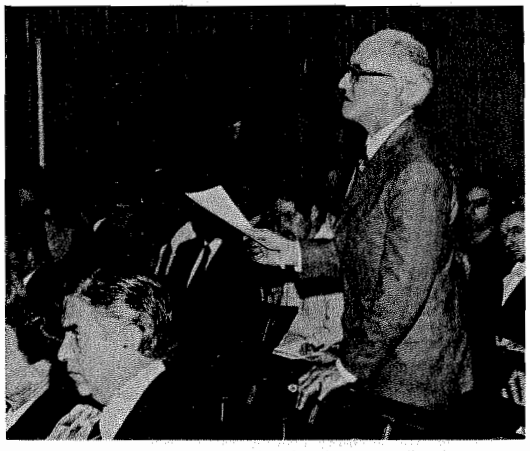
—**Staff and research relations and other institutions . . .** in particular was it desirable, and if so what mechanisms were required, to enable partial or total staff transfers from or to tertiary institutions, and the conduct of joint research programs? In other words, was it possible and desirable to integrate further the research efforts directly or indirectly sponsored by the Government?

—**Staff careers . . .** what recommendations should be made to take account of a probable future slow-growth condition with an increasing demand for elasticity of work? How were the problems of changing interests and abilities with increased age to be met for the benefit of both CSIRO and individuals? What conditions must be set if any of the following were to be contemplated: early retirement, transfers to government or tertiary education, transfer to industry or extension services, non-tenure appointments?

—**Scientific programming . . .** what organisation could be provided to reconcile autonomy with relevance and teamwork? What was the best way to develop programs as seen from the viewpoint of individual scientists? Would an extension of the idea of grouping Divisions provide further opportunities for rationalisation, peer assessment and taskforce programs?

—**Finance . . .** was it desirable to increase CSIRO direct financing by means such as 1) levies, e.g. on industry after the example of the RIRF? 2) a greater effort to direct work towards patents and licences? 3) an extended system of contract R&D involving two-way exchanges with industry or Government departments? How were benefits of CSIRO work to be assessed?

—**Management problems . . .** could business efficiency be further exercised for the benefit of research programs?



Dr Gordon Crewther, Chief of Protein Chemistry, discusses a point with the Committee at the Melbourne meeting.

Photos: Eric Smith

Academy membership

Dr C.C. Heyde of the Division of Mathematics and Statistics in Canberra was elected to Fellowship of the Australian Academy of Science at the Academy's annual meeting last month.

Dr Heyde's main research interests lie in the field of probability theory. He has published widely in this and related areas and is known internationally for his work.

Dr K. Norrish from the Division of Soils, Adelaide, was also elected to the Fellowship.

His main contributions have been in the field of physics and geosciences.

Farewell to Chief at Griffith

Dr Henry Barrs has been appointed Acting Chief of the Division of Irrigation Research for 12 months following the retirement of the Chief, Mr Eric Hoare.

A farewell function for Mr Hoare was held at the station at the barbecue area, a scene of many social gatherings over the 19 years Mr Hoare was head of the Division.

About 160 members of the staff and friends were there to wish Mr Hoare well in his retirement. Visitors included the Chairman, Mr Victor Burgmann.

OBITUARY

Mr F.J. Moore

Mr F.J. Moore, Senior Technical Officer in the CSIRO Division of Environmental Mechanics, Canberra, has died.

Fred's technical experience, mainly in instrumentation, spanned 40 years, beginning in England and continuing on his arrival in Australia in 1951.

He joined the Division of Plant Industry in 1962 as a technical assistant moving to Environmental Mechanics in 1971.

His CSIRO colleagues will miss his great technical skills, and his good fellowship and dry wit.

He is survived by his wife, Dorothy, and two daughters and a son.

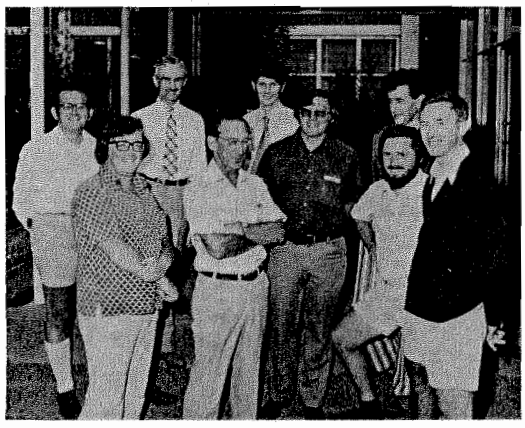
Dr Paul Wild appointed to Executive

Dr Paul Wild, Chief of the Division of Radiophysics, has been appointed an associate member of the Executive for a period of 12 months.

Recognised as one of the world's leading solar physicists, Dr Wild has been on the Division's staff since 1947. He first joined CSIRO to work on problems in radio astronomy, especially the sun, and from 1966–71 was Director of the Division's solar radio observatory.

Dr Wild was appointed Chief of the Division in 1971. In recent years he has been closely associated with the development of Interscan.

While Dr Wild is on the Executive, Mr H.C. Minnett will act as Chief of the Division.



Cloud experts at Epping — (from left): Dr T.S. Steiner, NZ Meteorological Service; Dr C.E. Coulman and Dr M.J. Manton, Cloud Physics; Associate Professor W.C. Cotton, Colorado State University; Professor B.R. Morton, Monash University; Dr M.J. Miller, Imperial College, London University; Mr J. Warner, Chief, Cloud Physics; Dr T.L. Clark, Atmospheric Environment Service, Canada; Dr B.R. Ryan, Cloud Physics.

Cloud modellers meet at Epping

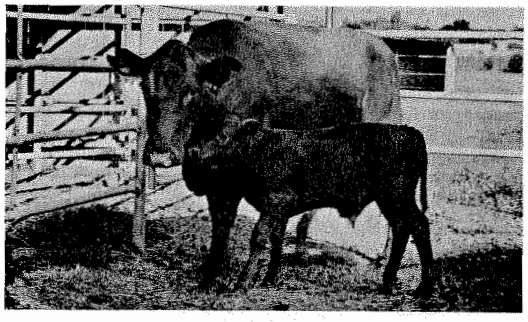
A small number of specialists who are involved in cloud modelling attended a workshop at the Division of Cloud Physics at Epping. The object of the exercise was to improve communication between experts in theoretical and numerical simulation of clouds on computers and observational scientists who specialise in measurement of the real atmosphere.

A core of 11 delegates, of whom four were invited from overseas, attended full-time but additional specialists were present at certain sessions.

For the first two weeks the participants discussed the subject in depth. The overseas visitors then spent a week visiting other related establishments in Australia and returned to Epping to prepare a report on the recommendations which stemmed from the workshop.

Adelaide school gets SA's first Belmont Red calf

The pride of Urrbrae



The first Belmont Red calf to be born in South Australia is doing well, to the delight of students at Adelaide's Urrbrae Agricultural High School.

The school is believed to be the only one in Australia with a Belmont Red, a cattle breed developed by CSIRO for beef production in hot, dry areas.

Behind the birth of the bull calf is a story of youthful enthusiasm, backed up by the generosity of two Australian companies and an enterprising part-time grazier.

It began last year when Urrbrae teacher Mr Ian Wilson decided his students should have an African or Asian cow for comparative studies with the school's British breeds.

One of Mr Wilson's students recalled seeing CSIRO's illustrated science strip 'The Researchers' in a Sunday newspaper featuring the Belmont Red breed, so Mr Wilson decided to try to obtain one.

The Belmont Red is not a pure African breed, but a cross between Hereford, Shorthorn and Africander breed. Under tropical or hot, dry conditions it shows superior weight gain, higher fertility and better tick and parasite resistance to British beef breeds.

Mr Wilson contacted CSIRO's Tropical Cattle Research Centre in Rockhampton, only to find the annual sale of Belmont Reds had been held the day before.

However, he was put in contact with Dr Warren Johnson, a Victorian surgeon who had bought three cows and a bull at the sale, and taken them to his small property at Broadford, north of Melbourne.

Dr Johnson generously loaned one of his cows to the school, with a bonus — it was pregnant. Elders-GM solved another problem when the company offered free transport for the cow from Victoria to Urrbrae.

Dr Johnson, in a further gesture, offered the school the cow's first female calf, and when the bull was born, extended the loan.

The big pastoral company, Dalgetys, solved the problem of lack of a bull in Adelaide with the offer of a free artificial insemination service. Dalgetys owns Australia's largest Belmont Red herd.

Dr Johnson originally bought his small herd after hearing that 18 years of development had gone into the Belmont Red breed.

'I thought that instead of just raising a few beef cattle, I would try something new,' he said. 'Although it was bred for the tropics, CSIRO said the Belmont Red might go well in dry southern areas, like the Riverina and the Mallee region of Victoria and South Australia.'

Dr Johnson is delighted with his unusual herd, since swelled by the addition of four more cows. Including the Adelaide calf, his seven cows have produced six calves — four heifers and two bulls.

He says the cows have maintained condition, despite the rigors of calving, and despite a very dry summer which has seen British breeds in the area lose condition.

'The Belmont Red appears to have inherited the placid temperament of African cattle and they're easy to handle,' Dr Johnson said.

'I'd now like to see how they would go in the Mallee or Riverina, which would be a better test of their qualities. As far as I know, nobody has tried them in those areas.'

FORESTRY EXPERTS INVADE CANBERRA

Alan Brown, Christel Palmberg and a team of helpers at the Division of Forest Research are still recovering after organising the invasion of Canberra by 200 scientists from more than 50 countries.

Alan and Christel were Chairman and Secretary respectively for the 3rd World Consultation on Forest Tree Breeding held at the Park Royal, Canberra for the international scientists.

Discussions centred on the latest research into breeding of forest trees, including moves to conserve the genetic resources of a number of important forest trees.

Australia's own tree, the eucalypt, came in for close attention and was recognised as one of the world's most important forest trees.

Discussions at the Consultation were translated simultaneously into Spanish, French and English.

The head of FAO's Forestry Department, Dr Kenneth King, opened the meeting and the Minister for Science, Senator J.J. Webster, welcomed delegates on behalf of the Australian Government which jointly sponsored the Consultation with FAO.

The new Chairman of CSIRO, Mr Victor Burgmann, extended a welcome on behalf of the Organization.

Now that the rush of the Consultation is over, the Division of Forest Research is organising a fitting farewell to Christel Palmberg who returns to her native Finland soon. Christel is a former FAO staff member who has been with the Division since 1974.

With its increasing international links, Forest Research will sadly miss her multilingual and administrative talents.

Appealing scientists

It is a sign of the times when research institutions turn to the public for funds, says 'New Scientist'.

A recent appeal by Sir Monty Finniston on behalf of the Royal Institution which wants ¾ million, was followed by an appeal a week later for ¼ million by the University of Newcastle upon Tyne. Newcastle wants the money for 'teaching and research in biomedical engineering'.

CSIRO loses well-known personality

One of CSIRO's best known women personalities has retired after 26 years with the Organization.

She is Miss May Guthridge who first joined Head Office when it was located at 314 Albert Street in Melbourne.

For a number of years May was in charge of Executive Services and later joined the Central Communication Unit as an administrative officer.

At a staff function, the Secretary, Mr L.G. Wilson, paid a tribute to May for her long service to the Organization which, he said, had possibly never been fully and publicly recognised.

May Guthridge

CSIRO staff for solar energy team

Membership of the eight-man Victorian Solar Energy Research Committee announced last month includes Wal Read, leader of the Solar Energy Utilisation Group at the Division of Mechanical Engineering.

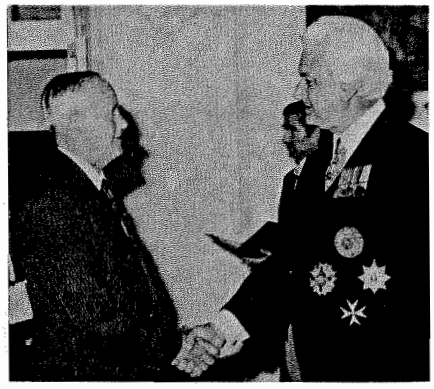
Roger Morse, Director of the Solar Energy Studies will act as expert adviser to the Committee.

The Committee will review solar energy research in Australia, advise the Victorian Government on ways to support promising research, maintain liaison with other relevant Australian committees, publicise possible solar energy applications and inform the public of realistic contribution possible from solar energy.

CSIRO personnel receive honours

Sir William Vines
Knight Bachelor

Mr Victor Burgmann
CBE



Mr Ken Prowse
MBE

The Chairman of CSIRO, Mr Victor Burgmann, a part-time member of the Executive, Sir William Vines, and the ACT Regional Administrative Officer, Mr Ken Prowse, were among the 62 people who last month received honours from the Governor General, Sir John Kerr.

Mr Burgmann was made a Commander of the British Empire in recognition of his service to science, Sir William was created a Knight Bachelor for distinguished service to primary industry, and Mr Prowse was awarded the MBE for service to CSIRO.
The investiture took place at Government House in Canberra.

New facility at MRL may help Sydney's smog problems

A smog chamber installation which, it is hoped, will help solve some of the problems associated with Sydney's smog, has been officially opened at the Mineral Research Laboratories, North Ryde.

The ceremony was performed by the NSW Minister for Planning and Environment, Mr Paul Landa.

Joint hosts for the occasion were Mr Tony Bradshaw, Chief of the Division of Process Technology, and Mr Eric Coffey, Director of the NSW State Pollution Control Commission.

The installation was built with funds provided by the Commission and will be used in a joint program of research into the formation of photochemical smog.

Known as the Sydney Oxidant Study, this is an undertaking involving the SPCC, CSIRO, and Sydney and Macquarie Universities.

Smog is caused by the action of ultraviolet light on a mixture of atmospheric hydrocarbons and oxides of nitrogen, but many details of this highly complex interaction are unknown.

The aims of the study are to identify all the compounds that act as precursors to photochemical smog, discover the origins of those that are most active in the process, and investigate the meteorological conditions that are conducive to its formation.

It should then be possible for the SPCC to minimise photochemical smog by setting new standards to regulate emissions of these precursors.

CSIRO's work in this study is to investigate the role played by hydrocarbons in the generation of Sydney's smog.

The research team consists of Dr Martin Smith and Mr Peter Nelson from the Division of Process Technology, and Dr Frank Whitfield from the Division of Food Research.

Dr Smith and Mr Nelson are members of their Division's Atmospheric Chemistry Section, led by Dr Maurice Mulcahy. This Section is concerned with research into the causes and behaviour of urban and industrial air pollution.

With the help of specialised techniques developed by Dr Keith Murray in the Division of Food Research, well over 100 hydrocarbons have been identified in samples of Sydney's air. The smog chamber will be used to find out how active each of these hydrocarbons is in forming photochemical smog.

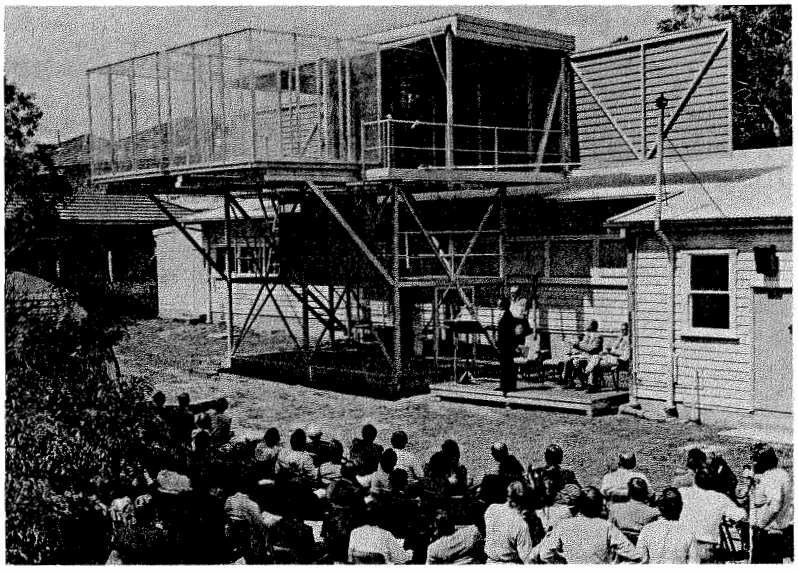
The installation consists of two identical chambers, each 20 cubic metres in volume, mounted on an elevated platform where they can be exposed to sunlight throughout the day.

The walls are made of teflon film. Unlike glass, this is transparent to ultraviolet light, an essential factor in forming photochemical smog.

Air containing different concentrations of hydrocarbons and other pollutants is drawn into the chambers before dawn and the formation of smog is monitored throughout the day by a range of instruments in the laboratory below.

By using one of the chambers as a control unit and changing the concentrations of pollutants in the other, the research team can build up a picture of the particular hydrocarbons which contribute most to smog formation.

At the same time, Mr Harvey Davies of the Division of Computing Research, is setting up a mathematical model of the reactions in the chambers. This will help to elucidate some of the finer points of the photochemical mechanism.



Chris Byrne from the MRL workshop gets a view of the opening of the new smog chamber from the elevated platform. On the dais below (from left) are the NSW Minister for Planning and Environment, Mr Paul Landa, the Chief of Process Technology, Mr Tony Bradshaw, the Director of the NSW State Pollution Control Commission, Mr Eric Coffey, and Dr Maurice Mulcahey, also from Process Technology.

These changing times

An aluminium barge once owned by the Division of Fisheries and Oceanography at Cronulla has been put to a new use...its travels around Port Hacking each weekend carrying icecream for Bay visitors.

The barge is now being used by a local businessman, Mr T. Lynch, who runs the floating ice cream parlour as a sideline to his marine salvage work.

The new business is flourishing under the title of the Ding-A-Ling Ice Cream Company, a far cry from the time when the barge was used for fisheries research.

Report from Hansard

Senator Webster—It is a fairly short paper because of what I believe to be the excellent administration and management of the CSIRO. They have their affairs in excellent shape and I think the general outline of variations makes questions on the financial aspect quite short.—Quote from Minister of Science speaking in the Senate on CSIRO's estimates. (Hansard).

Stargazer

A stargazing enthusiast has bought 30 copies of the Parkes poster from the Parkes Visitors' Centre, not to set up as an opposition salesman but to use as wallpaper in his home.

Science Minister sees Applied Geomechanics labs

The Minister for Science, Senator J.J. Webster, last month visited the Division of Applied Geomechanics, at Syndal, Victoria. He was accompanied by his Private Secretary, Mr L. Williams, and the Chairman of CSIRO, Mr Victor Burgmann.

It was the first time that a Minister for Science had visited the Division since it was established in 1958, and the first visit the Chairman had made to a Division outside Canberra in his new capacity.

Senator Webster was briefed on the Division's research by the Chief, Dr G.D. Aitchison, who outlined projects being done on both civil and mining engineering problems.

The Minister was brought up-to-date on some of the Division's new work on surface and underground coal mining projects in Queensland and New South Wales.

Senator Webster inspected some of the Division's facilities and discussed projects with members of staff. He saw the new Quantimet Image Analysis System that is being used to study the influence of structural features of soils and rocks on their mechanical behaviour.

He also saw a shear strength test made on a coal sample from one of the NSW coal mines and watched one of the first proving tests being carried out to evaluate the new large-scale loading frame being built in the Division's rock mechanics laboratory.

This machine can apply loads of up to 600 tonnes in both vertical and horizontal directions to test equivalent material models of earthen structures such as underground mines and tunnels. The models can be built up to a size of 3m x 3m x 1m.

During a working lunch the opportunity was taken to show Senator Webster displays describing research projects and some of the new rock stress cells and extensometers developed by the Division. These have been patented and are now being manufactured in Australia.

At the end of his visit, the Minister talked to the staff about some of the challenges at present facing CSIRO.

Senator Webster discusses work on ground support research with the project leader, Dr Peter Fuller (left).

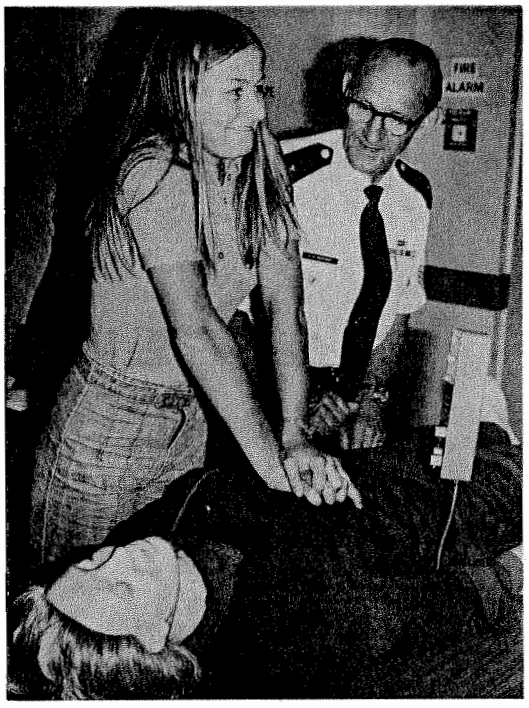
Follow-up

Thirteen secretaries from Melbourne Divisions have visited CILES as a follow-up to their recent seminar conducted by the Head Office Training Group at Chemical Technology.

The visit was to familiarise the group with the information functions and resources of CILES.

Staff train for emergencies

'Oh, doctor, I'm in trouble,
My heart beats much too much
At a certain kind of touch . . .'



Sue Davidson (above) was one of the staff of the Division of Animal Health who attended a demonstration and talk on emergency first aid given by Mr Charlie Bamford (right) from the Division of Chemical Technology.

A film, 'New Pulse of Life', was shown, together with the unveiling of 'Recording Resusie Anne', a lifelike model for teaching cardio-pulmonary resuscitation.

The session was the first of a series of such demonstrations to be held in CSIRO. They will be attended by a number of visitors and the Organization's safety officers in Melbourne.

The function was organised by Mr Geoff Watson, Division of Textile Industry, Geelong, who is convenor of the Technical and Trades Staff Development Committee in Victoria. Photo: Eric Smith

Fire fighting instruction

About 40 people, representative of most of the Melbourne-based Divisions, have attended a practical fire fighting training course organised for the Technical and Trades Staff Training Program in association with Melbourne's Metropolitan Fire Board.

Participants spent half a day learning how to combat fires during fire fighting so that in the event of an emergency they would be better able to handle the situation.

Four sessions were held at this course and more are being planned for additional staff later this year.

Ray Hirschfield (left) of the Printing Unit and Graham Crawford, Applied Geomechanics, find fire fighting is wet business.

Duncan Constable (left), from Mineral Chemistry, David Wignall, Applied Geomechanics, and Jim Reid, Mechanical Engineering, learn how to manage a fire hose.

Severed finger, severed hand? What to do in an emergency

In the event of an accident which severs a finger, hand or part of an arm, bleeding from the severed end can be stopped by gentle pressure bandage. Tourniquets, if applied, should be released half-hourly. The machine causing the damage should be instantly turned off and the severed part or parts removed. They should then be either placed in a plastic bag or wrapped and sealed so that the bag or wrapping is watertight. No attempt should be made to clean up the severed parts before wrapping them. The wrapped parts should then be placed in a container of cold water which could have the addition of a few small blocks of ice.

NOTE: Water in contact with the severed parts will be absorbed by the part and further damage it. Note also that packing in ice will so lower the temperature that it will do further damage. Cold water alone, at about 4°C will preserve the severed part for well over twelve hours and enable the patient and part to be transported to your nearest hospital for consideration for replacement surgery by a microsurgery team. Those injuries that are sharply severed do best, those that have been squashed in a press do less well and those that have been pulled off or avulsed do least well. However, no matter how badly the severed parts appear to be injured the decision as to replacement should be made by the doctors in the hospital.

