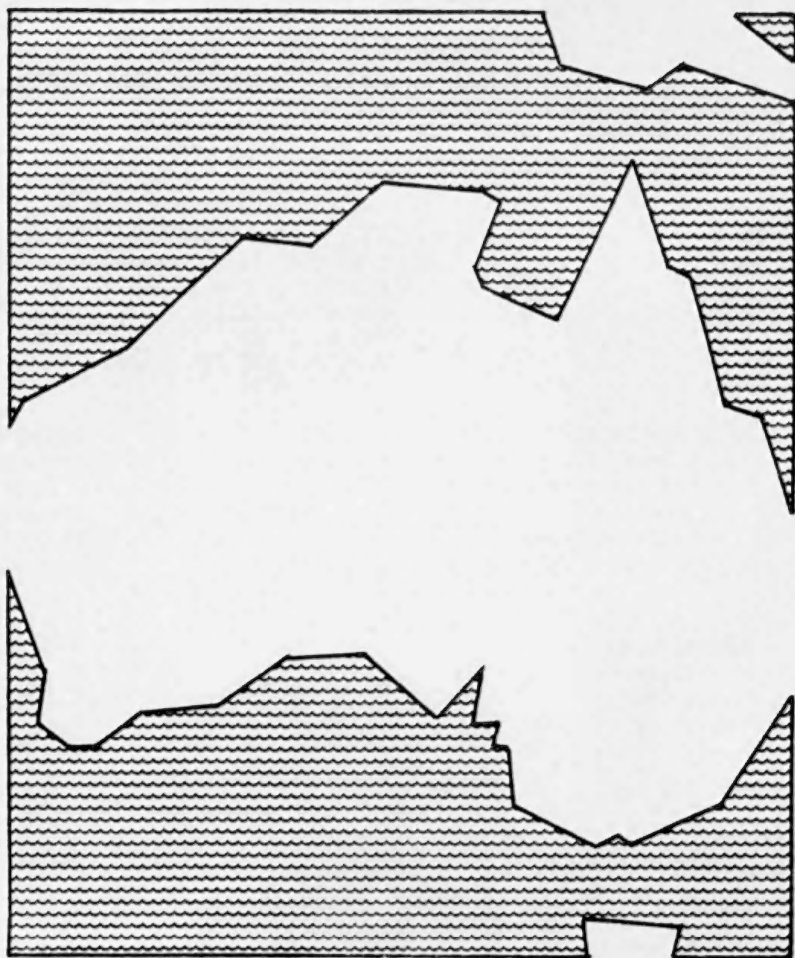
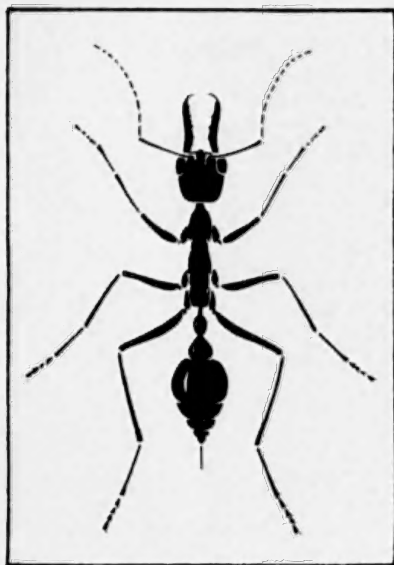


**Australian  
Entomological  
Society**



# **NEWS BULLETIN**

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(Office Bearers continued rear cover)

# AUSTRALIAN ENTOMOLOGICAL SOCIETY

## NEWS BULLETIN

### EDITORIAL

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The new format of the News Bulletin seems to have been generally well received. Sincere thanks are due to fellow Queensland Museum member, Geoff Thompson, who drew up the new cover design, produced the graphic headings for the Regional and Society Reports, and helps in many ways with the more hectic aspects of meeting printers' and postal deadlines during Bulletin production. David Yeates and Sybil Monteith find themselves not infrequently sucked into the same maelstrom.

It's now up to you members out there to help us fill the Bulletin with copy. Items of almost any entomological relevance are acceptable, but especially those which are newsy and somewhat lighter in nature. Use the Bulletin to publicize your own "Research Requests" or "Coming Events". Remember that it goes to 640 entomologists in Australia and Overseas four times a year.