Prepared by: DR EARL R. OWEN,
Head, Microsurgery Unit
Prince of Wales Hospital,
Sydney.
Courtesy: NML Newsletter.

Narayen staff to the rescue

The Cunningham Laboratory has received a letter from a Queensland grazier, Mr David Jenkinson, in appreciation of the efforts of the staff of the remote Narayen field station who recently went to the rescue of his property.

The property was Hawkwood, about 470 km north-west of Brisbane and the first sign of trouble came when the Narayen staff received a call from the Mundubbera Fire Brigade requesting assistance with a fire.

There had been an explosion in the station lighting plant resulting in a blaze covering the engine room and adjacent workshop.

Most of the station staff were following their usual Sunday morning pursuits when the call for help came through. Lawn mowers and gardening tools were dropped as they responded to the SOS.

Needless to say, the fire fighting tank was not on the truck but hanging ready on its hoist. Within 30 minutes the truck was ready to leave, followed by a Land Rover towing a tanker trailer.

Hawkwood is about 20 km away on a not very good road and normally takes about 25 to 30 minutes by car. On this occasion the truck did it in 20 minutes, even though loaded with 250 gallons of water.

The passengers' comments on the driver's ability were rather pointed as well as unprintable.

The next sequence of events rather resembled, in retrospect, a Mack Sennett farce, according to a 'Coresearch' report. The staff roared into the station, around an outbuilding and stopped dead about 3m from a petrol tank which happened to be burning very well. The property owner yelled for them to get out as he expected the tank to blow any second!

They did – from forward gear to reverse in one swift crunching movement. Unfortunately however, at that moment, the Land Rover unit chose to fly around the corner to be faced with a truck reversing rapidly. Some unusual manoeuvres took place as the men retired to a safer distance.

The Mundubbera Fire Brigade arrived soon after and the staff took over the role of water carriers. For the next two hours they pumped and carted from the nearby river some 3 000 gallons of water, while the brigade damped down the ashes.

After the Brigade left, the Narayen men stayed on, at their request, to finish off any 'hot spots' and enjoyed a welcome cup of tea provided by the property owners.

Damage was confined to the engine room and workshop – in fact they were destroyed. The house, however, the main worry, suffered no damage.

It provided Narayen staff with some excellent fire drill, a few tense moments and, in hindsight, a few laughs.

CSIRO BENEVOLENT FUNDS HEALTHY

Although the expenditure for each of CSIRO's four Benevolent Funds rose this year, financial figures indicate that each of the Funds has adequate assets.

These details were revealed in the combined report of the Funds released last month.

The Brisbane Fund was the only one where expenditure exceeded income. As far as the Funds are aware there are not likely to be any further disbursements needed for the victims of either the Brisbane floods or the Darwin cyclone.

At the annual meeting held in Canberra the financial situation was reviewed and it was agreed that as the combined assets were over $50,000 there should be no increase in contribution rates — 10 cents a fortnight.

All Funds are now able to interchange assets in the event of any substantial expenditure arising.

Membership

Contributor figures have increased during the year and the annual report says it is pleasing to note that the NSW Fund now has 80 per cent of the staff in that State as contributors.

Brisbane has 69 per cent, Canberra 63 per cent and the Southern Fund, which embraces the other areas, has 66 per cent.

The Chairmen of the different Funds paid a tribute in their annual report to Mr Ray Viney who retired last year from the position as Assistant Secretary (Finance and Supplies).

Ray was materially responsible for the establishment of the Southern Fund and encouraged the formation of the Canberra and Brisbane ones.

'He maintained an interest in the activities and development of the Funds over the years and whenever possible he attended the annual meetings of Chairmen. His successor, Mr Howard Crozier, is continuing this interest,' says the report.

The report also paid a tribute to the Chairman and Executive of CSIRO itself for its continued assistance and encouragement.

Finance

The financial situation of each of the Funds is shown below. Figures in brackets are for 1975.

Income and expenditure

Fund	Income $		Expenditure $	
Brisbane	1,718	(1,603)	1,724	(1,933)
N.S.W.	6,020	(5,078)	2,321	(2,207)
Canberra	3,866	(4,479)	1,309	(322)
Southern	7,209	(6,284)	4,509	(1,352)

Assets

Fund	Investments and cash $		Outstanding loans $	
Brisbane	7,403	(7,409)	315	(Nil)
N.S.W.	17,870	(14,181)	610	(923)
Canberra	12,668	(9,657)	1,524	(454)
Southern	15,966	(13,470)	Nil	(Nil)
	53,907	(44,717)	2,449	(1,377)

Purchasing officer has outside interests

When the Queensland Modern Dance Company performs at the world famous Sadlers Wells Theatre and the Royal Albert Hall in London this year its tour manager will be Colin Hamilton of the Tropical Cattle Research Centre in Rockhampton.

For 36¾ hours a week Colin acts as purchasing officer for CSIRO staff located in and around the northern city.

When working hours are over he turns his attention to his other major interest—the Modern Dance Company.

A few months ago he was appointed to represent provincial areas of the State on the company's Board of Directors and now assists it with its planning for the needs of country areas.

Colin provides the Board with valuable knowledge gained over many years of involvement in the cultural affairs of his State.

The company will represent Australia at the 1977 International Festival of Youth Orchestras and the Performing Arts in Aberdeen, Inverness and London for three weeks before visiting Europe.

Colin currently represents Central Queensland on the Board of Directors of the Queensland Arts Council, and holds executive positions with several cultural organisations in Rockhampton.

The first building of the new National Measurement Laboratory at Lindfield in Sydney has been handed over to CSIRO. It is the main workshop building and staff have now begun moving over from their former location at their laboratory at Sydney University. Some of the staff present at the time of the handing over were (from left): W.R.G. Kemp, J. Coles, A. Sinanian, D. Prendergast, W. O'Brien, R. Macfarlane, (all NML), Frank Whitty, (HO), G. Wildman (NML) and Ken Baker (HO).

Parkes Visitors' Centre attracts crowds

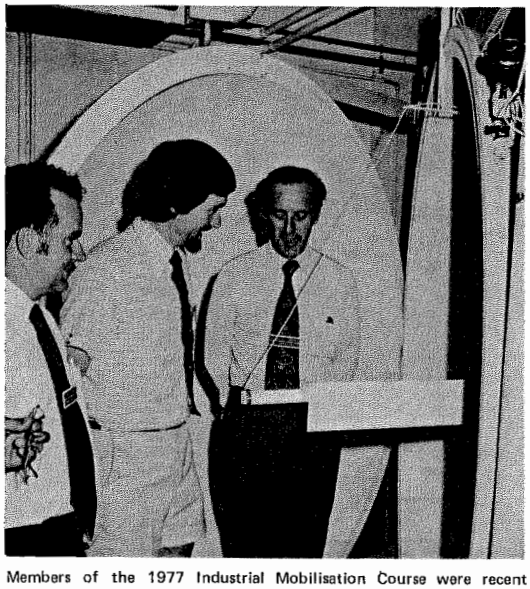
The Parkes Visitors' Centre recorded its largest attendance in one day at Easter when nearly 1400 people visited the telescope and centre.

Information Officer, Les Fellows, arranged with the promotors of the Antique Car Rally to spend several hours at the telescope. The dish was not in operation over the weekend and was tipped over facing into the centre so that tourists could get a full view of its interior.

The drivers of the 140 cars which were part of the rally were invited to park their cars around the telescope instead of using the normal park, an action that was also appreciated.

Hundreds of tourists that day took the opportunity to enjoy the audio visual 'experience', 'Listening to the Stars' at the Centre and many more took time out to look at the associated display.

INDUSTRY LOOKS AT NML



Members of the 1977 Industrial Mobilisation Course were recent visitors to the National Measurement Laboratory in Sydney. They included personnel from industry, the Armed Forces and tertiary establishments. One of the items of equipment which interested them was the large photometric integrating sphere used to measure the luminous flux from a fluorescent lamp. Dr A.J. Farmer (centre) demonstrated how this works.

Senators visit Head Office...

Head Office has been host to the Standing Committee on Science and Environment. The visitors included Senator D.S. Jessop (S.A.), (Chairman), and Senators N.T. Bonner (Qld), M.A. Colston (Qld), J.I. Melzer (Vic.), J.A. Mulvihill (NSW), M. Townley (Tas.), and Mr P. St. J. Dawe (ACT), (Secretary).

During a day-long visit, the Committee had discussions with the Executive and Secretariat on a number of topics of mutual interest.

These included a talk on arid zone research given by Mr Owen Williams of the Division of Land Resources Management, in which he emphasised the way liaison and research co-ordination is achieved.

During the day the Committee also visited the Division of Wildlife Research at Gungahlin.

...and politicians go to Highett

The Premier of Victoria, the Hon. R.J. Hamer, the Victorian Minister for Fuel and Power, Mr Balfour, and colleagues in the Premier's Department, the State Electricity Commission, and the Gas and Fuel Corporation, have visited the Division of Mechanical Engineering.

They were anxious to learn at first hand of the Division's activities, particularly in the field of solar energy.

After brief introductory talks by the Chief of Mechanical Engineering, Dr Barry Rawlings, group leaders Wal Read, Mike Wooldridge and Bob Dunkle, and an outline of related programs in other Divisions by Roger Morse of the Solar Energy Studies Unit and Dr Roy Muncey, Chief of Building Research, the Premier and his party inspected the array of solar projects.

Staff say farewell to former Chairman

In the weeks preceding his retirement, Sir Robert Price visited a number of CSIRO laboratories around Australia where at a variety of informal social occasions he was able to say goodbye to colleagues and people closely associated with the Organization.

In their turn, staff paid their tributes to the Chairman and wished both him and Lady Price a happy retirement.

The farewell visit to Adelaide by Sir Robert catalysed a successful and enjoyable 'get together' among the Adelaide CSIRO staff.

In the midst of the more formal occasions being organised across Australia for Sir Robert, the Adelaide contingent opted for a rather different function.

In the true spirit of the 'Wine State' the Cellars at the local Stonyfell Winery Estate, only a few miles from Adelaide, were chosen as the venue.

The meal consisted of chicken barbecued on charcoals and salads ('strictly fingers'), washed down with an assortment of selected Stonyfell wines. The motto, 'eat, drink and be merry' truly applied and a casual, informal atmosphere prevailed.

Sir Robert was able to mingle and chat with CSIRO staff from all Adelaide Divisions, including several retired staff members, and with other guests.

This gathering of Adelaide CSIRO Divisions on a social basis was in itself a rare event, surprising for such a small city, but judging by the success of the evening, it is hoped that it will be the first of many such functions in the future.

Degree

In Brisbane members of the Queensland State Committee and a group of close friends drank his health and wished him well in the years ahead.

During the evening the Chairman of the State Committee, Professor Norman Lahey, presented Sir Robert with an honorary degree and a special 'medal' struck for the occasion.

The degree was that of Baccalaureate of Australian Science, Technology, Administration, Research and Development, entitling Sir Robert to a new set of intriguing initials to add to his KBE, D.Phil, D.Sc.

In a more reverant fashion, Sir Robert was given a fairly old and rare publication, 'Queensland Flora', a book which he greatly appreciated.

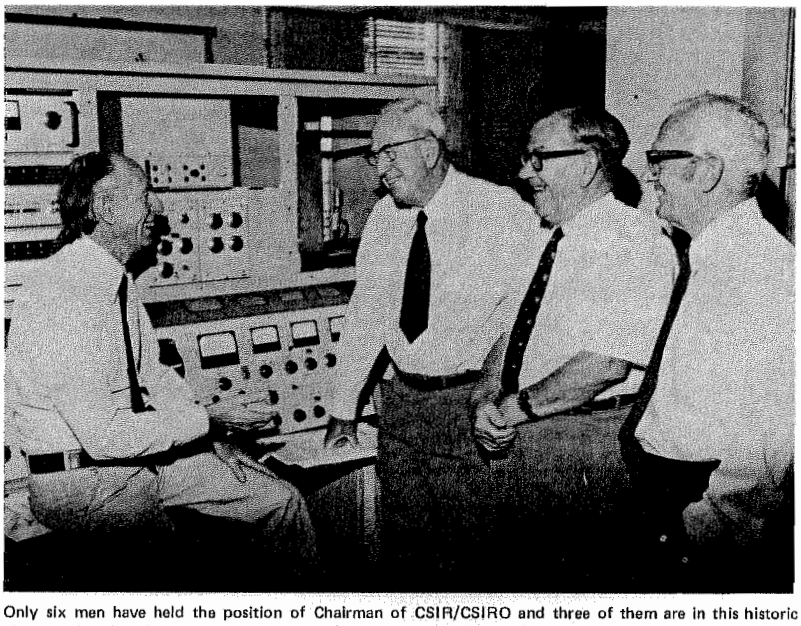
In Sydney, the Chairman had the opportunity to say farewell to the staff when he visited a number of Divisions, and colleagues again took the opportunity to wish him a pleasant retirement.

The Sydney Chiefs and Officers-in-Charge of Units and their wives attended a dinner at the Division of Food Research given in Sir Robert's honour. Among the guests were several old colleagues including Dr J.R. Vickery and Dr Arthur Briggs.

Host for the dinner was Mr Michael Tracey, the present Chief of Food Research.

The Chief of Chemical Physics, Dr Lloyd Rees, organised the Melbourne farewell from the Chiefs. This took the form of a lunch time barbecue where guests included Sir Ian Wark, Mr Lewis Lewis and Professor J.M. Swan.

The good wishes of the Chiefs was formally conveyed to Sir Robert by Dr C.H.B. Priestley, Chairman of the Environmental Physics Laboratories.



Only six men have held the position of Chairman of CSIR/CSIRO and three of them are in this historic photograph taken in Canberra. Sharing a joke with the Chief of the Division of Entomology, Dr D.F. Waterhouse (far left) are (from left) Sir Frederick White, Sir Robert Price and Mr Victor Burgmann.
Photo: Peter Hay

Regional Administrative Officer, Ken Prowse, calls for three cheers for the retiring Chairman, Sir Robert Price, at an ACT staff function held at Forest Research.

In an informal mood at the staff party in Canberra, Sir Robert calls for three cheers for CSIRO as it moves into its second 50 years of achievement.

Chiefs' party

At one of the last functions, the Executive, Secretariat and the Chiefs and their wives, as well as a few close friends of the Organization, paid their tributes to Sir Robert at a dinner party in Canberra hosted by Dr D.F. Waterhouse.

The staff of the Canberra Divisions, Head Office and the RAO, as well as some former members of the staff, chose to say their goodbyes to Sir Robert and Lady Price during the course of a party organised to mark the start of the second 50 years of achievement of CSIRO.

Among the guests were the Minister for Science, Senator Webster, a former Chairman, Sir Frederick White, and the incoming Chairman, Mr Victor Burgmann — three of the Organization's six Chairmen.

An extremely beautiful work 'The Australian Flower Paintings of Ferdinand Bauer' was presented to Sir Robert. The book, one of a limited edition, like the Queensland gift, was of special interest to Sir Robert who has a particular love of Australian flora.

At the Perth function, (after the speeches were over), Denis Hurle of LRM, devoted a little attention to Christine Daniel, LRM mag. card operator.

The party was a strictly informal evening. Because of the sudden drop in Canberra's temperatures, it was transferred from the outdoors of the Ginninderra Field Station to the Division of Forest Research. The same casual arrangements stood, however, and the only brief moments of formality came when the Canberra RAO, Ken Prowse, called for three cheers for Sir Robert and Lady Price.

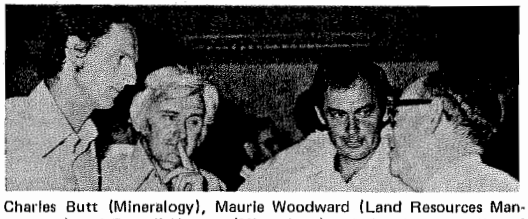
Making one of his final speeches to the staff, Sir Robert spoke about some of the challenges he felt lay ahead for the Organization and his conviction that CSIRO would meet them.

In a different vein, he also acknowledged the strength of the social clubs throughout the Organization. He felt they were responsible for much of the goodwill and friendship that existed within CSIRO.

The retiring Chairman meets the retiring oldest CSIRO inhabitant. When Sir Robert made his last official visit to the Division of Animal Health in Melbourne he took the opportunity to congratulate Jeff Foley on his 49½ years of service with the Organization. Jeff retired from CSIRO last month. It is believed that Eric Smith (who took this picture) probably now holds the honour of being the longest serving member of the staff. Eric joined CSIR in 1931.

The experts pass their opinion on some of the local produce at Stoneyfell Winery in South Australia during Sir Robert's last visit to Adelaide. From left: Sir Robert, Dr John Possingham, Chief, Horticultural Research, Dr Waldie Forrest, Director of the Wine Research Institute, and Dr Arnold Martin, Chief, Soils.

Photographers: Eric Smith, John Coppi, Bill van Aken, Ross McKenzie.



Charles Butt (Mineralogy), Maurie Woodward (Land Resources Management) and Russell Hudson (Mineralogy) wait for the punch line of a story told by Sir Robert at the 'Sundowner' the WA Labs turned on to say farewell to the Chairman.

The 'mob' from Entomology enjoying themselves at the Canberra party—(from left) Andy Moore, Maureen Gallaway, Geoff Foster and Juleen Cavanaugh.

Siroforum

CSIRO logo

I wish to add the suggested logo for CSIRO to those which have already been submitted and published in recent editions of 'Coresearch'.

To me this logo embodies in a simple way the meaning of CSIRO.

The letters occupy the entire area of Australia, symbolising the manner in which its research effects all aspects of Australian life in laboratories spread over all Australian States and territories.

To this logo can be added in an appropriate way, the name of each individual Division or Unit.

Deborah H. Sporrer
Wheat Research Unit
North Ryde

A member of staff in Adelaide who prefers to remain anonymous (but who nevertheless submitted his name to the editor) has sent the following design as a suggestion for a logo for CSIRO.

In his explanation of the various aspects of the design he says:

- The figure holding the torch represents scientific aspiration and the quest for knowledge.
- The hand among the stars represents the outer reaches of CSIRO's study of our universe.
- The sphere is obviously the earth with its atmosphere shown as hatching.
- The stylised drawing of Australia is useful in that it reminds other countries of our participation in research.
- The letters CSIRO have already become a well recognised symbol in their own right and should be used as they have been in the past. They may be a little too large in this design and perhaps letters with more character should be chosen.

The human figure shown in the design is based directly upon a bronze statue made by the great Australian artist Arthur Murch and is part of a memorial plaque erected on a wall within one of the older buildings of the Division of Human Nutrition.

The plaque honours the memory of the late Thorburn Brailsford Robertson, Chief of the original CSIR Animal Nutrition Laboratory, Adelaide, South Australia. I trust that the incorporation of the small statuette within a logo design will show no disrespect to this great man.

The right word

These days (so we are exhorted) the right word to use is 'flammable'. Candidly, I don't think this is very telligent at all, and I hope the word never gets corporated into legal standards.

Unfortunately, though, the incidence of the word seems to be creasing.

We are told that there is a powerful case for the corporation of this word into the English language: namely, that migrants and other persons with foreign mother tongue could get the wrong ideas if told that something is inflammable.

Hold it then! What *is* the word, in some of those other languages, for the concept of catching fire easily?

Let's see — French: *inflammable*!; Italian: *infiammabile*!!; Spanish: *inflamable*!; Dutch: *ontvlambaar*; German: *entzundbar*.

All right, then, does the word 'flammable', or something like it appear in those languages?

Answer: No.

What about our own dictionaries? The Shorter Oxford English Dictionary gives: flammable = can be set on fire; inflammable = *easily* set on fire.

The Random House Dictionary of the Enblish Language gives: flammable = inflammable (!!), from the Latin flammare to set on fire; inflammable, from the Latin inflammare to inflame.

Now, I'm not normally of a flammable disposition, but by crikey this muckin' abart with the language really makes me breathe fire, and I think some people are going to get their fingers burnt.

Hervey Bagot
Division of Mineral Chemistry,
Port Melbourne.

and more right words...

CSIRO's veteran photographer Eric Smith has long had an interest in the correct use of the English language. In a precise note, he has drawn our attention to the wrong use of a word in the last issue of 'Coresearch'. In a page 2 story we described the award given to Mr John Bolton of the Division of Radiophysics by the Royal Astronomical Society as being 'prestigious'.

Eric gave us the dictionary meaning of the word . . . . . 'practising juggling or legerdemain, sorcery, magic, conjuring'. Since the award was a high honour for the recipient, we can only admit that our choice of words was inappropriate. —Ed.

...and phrases

W.S. Gilbert would have been appreciative, if not envious, of certain gems in one of the latest circulars from Head Office to Chiefs.

'I am writing to let you know of the arrangements which the Executive is making to deal with situations, predictable and unpredictable, which may arise in the next year . . .'

This transcends even the accomplishments of the Modern Major General who, skilled as he was in matters animalculus (not to mention the differential calculus) never purported to deal with the unpredictable.

But later in the circular we are disillusioned: 'Since the outcome of the Inquiry cannot be foreseen, it is not possible, at this stage, to contemplate arrangements which may be required to deal with the outcome'.

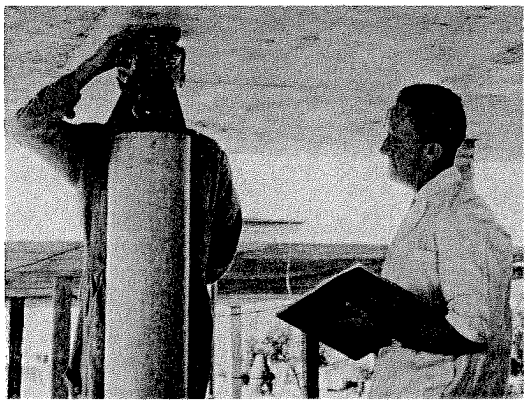
Why not? The House of Peers throughout the war did nothing in particular . . . but did it very well. And there is no possible probable shadow of doubt, no possible doubt whatever that they *are* doing it very well, as demonstrated by the description of the game of Head Office musical chairs described in the latter part of the circular. 'Be careful to be guided by this Golden Rule: stick close to your desks and never go to sea and you may be ruler of the Queen's Navee...(chorus) *stick close to your desks and never go to sea and you may be ruler of the Queen's Navee.*

Substitute 'laboratory' for 'sea' and I fear that the latter quote is suitable for inscription on the Head Office portals.

(And, in case the Lord High Executioner has a little list, I sign myself.)

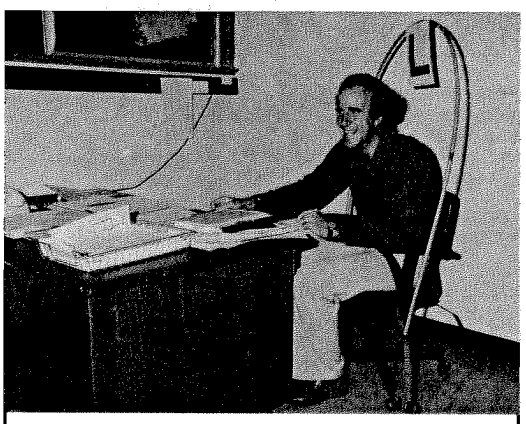
G.R. Dolby
Cunningham Laboratory
St Lucia, Brisbane

Science at work



'Really, Doc, it's not true what they say about all of us in Staff Section. Hold it! Down periscope! Dive, Dive, Dive!'

Learner's chair



New furniture to replace that destroyed in the great fire of 26 September 1975 was recently purchased when the rebuilt laboratory of the Division of Textile Physics was reoccupied.

It included an office chair fitted with casters and allocated to one Rob Rottenbury. Not being familiar with this type of roving chair Rob's first attempt to mount it was less than successful.

His colleagues accordingly devised and constructed a suitable learner's rig complete with safety harness as illustrated in the accompanying photograph. Within a few hours of using the rig Rob had progressed sufficiently to do without the rear view mirror.

The rig will shortly be available for anyone who is experiencing difficulty with this type of vehicle. One of its advantages is that no instructor is required, a considerable saving in these days of restricted ceilings.

Safety notes

It will be noted that Safety Notes carefully avoids the 'naming' of laboratories when reporting various incidents, the reason for which is obvious. However, precedent must be broken, and the following relates to the Division of Chemical Technology.

Like many other laboratories, problems were being encountered with the disappearance of, or unlawful modifications to, electrical extension and other flexible leads.

The Division has had manufactured a flexible three core cable with an outer covering of bright orange with a green stripe. The letters CSIRO are embossed at 10 cm intervals.

Plugs and sockets have a transparent outer cover and the wiring to the terminals is clearly visible. The plugs and sockets are sealed to the cable outer covering with a suitable adhesive.

Leads can be inspected visibly for good connection to terminals, removal of the plugs or sockets is difficult, and the bright colour reduces tripping hazards.

The cable is the same price as ordinary grey flex, but has to be purchased in larger quantities.

Consequently, the Division is offering reels of 100 m to other Divisions.

If you are interested, a sample lead is available for inspection from the Head Office Safety Officer.

J.W. Hallam
Safety Officer

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

Editor. Dorothy Braxton

215##1977

Coresearch

A monthly publication for CSIRO staff

June/July 1977 215

Staff may operate own medical fund

CSIRO staff may establish their own medical and hospital insurance fund. Last month representatives of the Staff Associations, Benevolent Funds and Credit Societies met to discuss such a proposal with representatives from the Commonwealth Department of Health.

Should the proposal be implemented, a medical scheme could be established by early next year.

From the meeting, held in Canberra, a working party was set up to undertake a feasibility study. The convenor of this is Mr Howard Crozier, Laboratories Co-operative Limited.

Other members are Dr Graham Brown, CSIRO Officers' Association; Dr David Goodchild, Chairman of the Joint Benevolent Funds Committee; Mr Bill Hosking, CSIRO Cooperative Credit Society; Dr Don Morton, Queensland Benevolent Fund; Mr Trevor Clarke, NSW Laboratories Credit Union Ltd.; Mr John Warwick, representing the Executive; and Mr Ian Farrer, Laboratories Co-operative Ltd and the Head Office accountant.

The idea of CSIRO staff having their own medical insurance scheme is not entirely new. In 1962 the then accountant of the Canberra Regional Administrative Office, Mr Ted Petersen, submitted a formal proposal to the Secretary.

The then Secretary, Mr Guy B. Gresford, reached the conclusion, however, that it was not practical to pursue the matter any further.

The present proposition was put forward by Dr Don Morton of Brisbane, who has made a study of other health schemes which have been started by staff associations of other organisations.

'We would need to have about 1000 members before the idea could get off the ground,' Mr Crozier said. 'The scheme would be open to members and their families and we would operate a full range of medical and hospital benefits.

'We would hope to be able to offer discount rates for the services and have a scheme which would be fully reciprocal with other schemes.'

The first step the working party plans is to conduct the feasibility study which will show whether enough of the staff would be interested and whether the proposal would be viable.

With the cooperation of the Health Department, a more detailed study will be made of similar staff-operated schemes.

A number of problems such as what would happen when members of the staff retired or resigned from CSIRO would have to be looked at, Mr Crozier said.

'If we decide to go ahead with the plan, we would probably endeavour to get financial backing from a bank. It could be an attractive proposition for them, with the fund eventually becoming a multi-million dollar business.'

Staff who would like to make further inquiries about the proposal or submit ideas should write to Mr Crozier at Head Office. Letters to the Editor of 'Coresearch' on the subject would also be welcomed.

Sell-out

The Brisbane RAO has a supply of CSIRO films which people in Queensland may borrow.

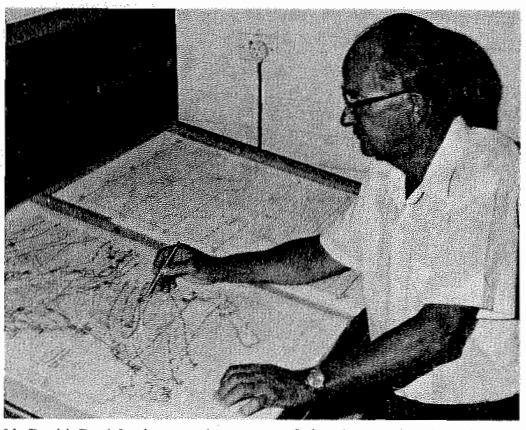
The Regional Administrative Officer, Mr David Thomas, recently sent a copy of 'The Birth of the Red Kangaroo' to the State school at Burketown.

It was returned with thanks and the usual comments about its interest and high quality.

About 220 people saw it. The part of the report that came back with the film that caught the attention of the RAO was the section describing 'type of audience'.

Instead of the usual they expected (i.e. grades V and VI) the report said: The whole town.

CSIRO does its best but seldom does one of its films get such a coverage.



Mr David Rochford at work on one of the charts related to the merchant ship program.

New Chief appointed

Mr David Rochford, the man who initiated Australia's merchant ship scientific program, has been appointed Chief of the Division of Fisheries and Oceanography.

He will succeed Dr K. Radway-Allen who will retire from CSIRO next month.

In 1966 he began the merchant ship program which has involved vessels working in the Tasman and Coral Seas taking part in an unusual scientific project.

The vessels are fitted with equipment which gives a continuous record of the temperature of the waters through which they are passing.

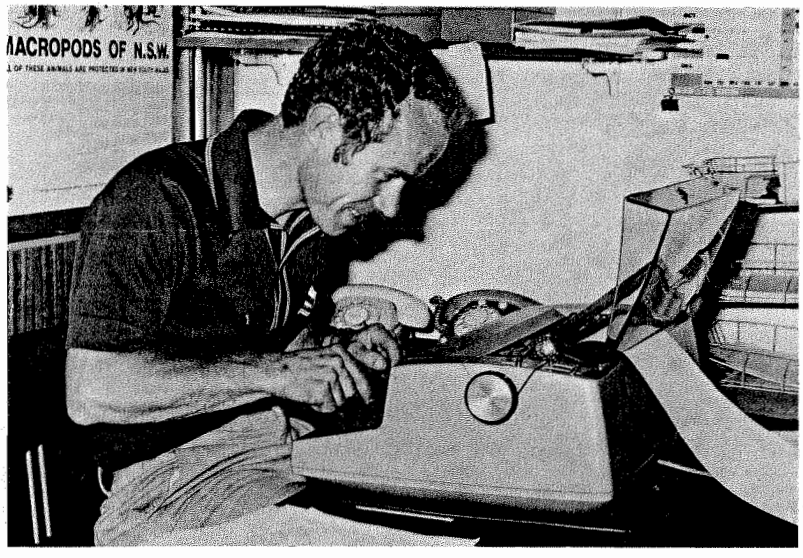
Regular samples are taken to ascertain the salinity of the waters.

The 11 years (to date) accumulation of monthly temperature and salinity charts are of great value to biologists, oceanographers and meteorologists for they provide an environmental frame of reference against which water movements, fish distribution and weather phenomena may be interpreted.

Mr Rochford was also involved in the Indian Ocean Expedition (1959-65) in which the research ships of 13 nations were working. Out of this expedition came the Oceanographic Atlas of the Indian Ocean. Mr Rochford was responsible for the chemical aspects of the Atlas

'It is the first of all problems for a man to find out what kind of work he is to do in this universe'

Thomas Carlyle—Inaugural address, Edinburgh, 2 April 1866.



Coping with the limited resources available under the staff ceilings not only has people working longer hours, but many are having to turn their hands to doing things that usually support staff would do for them. In Perth, for example, the Divisional Editor at Land Resources Management, Malcolm Howes, now believes that happiness is not having to do your own typing.

Photographer Bill van Aken recently walked into Malcolm's office and found him struggling to overcome the intricacies of an IBM electric typewriter.

Journalist for Forest Research

One of the best known members of the Central Communication Unit, Miss Wendy Parsons, has decided that Division fields look greener than those of Head Office and has left the Unit to take up a position as science journalist for the Division of Forest Research in Canberra.

Wendy has spent the last five and a half years in the Unit working in its Media Section.

Wendy is the second journalist to be appointed to such a position in the Divisions, the first being Mr Stuart Maxwell-Wright in the Division of Building Research. Stuart was also originally a member of the CCU.

Watch your PEQ – it could help the energy crisis

Mr Ron Ballantyne of the Division of Building Research at Highett, has calculated that the average Australian family of four uses up 280 gigajoules of the country's energy resources each year. This is equivalent to the energy stored in 10 tonnes of black coal or to the energy needed to keep a single bar radiator burning 12 hours a day, seven days a week, for four years.

'Such a level of energy usage is often unnecessary', said Mr Ballantyne.

'However, it isn't necessary for people to reduce their energy consumption dramatically. They'd be doing the world a service by maintaining their present energy usage or keeping any annual increase to a minimum – preferably below two per cent.'

'If this were done, especially with petroleum products, it would be a worthwhile contribution to energy conservation.'

Mr Ballantyne believes that the public as a whole is unaware of just how much energy it consumes, and he has therefore embarked on an 'energy-awareness campaign'.

He has devised a means of calculating personal energy quotients (PEQ) – the amount of energy that people buy during the year.

Anyone who would like to work his/her 'personal energy quotient' for the year can do so by getting a form from Mr Ballantyne at the Division.

To work out your energy use you need only your household electricity, gas, fuel bills for a year, and a good idea of how your working day and recreation time are spent.

In 1975 the average Australian PEQ was about 70 gigajoules. This is similar to that in some European countries and about half that in the United States. The PEQ figure for India is about three gigajoules.

Mr Ballantyne hopes that 'Coresearch' readers will not only work out their PEQs for their own satisfaction, but will also send him the completed form and the supplementary questionnaire so that he can assess the statistics.

Mr Ron Ballantyne

If the result of the calculations make you feel a little guilty, then Mr Ballantyne suggests a few steps that you might take to reduce your PEQ:

–use a clothes line instead of a clothes dryer whenever possible;

–use only cold water in the washing machine (wash infectious items by hand);

–insulate your home, especially the ceilings; fit awnings over all windows exposed to direct sunlight in summer; alternatively, train deciduous trees or creepers to provide summer shade but to allow in winter sun;

–ensure that your next car has good petrol economy (not worse than 10 litres/100 km or 28 mpg) and avoid lead-footed driving;

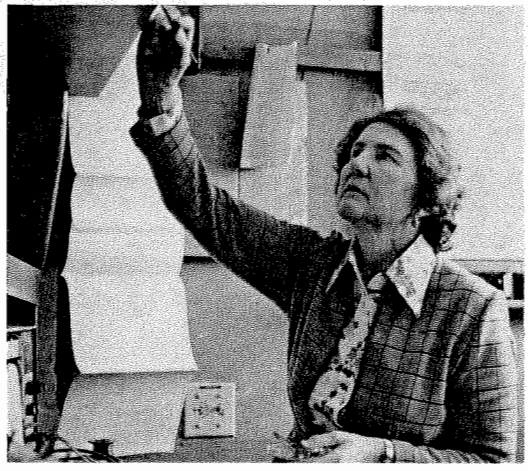
–walk or use a bicycle whenever possible;

–if you cannot walk or cycle to work, travel there by public transport or shared private transport; and take political action for better public transport services if they are inadequate;

–work a shared car roster with friends for recreation and socialising;

–minimise motorised recreation, much of which also abuses our environment.

First woman in CSIRO to become CRS



Dr K. Rachel Makinson who has been a senior principal research scientist at the Division of Textile Physics in Sydney has been reclassified as a chief research scientist. This is the first time that any woman in CSIRO has achieved this distinction.

Rachel first joined CSIRO in 1944 as an assistant research officer.

On several occasions she has been Acting Chief of the Division and was a part-time Counsellor of the Interim ASTEC.

Marine Biochemistry Unit disbanded

CSIRO's Marine Biochemistry Unit, which has been located at the University of Sydney, has been disbanded.

The Officer-in-Charge, Dr G.F. Humphrey, has accepted a position as a Research Associate in the School of Biological Sciences at the University of Sydney. He remains a CSIRO officer.

The other professional staff have transferred to the Division of Fisheries and Oceanography.

ASEAN visitor

Mr H.R. Dharsono, Secretary General of the Association of south east Asian nations (ASEAN) has visited Australia at the invitation of the Commonwealth Government.

Some of CSIRO's Divisions were included in his itinerary.

Mr Dharsono, who has had a distinguished military and diplomatic career in Indonesia, was appointed the first Secretary-General of ASEAN in June 1976.

On his tour of the CSIRO campus at North Ryde he was accompanied by Mr Ali of the Foreign Trade Office of the ASEAN Secretariat, and Mr A. Gyngell of the Commonwealth Department of Foreign Affairs.

The visitors spent a full day on the campus. In the morning, they were welcomed by Mr Tony Bradshaw, Deputy Director of the Minerals Research Laboratories, and were taken to see projects concerned with energy (flash pyrolysis of coal), iron ore, electrostatic precipitation and air pollution measurement.

After lunch, Mr Dharsono and his party met Mr Jack Kefford of the Division of Food Research. Australia is spending $5 million on projects for ASEAN, mainly in the food research area.

Mr Dharsono was shown two projects in which he expressed interest—one on post-harvest handling of tropical fruits and a second on vegetable protein.

'Freedom to speak'—scientist's view

Dr Fred Morley is a man with a strong conviction that CSIRO scientists should always enjoy the freedom to speak their own minds.

In fact, he goes so far as to say that the Organization's scientists have a responsibility to express their views, both within the Organization and within the community.

Over the years Fred has worked in CSIRO he has practised what he preached. His name has appeared over letters to newspapers and other publications, and he has expressed his views at staff meetings and to the Executive when he felt strongly on issues.

Last month Fred announced that he would be leaving his Division of Plant Industry and transferring to the University of Melbourne as a Senior Research Fellow in Epidemiology.

His work there will be concerned mainly with the management of grazing animals in relation to pastures and disease, very largely a continuation of his present work.

He will also be teaching both undergraduate and some post graduate students.

While he is transferring his research activities, the 59-year-old scientist is unlikely to give up his long habit of expressing his viewpoint.

'I feel strongly about the importance of science in agriculture in particular but in the community as a whole as well,' Fred said before his departure from Canberra.

'Science should not be pretentious about its achievements, but neither should it be apologetic for what it is doing.'

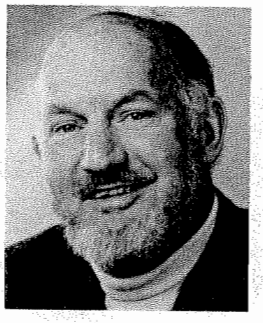
Equally he believes very strongly that science should not be distorted for political reasons. He also reacts when he feels the whole truth has not been presented or has been vamped, consciously or otherwise, to serve the ends of particular groups.

Over the years Fred has built up what he calls his 'File of Discontent,' a collection of letters he has had published in various publications.

Some of the issues on which he has put pen to paper have been:

- **The failure of employing bodies to take women on to their staffs at appropriate levels...** '15 years ago I wrote that women should be given responsibilities commensurate with their abilities.

'I also believe that CSIRO should employ more married women in part-time positions, if they cannot work full-time, to take advantage of the talents they could offer. If need be the system could be altered to allow two part-timers to be held against one full-time position.'



Dr Fred Morley

- **The importance of agricultural science to the country...** 'while Australia believes this is an area of research too highly populated, the United States has changed a similar view and is now once more appreciating the importance of this work.'
- **Staff relations...** 'I have a strong conviction that there should be more consultation right down the line because there is a wealth of talent in CSIRO at all levels. I know this is not easy to achieve but those talents should be tapped by the Executive and Chiefs in their decision-making.

'At the same time the people down the line must appreciate that it's the Executive which has to carry the responsibility if things go wrong and that it must be able to exercise its rights.'

- **The planting of pine forests on mountain country...** 'I'm a bush walker and skier and I deplore the use of mountain country for the planting of pines in the high country when there is lower and more accessible terrain available for them.'

Career

Fred has had a distinguished career and will be missed in his Division. His list of achievements in grazing management research is impressive and in 1970 he was awarded the medal of the Australian Institute of Agricultural Science for his work.

Looking back, he feels he has owed much to Sir Otto Frankel, a former Chief of the Division, and to Sir Ian Clunies Ross, a former Chairman.

'I first met Sir Ian when I was working for the NSW Department of Agriculture at Trangie. He came to visit us and I drove him round the place in a sulky.

'He expressed an interest in my work and later when I transferred to CSIRO and was overseas he kept in touch with me by correspondence. This always meant a lot to me.'

Over the years Fred has made a number of overseas trips to work on various projects, some of which have been funded by aid agencies.

This led to his interest in foreign languages and he has a reading knowledge of several of them.

A widower for some time, Fred recently made a double decision. Not only would he tackle a new position but last month he also remarried.

Queen honours CSIRO staff

Dr Alan Walsh, one of CSIRO's most distinguished scientists, was created a Knight Bachelor by the Queen last month in her silver jubilee honours list.

Sir Alan retired from the Division of Chemical Physics in January after 30 years of research. For the last 15 years he was Assistant Chief of the Division.

Sir Alan, who is now a consultant to industry, invented the atomic' absorption spectrometer, an instrument that has since been described as 'the most significant advance in chemical analysis this century.'

Sir Alan Walsh

His work has been widely acclaimed overseas and has been recognised by many societies.

Other CSIRO staff to receive honours from the Queen were:

Officer of the Order of the British Empire (OBE)

Mr J. Coombe, ACT, who has had a long career in CSIRO administration and who is now assistant to the Chairman, for public service.

Officer of the Order of Australia (General Division) (AO)

Dr M.F.C. Day, ACT Chief of the Division of Forest Research and a former member of the Executive, for distinguished service in the field of biological research.

Medal of the Order of Australia (General Division) (OAM)

Mr J.J. Foley, Division of Animal Health, Melbourne, and a member until early this year of CSIR/CSIRO's staff for 50 years, for public service.

British Empire Medal (Civil Division) (BEM)

Mr J.D. Chamberlain, Manager of CSIRO's Printing Unit in Melbourne, for public service;

Mr A.W. Palm, a member of the technical staff of the Division of Soils, Adelaide, for public service.

Farewell to Phil Rawlinson

Phil Rawlinson and Alan Stewart reminisce about earlier days on Black Mountain.

Canberra colleagues have said farewell to one of the best known members of the staff in the ACT—Phil Rawlinson, DAO at Land Use Research. Phil has retired after 23 years service with CSIRO.

Born in London, he and his family came to Australia in 1951 and settled in the small saw-milling village of Monga on Clyde Mountain, between Canberra and the coast.

In 1954 Phil came to Canberra and started with CSIRO as a base grade clerk for the Land Research and Regional Survey Section of the Division of Plant Industry. He saw that Section evolve into the present Division of Land Use Research and became the Division's first administrative officer.

The administrative responsibilities of the Division were heavy as over the years they involved personnel at various field stations, survey teams in Australia and Papua New Guinea, and the influx of research staff from overseas.

Phil was able to handle all of these situations in such a way that many people will always be grateful to him for his help and compassion.

He and his wife, Rosemary, are looking forward to a retirement of leisure and relaxation with their many friends in Canberra.

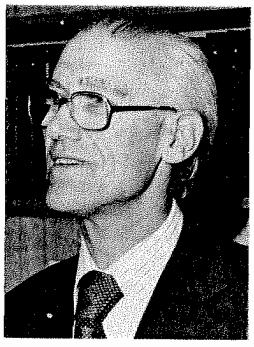
Changeover at Division of Computing Research

Dr Godfrey Lance who has been head of one of the world's larger computing facilities since 1963, last month stood down from his position as Chief of the Division of Computing Research.

His place has been taken by the former Assistant Chief, Dr Peter Claringbold.

During the years he was responsible for the facility, Dr Lance built up a Division which undertakes research and provides a service of considerable power and proportions.

He will continue to serve the Division as Assistant Chief.



Dr Peter Claringbold

During the seven years Dr Claringbold has been with the Division he has been particularly interested in computer language.

He was also very closely involved with the task of acquiring the equipment for the Cyber 76 computer and building up SIRONET.

Wanted—volunteers for technical aid

Does anyone have some time after working hours to contribute to an international voluntary organisation which provides free technical assistance to the rural and urban poor of the Third World?

Gavin Byrne, a scientist with the Division of Land Use Research, Canberra, belongs to such an organisation—VITA (Volunteers in Technical Assistance)—and feels that many people in CSIRO have the knowledge and skills that VITA is looking for.

For example, he says, volunteers are needed to help and advise in the production of methane gas; the practical application of animal, wind, solar and water power; grain processing and storage; bamboo craft; low cost tropical construction materials; and the processing of tropical foods.

Over the past 10 years Gavin has handled about a dozen requests. On occasions fellow CSIRO workers have helped him solve some of the problems. One of these for instance, was the development of a small threshing machine for Columbia.

VITA is a private non-profit organisation of 4500 part-time volunteers which operates from a central office in America.

Requests for help, about 1200 a year, are relayed to the appropriate specialist volunteer who answers the inquiry by correspondence or, if necessary, by a visit to the location.

Over 10,000 copies of a VITA publication, 'Village Technology Handbook', have been distributed.

'The organisation provides an excellent chance to help people in other countries who would not otherwise have access to appropriate technical assistance,' Gavin said.

'It also gives people an opportunity to get an understanding of some of the problems in countries less affluent than our own as well as an insight into different cultures.

'VITA offers a practical and useful opportunity to explore the possibilities of alternative technologies,' he added.

'It should be realised that this is strictly an extracurricula activity and that VITA needs not only scientists, but technical and trades staff and those skilled in other areas such as editing, drafting and library work.'

People who would like further information about VITA should write to:

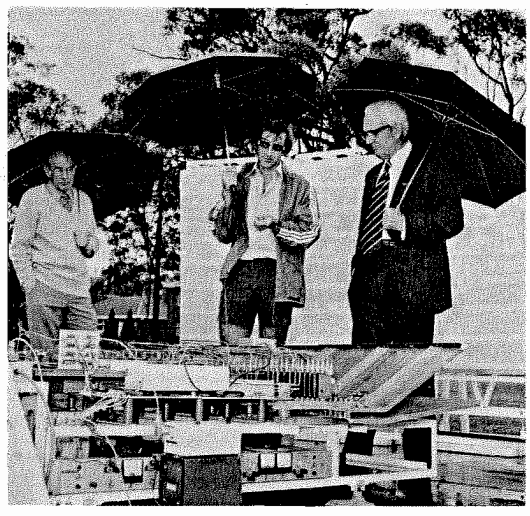
Volunteers In Technical Assistance—VITA, 3706 Rhode Island Avenue, Mt. Rainier, Maryland, 20822, USA.

Gavin Byrne

Quote

'When you start telling you stop communicating...the alternatives are asking, sharing and involving.'—Bill Boal in 'Corporate Communications'.

Interscan displayed



During the 12-month period for which he has been appointed Chairman, Mr Victor Burgmann (right) is spending part of his time learning more about the work of different Divisions. Sydney's rain didn't deter him from looking at Interscan equipment at the Division of Radiophysics with Dr R.X. McGee and Dr Dennis Cooper (centre) last month.