I'd like to announce a new segment in the Bulletin which I'll call "Featured Photographs". These will be black and white photographs of special interest, submitted by members and reproduced in the Bulletin as full page plates accompanied by an explanatory caption of up to 200 words. Up to two such photographs may be used in each issue. Criteria for acceptability are that the photograph be of good quality for reproduction, that it be of entomological relevance and preferably showing insects or parts thereof, and that it have a suitably interesting "story" to make the caption. So if you've got a special photograph which fits the bill send it in and I'll be glad to use it.

As this Bulletin goes to press the Armidale Conference of the Society is drawing to completion. The next issue will have a complete coverage of the Conference and will record the new Office Bearers elected at it.

Copy deadline for next issue is July 22.

Geoff Monteith  
News Bulletin Editor

### ADVERTISING IN THE BULLETIN

Advertising space is available in the News Bulletin. Proposed advertisements must be approved by the Executive and should be sent in the first instance to them at the address opposite.

Rates:	Full Page	\$50.00
	Insert	\$35.00

### NOTICE

MATERIAL IN THIS BULLETIN MUST NOT BE REFERRED TO AND NOT REPRODUCED WITHOUT PERMISSION OF THE AUTHOR OF THE MATERIAL.

## EXECUTIVE REPORT

### Meetings

The Executive met on February 9th, March 10th, April 13th and April 27th.

### Membership

Since the last Executive Report 16 new members have been elected, there have been 5 resignations, two members have been deleted under Section 21(c) of the Constitution, and two names have been reinstated to the membership. Total membership now stands at 639 and the geographic distribution is as follows:

QLD	140	VIC	79	WA	29
NSW	139	TAS	25	NT	12
ACT	93	SA	61	Overseas	58
				Unknown	3

### New Members

We extend a warm welcome to the following new members:

#### Elected February 9, 1983

Miss A.J.A. Green, Tasmanian Museum & Art Gallery, P.O. Box 1164M, G.P.O. Hobart Tas 7001. Miss Green is the Curator of Invertebrate Zoology at the Museum and her research interest is the terrestrial isopods of Australia and New Zealand.

Mr L.R. Miller, CSIRO Entomology, P.O. Box 1700, Canberra City, ACT 2601. Leigh's general interest includes insects as forest pests, termite control, taxonomy, phylogeny and biology.

Mr P. Nkunika, Waite Agricultural Research Institute, Glen Osmond, SA 5064. Phillip is also interested in the taxonomy, biology and ecology of termites.

#### Elected March 10, 1983

Dr K. Farrow, 18 Kerrie Pl, Hornsby NSW 2077. Keith is employed by a Pest Control Firm.

Mr M.A. Heap, P.O. Box 19, Kununurra

WA 6743. Mark is an Entomologist with the Department of Agriculture.

Dr D.S. Horning Jnr., Macleay Museum, University of Sydney NSW 2006. Woody Horning has been a State Survey Entomologist in Oregon USA, Senior Lecturer (Invertebrate Zoology) University of Canterbury in Christchurch and Senior Biologist with the SPCC NSW before taking the post at the Macleay Museum. Interests are likewise diverse and include biogeography of subantarctic islands and Antarctica, parasitic Hymenoptera and insect curation.

Dr B.C. Longstaff, CSIRO Entomology, P.O. Box 1700, Canberra City, ACT 2601. Barry is a Senior Research Scientist at the Division. Interests include population dynamics of grain insects and modelling.

Dr E.S. Nielson, CSIRO Entomology, P.O. Box 1700, Canberra City, ACT 2601. Ebbe is the new Curator of Lepidoptera at the Division and has wide experience in Denmark.

Mr M.R. Perry, 5/23 Auburn Ave, Hawthorn East, Vic 3122. Mark is at the Plant Research Institute Burnley and is interested in computer simulation, ecological modelling and Limnology.

Mr J.W. Zhao, Entomology, Waite Agric. Res. Inst., Glen Osmond SA 5064. Jing Wei is a postgraduate student at the Waite, interested in the biological control of insects pests of rice and citrus and also the classification of larval Ichneumonidae.

#### Elected April 13, 1983

Mr M. de Baar, Forestry Department, 80 Meiers Rd., Indooroopilly Qld 4068. Murdoch has been the Curator of the collection for 9 years and has a series of publications on the Lepidoptera.