Picture: John Masterson

Agricultural Science Fellowships

Four prominent CSIRO agricultural scientists have been honoured by the Australian Institute of Agricultural Science. The Federal President of the Institute, Mr Norman Halse, has announced the award of Fellowships for contributions to agriculture and the profession.

The recipients include:

Mr Peter Butler, Senior Assistant Secretary at Head Office in Canberra. Mr Butler has been a senior member of the CSIRO secretariat since 1951 with specific responsibilities for research in the agricultural and biological sciences.

Mr B.V. Fennessy, CSIRO Division of Wildlife Research, Canberra. Mr Fennessy is well known for his work on the biological control of rabbits particularly the introduction of myxomatosis. In recent years he has been concerned with the control of dingoes and feral pigs.

Mr J.K. Taylor of Adelaide, a former Chief of the Division of Soils in CSIRO. He has made substantial contributions to soil survey work in Australia both in the field and later as an administrator.

Mr D.C. Wark who was until recently principal research officer in the CSIRO Division of Plant Industry in Canberra. He is recognised as Australia's foremost tobacco breeder and has received world acclaim for breeding disease resistant varieties. His resistant lines are used in tobacco breeding programs in Europe, North America and Africa.

One of the Institute's two Medals of Agricultural Science has been awarded to **Dr R.C. Rossiter** of the Division of Land Resources Management in Perth.

Dr Rossiter's award was made for his research on subterranean clover and its effect on the fertility of ewes.

His work on the ecology and physiology of sub-clover has made an outstanding contribution to the understanding of this most important pasture legume. He is recognised as a world authority on Mediterranean pastures, the citation said.

Slide value

'A picture may be worth a thousand words but a slide isn't worth a syllable if it doesn't say anything or says too much.'

AV Communications

Siroforum

Let sleeping logos lie

Mr C. Chan, Plant Industry, has submitted his suggestion for a CSIRO logo, the last that will be accepted at this particular time.

The Editor wishes to thank all the readers who sent in their ideas—their efforts will now be discussed by the appropriate people.

★ ★ ★

I find the current preoccupation with logos a little disturbing. I suggest that it might be more rewarding if staff tried to make our research effort more meaningful to Australia, rather than wasting time in designing a trendy logo which no doubt will be replaced in a few years by an even trendier one.

For me, and I am sure a large number of Australians, the letters CSIRO say all that they need to.

It appears that not only Roman Centurions spend most of their time being renamed and replanned and never doing any real fighting.

M.H. Jones
Mineral Chemistry

★ ★ ★

Much has been written about a logo for the Organization—in fact the letters to the Editor on this subject must far outweigh any other subject, judging by the amount of space devoted to them on the back page of each issue.

I am no artist, so feel out of it when it comes to designing a logo but thought your readers may like to see a design we have been using for a number of years—on our letterheads, forms, sign above the door, newspaper advertisements, —the logo is well known to Brisbane people.

Most think it means Colonial Sugar Refinery or State Government Insurance Office but it's still well known—the C stands for Commonwealth, which, since 1851, has been the title of the federated States of Australia: the S stands for Scientific which as your readers will know means pertaining to Science: the I is for Industrial and that means pertaining to Industry (a crafty expedient adopted here): the R is for Research or the act of searching etc.; and the O Oh! reader, means Organization, i.e., an organised structure or body.

To save further confusion and, dare I suggest, further space in your popular paper I submit the magic logo—

CSIRO

and hope we may be able to leave it at that.

David Thomas
Regional Administrative Officer,
Brisbane

A matter of prestige

As one who also tries to thread a way through the narrow channel between the Scylla of precision and the Charybdis of pedantry, may I suggest that you capitulated too readily (Siroforum No. 214) in respect of the modern meaning of 'prestigious'.

While it is clear that the Latin root and the original meaning of 'prestige' and its adjective 'prestigious' related to the illusion of the magic maker, of four authorities available to me (Shorter Oxford English Dictionary, Random House Dictionary of the English Language, Webster's Third International Dictionary, Fowler's Modern English Usage, 2nd ed.), none denies the current meaning of prestige and only the first allows the original meaning as current usage.

The position is less clear with 'prestigious'. Random House gives only 'illustrious'. Webster also considers this to be the current meaning and classes 'illusory' as archaic. The Shorter OED gives only 'illusory'. Fowler does not mention the adjective, but it would be curious if he supported the view that the adjective can be used only in a sense he considers not to be current for its parental noun.

Illusory or illustrious? The second sense for 'prestigious' has authoritative support and is so commonly current that opposition seems to me to be Canute-like in character. After all, we manage to live with many other changes and even reversals of meaning, the latter well exemplified by the curious survival of 'let' in its archaic meaning in the one phrase 'let or hindrance'.

A.W. Charles
Science Branch,
Head Office

★ ★ ★

Having had a sneak preview of Alan Charles' logomachic letter, I bring to his attention the fact that King Canute was considered an enlightened monarch; indeed, Fulbert, Bishop of Chartres (of sainted memory) wrote to him: 'We were amazed at your wisdom and equally at your piety.'

Not so Alan Charles who, it seems, has yet to experience the day when tides, like worms and language purists, turn—with or without the assistance of the legerpied of prestigious royal personages.

Imprimatur
(name supplied)

★ ★ ★

Illustrious though King Canute may have been, he was not immune from illusion. As the Greeks said, 'Even Homer nodded'. My case rests.

A.W. Charles

The English language—again

Inflammable or flammable?

After reading Mr Hervey Bagot's views on the use of the word inflammable or flammable (Coresearch No. 214), I feel I should put the following questions to him:

Has he ever given a thought to the fact that it is not always the foreign tongue that is giving the trouble, but the English language itself?

Has he ever realised that every time the prefix 'in' is used in the following words it means 'not'. To name a few—inapt, incompetent, incommunicative, inexperience, incoherent, inhuman, incompatible, insane, incapable, incomplete.

Perhaps it is easier to understand now why foreigners and people with English as their mother tongue, make mistakes when inflammable comes around?

M. Scholtz
Division of Entomology
Long Pocket Laboratories,
Indooroopilly

Award

Mr Norman Branson of the Division of Protein Chemistry, Melbourne, has been awarded the prize for studies in public administration at the Royal Melbourne Institute of Technology.

Appointment

Mr A.V. Bradshaw, Chief of the Division of Process Technology, Sydney, has been appointed Honorary Professor in the Department of Metallurgy at the University of Newcastle. The appointment is for two years in the first instance.

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

Editor. Dorothy Braxton

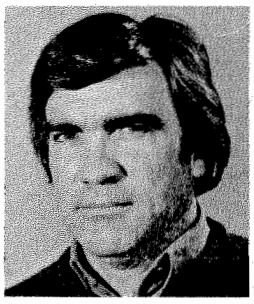
CSIRO ball in Melbourne

The annual ball of CSIRO in Melbourne will be held at the Camberwell Civic Centre Melbourne on Friday 5 August.

The Peter Williams Orchestra will be featured. The cost will be $28 a double all inclusive.

Melbourne staff interested should contact their Divisional Representative or Social Club. Interstate staff are most welcome and should contact the ticket secretary, Vi Kingham at the RAO Melbourne for tickets.

He's a 1978 Churchill Fellow



Mr Bob Gault

Mr Bob Gault of the Division of Plant Industry's Microbiology Group in Canberra has been named as one of 67 Churchill Fellows for 1978.

Bob, who has been with the Division for eight years, will spend 14 weeks in New Zealand, Canada and the United States.

He will gather first-hand knowledge in those countries of developments and trends in the use of root nodule bacteria inoculants with the aim of improving nitrogen fixation by legume crops in Australian agriculture.

Memorial fund for scientist

When David George Morris, 32, died in Canberra last month from cancer, his mother, Mrs G. Brumby, requested that instead of sending flowers, Dave's friends might like to contribute to a cancer research fund.

The money, about $300 so far, will probably go to help the ACT Cancer Research Fund establish a radio therapy unit in Canberra.

Even though he was so young Dave had packed a great deal of living and a wide range of experience into those years.

He joined the Land Evaluation Group of the Division in 1969 and initially spent two wet seasons at Katherine working on grain-sorghum field experiments.

On returning to Canberra in 1971 he showed an aptitude for computer programming which he was encouraged to develop.

Between 1972 and 1976 Dave made a significant contribution to the development of crop simulation models and their computer programming.

A great raconteur and balladeer, Dave also wrote poetry and short stories. His delightful 'Doleful

David Morris

Dan', a story for children of a pigeon who finds his true love (Ho-ming), is illustrated with a battery of complex psychedelic line drawings.

Safety notes

Emission control—a trap for the unwary

New vehicles are now fitted with emission controls to reduce atmospheric contamination. Part of this system is the provision of a non-venting petrol filler cap. The vent pipe from the petrol tank leads to a carbon filter and then to either the carburettor or air inlet filter assembly.

During a recent field trip where the shade temperature was in excess of 40°C, the petrol tank of a station wagon was filled to capacity. On resuming the journey, the driver noticed a strong smell of petrol. Investigation showed that petrol had filled the carbon canister to overflowing and was also escaping from the intake spout of the air filter.

A rise of 40°C will increase the volume of 50 litres of petrol by over half a litre.

Manufacturers are now warning against this hazard.

Do **NOT** fill petrol tank to capacity by slow top-up, only fill at automatic fastest rate until first cut off.

This should leave sufficient air space in the petrol tank to cope with possible fuel expansion. Remember that the driving range is reduced.

J.W. Hallam
Safety Officer

216##1977

Coresearch

A monthly publication for CSIRO staff

August 1977 216

UN to stage major science conference in 1979

A major United Nations conference is in preparation for 1979 on the subject of Science and Technology for Development.

Australia, as a country with both interest and experience in the application of scientific research to development, is expected to be an active participant in the conference.

The role of science and technology in national and international social and economic development will be examined by the United Nations, with special emphasis being given to ways of overcoming difficulties in the application of science to development problems.

Australia's preparations for the conference will include wide consultation with government and non-government bodies. A Secretariat has been established for this purpose in the Department of Foreign Affairs.

Following a request from the Department, the Executive agreed to provide a CSIRO officer, Mr Ian Gordon, on secondment for 12 months, as Executive Officer for the Australian Government preparations.

Ian Gordon

Ian, who is normally with the External Relations Section, Head Office, took up his new position on 18 July.

CSIRO is also represented on the Steering Committee for the Australian preparations for the conference. The Organization is likely to play a substantial part in preparing case studies illustrating the application of research to development in Australia.

The Chinese delegation visited Culgoora where Kevin Sheridan (right) of the Division of Radiophysics explained the radio heliographic contour plotting equipment to Professors Tsien San-Chiang and Wang Shou-Wu of the Chinese delegation. With them were Chin Kwong, a Chinese student from the University of Sydney, Dr Harry Minnett, Chief of the Division, and Steve Smerd. Jenny Dixon was operating the computer teleprinter.

Chinese delegation at CSIRO labs

Four distinguished Chinese scientists have been visiting Australia to conclude discussions concerning a bilateral science agreement between the Chinese Academy of Science and the Australian Academy of Science.

The leader of the delegation was Professor Tsien San-Chiang, a nuclear physicist and Deputy-Secretary General of the Academia Sinica.

Other members of the group were Professor Wang Shou-Wu, physicist, Deputy Director of the Institute of Semi-conductors, Professor Tung Ti-Chou, biologist, one of the most distinguished elderly scientific statesmen in China, Professor Wang Ying-Lai, biochemist, Vice Chairman of the Institute of Biochemistry and internationally known for his work on insulin, and Mr Tsien Hao, interpreter.

The Chinese were returning a visit which was earlier made to their country by a delegation from the Australian Academy. Dr Lloyd Evans, Chief of the Division of Plant Industry, was a member of that group.

The scientists visited Head Office where they were welcomed by the Chairman, Mr V.D. Burgmann.

The Chinese expressed particular interest in the way the CSIRO 'popularised' its research results to industry and the farming community and asked questions about the coordination of research between Divisions.

While they were in Australia the delegation visited a number of CSIRO laboratories including those of the Divisions of Animal Production, Chemical Physics, Computing Research, Entomology, Environmental Mechanics, National Measurement Laboratory, Plant Industry, Protein Chemistry, Radiophysics, Wildlife Research and the Solar Energy Studies Unit.

Professors Wang Ying-Lai and Tung Ti-Chou visited the Division of Plant Industry where they discussed the work of the Division with the Chief, Dr Lloyd Evans, and talked with members of the storage protein, molecular genetics and nitrogen fixation groups.

Sri Lankan at LUR

Above: Bill White gives Chandra Jayasuria some assistance with some of her cartographic work in the drafting room at Land Use Research.

When Chandra Jayasuria eventually returns to her home country, Sri Lanka, she will take with her sophisticated cartographic skills that she has acquired during her five years as drafting assistant and later drafting officer at the Division of Land Use Research in Canberra.

Chandra came to Canberra in 1972 with her husband who had received a scholarship under the Columbo Plan to study at the Australian National University. She has an Arts Degree in Geography from the University of Sri Lanka and was a tutor there in 1971.

Chandra joined CSIRO and under the direction of Bill White, cartographer at the Division, has learned the newest cartographic methods and techniques as well as the theory. The latter she has studied at home after working hours.

Bill is very proud of her accomplishments and feels that Chandra has developed into an excellent cartographer.

She has helped him with several maps, the most recent being the South Australian Ecological Survey Maps.

Editor retires

Miss Margaret Walkom, who has been a senior member of the Editorial and Publications Service for many years, retired last month because of ill health.

Margaret joined CSIRO in 1948 after service with the ABC. She has had a long association with the production of the Organization's Annual Report and other CSIRO publications.

Queen's honours

In honour of her Silver Jubilee, the Queen has awarded Silver Jubilee Medals to a number of Australians. Among the CSIRO personalities who received them were Sir William Vines, Executive; Dr D.F. Waterhouse, Chief, Entomology; Mr J. de P. Beresford, Land Resources Management; Mr S.M. Brisbane, Tribophysics; Miss L.C. Lawrence, Head Office; Mr R. McInnes, Entomology; Miss Gladys Munro, CILES; Mr L.J. Phillips, Tropical Crops and Pastures; Mr J.H. Watson, Textile Industry.

NSW lake is habitat for wildlife

The sight of a canoe—seemingly self-propelled—moving close in to an island on Lake Cowal in New South Wales must have sometimes made a number of casual visitors stop for an intrigued second glance.

Wim Vestjens observing birds from under a River gum.

Unless they knew what its presence signified, few would realise that the island was home to a colony of breeding birds and that the canoe was part of the equipment associated with a study of the wildlife of the lake.

If they looked carefully they might well see a man in the water gently gliding it along.

This would be Mr Wim Vestjens, a zoologist from the Division of Wildlife Research in Canberra, who has been studying the behaviour of birds on the lake for the last seven years.

The lake, between West Wyalong and Forbes, is 150 km^2 in size when it is full, but it fluctuates depending on the season. The survey area covers 60 km^2.

Wim spends one week out of each month at the lake, making about 90 per cent of his observations from the canoe. Sometimes he uses a blind that he has built into it, but often he needs to move very quietly across the lake checking birds and their nests. To create as little disturbance as possible he wades through the water, pushing the canoe ahead of him.

On land, the vegetation generally provides enough cover so that blinds are not needed.

'It takes about six months to become acquainted with an area so I know where to look for its inhabitants. Animals that at first appear to be rare are later found to be quite common once you know where and when to look for them,' Wim explained.

Several papers have already been published by Wim on the behaviour of various birds at the lake including the pelican, darter and spoonbill and he is now completing a technical memorandum entitled 'Status, Habitat and Food of Vertebrates at Lake Cowal, NSW'.

This describes six habitats at the lake, lists plants collected and provides information on occurrence, breeding, food and parasites of the vertebrates in the habitats.

So far Wim has found 162 species of plants, 11 species of fish, 11 species of amphibians, 30 species of reptiles, 17 species of mammals and 172 species of birds; 193 species out of the 241 were observed from the lake shore.

The contents of 1338 stomachs were determined for 163 species of vertebrates, most of which fed on some aquatic food.

'Plants and animals form a food chain. One link in the chain is the common tiger snake which, at Lake Cowal, is found in the water and on trees and bushes growing in the lake itself.

'I've analysed the contents of 20 tiger snake stomachs and have found that the snakes have a varied diet consisting of birds' eggs, nestlings, insects and small mammals in addition to the frogs they normally eat.

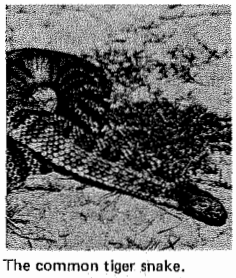
'The snakes in turn are preyed upon by various birds, among them the white ibis, whistling kite, brown goshawk, swamp harrier, kookaburra and pied butcherbird.

'Man is the birds' greatest enemy. Visitors to breeding areas scare birds from their nests allowing egg-robbers such as ravens and night herons to take the eggs. Birds are drowned in fish nets and shot from cars or during the duck shooting season,' Wim said.

'The only time that I avoid the lake is the first week of duck season. Hundreds of hunters come to the area then and do a great deal of damage—often shooting protected species of birds.

'I believe the whole lake should be protected because of its abundant wildlife but a few farmers would disagree. They think the lake should be drained and used for growing wheat and for grazing.'

Story: Barbara Hartley
Pictures: Wim Vestjens



The common tiger snake.

Yellow-billed spoonbills on nests.

Pelicans with nestlings: pelicans breed on islets and on lignum.

Distinguished scientist retires

After more than 30 years service, Dr C.H.B. Priestley has retired.

Dr Priestley was foundation Chief of the Division of Atmospheric Physics and since 1973 has been Chairman of the Environmental Physics Research Laboratories.

A farewell function to mark the occasion was attended by more than 100 of his friends, including past and present members of the Division of Atmospheric Physics.

Among those who spoke of the contribution Dr Priestley has made to Australian and international meteorology were the Chairman, Mr V.D. Burgmann, Dr Gibbs, Director of Meteorology in Australia; Mr R.H. Clark, Officer-in-Charge of the ANMRC; and two former members of the Division of Atmospheric Physics, Dr F.A. Berson and Mr E.L. Deacon.

A presentation in the form of a Campaign planter chair, a novel by Ernestine Hill and a photographic anthology from the Division of Cloud Physics was made by Dr Brian Tucker, the present Chief of Atmospheric Physics.

Picture: The Chairman, Mr V.D. Burgmann says goodbye to Dr and Mrs Priestley.

SIROTEM FOR USSR

After red tape galore, international telegrams and a strike, the Mineral Research Laboratories finally managed to pack their staff member, Jock Buselli of Minerals Physics off to Russia, says a report in 'Minfo'.

Jock has taken with him his wife, a working technical knowledge of the language and SIROTEM, a mineral exploration tool based on a transient electromagnetic technique developed by the Russians.

Instruments made by the USSR are available and often used in Australia but MRL's version is more sophisticated and much lighter. Jock can pack it in two suitcases and it weighs just 44 kg.

Commercial production of SIROTEM should start soon.

The Buselli's are to spend three months in Leningrad where Jock is working at the Institute for Methods and Technology of Prospecting (VITR).

He will visit the Institute for Geophysical Methods of Prospecting (VNIIG) in Moscow and hopes to conduct field trials of SIROTEM at Tbilisi, in the Caucasus.

Jock will return to Australia next month and hopes to bring a Russian scientist back to work with him for three months on an exchange visit.

Wordy study

It can't be said that our scientists are necessarily short of simple words to describe their work. We hear the authors of an early draft of a paper going through the system at the Mineral Research Laboratories at North Ryde have come up with a classic adjectival phrase which allegedly reads: 'the six variable central composite design iron ore pellet induration study.'

Dr Frank Bradley up in the air about his work

What happens to wind as it strikes a hill? To find the answer to that question Dr Frank Bradley of the Division of Environmental Mechanics, Canberra, has been climbing 100 m up a Telecom tower on top of Black Mountain—a 250 m high hill in Canberra which has six CSIRO Divisions at its foot.

According to Frank, the behaviour of wind over uniform flat surfaces can be predicted, thanks to pioneering work by CSIRO's former Division of Meteorological Physics. However, there is very little detailed information about wind flow over irregular terrain involving slopes and hills.

Such information is important in studies of wind erosion from exposed hills and sand dunes, dispersal of air pollution in a hilly environment, and topographically-generated wind anomolies which affect aircraft operations at some airfields.

It can also assist in the assessment of sites for wind power generation and provide gustiness data needed for the design of the associated propellers and towers.

Though not the micrometeorologist's ideal site, Black Mountain has several useful features for this experiment.

It presents a uniform wide face and a steep slope to the prevailing north-west wind, it is conveniently close to the Division's laboratory, and it has a ready-made tower high enough to be above immediate surface effects.

Cooperation

Telecom was very co-operative in granting permission to use the tower and provided riggers to install the booms on which measuring instruments are fastened so that they are clear of the tower.

Cup anemometers are used to measure the wind speed while more complex fast response anemometers measure turbulence.

Anemometers have also been installed on a 23 m mast at the foot of Black Mountain to monitor the wind before it encounters the slope.

All the signals from these instruments are fed to recording equipment in one of the Division's mobile laboratories, parked at the base of the tower.

With the help of a technical officer, John Bryan, Frank Bradley climbs the tower two or three times a day to attend to the instruments—weather permitting. The anemometers are at various levels from 16 to 100 m and are reached by pulling them in along the booms on a trolley or by using swinging booms.

'We climb the tower by a series of 16 m ladders and use a hoist to haul up some of the instruments,' he said.

'We tie others around our waists or carry them in haversacks, in our pockets, or even between our teeth! From the tower we talk to the caravan using walkie-talkies.

'While I've worked on towers before in Australia and America, I must admit that I was a little apprehensive the first time I climbed this one. We are used to it now though and concentrate on the work to be done,' Frank said.

High level problems

A few unforeseen problems, however, have had to be solved.

Because of unexpectedly high winds, some of the more sensitive instruments have blown to pieces.

'Everything has to be tied to the tower so that it won't blow away, even if it is only being put down for a moment,' Frank said.

In the beginning there were electronic difficulties too; interference from the high-powered TV transmitters had to be guarded against or suppressed. If an instrument goes wrong it is always the one at the highest level.

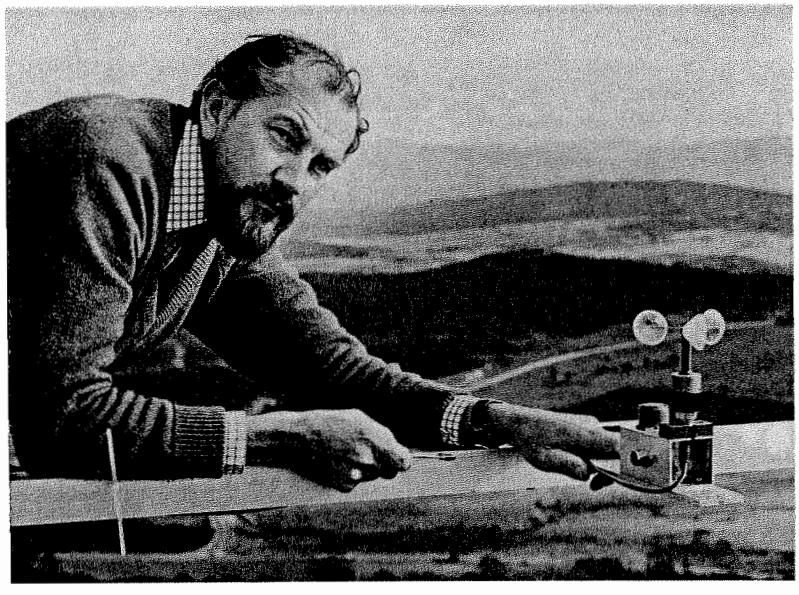
The measurements must be made as soon as possible as the tower is soon to be dismantled. The new communications tower now under construction is unsuitable for an experiment of this kind as its size and solid construction would distort the wind.

Frank believes that the experiment will provide valuable data on the way in which such hills modify the wind velocity, turbulence intensity and shearing stress.

The results will also provide full-scale reference data for similar studies on model hills in the Division's wind tunnel, where conditions can be varied readily.

The ultimate aim is to compare experiment with theory so that the effects of hills can be predicted from their geometry.

Story: Barbara Hartley
Picture: Greg Heath



A bird's eye view of Canberra: Dr Frank Bradley adjusts an anemometer on the Black Mountain tower.

Internal auditors get new charter

The 12 members of CSIRO's Internal Audit Group met in Canberra last month for discussions on their new charter.

This was the first time all the members had been together for some time—in their daily work they are scattered in various locations across the country.

The Group was mainly concerned with discussions on the implications that the charter would have on their work. During the course of their talks, the Chairman, Mr Victor Burgmann, spoke to them about the charter and the Group's functions, responsibilities and programs.

The Secretary, Mr L.G. Wilson and the First Assistant Secretary (Administration), Mr Howard Crozier, also discussed aspects of the Group's work with the members during their meeting.

Under the revised arrangements, the Internal Audit Group is now required to report annually to the Executive.

In future more emphasis will be placed on problem solving during audit inspections. There will be less formal reporting but increased informal discussion between the auditor and the group or section involved.

Mr Gabriel Martich, the Chief Internal Auditor (right), photographed during an informal discussion with members of the group and, from left, Mr Howard Crozier, Mr Gratton Wilson and Mr Victor Burgmann.

New laboratory in SA for CSIRO

The South Australian branch of the Materials Research Laboratories of the Department of Defence has been transferred to CSIRO.

The transfer will become effective as from 1 September.

The laboratory is located at Woodville North, Adelaide. Its present branch superintendent, Mr J.F. McNeil, will remain its Officer-in-Charge until his retirement next year.

At the time of going to press, details of the laboratory's new name and program had not been finalised.

The Laboratory's current work includes research in metallurgy and electro-photography as well as consulting and standards service to Government departments and industry.

These projects are currently being examined with a view to their integration with research in a number of Divisions.

Bottoms up!

During his recent overseas travels, Jim Goodspeed of the Division of Land Use Research visited a sewage reclamation pilot plant at Pretoria used to demonstrate water reclamation processes.

After watching with keen interest the progress of the material from 'raw input' to 'processed influent,' he was invited to drink a glass of the final product, being assured that Australians showed quite a high survival rate from the test.

A can of beer was then administered, presumably to be blamed for any ensuing ill effects. There were none.—Land Use Research Newsletter.

Scientific exchange with Brazil

Dr N.K. Boardman, a member of the Executive, will visit Brazil this month in response to an invitation from the Organization for Research into Agriculture and Cattle Breeding (EMBRAPA).

The purpose of the visit is to develop closer collaboration between the two countries in agricultural research.

Earlier this year the President of EMBRAPA, Dr Jose Cabral, and its Executive Director, Dr Almiro Blumenschein, were in Australia to become acquainted with current scientific research and to discuss with CSIRO and other interested people the possibility of further cooperation in fields of mutual interest.

For many years CSIRO has had close contacts with research scientists in Brazil and has welcomed the opportunity for further collaboration on an informal basis.

Areas of interest to both Organizations include the introduction and breeding of legumes, nitrogen fixation, animal breeding, management of grazing systems, land resources surveys, and tropical fruit tree crops.

In addition to collaborative research, it is envisaged that there will be opportunities for scientists to make exchange visits.

Minister visits Deniliquin

An outline of the research activities being undertaken in the rangelands of western New South Wales was provided for the Minister for Science, Senator J.J. Webster, when he visited the Riverina Laboratory at Deniliquin recently.

The Minister, who was undertaking his first visit to the laboratory, part of the Division of Land Resources Management, was accompanied by his Senior Private Secretary, Mr L. Williams, and a member of the Executive, Dr K. Boardman.

Because of the widely dispersed nature of the field programs currently in progress, some located 500-800 km from Deniliquin, much of the research had to be reviewed with the assistance of an audio-visual display, designed especially for such purposes.

Senator Webster was briefed on the laboratory's research activities by the Officer-in-Charge, Dr Allan Wilson, and other scientists at Deniliquin who described particular aspects in more detail.

Much of the discussion centred on the results obtained to date from major research programs involving multidisciplinary teams of scientists.

One important team project at the laboratory, for example, is concerned primarily with studying the problem of woody shrub species which have increased dramatically in the poplar box woodlands since the advent of sheep grazing. There are 60,000 km^2 in western NSW and 90,000 km^2 in Queensland that are affected or highly susceptible.

The Minister was told that the reasons for the shrub invasion are complex, but are thought to stem primarily from the upsetting of the grass/shrub balance by sheep grazing.

Other important projects outlined to the Minister included those relating to the assessment of range condition in various vegetation types including saltbush, bluebush, mulga and rosewood-belar communities being undertaken by Mr Graeme Tupper, Mr Bill Mulham and Mr David Tongway.

These studies are aimed at developing improved management practices so that the vegetation resource in these communities, many of which are extremely fragile when heavily grazed, is not depleted to the point where reclamation is virtually impossible, or at least, uneconomic.

Part of this work also involves the potential use of remote sensing techniques to monitor trends in range condition. One such approach being explored is the possible use of imagery obtained from LANDSAT satellites.

The Minister took the opportunity of personally meeting research staff during an informal lunch held in the laboratory gardens where many discussions took place.

Before leaving Deniliquin Senator Webster and his party visited the Falkiner Memorial Field Station where he inspected Miss Veronica Rogers' experimental lucerne stands. He was particularly interested in the new variety 'Falkiner', bred as a root-rot resistant variety for heavy, poorly-drained soils, but which is now also showing some degree of resistance to the Spotted Alfalfa Aphid.

CSIRO fun run

Rosemary Bell, (above) an experimental officer at the Division of Entomology in Canberra sprinted 6 km round the saddle of Black Mountain last month to take the honours in the ACT CSIRO Fun Run.

Rosemary, who has since won the NSW women's open long distance race (5000 km) led home a field of 48 participants from the Canberra RAO and local Divisions, considerably helping her team from Entomology to win the handsome cup made and donated by Colin Hazelton, Environmental Mechanics.

The Fun Run was a successful event, clearly enjoyed by those participants still able to stand at the finish. It will be staged against next year. Already the RAO team has issued a challenge to Head Office to enter a team in 1978.

Summer language school

In January, the Australian National University and the Canberra College of Advanced Education, in conjunction with the Centre for Continuing Education, will again be holding a summer program of intensive language courses.

The following languages will be offered: Bahasa Indonesia, Arabic, Japanese, Russian, Chinese (elementary and intermediate) and Spanish (elementary and intermediate).

No previous knowledge of the languages is required (except for the intermediate levels in Chinese and Spanish).

All six courses will run from Tuesday, 3 January to Friday, 27 January. The tuition fees, which are tax deductible, are $270 for each course, and include the cost of appropriate text books.

Enrolments close on 18 November 1977. For further information on the courses and accommodation, and enrolment forms, please contact Jane Stott, Conference Officer, Centre for Continuing Education, ANU, PO Box 4, Canberra City, 2601, or phone Canberra 49 4556.

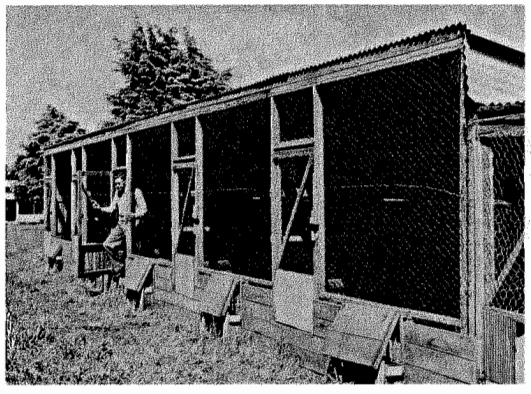
A matter of words

On receiving the first award of merit for public speaking from Australian Rostrum, an association of 5 000 men, Myra Roper stressed her belief in the importance of using language accurately and economically. By way of illustration she told the following story:

'The Lord's Prayer has 56 words, the Ten Commandments have 287 words, the United States Declaration of Independence has 300 words, and the European Common Market Directive on the sale of duck eggs has 26 911 words'.

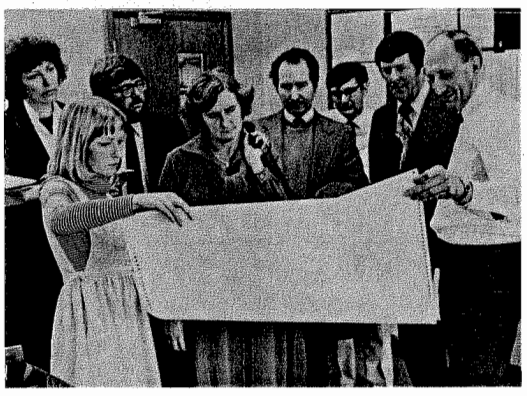
Is there a message here for public servants? —CILES Newsletter

Science at work



Despite economic stringencies, the new high-security laboratory at the Division of Exotic Bugs and Wogs was opened this week. Temperatures are controlled to within 0.1°C of ambient, and a wide range of humidities is available. Special perforated metal walls provide one-way laminar air flow into the laboratory, preventing potential threats to the human race from escaping.

Senators at LUR



Members of the Senate Standing Committee on Science and the Environment recently visited the Division of Land Use Research for a demonstration of the application of computer data-base methods to land use and environmental questions.

Inspecting a natural vegetation disturbance map produced during the visit are (left to right): Ms H. Church (Committee Secretariat), Toni Paine (LUR), Mr A. Stanton (Committee Secretariat), Senator Melzer, Mr P. Dawe (Committee Secretary), Mike Austin (LUR), Senator Jessop (Committee Chairman) and Bruce Cook (LUR).
Photograph: Jack Cavanagh.

'Minfo' ceases production

The Mineral Research Laboratories have ceased production of their lively newsletter, 'Minfo'.

For the last six and a half years 'Minfo' has provided an informal means of communication among the MRL sites during their formative years.

Now, according to its Editor, Jenny North, in a farewell editorial, 'Minfo' will cease publication because it has no further role to play at present.

The newsletter will be missed by many people who have enjoyed reading it and who used it as a means of keeping up 'with who's doing what, where and when' in the labs.

Siroforum

C.S. Goon, Adelaide: Please send your name and address and your letter can be used. Anonymity will be preserved, but we require your signature as token of good faith. —Editor

It's yippee time!

The indexed tax scales from 1 July 1977 have increased the total fortnightly CSIRO take home pay by about $105,000.

DO YOU NEED YOUR SHARE RIGHT NOW?

WILL YOU WASTE IT?

OR

MAKE IT WORK FOR YOU?

Invest the difference in your credit society by automatic fortnightly deductions from salary at interest rate 9 per cent.

See your DAO today, or ring:
Canberra Society 48 4580
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'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476
Editor. Dorothy Braxton

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Coresearch

A monthly publication for CSIRO staff

September/October 1977 217

Co-operation with industry stepped up

Future cooperation between Australian industry and CSIRO was discussed at a meeting held at Head Office last month between representatives of the Organization and the Australian Industrial Research Group.

In the past, CSIRO and industry have worked together on numerous collaborative ventures, but these have tended to be on the basis of CSIRO dealing with a single firm which was involved with a specific project.

Now, as a result of this meeting, there are likely to be more formal discussions on matters such as:

- the transmission of CSIRO's technology to industry
- ways of getting more information on CSIRO's research programs to industry so that industry knows the fields in which the Organization is working
- research associations
- ways in which industry research might be supported by the Government
- possible use of State Committees to formulate communication with industry
- further methods of obtaining industry's views on national research needs.

The Australian Industrial Research Group is a body comprising about 50 senior industrial research managers of the larger industrial organisations in Australia. They first met in 1964 to consider how they might inject better quality and competence into the management of their research departments.

Over the years, it has focused its attention on four major areas:

- improvement of research management in industry
- relations with the Federal Government
- interaction with universities and other educators
- fostering understanding of the need for industrial research.

The Group has always recognised the importance of Government policies in the industrial sector and in recent years has spent an increasing amount of time dealing with the issues involved in the formation of policies directed towards making R and D in secondary industry more effective.

Joint meeting

The idea of the joint meeting came about following discussions between Dr L.W. Davies, Chief Scientist with Amalgamated Wireless (Australasia) Ltd, and Dr H.W. Worner, of the CSIRO Executive.

They found both parties—the AIRG and CSIRO—were concerned about the fall-off of Government funds for industrial research development. Both felt that the two organisations should discuss matters of mutual interest and cooperate to identify means of closer collaboration.

Visitors to the conference, including the Minister for Science, Senator J.J. Webster, Dr G.N.

Continued on page 6

Delay

The publication of this issue of Coresearch has been unavoidably delayed because of editorial problems in Canberra and power restrictions at the Printing Unit.

Report of Committee of Inquiry tabled

The report of the independent inquiry into CSIRO was tabled by the Prime Minister, Mr Malcolm Fraser, in the House of Representatives on 6 October.

In tabling the Report, Mr Fraser said 'I should like to thank publicly those who undertook this inquiry. They spent a great deal of time on it. This is a very worthwhile report. The Government is examining it. I hope we will be able to announce a decision in relation to it shortly.'

At the time of Coresearch going to press, no information was available on when the Government was likely to announce its decision.

All Divisions have now been provided with copies of the report.

The Prime Minister, Mr Malcolm Fraser, took time out while attending a conference of Second Division Officers at Head Office to look at the display boards from the Brisbane Show.

The boards were brought to Canberra after the show where they aroused the interest of many staff and visitors, including members of the Australian Industrial Research Group meeting at Head Office and the Chiefs who were also at Head Office for their annual meeting.

Brisbane Show story pages 4 and 5.

Photograph: Peter Hay

Russian women visit Australia

Under the Australia/USSR Science Exchange program, two women geologists, Dr Antonia Novikova and Dr Svetlana Sidorenko recently spent eight weeks in Australia.

Both are from the Geological Institute of the USSR Academy of Sciences in Moscow, Dr Novikova being a specialist in Precambrian tectonics and Dr Sidorenko in organic materials in Precambrian sedimentary and metamorphic rocks.

Their program in Australia was arranged by Professor Rutland of the University of Adelaide and began with an excursion to Central Australia with BMR and university geologists.

After visits to Canberra, Melbourne and Adelaide they spent four weeks with the Division of Mineralogy in Western Australia. Two field excursions accounted for most of this time, one to the Eastern Goldfields and one to the Pilbara.

Jack Hallberg showed the visitors something of the greenstone belts of the Eastern Goldfields, the gold and nickel mining areas and his study area near Leonora.

Rudi Horwitz, who had only recently returned from a visit to the Ukraine under the same exchange program, and Dick Morris then took the visitors to see the western part of the Archaean Pilbara Block and the Hamersley iron province.

Black shales exposed in the iron ore mine at Mt Tom Price were of particular interest to Dr Sidorenko, while Dr Novikova's interest in structural geology led to stimulating discussion with Rudi Horwitz on the structure and development of the belt of Proterozoic rocks that divides the two Archaean Blocks.

Geologists first, Dr Novikova and Dr Sidorenko both showed keen interest in the way Australians lived, in Australian art and culture and in the contents of Australian shops.

Russian geologists, Dr Antonia Novikova, (left) and Dr Svetlana Sidorenko relax at an Australian bush picnic—complete with Vegemite.

They won the Jubilee Awards

Alan Bell, Brian Lee, Ian McDonald and Maurie Woodward have been granted the CSIRO Jubilee Study Awards.

The Executive established the CSIRO Study Awards this year to provide opportunities for staff to gain overseas training and experience not available to them in Australia.

They are open to all non-research staff over the age of 18 who show promise of future achievements and those whose achievements are already substantial.

The number of awards will be limited to four each year.

Alan Bell is a Technical Officer with the Division of Applied Organic Chemistry in Melbourne. He has been with CSIRO for 10 years, for the last three years being involved in coal research.

For six months Alan will study techniques used in coal conversion in Pittsburgh, Pa., U.S.A.

A Scientific Services Officer with Head Office in Canberra, Brian Lee joined CSIRO in 1969. Brian was a science writer for 'Rural Research' for several years and now writes for 'Ecos'.

He will evaluate and study new ideas and techniques in science journalism. For three months Brian will write for 'New Scientist', a weekly popular science magazine in Britain. He then plans to talk with editors, writers and production staff of semi-technical science periodicals in the U.K., Canada and the United States.

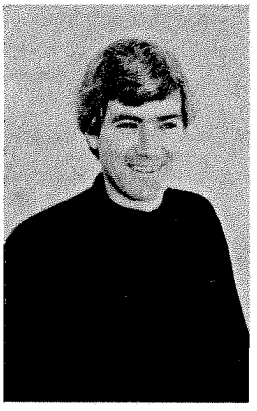
Ian McDonald is the Divisional Secretary at the Division of Food Research, Sydney. He started as a base grade clerk with the RAO, Sydney, in 1959. In 1964 he became a trainee Divisional Administrative Officer and then Acting DAO at the Division of Animal Physiology before going to Melbourne as DAO with the Division of Mechanical Engineering. He returned to Animal Physiology as DAO from 1967-1970.

Ian will be reviewing management of two major research institutions in England for six months, the Institute of Animal Physiology and the Rothamstead Experimental Station. He will visit other institutions in Britain and Europe before going to the University of California at Davis for a month.

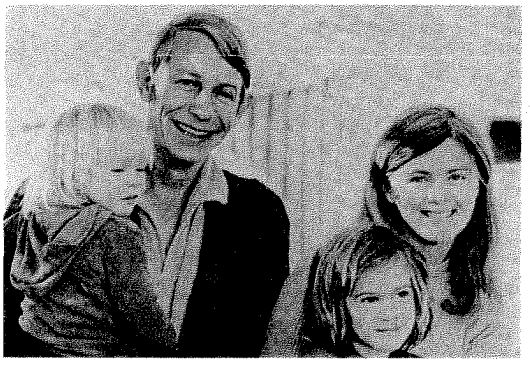
Maurie Woodward is a Senior Draftsman at the Division of Land Resources Management, Perth. He started working for CSIRO in 1955 with the Division of Soils in Canberra before transferring to the Division of Land Use Research five years later. In 1974 he joined LRM.

In the United States Maurie will study techniques in the visual communication field. For two months he will be at the Department of Instructional Media, Utah State University, and then will go to the Smithsonian Institute in Washington, D.C. He will also visit the Encyclopedia Britannica Educational Corporation in Chicago. Emphasis will be on working experience with production teams.

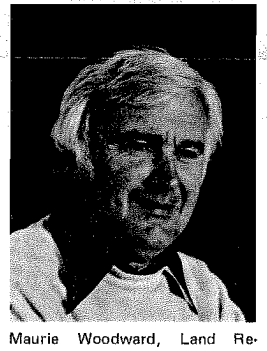
Ian McDonald, Food Research, who will go to the UK and USA.



Alan Bell will study coal conversion techniques in the USA.



Brian Lee, 'Ecos' writer, with his wife, Mardi, and children, Joannah and Vanessa who will join him in the UK.



Maurie Woodward, Land Resources Management, will spend part of his time at the Smithsonian Institute in Washington.

NML 'funnel' is not appreciated

Regular readers of the NML Newsletter might have gained the impression over recent months that members of the staff are not in love with the 'objets d'art' that they will have to put up with at their new laboratory at Bradfield Park.

One such 'objet' which has been dubbed 'the funnel' is not universally admired.

In the latest issue of the NML Newsletter one correspondent suggests that since the Federal Government is soliciting donations of works of art for its official buildings, 'the funnel' should be despatched to Canberra forthwith. 'Such an unselfish gesture would bring its own rewards,' he writes. 'We wouldn't have to look at the bloody thing!'

It usually takes me more than three weeks to prepare a good impromptu speech.
—Mark Twain

P4 complex to be opened

The official opening of the P4 Laboratory at Ciawi near Bogor in Indonesia is being planned for the third week in March 1978. By then 43 buildings at the complex will have been completed. These include various laboratories, a conference centre and library.

The laboratory now has a staff of 223. By the end of this year that number will include 20 expatriates.

Quote of the month

What we need is an enthusiastic but calm state of mind and intense but orderly work. (The Words of Chairman Mao on staff ceilings as per Entomology Newsletter).

New publication launched for use in schools

CSIRO has launched its first publication intended for school teachers—Scifile. This two-colour booklet will appear each term and will attempt to keep teachers in touch with the current research work of the Organization.

Compiled and written by Dr Michael Dack and designed by David Marshall, both of the Central Communication Unit, Scifile is one of a series of projects being undertaken by the CCU to make CSIRO's research more available to teachers and education authorities for use as resource material.

All too often teachers experience difficulty in demonstrating how the scientific theory taught in the classroom can be applied to problems of the day. The short stories in Scifile provide teachers with many examples of Australian science at work, most of which are backed up by more detailed accounts in 'Ecos', 'Rural Research' and other CSIRO publications already sent to school libraries.

Scifile also contains information about CSIRO films and special events such as open days.

The Curriculum Development Centre in Canberra, an education body concerned with the production of materials for schools, devised an appraisal questionnaire for a pilot edition of the new publication which it sent to selected schools and education officials in each State. The response was more than favourable and showed that the booklet fulfills a real need among teachers.

More than 20 education bodies around Australia (government and non-government) have agreed to distribute Scifile to their schools each term free of charge. The Australian Science Teachers Association has volunteered to send copies to its 4000 members.

Teachers and other interested people can obtain additional copies on subscription from the Editorial and Publications Section in Melbourne.

Mileage

It's just 28 years since CSIRO was born (by that prolific sire, Act of Parliament, out of CSIR).

The most recent edition of the NRMA's map of Melbourne and environs shows none of the modern CSIRO locations, except for the laboratories at Fishermen's Bend, which are designated 'CSIR'.

Which makes that map at least 28 years old—a lot of mileage for any map.

Technology conference to be held at ANU

The 3rd Australian Conference on Technology will be held at the Australian National University, Canberra, in May next year.

The conference aims to cover techniques and technology developed and used by technical staff throughout Australia.

It is being organised by the South Australian Division of ANZAAS and the Australian Institute of Science Technology with the assistance of the Canberra Branch of A.I.S.T.

Papers to be presented will cover techniques in Agricultural Science, Bio-engineering, Biological Science, Earth Science, Engineering, Environmental Monitoring, Medical Science, Physical and Organic Chemistry, Physical Science, Social Science, and Visual and Lecturing Aids.

All correspondence should be addressed to:
Conference Organiser,
ANZAAS-SA,
141 Rundle Mall,
Adelaide, S.A. 5000

'CSIRO Published Papers 1916-1968' is now available on microfiche at a cost of $40 per set.
—CILES Bulletin

New address

As from 1 September, the registered office of the CSIRO Officers' Association will be located at 9 Queens Road, Melbourne, 3004, Telephone (03) 26 3361.

All communications should be forwarded to this address.

Budget allows CSIRO 'modest expansion'— Minister

The 1977/78 Budget provision of $134 048 000 for the operations of the CSIRO would enable the Organization to press ahead with scientific research programs vital to Australia, the Minister for Science, Senator J.J. Webster, said in his comments on the Budget figures.

He said the figure represented an increase of $13,198,004 or 10.9 per cent over last year's appropriation from Consolidated Revenue.

Redeployment of staff had meant CSIRO could obtain a modest expansion of activity in high priority research areas such as energy and biological control.

'This is despite a reduction of 78 in CSIRO's staff ceiling,' Senator Webster said.

$5,745,000 of the increase resulted from:

- changed funding arrangements of CSIRO's sheep and wool research program as from 1 January 1978—$4.4m
- transfer of funding of the Kimberley Research Station from the Department of National Resources to CSIRO as from 1 July 1977—$0.6m
- CSIRO's assuming responsibility for the Materials Research Laboratory in South Australia from the Department of Defence as from 1 September 1977—$0.74m.

'The balance provides $7,453,004 for inescapable rises in salaries but makes no provision to offset inflationary increases in other operating costs,' he said.

'This means CSIRO has to exercise economies wherever possible to maintain its existing level of research activities.

'The Government also recognises that in recent years the redeployment of resources within CSIRO has been made particularly difficult by the inability of Rural Research Funds to meet the rising cost of research.

'Therefore it has been necessary for CSIRO to redeploy some staff out of the Rural Industry Research activity.

'This is a problem which the Government has recognised and has taken into account in its decision following the report of the Industries Assistance Commission into the funding of rural research.'

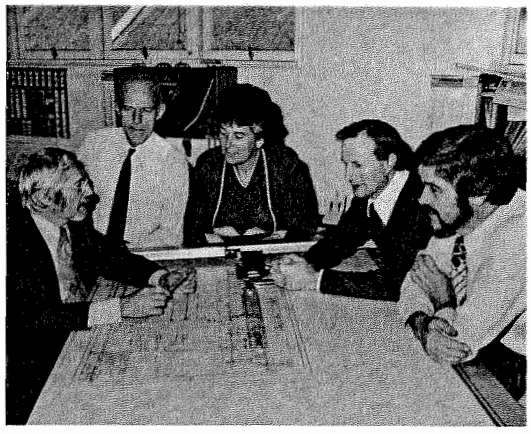
Senator Webster said there were practical limits to staff redeployment possibilities.

'Lowering staff ceilings reduces the degree of flexibility CSIRO would otherwise have in selecting those research activities which should be expanded,' he said.

'In formulating the present Budget it has been necessary for the Government to pay particular attention to this, and it is essential for these problems to be clearly borne in mind in the future.

'For only by so doing can we preserve the valuable investment this country has in scientific manpower and attempt to maintain the high degree of resource flexibility necessary to initiate and expand research in areas of national importance.'

Draughtsman retires



When Eli Emanuel joined the drawing office of the Division of Physics in 1958, his first job was a drawing of equipment for handling liquid helium. The picture shows Eli (left) discussing his last drawing before his retirement last month with fellow members of NML drawing office staff. Believe it or not, it was of equipment for handling liquid helium!

With Eli are his colleagues Ron Riches, Shirley Williams, Carl Sona and Ross Macrae

Speaker scheme to continue

CSIRO's speaker scheme, which began as a jubilee activity, is to be continued indefinitely.

The project has recently been evaluated and is seen by the Organization as a voluntary effort which is paying dividends for both CSIRO and the community.

The scheme began last year when Harry Black, (Adviser, Community Relations) from the Central Communication Unit visited a number of Divisions in Sydney, Melbourne, Brisbane and Adelaide to discover the support for the idea of establishing a speaker project.

There was enough enthusiasm for the idea to launch it and since then it has been operating successfully in the Melbourne, Sydney and Brisbane regions.

Panels of volunteer speakers have now been formed in Canberra and Adelaide and if the scheme is supported in other areas, it will be taken on in those regions as well.

The Advisory Council and the Executive have both given their endorsement of it and already there has been an enthusiastic reception from the community organisations involved.

In each region a contact officer coordinates the scheme, arranging speakers to match requests from community groups and shielding speakers from excessive demands.

Officers engaged on panel activities are considered to be on official duty and have the normal compensation coverage. If speakers are at distant engagements from their home or laboratory expenses may be met by the Division subject to the prior approval of the Chief.

Speaker information kits have been compiled and interim lecture slides and captions are available for speakers so that they have background information to use before talking to their audiences on their own subject.

The regional contact officers are: Canberra—Mr Harry Black, Coordinator, Head Office; Melbourne—Mr Clyde Garrow, Manager, Information Services, CILES; Sydney—Mr Otto Adderley, Senior Information Officer, RAO; Brisbane—Mr Dave Thomas, Regional Administrative Officer, RAO.

New information officer

The Division of Environmental Mechanics in Canberra has appointed Jean H. Weber (right) as Editorial and Information Officer. She replaces Mr Ed Highly who has transferred to the Division of Entomology.

Jean received her M.Sc. degree in Plant Ecology from the University of Maryland in 1970 and worked at the California Academy of Sciences in San Francisco before migrating to Australia in 1974.

For the past two and a half years she has worked at the Australian Institute of Marine Science in Townsville, North Queensland.

Building Research farewells ceramics expert

The man who has probably done more than anyone else for the ceramics industry in Australia, Mr Elijah Tauber, has retired after more than 15 years distinguished service with the Division of Building Research in Melbourne.

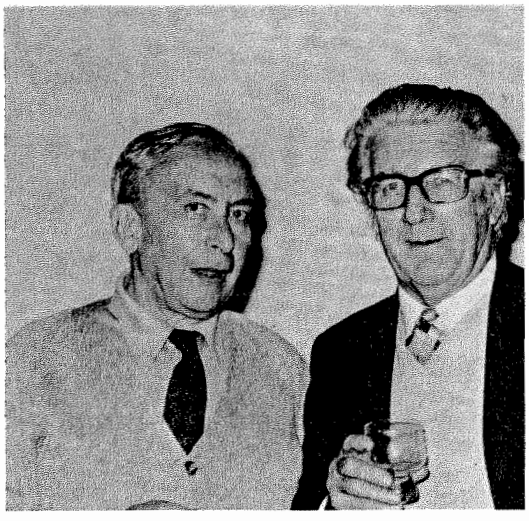
Elijah, who was born in Poland, graduated with a degree in ceramic engineering from the College of Ceramics in Paris in 1947.

In 1950 he went to Israel where he established that country's first ceramics research institute in the port city of Haifa.

He came to Australia in 1951 and worked with ACI before joining the Division in 1962.

Elijah initiated and supervised many worthwhile contributions to Australia's ceramics industries. These have included the introduction of basalt ceramics, the utilisation of previously unused raw materials, and the development of a patented process for glazing concrete.

His work on local raw materials (clays, silica sands, zircon and pyrophyllite) has reduced Australia's reliance on foreign technology, research and expertise.



Mr Tauber (left) talks with Mr Ian Langlands, a former Chief of the Division of Building Research, during a farewell party held at the Division recently.

Geoscience Unit formed

An independent group, the Fuel Geoscience Unit, has been established within the Minerals Research Laboratories at North Ryde, NSW.

It is to be concerned with exploration, assessment and utilisation of fossil fuels.

Dr G.H. Taylor has been appointed Officer-in-Charge of the Unit.

A number of staff of the Division of Mineralogy presently located at North Ryde have been transferred to the Unit, along with the CSIRO staff working at the Baas Becking Geobiological Laboratory in Canberra.

Solar Energy Index

A new quarterly publication, 'Australian Solar Energy Index', is being issued by the CILES Information Service.

The first issue will include all papers mentioned in the 'Australian Solar Energy Data Base 1952-76' together with the first instalment of updated material from 1977.

CSIRO solar energy papers as well as those from other Australian research institutions are indexed.

From 1978 onwards the data base will be updated on a current awareness basis.

Medallist

Dr Keith Norrish from the Division of Soils has been awarded the Prescott Medal for 1977 for outstanding contributions to Australian soil science.

Language contribution

Members of the staff of the P4 Laboratory near Bogor are finding they are making an unexpected contribution to the Indonesian language, Bahasa Indonesia.

Some time ago a linguistic committee was set up with the aim of co-ordinating Bahasa Indonesia with Bahasia Malaysia into one language.

Many of the technical terms have not yet been standardised, even in Bahasa Indonesia, an area which has created some problems for CSIRO's personnel working there.

Efforts are being made to help overcome this with the Organization's people making their input wherever practical.

Caretaker departs

'The tiger of Taranna', Albert Boxall, retired from the Tasmanian Regional Station last month. Caretaker-gardener since 1970, Albert will be remembered for his delightful turns of phrase and many improbable tales.

Expert with axe and crosscut, bullock and horse, chain saw and bulldozer, Albie will be remembered for his absolute reliability, warmth of personality and good humour. (Forest Research News Sheet.)

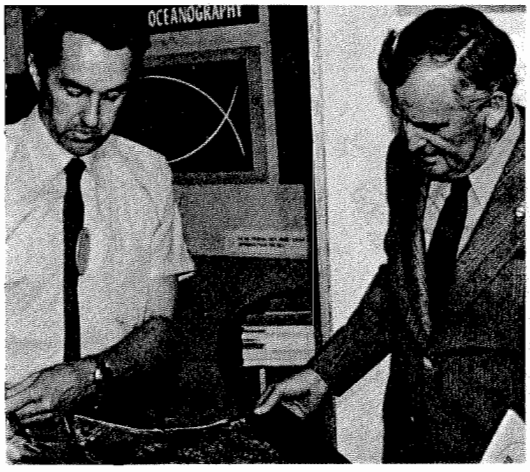
RESOURCES POOLED FOR BRISBANE SHOW

Twenty-seven of CSIRO's 37 Divisions, the Brisbane RAO and the Central Communication Unit have completed one of the Organization's biggest public relations exercises—they pooled resources to participate in the Royal National Association Exhibition, commonly known to Brisbane people as the 'Ekka'.

It is believed that this was the first time so many units of the Organization had taken part in one particular exercise of this kind.

Speaking during People's Day when about 100 000 people passed through the turnstiles, the State Governor, Sir James Ramsay, said that the show was a shop window on Queensland and a panorama of the Queensland way of life.

The way CSIRO has contributed to that panorama was depicted in its displays, in the back up material that was available to the thousands of people who visited the stand, and by members of the staff who answered countless hundreds of questions.



Mr David Thomas, RAO Brisbane, shows the Queensland Premier, Mr J Bjelke-Petersen , the Landsat poster of the Brisbane area.

The bold blue colours of CSIRO's stand at the Brisbane Show attracted immediate attention in the John Reid Hall.

The stand itself was designed to interest the general public in the Organization, but much of it was aimed at primary and secondary school children, the idea being to give them the opportunity to discover for themselves what CSIRO was doing for Queensland in particular, Australia in general.

In the 10 days that the show was staged, about 800 000 visited the Ekka grounds. Trying to estimate how many called into the CSIRO stand was almost impossible but a conservative estimate would be 20 000.

Many thousands more would have passed by it and given it at least a casual glance.

Among the visitors were the Premier of Queensland, Mr J. Bjelke-Petersen, and his wife, both of whom took a particular interest in the displays and material that was on hand.

A presentation copy of 'Surprise and Enterprise' and the new Landsat poster showing the environs of Brisbane which was specially printed for the show, were given to the Premier by the Brisbane RAO, Mr David Thomas, co-ordinator of the organising committee.

Similar presentations were also made to another visitor, the Acting Lord Mayor of Brisbane, Alderman Ray Lynch.

Organisation

With funds coming from Head Office to meet the major costs, the display featured aspects of Queensland research undertaken by 13 Divisions. The work of a further 14 was covered in the booklet 'CSIRO in Queensland' giving a total participation of 27 Divisions.

The organisation of the stand was in the hands of a Brisbane-based committee drawn from the RAO and the various Divisions which have laboratories there.

Its Chairman was David Thomas who was well supported by RAO staff such as Ken Turner, John Ryan, Jim McMaster and Jeff Fenwick.

Everyone in the RAO in fact, was involved in the operation to some degree since the office still had to be kept running while some of its staff were engaged on 'show biz'.

Early in the planning it was recognised that help was going to be needed from outside Brisbane.

The call for assistance was widely answered and the cooperation that was received from other Divisions, particularly Land Resources Management, has probably set the scene for future operations of this kind.

Instead of any one group with limited resources trying to achieve limited success with a major exercise, the support of Divisions and offices is likely to be requested, especially in the areas where special skills are needed.

As it worked out, LRM's graphic designer, Maurie Woodward, was made available to be responsible for the overall design of the stand and the creation of the individual display boards.

The boards themselves were constructed by Ted Haynes at the Meat Research Labs at Cannon Hill while Keith Symmans and Steve Ryan from Mineralogy proved to be masters with plywood when it came to mounting all the pictures.

The photography was an essential part and this was ably taken on by a number of Divisional photographers with special help from LRM's Bill van Aken and Bob Campbell, at Cannon Hill.

The text for the board was written by Justin Murphy of LRM while the Division's editor, Malcolm Howes, assisted with proof reading of material.

The CCU helped by providing back up material and liaison services, while promotional activities were a joint responsibility of the Unit and the Brisbane staff, particularly Peter Thompson of Tropical Crops and Pastures.

Behind scene workers included Kim Short and Pam Donald (LRM) and Pam Felsman (CCU) who typeset many thousands of words for the various publications and boards on composers.

Competitions

During the Show, children were invited to take part in various competitions including a crossword puzzle devised by Ross Clarke of Wildlife Research in Darwin.

Prizes for the sections were presented by the Minister for Science, Senator J.J. Webster. Winners of the senior competition will be flown to Mundubbera where they will enjoy a 'science safari' at the Narayen Field Station.

Manning

Manning the show was a major effort with staff being needed for about 11 feet-killing hours a day, not counting the early morning duty of getting the day's supplies of material into the grounds before 8am.

David Thomas, Ken Turner, Maurie Woodward and Justin Murphy did the lion's share with assistance from other members of the RAO and the Brisbane Divisions.

There were also a number of inter-state people willing to help.

These included Bob Couper and Jim Creffield from Building Research who did a star turn with their collection of live termites, keeping many hundreds of both children and adults fascinated for long periods. They were helped at times by Michael Lenz and Bob Barrett from Entomology.

Live prawns and a model prawn vessel kept more children intrigued while others learned for the first time about the way the Division of Textile Industry has revolutionised the spinning industry with Selfil and Self Twist, a model gown made from the Selfil process being of special interest.

Many people were attracted to the stand by the sale of the Landsat poster of the Brisbane environs which was specially produced with the help of the Division of Mineral Physics for the occasion.

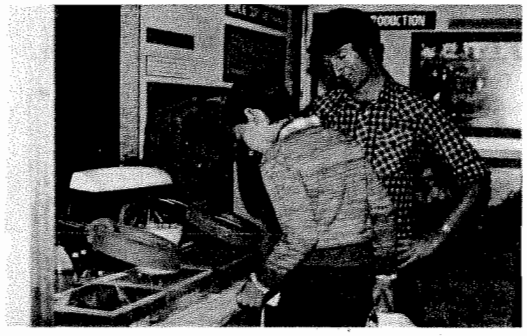
Because CSIRO's contribution to the Ekka had been well promoted throughout the schools in the region, many children made a beeline for the stand.

Those who couldn't find it immediately pestered other stands, so much so that one slightly desperate officer from one of the State Government displays called in one day and asked: 'What exactly has CSIRO got here? Every second question we're getting isn't about our work but rather it's "Can you tell us where to find the CSIRO display?" '

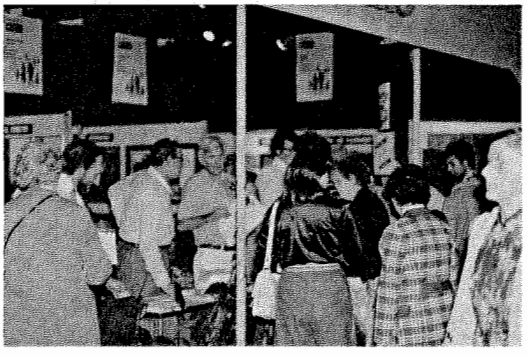
Minister displayed interest

The Minister for Science, Senator J.J. Webster, took an interest in the progress of the Brisbane Show and sent the following message to the Brisbane RAO, Mr David Thomas:

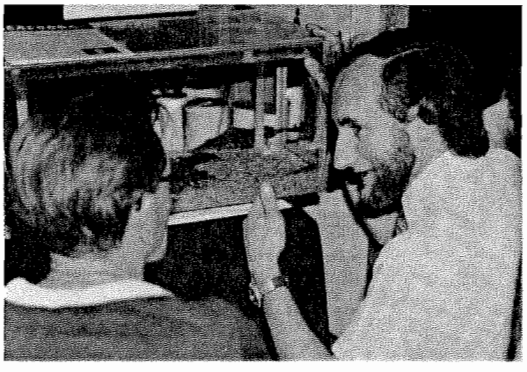
> **'Congratulations upon your exhibition at the Brisbane Show. CSIRO interests and that of support for research in Australia are progressed by your endeavour.'**



Mr Jim Creffield (right) describes the antics of the termites to a visitor. The 'termite farm' was a star attraction of the display.



The crowds build up and (in the background) Bob Couper, Ken Turner, Maurie Woodward and Justin Murphy are kept busy.



Bob Couper shows a visitor the tank of tiger prawns and gives him an outline of the work being done at the Cleveland laboratory.

Pictures: Bob Campbell

Teacher 'sings for her supper'

The place was the Brisbane Show, the 'Ekka' if you are on familiar terms with Brisbane, the Royal National Association Exhibition if you insist on formality.

The scene was the CSIRO stand and the people around included David Thomas and Ken Turner from the Brisbane RAO and Justin Murphy and Maurie Woodward from Land Resources Management, Perth.

Picture the situation – the CSIRO bods looking frazzled and bewildered after the onslaught of hundreds upon hundreds of eager schoolkids all out for one thing – to head for CSIRO's stand where they'd been advised school project material was available.

A moment's respite occurs and then along comes another group, this time a bunch of about 30 little piranhas led by a young teacher, variously described as pert, pretty and a knockout. Obviously female.

While the kids grabbed anything in sight, the guys moved in. What this teacher needed to light up her life was a copy of 'Surprise and Enterprise,' price a mere $1.50.

What the teacher said she didn't need was a copy of 'Surprise and Enterprise,' at least if it was going to cost her $1.50. Suggestions that she could charge it to the P and C Committee went unheeded.

And then someone – who shall remain anonymous – suggested she should sing for it.

No one was more surprised than our anonymous colleague when the pert, pretty miss agreed. With a flurry of her skirt, she whipped up on top of the counter, and, watched by the adoring bunch of piranhas, she proceeded to sing 'Mary had a little lamb' or something like that.

Having done so, she just as prettily hopped down, picked up her copy of 'Surprise and Enterprise', and gathering her group around her thanked those concerned and with the words, 'Come on kids, on to the next place, we've knocked that one off,' away she went leaving behind a group of rather bemused, bewildered guys.

High prices for bulls

Repeating last year's performance, the Narayen Belmont Reds have recently sold for top prices. David Coates, manager at the Narayen Field Station, reports that the prime bull topped the local market at $1050. The 19 bulls averaged $600 each and the 15 cows $250 each.

New use for old paper

Having decided that school children should be a target audience at the Brisbane Show, the organisers were faced with the realities of the situation. The kids had to be provided with back up material for their school projects, essays and crossword puzzle competitions. Material was also needed to provide visitors with additional information on the 13 displays being exhibited.

Preparation of the material was accomplished without too much hassle. What looked like being a major effort was its printing. The cost of paper is not cheap.

The difficulty was largely overcome by the ever-resourceful members of the Land Resources Management Communications Unit. They found a large supply of out-of-date letterhead paper from Divisions located in WA which had had a name change at sometime in their history. The paper had never been disposed of and made first class printing material.

The old-letterhead was overstamped 'Recycled Paper' and 25 000 copies of the project material was printed on the Division's own printing press for the incredible price of 80c per 3000 copies, about $7.00 all told.

Sydney staff run Centrepoint exhibit

While final touches were being made to the exhibits for the Brisbane Show, staff from some of the Sydney Divisions had a problem of their own to cope with—at short notice they agreed to take part in an exhibition called 'Australia on Parade' at the Centerpoint Shopping Arcade.

The exhibition was held in association with the Lyrebird Awards, a project organised by the Australian fashion industry.

Jenny North, information officer at the Minerals Research Laboratories, co-ordinated the available resources.

MRL workshop staff designed and built a novel projection booth for the theatrette.

Staff from MRL, Radiophysics, Fisheries and Oceanography, the Sydney RAO and CILES Information Service manned the displays and operated the projector for the 12 days of the event.

In that time, visitors saw a small collection of CSIRO displays, the highlight of which was probably the holograms which were contributed by the National Measurement Laboratory.

Visiting Fellow

In September, Dr Robert S. Mansell, Associate Professor of Soil Physics, University of Florida, began a year as a Visiting Fellow with the Divisions of Environmental Mechanics and Forest Research, Canberra.

His recent research involves the transport of phosphorus and potassium with water movement in sandy soils, and is related to the efficient use of fertilisers, herbicides and irrigation water for agricultural production of food.

CSIRO gets keys to new NML lab

CSIRO has 'taken delivery' of the main buildings of its new National Measurement Laboratory at Lindfield. Part of the performance was the handing over of the keys, an impressive collection as the Director, Mr Fred Lehany (right) found out. Giving him a hand with them are Bob Fuller, Head Office Buildings Branch, and Jim Andrews of the Department of Construction (left).

Scientist on TV

Social scientist, Dr Margaret Mead, Chairman of the Board of the American Association for the Advancement of Science, on two TV appearances recently made pertinent observations about the communication of science.

In a BBC program 'The World of Margaret Mead' shown on the ABC on 9 August, she commented: (statements are direct quotes)

'Unless we are able to put the sciences together so they make some kind of comprehensible whole, comprehensible to laymen—and remember the botanist is a layman to a physicist and both are laymen in the analysis of English literature or whatever—unless the world can become intelligible again to laymen, we don't have very much chance of making a go of it.'

On Monday Conference on 18 July Dr Mead was asked if modern western society was too complex for the average man to participate meaningfully in social decision-making.

She replied: 'Well, I don't think that it is too complex. If we didn't have computers and we didn't have TV I'D say it was. You couldn't get ideas over fast enough and clearly enough to people who didn't happen to know anything about that set. It isn't a question that there are a lot of great, stupid, uneducated people in the world, and then there are these great experts. The experts are all lay people in relation to other experts. A botanist can be just as stupid about physicists as a preacher or a lawyer or a candlestick maker. We have the whole world where people are lay people, uninstructed about somebody else's speciality. But we have marvellous ways of making these things intelligible today. . .'

Retirement

Dr F.G. Lennox, former Chief of the Division of Protein Chemistry (1949-1973), has recently retired.

From 1973 to 1976 he was Minister (Scientific) at the Australian High Commission, London, and the following year was a Senior Research Fellow at the Division of Animal Health, Parkville, Vic.

Currently he holds an honorary position in the University of Melbourne's School of Botany working on flavonoids and related leaf constitutents in relation to plant taxonomy and physiological changes in plants.

New prawn laboratory opens

The Division of Fisheries and Oceanography's new laboratory for the detailed study of prawns has been opened at Cleveland, near Brisbane.

The $2.1 million laboratory is the headquarters for CSIRO's Tropical Prawn Research Project. The aim of the project is to study the ecology, behaviour and physiology of commercial species of prawns.

This research will provide CSIRO scientists with the information needed to advise Federal and State management authorities on such matters as the maximum amount of prawns that can be fished in a given year, the effects of fishing pressure and other interferences by man, and the causes of natural fluctuations in prawn catches.

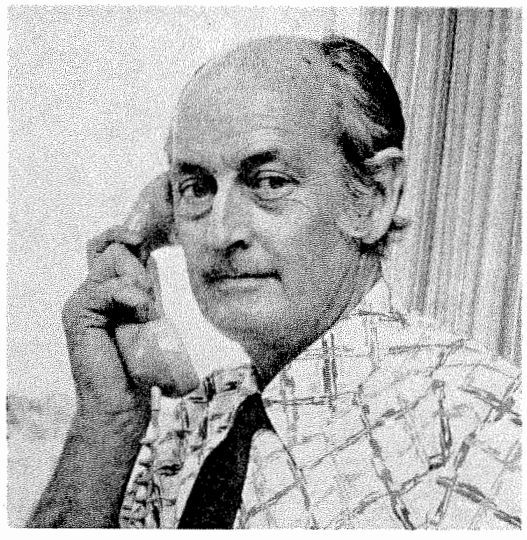
The laboratory is sited next to the Moreton Bay waters which contain almost all the important commercial species of prawns as well as good quality sea water.

One of the features of the building is a sea water system which allows clean offshore sea water to be piped to the various laboratories and aquariums.

The Northeastern Regional Laboratory operates both as a base for field studies in the Gulf and as laboratories for experimental studies of prawns. A field station has been set up at Karumba on the Norman River.

During the opening ceremony, the Minister for Science, Senator J.J. Webster, spoke of the importance of the prawn industry not only to Queensland but to Australia.

The Northeastern Regional Laboratory at Cleveland, Qld.



Dr Bill Dall, Officer-in-Charge of the new laboratory.

Staff around country farewell Ken Prowse

Some months ago a group of people in Canberra pondered the question...how did CSIRO farewell Ken Prowse, Canberra's Regional Administrative Officer, who had announced his intention of retiring on 30 September after 44 years service?

How did the Organization adequately express its appreciation for all that Ken had done for CSIRO throughout his long career?

RAO 'old hands' have a farewell drink with Ken—from left: Geoff Boswell, Bill Moore, Don Thomson, Ross Thomas, Ken, Pat Jones, Tony Culnane and Frank Sebesta. Photographs: Peter Hay

No one seemed to be able to measure up Ken's contribution anyway. Over the years he had helped so many people in so many ways he had become a legend around the place.

It was ironical that in any other circumstances it would have been to Ken that people would have gone for a solution to just such a problem, for often he has been faced with a similar quandary.

In the end, there was no one answer. There were farewell parties, farewell gifts, messages wishing both Ken and his wife, Trix, good luck for their retirement.

The greatest compliment that could have been paid to Ken undoubtedly came from the depth of sincerity which was expressed by everyone who wished the couple well.

Ken first joined CSIR as a messenger boy with the Division of Economic Botany at the tender age of 16.

He had come to live in Canberra in 1927 with his parents who became the proprietors of the Blue Moon Cafe, the second business in Civic. From its upstairs balcony Ken and his brother used to shoot rabbits down from what was later to become the national capital's main shopping area.

From the beginning Ken loved Canberra and he watched the city grow with a pride in it that has never diminished.

Just out of short pants when he started work, Ken was quick to learn the ways of the Council. He soon discovered that the support staff, of which he was a part, existed to help the scientists. Until the close of business on 30 September 1977 that was the maxim by which Ken worked.

He learned about the 'system', that it should be considered a guide rather than an immovable force and that there were ways through it rather than round it.

Throughout his career, which was to culminate in his role as the Regional Administrative Officer in Canberra, Ken insisted on sound administrative procedures.

He applied these to whatever he tackled, be it the opening of a new laboratory, the organisation of financial expenditure, the recruitment of a base grade clerk, the extrication of a scientist from some difficult situation.

When Ken tackled something he did it properly. If he was arranging the opening of a new building and protocol called for the National Anthem to be played, you knew the exact time the first bar would be played.

And when it came to something like arranging the details of the evacuation of the staff from Darwin after Cyclone Tracy, few people could have done it with greater dedication to helping his colleagues than did Ken.

Part of the secret of Ken's success of course, has been his use of 'the old chum's act.' He didn't exactly invent it, but it would be true to say that he has long been a disciple of it and on countless occasions he was able to use it in ways to benefit CSIRO and the staff.

Many of his 'contacts' were built up during his wartime career when he rose to the rank of Major with the AIF. He served with the 2/4 Australian Pioneer Battalion at Darwin, Moratai, Labuan and Sarawak and on cessation of hostilities was appointed President of the War Crimes Court at Labuan.

But some of Ken's friends were killed or injured and there was lasting compassion for their families. Ever since the war ended, Ken has been involved in Legacy, not to mention other community activities.

It would take a book to recount the stories that are told about Ken in CSIRO...it would need a sequel for Ken to list the tales he can tell about his colleagues.

Colourful versions of some of them were told at a staff function at Forestry House when more than 300 people gathered to say their personal farewells to him and Trix.

The Chairman, Mr Victor Burgmann, formally thanked Ken on that occasion for all that he had done for CSIRO and recounted some of the many tales that have grown up about him before asking him to accept the Neco wall hanging of Canberra that was a gift from the staff around the country.

The picture, processed in Perth from an original photograph taken by Jack Cavanagh of Land Use Research, will hang on the wall of the billiard room Ken is planning to incorporate in his new home at Tumut.

Other gifts included a handbag for Trix and a well-filled wallet.

The party brought out a lot of old friends...girls who had been technical assistants in the thirties when Ken just joined the Council, others who had been his secretaries over the years and a lot of his old mates who could recall the young Prowse of 40 years ago.

When the new Prowse home is completed, traffic along the highway between Tumut and Canberra is likely to be much heavier as old friends keep up old friendships. There will be trout in the nearby streams, a billiard table for serious competition in that sport and there will be leisurely hours to talk about the 'old times'. Ken has also promised a well-stocked fridge for his visitors.

The RAOs get together with their retiring colleague: (from left) Tony Culnane, who has taken over from Ken in an acting capacity, Trevor Clark (Sydney), Ken, Jack Brophy (WA), Alan Patterson (Melbourne) and David Thomas (Brisbane).

Ken has a word with an old colleague, Mrs Phyllis Nicholson, at the Forestry House farewell.

The Chairman, Mr Victor Burgmann (left) and former Chairman, Sir Robert Price, talk with Ken at the staff farewell. In the background is the wall hanging presented to Ken.

Co-operation with industry....

Continued from page 1

Evans from the Department of Productivity, members of the AIRG and senior officers from CSIRO were welcomed by the Chairman, Mr Victor Burgmann.

The conference, entitled 'Interactions between CSIRO and industry in research and development', offered a unique opportunity for the participants to examine matters relevant to determining the nations needs in research, Mr Burgmann said.

Commenting on research priorities, he said that both CSIRO and industry research budgets had been hit by financial stringencies in recent years.

In the situation of static (or even declining) financial resource it was obvious that greater selectivity had to be exercised in regard to the industrial research problems which both CSIRO and the AIRG were engaged upon.

In the past in a time of expanding resources, it was appropriate that many long-term activities could be initiated. CSIRO believed then—and continued to believe—that much of the longer-term work would eventually be relevant to Australian industry.

'But in the present situation,' Mr Burgmann said, 'we recognise that we cannot even consider starting a new program without curtailing or redeploying resources from other programs.

'Within CSIRO the Executive and Chiefs are making strenuous efforts to ensure existing research resources are deployed as effectively as possible.'

Looking to the future, he said, if CSIRO and the AIRG were to further develop the case for increased industrial research and development in Australia, it would be necessary to give full consideration to the possible future of Australian industries.

The role of R and D would need to be carefully designed in a way which was consistent with trends in industry.

The continual improvements of procedures for allocation of funds was also important so that resources which might in future become available were directed to areas of greatest promise.

In his opening address, the Minister said that industry should be encouraged to undertake more research and development.

It was odd that a significant number of people were sceptical of the value of research investment, considering the great technological advances of the 20th century.

Inflation, said Senator Webster, had caused rapid escalation of the cost of scientific labor—which had doubled in the period 1971-76. But inflation would not be beaten unless productivity was increased. Greater productivity hinged efficient techniques developed by continuing industrial research and innovation.

Senator Webster added that private industry must also be encouraged to take advantage of results of public-funded research.

'The gap between scientific result and industrial application is too wide.'

During the conference, the participants looked at five case studies involving CSIRO and industry collaboration to see how these had worked in practice.

Dr David Solomon, Chief of the Division of Applied Organic Chemistry outlined some of the constraints the CSIRO system largely on improved and more placed on a Chief in responding to an industry initiative, and Dr Paul Wild, an associate member of the Executive, spoke on the existing and future mechanisms which might be employed to facilitate interaction between CSIRO and industry.

Committee

A small committee comprising Dr Wild and two other CSIRO members yet to be decided, Dr Peter Richards, President of the AIRG, and two other AIRG members yet to be decided, was set up during the conference to look at areas of possible collaboration which the two bodies felt they should discuss further.

Remote field stations get Ministerial visit

In the last month or so, the Minister for Science, Senator J.J. Webster, has continued his program of visiting CSIRO establishments to become familiar with their research programs.

Included in recent itineraries have been visits to staff working in the Pilbara and to the remote field stations at Kununurra and Katherine. He was accompanied by members of his staff and Dr John Nicolson from the Science Branch of Head Office.

In the Pilbara, the Minister was able to see CSIRO research being applied to industry and improving the quality of life.

Several Divisions have been aiding industry and horticulture in this area.

At Paraburdoo, Dr Robin Batterham of the Division of Chemical Engineering explained the Division's two collaborative research programs with the iron ore industry-crushing and grinding, and process control and optimization.

Similarly, the Division of Process Technology has helped Hammersely Iron solve the serious problem of production losses due to 'catastrophic spalling', the explosive disintegration of pellets during the drying stage.

The Division's research is now aimed at understanding the major factors which affect the development of good pellet quality.

During the visit to the Pilbara Mr Wilf Ewers of the Division of Mineralogy explained the geology of the area and the Division's work in aiding the search for further deposits of iron ore.

Another CSIRO project in the area has involved the Division of Horticultural Research which has been collaborating with the Superintendent of Conservation at Hammersley Iron by providing advice and help in the selection of fruit trees to be planted in the Pilbara, fresh fruit being an expensive commodity to transport.

At Dampier the Minister saw horticultural plots where tree species that might be suitable for the area were being grown.

The Chief of the Division of Tropical Crops and Pastures, Dr E.F. Henzell, joined the Minister for his visit to both Kununurra where the Kimberley Research Station is located, and to the Katherine Research Station, south of Darwin.

After a discussion concerning the marketing and transport difficulties of the Kununurra area, the Minister was taken on a bus tour of experimental plots of grain sorghum, grain legume crops and kenaf, crops with which the Kimberley Research Station (KRS) is currently concerned.

The Minister was told that one way of meeting the world's increasing paper requirements was to grow highly productive crops specifically for paper pulp production. Kenaf was one crop that showed promise and research at KRS was currently being directed to its production. The Division of Chemical Engineering is also involved in this program.

KRS is also one of the major areas for CSIRO's research into grain legumes for both human and livestock feed and the Minister was shown some of this work.

At Katherine, the Minister's party was joined by Mr Les McFarlane, a member of the N.T. Legislative Assembly, Mr John Tilley, Chairman of the Katherine Research Station Advisory Committee and Mr Arthur Garrard, a member of the Committee and Manager of Manbulloo Station, where the Division of Tropical Crops and Pastures is carrying on research programs.

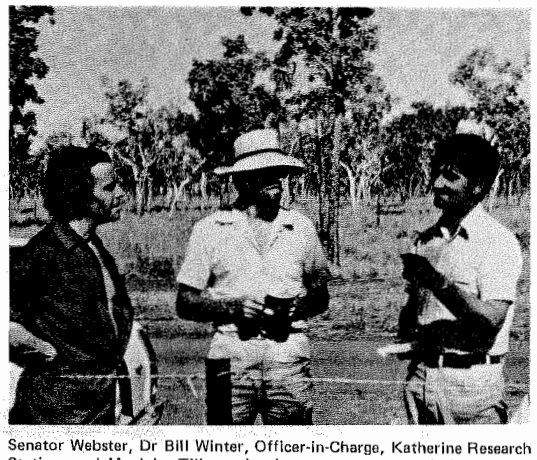
At the experimental grazing plots at Manbulloo the Minister saw how studies were being made based on four species of stylo sown as pasture in typical, sparse, open woodland.

Grown with native grasses the stylos can produce stable pasture mixtures which could sustain good animal production.

The best plots had shown that the carrying capacity of the country could be increased eight times and the growth rate of each beast could be doubled.

Because an economic herd of cattle could be run on a smaller area, management could be improved and labour costs reduced.

At Kimberley Research Station Dr Angela Done and Mr Russell Muchow show Senator Webster one of the experimental plots of kenaf.

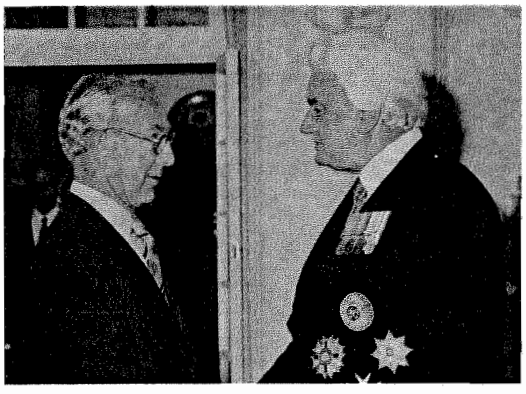


Senator Webster, Dr Bill Winter, Officer-in-Charge, Katherine Research Station, and Mr John Tilley, a local property owner and Chairman of the Katherine Research Station Advisory Committee, discuss tropical legume plots at Manbulloo Station.

QUEEN'S BIRTHDAY HONOURS

In recent weeks there have been investitures held across the country for a number of people who were mentioned this year in the Queen's birthday honours list.

In Canberra, the Governor-General, Sir John Kerr conferred the OBE on Mr Jack Coombe (right), Assistant to Chairman, for public service, while Dr Max Day (lower right), Chief of the Division of Forest Research, received an AO for distinguished service in the field of biological research.



The Ord River has been the scene for a 24-minute documentary being filmed for television by Mike Swinson from the ABC Townsville. Dr Raymond Jones from the Division of Tropical Crops and Pastures was at the Kimberley Research Station at the time and assisted the ABC film crew.

Scientists on air

Several CSIRO scientists from the Division of Tropical Crops and Pastures have in recent weeks been heard on the BBC's World Service program 'Farming World'. Taped interviews were made by the BBC's staff member, Mary Cherry, when she was in Australia last December. So far Dr Mark Hutton, former Chief of the Division, Merv Hegarty, Ian Wood and Harry Stobbs have been 'on air' and more will follow.

Credit Society tops $5 million

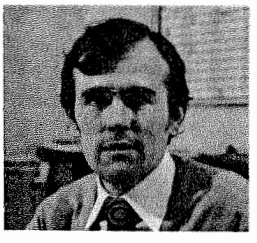
At the General Meeting of the CSIRO Co-operative Credit Society Ltd, Melbourne, last month, the Chairman of Directors, Dr R.W.R. Muncey, Chief of the Division of Building Research, announced yet another milestone in the history of the Society. The loans outstanding and the money on deposit both passed the $5 million mark during October 1977.

Dr Muncey said that he and the other Directors were most gratified by the confidence placed in them by the members and the support that was given to the Society.

Fellow AIAS

Mr J.K. Taylor, former Chief of the Division of Soils who retired in 1964, has been made a Fellow of the Australian Institute of Agricultural Science. The honour is in recognition of his contributions to soil science in Australia since the late 1920s.

As early as the 1930s Mr Taylor had written on the use of aerial photography in soil surveys, so setting the scene for what became standard practice.



New O-I-C of Film and Video Centre takes over

Mr Nick Alexander (above) has been appointed Officer-in-Charge of the Film and Video Centre, Melbourne.

A former member of the CSIRO Film Unit (from 1965-1970), Nick has free-lanced overseas for BBC 'Panorama' and '24-Hours' filming in Mozambique, Zambia, South Africa, Tanzania and Vietnam.

On his return to Australia in 1972 he directed several teaching films for Monash University Audio-Visual Aids Section.

In 1973 Nick co-produced (with David Corke, another former member of the Film Unit) a 50-minute TV documentary 'Shed Tears for the River' for the South Australian Department of Environment and Conservation.

For six months he was the Melbourne film editor for 'A Current Affair' and has done documentaries, editing and free-lance film production work.

Siroforum

Staff ceilings

How many others share my disgust at the silent acquiescence of the upper ranks of CSIRO, not to mention staff associations, with the latest staff reductions?

The latest 'surgery', to trim a fixed percentage of 'fat' off all Divisions regardless of their recent economies, and of Australia's social and economic needs, threatens the welfare and independence of science in this country even more than did past suggestions of restructuring CSIRO.

For apparently the present operation is to be conducted blindly according to doctorinaire rules without even the most superficial examination of individual, Divisional circumstances and without any discernible sense of policies or priorities.

Granted that an upper limit must be set to expenditure by CSIRO, should we not be arguing like hell that research and innovation provide the one means which might conceivably restore some health to Australian industry and that therefore expenditure on research should have very high priority?

But aside from that, why should a blanket ruling dictate that major economies must be via staff reductions? Are science administrators incompetent to judge the least harmful ways to economise?

The human mind is the one indispensible item in research. Our recent fascination with, not just equipment but, the latest model of the newest equipment is a distortion of essentiality.

If CSIRO must economise, as is reasonable, why can we not adopt the policy of retaining staff, or even adding to them selectively, but cut expenditure by postponing schedules for replacement of, and adding to, equipment. It would be salutary to take the time to explore more imaginatively the potentialities of the equipment we already have.

After all, the newer model often only exchanges one set of artifacts for another which is still to be recognised. To aid adoption of this attitude, Head Office might announce that future approvals of equipment will in no way depend on past high levels of spending by the requesting Division or Section.

As one too old for salt-mining and too young to retire, I sign myself

I. de Spair
(name supplied)

Tall tales and true....

There would appear to be some substance in the allegation's made in the article 'Shortchanging the Short' which appeared in the Library Column of HO Newsletter No. 42.

On the same day of issue, the RAO Canberra distributed a note on the new Pay Advice envelopes which illustrated the layout and details of content. One of the items was 'Height Allowance' but did not indicate if it was for tall or small people.

T.B. (name supplied)

Would you believe that the reference to height means staff who may be up a pole or a tree?

Science appointment

Dr J.L. Farrands has been appointed Secretary, Department of Science as from 10 October.

An experienced scientist and administrator, Dr Farrands has been Head of the Defence Science and Technology Organisation for the past six years.

His activities in governmental science over 30 years have been as an individual research worker, a director of one of the largest research establishments in this country and as a scientific adviser to successive governments on scientific and technical matters.

He has participated in many extra-governmental scientific activities.

Dr Farrands succeeds the late Sir Hugh Ennor.

Distinguished scientist bows out

Dr Eric French reminisces with a former associate, Sir McFarlane Burnett at one of the farewell functions in his honour.

An Honorary Membership of the Australian Veterinary Association has been bestowed on Dr Eric French who has retired from the Division of Animal Health, Melbourne.

The honor is conferred upon eminent persons as a token of respect for their contributions to the veterinary profession but is rarely given—since 1928 the Association has appointed 10 Honorary Members, and only one is still surviving.

Dr French joined the Division in 1959 to establish the first Virology Section in Australia to study virus diseases of livestock. He was appointed Assistant Chief in 1968.

He has acted as consultant and adviser to veterinarians from all sections of the profession and has played a major role in the training of personnel to establish other virology units throughout Australia.

Dr French made many contributions to the First Edition of the Manual for Diagnosis of Exotic Diseases of Animals and was co-editor of the second edition. He has served on various committees concerning animal viruses and exotic diseases of livestock.

Biography of former Chairman written

A biography of Sir Ian Clunies Ross, Chairman of CSIRO from 1949 to 1959, will be published in November by the Australian Academy of Science.

Written by his son Anthony, a lecturer in history at the University of Strathclyde, Glasgow, Scotland, it will be issued in the journal, 'Records of the Australian Academy of Science', Volume 3, No. 3/4.

Included in the journal is the Flinders Lecture given by Dr C.H.B. Priestley, Chairman, Environmental Physics Research Laboratories, entitled 'On Winds and Currents'. There is also a biographical memoir of Lord Casey by Sir Frederick White, another former CSIRO Chairman.

It may be purchased for $5.00 at the Academy of Science, Canberra, or orders with payment may be sent to:

The Australian Academy of Science, PO Box 783, Canberra City, ACT.

Polish scientist is Pye Fellow

Dr Piotr Kowalik, Associate Professor of the Institute of Hydrotechnics, Technical University, Gdansk, Poland, is spending six months with the Division of Environmental Mechanics under the Division's Pye Fellowship scheme.

Dr Kowalik is a soil physicist whose recent work involves the mathematical modelling of the flow of water in soil-plant-atmospheric systems in field conditions.

He obtained his Ph.D. at the Technical University, Gdansk, in 1972, having completed an International Course of Soil Science at the University of Wageningen, Netherlands, during 1968-69.

He worked at the Institute of Water Management (ICW) in Wageningen during 1973 and was a Visiting Professor at the University of Firenze, Italy, in 1976.

Obituary

The death has occurred after a lengthy illness of Jim Robinson of the RAO, Canberra.

Jim joined Head Office in 1970 and later transferred to the Regional Office where he was responsible for the issue of Commonwealth registration plates, and as customs officer for the Canberra region. Through this service Jim became well known throughout Australia for his quiet and unassuming personality coupled with a willingness to assist whenever it was possible.

The esteem in which he was held was demonstrated by the generous donations made by staff and friends to send Jim and his wife on an all expenses paid holiday. Unfortunately Jim did not recover sufficiently to enable him to make the trip. Ansett Airlines of Australia had provided two tickets to any location of their choice, and the thanks of the RAO staff go to them for this offer.

Football results

CSIRO Sydney soundly defeated CSIRO Canberra in the annual(?) rugby league challenge for the F.S. Cox Trophy in Sydney on 10 September.

According to vague reports it was a bone-breaking, muscle-bruising game with sore bodies and sore heads on Sunday morning. Final score: 13-5.

Science at work

Courtesy: Punch

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

Editor: Dorothy Braxton
Assistant Editor: Barbara Hartley

Coresearch

A monthly publication for CSIRO staff

November/December 1977 **218**

New Lab to Aid Poultry Research

The Division of Animal Health's new laboratory, the Specific Pathogen Free (SPF) Poultry Unit, was officially opened in October by the Member for Mallee, Mr Peter Fisher, representing the Minister for Science, Senator J.J. Webster. The Unit is located at the Division's Maribyrnong Field Station in Victoria.

In the official party along with Mr Fisher were the Chairman, Mr Victor Burgmann; Dr Jeff Fairbrother, Executive Director of the Australian Chicken Meat Federation; Dr Alick Lascelles, Chief of the Division of Animal Health; Dr Len Lloyd, Officer-in-Charge of the Unit; and Mr Bill Snowdon, Section Leader, Virology, of the Division.

The Unit is the result of a collaborative effort between CSIRO, the poultry industry and the Commonwealth Department of Construction. It will play an important role in disease control in Australia's poultry industry.

The new laboratory is a poultry disease research centre and is designed to house specific pathogen free poultry, that is, poultry which are bred in conditions that keep them free from a wide range of microorganisms capable of producing poultry diseases.

Specific pathogen free poultry flocks are essential for studying diseases of birds and for producing vaccines against poultry diseases.

Poultry diseases cost the industry an estimated $38 million in production losses each year.

Many of the virus vaccines used to counter poultry diseases are produced by growing the viruses in fertile eggs.

However, a number of poultry diseases are transmitted through the egg and if a vaccine were produced from infected eggs there would be a grave risk of an unwanted disease actually being introduced by wide-scale vaccination of commercial flocks.

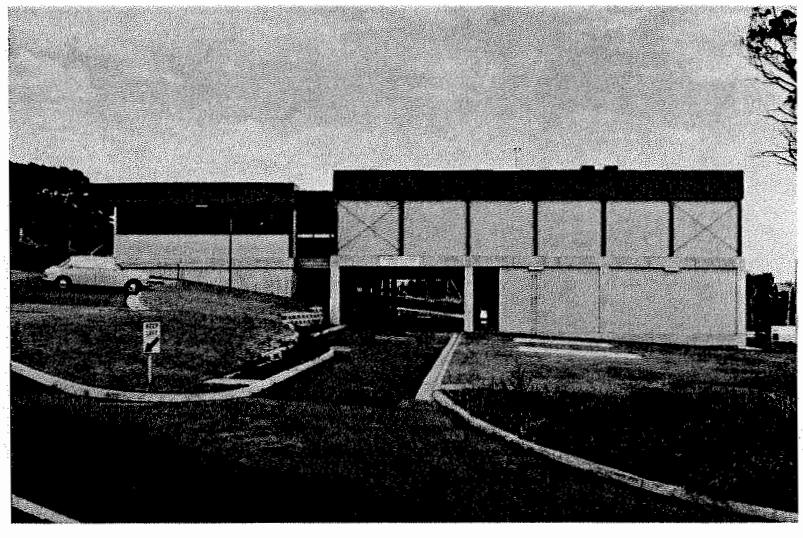
As a first step towards minimising this risk, all poultry vaccines manufactured and used in New South Wales from 1 January 1978 must be produced from SPF poultry only.

The Unit will build up a national reserve of SPF poultry, develop tests which will be required to maintain the pathogen-free status of SPF flocks, and use its flocks to study diseases of birds.

Fertile eggs will be available to vaccine producers and research laboratories for the establishment of additional SPF flocks.

Helping the Chairman, Mr Victor Burgmann, try on one of the multibird isolator gloves for size are (from left) Sue Davidson, Jane Wallace and Wendy Tenner. Empty isolators were on display for guests to inspect. There are a total of 36 multibird isolators, each accommodating 12 to 15 laying hens and one or two roosters. Staff has no direct contact with the birds except through the gloves which are permanently fixed to the gloveports of the isolators.

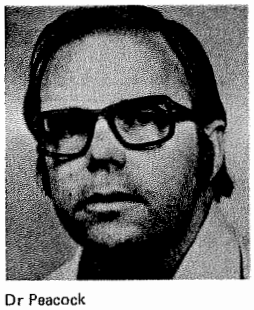
The Specific Pathogen Free Poultry Unit (below) was built at a total cost of $930 000 of which $195 000 was contributed by the poultry industry.



New Chief

Dr W.J. Peacock has been appointed Chief of the Division of Plant Industry for a period of six years, following the completion of Dr L.T. Evans' term as Chief in January.

Dr Evans will return to full-time research in the Division.



Dr Peacock

A world authority on cellular genetics, Dr Peacock will be one of the youngest scientists to head a CSIRO Division.

In 1958 he graduated from the University of Sydney with a B.Sc. in Botany and gained a Ph.D. in cellular genetics from the same university in 1962.

Before joining CSIRO in 1965, he spent three years at the University of Oregon, USA.

Dr Peacock currently heads a research group in the Division which has made important discoveries about the chemical composition and organisation of chromosomes in higher life forms.

Last year he was elected to the Australian Academy of Science.

CSIRO Health Fund survey

At a meeting held on 19 October the working party set up to undertake a feasibility study into a CSIRO staff medical and hospital insurance fund decided to defer making a firm recommendation until early in the new year.

Mr Howard Crozier, convener, said the decision was made in view of possible changes in existing health fund premium rates.

Two members of the working party, Dr David Goodchild and Dr Graham Brown, reported on the results of a survey conducted to assess the feasibility of the proposal among staff members.

Of the 290 questionnaires distributed, responses were received from 110 persons. Virtually all indicated that they would be interested if premiums were ten per cent below those of other funds. Half of those who responded said they would not be interested if premiums were discounted by five per cent.

Comments from those who completed the questionnaire indicated that staff would want equivalent health coverage, portability from one health scheme to another, optical coverage, convenient quick repayments, and guarantee of financial backing.

Mr Crozier said that in order for a health fund to be registered with the Department of Health it would need to have the required finance.

A more detailed survey may be taken that would include one entire staff association and at least one laboratory.

A sub-committee had looked into similar types of funds. The Queensland Teachers' Union Health Fund demonstrated that it is feasible to operate a non-subsidised health fund at attractive premium rates.

FLIES ARE HER FORTE

When Zenta Liepa accepted a position at the Division of Entomology in Canberra 27 years ago, she didn't know how well she was going to become acquainted with that Australian summertime nuisance—flies!

While most of us would just as soon not see a fly, Zenta has spent hundreds of hours in the field collecting them and she thinks that they are 'beautiful'. Under a microscope some of them are indeed very beautiful.

Zenta's introduction to flies began in 1950 when she joined CSIRO.

A political emigrant, she arrived in Canberra from Latvia in 1947 and worked under Government contract at Lawley House, a Government hostel.

'Since I was Latvian, someone suggested that when I finished my two-year contract, I might like working with Dr S.J. Paramonov, a Russian entomologist at CSIRO, to help him with his 'English.' They didn't realise that at the time Latvians and Russians were not on the best of terms,' smiled Zenta, 'but he was a Ukrainian and we got along splendidly.'

She has seen the Division's collection of the Order Diptera (Flies) grow from a few thousand to over 80 000 specimens.

In the 50s she and Dr Paramonov travelled throughout NSW collecting specimens on one-day field trips. She has looked for flies in every Australian State except Western Australia, even the Simpson Desert, Lord Howe Island and Norfolk Island.

'In the Simpson Desert we would begin collecting at 6 am and finish at midnight. I still remember very well the leeches at Lake Eham on the Atherton Tableland and the results of my encounter with a stinging tree in the Lamington National Park,' said Zenta.

Fieldwork takes only about one per cent of her time. In her role as 'general manager' of the collection, she processes newly arrived specimens, making the preliminary classification.

Responsible for the reference catalogue of Australasian Diptera, she has also established a subject and geographical index.

Zenta has published a catalogue of Dr Paramonov's publications and type species, and is junior author of a section of the Oriental Catalogue.

She is now working with Dr Don Colless at the Division.

She was especially pleased the first time a species was named after her, in recognition of the work that she had done.

In her spare time Zenta returned to school and now has an Arts degree, majoring in Political Science and Australian History.

Flies are still her main interest and armed with nets, killing bottles and petal packs (containers with small pieces of tissue for the protection of the specimens), Zenta often takes a busman's holiday and spends hours of her own time in the field.

'I can take my time and collect selectively, searching for habitats that look particularly interesting.

'Whenever I stay at a motel the first thing that I look at are the night lights, fluorescent ones are particularly good, to see if there are any unusual specimens attracted to light.

'There are still many places I would like to go to collect,' said Zenta, 'Kangaroo Island, Western Tasmania, and parts of Western Australia.

'Even here in the ACT I found a very interesting specimen last week on Black Mountain, within a short walking distance of the laboratory. On Mount Ainslie I recently made the first collection of the male of a species that had not been collected in the ACT since 1947.

'There is still much to be done.'

At work in the laboratory, Zenta Liepa studies one of the specimens in the Division of Entomology's large collection of Diptera.

Dr Charles Gerrard (right), Acting Chief of the Division of Applied Geomechanics, presents Dr and Mrs Aitchison with a farewell gift.

Chief Retires

Dr G.D. Aitchison, Chief of the Division of Applied Geomechanics, has retired from CSIRO on medical grounds.

Dr Aitchison joined the Division of Soils in 1943 to work on soil stabilisation for airfield construction. Later he did soil mechanics research in relation to building foundations and road construction.

In 1958 he was appointed first Officer-in-Charge of an independent Soil Mechanics Section of CSIRO, having established a world-wide reputation for research on the engineering properties of unsaturated soils.

In 1967 Dr Aitchison became the first Chief of the Division of Soil Mechanics. When the Division's research in soil mechanics in relation to civil engineering was extended to include rock mechanics studies for both the civil and mining engineering industries, the Division was renamed the Division of Applied Geomechanics.

In 1973, at the request of the Executive, he undertook a review of the geomechanics aspects of coastal and offshore engineering.

During his retirement he intends to continue, on a personal basis, his interests in environmental and coastal and offshore geomechanics.

A farewell barbecue luncheon was held at the Division in October and Dr Aitchison was presented with a slide projector by the staff.

A formal farewell dinner was held in November.

Nothomyrmecia macrops

A team of CSIRO scientists has found the world's most primitive living ant in South Australia, ending a 46-year search by entomologists from around the world.

Known only by its scientific name, *Nothomyrmecia macrops*, the ant is described by its finder, Dr Bob Taylor of the Division of Entomology, as a 'living fossil'.

Dr Taylor was a member of an expedition which found the ant in Mallee scrub on South Australia's Eyre Peninsula last month, 1300 km from the Esperance area of Western Australia where the only two known specimens were collected in 1931.

New soils booklets released

A new series of six booklets on soil science and related subjects produced by the Division of Soils will help the home gardener.

The series has been written in response to a growing number of enquiries from students, gardeners, home builders and others for information about soils in general and about soil in their own area in particular.

The booklets cover principles in soil science, the role of earthworms in improving soil, composting techniques, plant nutrition and trouble-shooting in the home garden.

The first two booklets titled 'Soils—An Outline of their Properties and Management' and 'Soil—Australia's Greatest Resource' are now available from CILES or the Australian Government bookshops for $1.00.

The third booklet, 'Earthworms for Gardeners and Fishermen', is due out in December.

'Composting', the fourth booklet, should be available early in the new year.

The remaining two booklets titled 'What's Wrong with my Soil?' and 'Food for Plants' will go on sale next year.

Staff Associations meet Executive

Representing the CSIRO staff associations at the meeting with the Executive were: (seated, from left) Dick Mott (CSIROLCA) Graham Brown (CSIROOA), Carole Popham (CSIROTA) and Stuart Snell (ACOA); (standing, from left) Keith Hodgson (CSIROLCA), Gary McMorran (APSA[FDO]), Paul Wright (APSA[FDO]) Allan McKenzie (CSIROOA) Stan Imer (ACOA) and Dick Desmond (CSIROTA).

Photo: AIS

The third annual joint meeting between the Executive and representatives of staff associations was held at Head Office on 31 October.

Matters discussed at the meeting included the report of the Committee of Inquiry into CSIRO, safety, grievance appeals, flexible working hours, careers opportunities for Clerical Assistants, staff ceilings, the Commonwealth Employees (Employment Provisions) Act 1977, and the establishment of a CSIRO joint consultative committee.

The Executive outlined a possible formal framework for dealing with general grievance appeals within the Organization and sought formally the views of the associations on this framework.

A joint working party under the chairmanship of Dr N.K. Boardman will be set up to plan the establishment of a CSIRO joint consultative committee or joint council. Each of the five associations will be represented on the working party.

The Executive agreed to initiate a review of the flexible working hours trials in operation throughout the Organization.

David Rivett Medal

Nominations and applications are invited from members of the CSIRO research staff for the award of the David Rivett Medal.

The award was instituted by the CSIRO Officers' Association in 1964 to honour the memory of the late Sir David Rivett, Chairman of CSIR from 1946 to 1949.

It is offered every two years for outstanding research by members of CSIRO staff under the age of 40 on 1 January.

The 1978 award is to be made in the field of biological sciences for research 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, 9 Queens Road, Melbourne 3004, before 30 March, 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 1967, or to be published before the award
- copies of these papers.

A committee appointed by the Council of the 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.

Transfer

The South Australian branch of the Materials Research Laboratories of the Department of Defence which was transferred to CSIRO on 1 September, has become part of the Division of Tribophysics.

A small group within the laboratory will be attached to the National Measurement Laboratory.

Pre-Retirement Planning Seminar

Why plan for retirement? What is the best way to invest my money? What should I consider if moving to a new area after retiring? What am I entitled to?

The Head Office Training Group in Canberra organised a Pre-Retirement Planning Seminar for CSIRO staff and their spouses in order to help answer some of these questions.

There was an enthusiastic response to the three consecutive Friday afternoon sessions held at the Division of Forest Research during November.

Topics discussed included superannuation, entitlements, social security, investments, taxation, travel, estate probate, wills and personal health.

Tony Culnane, Acting Regional Administrative Officer in Canberra, said the seminar was intended to act as a model for similar seminars that will be held for staff throughout Australia. The video-taped speeches will be available for distribution.

A social was held after the final session for the 120 people who attended.

Doreen Thiedeman (Soils) talks with Ross Walker from the Council for Ageing.

Chatting before one of the seminars are Mrs Ken McLachlan, Roy Brewer (Soils), Jim Sleeman (Soils) and Ken McLachlan (Plant Industry).

Looking at the CSIRO exhibit at the National Press Club, Canberra, are Mr Lyndsay Neilson, Director of Planning with the Geelong Regional Commission, Mr Bob Smyth, senior project officer with the National Capital Development Commission, and Miss Pauline Calver of the NSW Fisheries Department. Photo: Jack Cavanagh

URPIS FIVE

The Fifth Australian Conference on Urban and Regional Information Systems (URPIS FIVE) was held at the National Press Club in Canberra from 9-11 November.

The conference provided an opportunity to review and assess the significant developments that have been taking place within Australia over recent years in the use of geographically based information technology in planning and administration.

The 180 people attending included representatives of Commonwealth, State and Local Government departments and authorities, private planners and consultants, and academics from a wide variety of disciplines and institutions.

The opening address was given by Dr Dick Millington, associate member of the Executive. He stressed the importance of co-operation and communication between agencies involved with geographically-based information systems and the need for national guidelines, standard classification, and identification of common sets of data required in planning.

Sections included papers on resources planning and administration, social infrastructure, local government, utilities, lands administration, computers, remote sensing and surveying and mapping.

An exhibit entitled 'Aids for Planners' was prepared for the conference by five CSIRO Divisions—Building Research, Computing Research, Applied Geomechanics, Land Resources Management and Land Use Research.

A series of eight display panels allowed for a simultaneous comparison of various techniques and approaches being developed for land and other resource allocation within CSIRO. Accompanying each display was a handout which provided a summary of research activity.

Much of the organising of the conference and coordination of the exhibit was done within the Division of Land Use Research by John Wells.

Chief Minister visits lab

Staff of the Division of Tropical Crops and Pastures were host to the Hon. Mr P.K. Kenilorea, MLA (centre), Chief Minister of the Solomon Islands, when he visited the Samford Pasture Research Station near Brisbane.

Dr Ted Henzell, Chief of the Division, welcomed Mr Kenilorea and outlined the activities of the Division prior to making a tour of the Station.

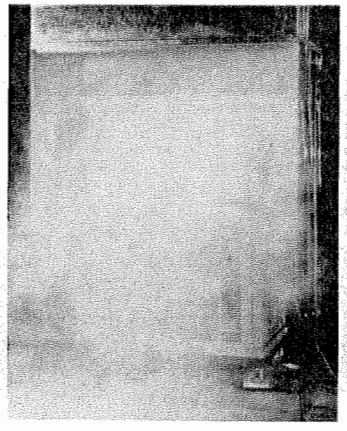
In the glasshouses, Dr Bob Bray (left) explained the processes involved in plant collection, introduction, quarantine and testing before new cultivars can be released commercially or material selected for further breeding.

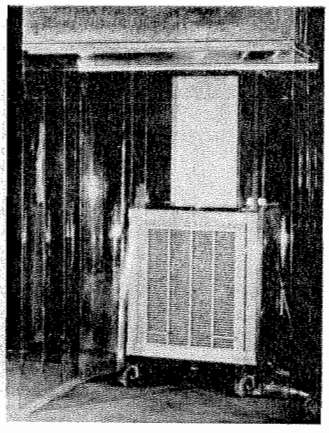
Mr Kenilorea was interested to hear that the Division has the largest collection of tropical forage plants in the world. Discussion centred on ways in which research findings were translated into a form that could be used by farmers and graziers.

Dr Harry Stobbs (right) demonstrated the importance of good pasture management in the tropics to the structure and quality of the pasture. Where pastures can be maintained as a low dense sward and the daily grazing time extended, milk production can be increased dramatically.

Going... going... gone!

The Division of Mechanical Engineering has been studying ways of cooling workers in hot environments. Smoke is usually added to the cool air during tests of mancoolers so that air flow can be monitored easily. The tests were even more successful than expected and the cooler appears to have entirely eliminated the problem of wilting workers.





THE NEWS IN BRIEF

The Cunningham Laboratory 'Bulletin' has reached its 100th edition and is to be retired to make way for a new fortnightly news sheet to cover the whole of the Division of Tropical Crops and Pastures, plus staff of other Divisions at the Cunningham and Davies Laboratories.

Any suggestions for a title would be welcomed. The prize for the suggestion chosen will be a year's free subscription to the news sheet.

Rod Berry (left) was recently farewelled at Cooper Laboratory and Field Station, Lawes, Qld. A colourful character, Rod will go back to training stock-horses after spending his time at Cooper wrestling with the problems of kenaf pollination and seed collecting.

At the Division of Tropical Crops and Pastures' Cooper Laboratory, Lawes, Qld, Mike Foale prepared defences for the glasshouse, rain shelter and experimental plots against competitors who might drop in from the World Parachuting Championships that were conducted just half a mile away.

The following holidays will be observed in CSIRO in all States and Territories.

Monday 26 December 1977
Tuesday 27 December 1977
Wednesday 28 December 1977
Monday 2 January 1978

In South Australia, Wednesday 28 December 1977 will also be a holiday for observance of Proclamation Day.

Sue Hanmore, Sir Robert Price's secretary for several years, stands beside his portrait which was recently unveiled at Head Office. The artist, Graeme Inson, is a leading Sydney portrait painter who also painted the portrait of Sir Frederick White, CSIRO Chairman from 1959 to 1970. Photo: Peter Hay

The Divisions of Radiophysics and Cloud Physics sponsored Pat Sykes (left) and John Conus, both from Radiophysics, in the 1977 Outward Bound Hawkesbury Canoe Classic for the Multiple Sclerosis Society of NSW.

At their first attempt at canoe racing, they paddled the 40 km in about 4½ hours to win their Canadian Canoe section—and were second overall.

The CSIRO Annual Safety Report for 1976-77, a comprehensive survey of lost-time injuries and a summary of the existing and proposed safety programs, is available from all CSIRO libraries.

Visitors Centre

The visitors centre at the Kimberley Research Station, Kununurra, is being completely revamped with new displays, an audio/visual show and new handout material.

Each year some 8-10 000 tourists visit KRS to learn something about CSIRO and research on the Ord.

Horticultural Congress

For the first time the International Horticultural Congress is to be held in Australia. The Congress, the XXth, will be staged at the University of Sydney from 15-23 August.

The Organising Committee has made the formal call for papers and for registration of delegates. The last date for receipt of papers is 1 February and for registration 1 April. An additional fee is charged for late registrations.

There is no restriction on who can attend the Congress, but registration is on a full-time basis only and costs $A80 for each delegate or $A40 for students. Accompanying persons can obtain associate registration for $A25.

At least 1500 delegates are expected to attend, the majority coming from overseas.

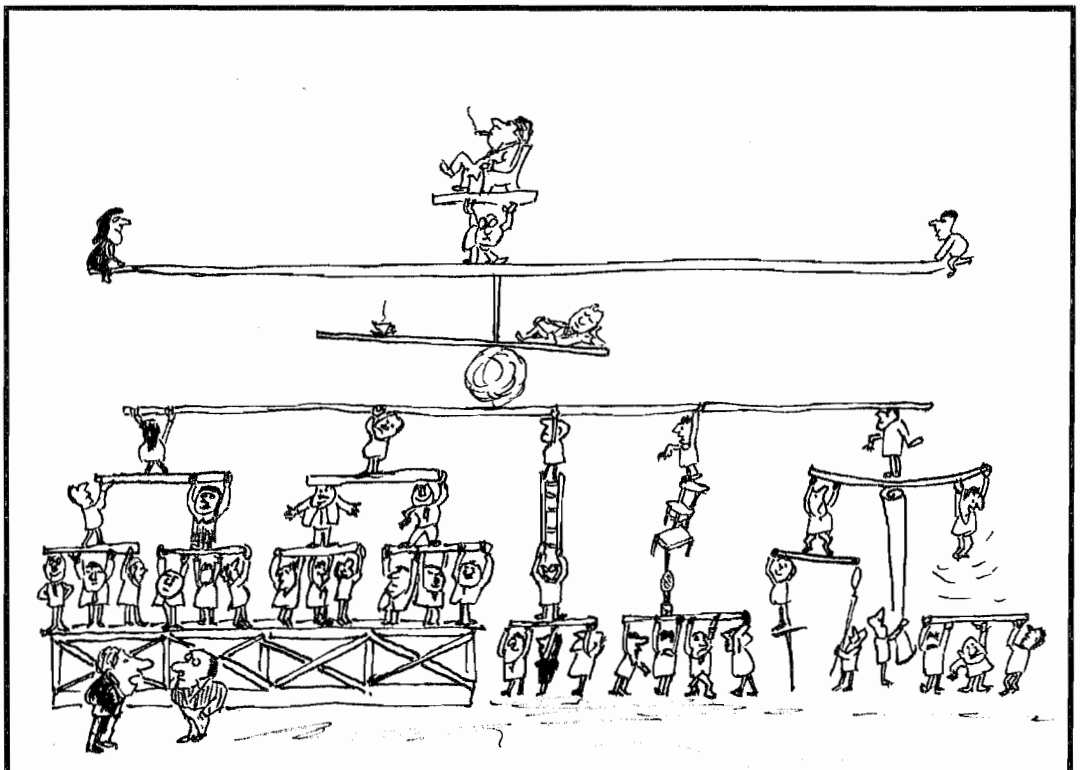
The formal program is divided into eight sections:

- Interdisciplinary
- Postharvest Horticulture
- Citrus
- Viticulture
- Temperate Fruits
- Sub-Tropical and Tropical Fruits
- Vegetables
- Ornamental and Amenity Horticulture

The first two sections will deal with the full range of horticultural crops.

The sectional programs will run concurrently. They will be attractive to professional, practising and amateur horticulturists as well as technologists and scientists.

Full details are available from: The Secretary, XXth International Horticultural Congress, 157 Liverpool Street, Sydney, NSW 2000, Australia.



Now that we're organised . . . . . what the hell do we do? Ian Lowe

Hmmm

In a recent edition of the 'Age', a Canberra head office of a Public Service branch sought a Clerical Assistant Grade 3 in the following terms:

'Qualifications. Because of the group's increasing commitment to on line data entry via peripheral interactive equipment, to the computerised financial system, the ability to type would be an advantage.'

And the ability to decipher an essential.

'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, Box 225, Dickson, A.C.T. 2602, Tel. 48 4476

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