Mr S.J. Gagen, Plant Research Institute, Swan St., Burnley Vic 3121. Stephen is an entomologist with the department of Agriculture and has a wide range of interests including

insect pathology and biological control, mathematical modelling, applications of computing and electronics to entomology.

Mr T.A. Heard, 82 Goldsborough Rd., Taringa Qld 4068. Tim is a student specializing in Entomology with interests in integrated pest management and biological control.

Mr M.J. Hockey, 31 Stephenson St., Oxley Qld 4075. A technician in the Forestry Department, Michael is interested in ant behaviour and taxonomy.

Dr D.A. Mackay, School of Aust. Environmental Studies, Griffith University, Nathan Qld 4111. Duncan is a CSIRO postdoctoral fellow whose interests are centred around the ecology and evolution of host plant selection by phytophagous insects. Currently he is working on the behavioural bases and relative importance of pre- and post-alighting host discrimination by ovipositing butterflies.

#### Elected April 27, 1983

Mr P.R. Dyer, 142 Molesworthy St., North Adelaide SA 5006. Philip is an honours student examining the effect of insecticides on predatory insects of lucerne with emphasis on the ecological aspects.

#### Resignations

It is with regret that the Executive accepts the resignations of the following members:

G.D. Adams (Qld), C.A. Crawford (nee McKenzie) (SA), B.K. Filshie (ACT), P. Walker (Vic), J.P. Witanachchi (Sri Lanka).

#### Deletions

The following members have been deleted from the Membership List under the provisions of Section 21c of the Constitution:

Ms V. Taefu (Samoa), Mrs F. Malit-Caliboso (Philippines).

#### Reinstatement of Membership

In the previous Report, two members had been deleted under Section 21(c) of the Constitution. These two members, Mr J.T. Hamilton and L. Greenup, both of NSW, should be reinstated with all rights and privileges of membership. The Executive accepts the circumstances leading to the deletion of these members as being of no fault of their making and offers its apologies.

#### Executive Appointment

Mr D. Rugg has been appointed to the position of Assistant Secretary.

## ADDRESS CHANGES

State of previous address shown in parentheses.

MR A.F. ATKINS, Illustration Section, Newcastle C.A.E., Box 84, Waratah, NSW 2298 (ACT).

MR A BARANNIKOW 4 Firth Street, Arnecliffe, NSW 2205 (NSW).

DR I.F.B. COMMON, 32 Katoomba Crescent, Toowoomba, Qld 4350 (ACT).

MRS B.W. CRIBB (nee SORBY-ADAMS), 12 Bywong Street, Toowong, Qld 4066 (Qld).

DR I.C. CUNNINGHAM, D.P.I. Entomology, Box 1054, Mareeba, Qld. 4880 (Qld).

DR D.T. GWYNNE, R.R. No. 10, Brampton, Ontario, L6U 3N2, Canada (WA).

DR G.H.S. HOOPER, International Atomic Energy Agency, P.O. Box 200, A-1400 Wien, Austria (Qld).

MR N.M. HUDSON, 114 Karoola Road, Lindisfarne, Tas. 7015 (Tas).

MR J.B. JOBE 24 Woodpark Drive, Knaresborough, North Yorkshire, HG5 9DL England (U.K.).

DR J.H. McDONALD, 134 Brackenbury Street, Warrandyte, VIC 3113 (VIC).

MR R.C. PIPER, 229 Gordon Parade, Manly, Qld 4179 (Qld).

- MR B. POVEY, 54 Cronin Street, Annerley,  
Qld 4103 (Qld).
- MR P.W. SAVAGE, 37 Donna Buang Street,  
Camberwell, VIC 3207 (VIC).
- MR G.B. SMITH, 7/21 Sproule Street,  
Lakemba, NSW 2195 (NSW).
- MR R.I. STOREY, D.P.I. Entomology, Box  
1054, Mareeba, Qld 4880 (Qld).
- DR J.T. ST LEGER MOSS 3/25 Belmont  
Avenue, Woolstonecraft, NSW 2065  
(ACT).
- MR N.L. TREVERROW, Agricultural Research  
Station, Wollongbar, NSW 2480 (NSW).
- DR A.J. WAPSHERE CSIRO Entomology, P.O.  
Box 1700, Canberra City, A.C.T. 2601  
(France).
- MR R.B. WELLS, 1 Toorak Court, Wurtulla  
Beach, Qld 4575 (Qld).

## MISSING MEMBERS

We have lost contact with the following members. It would be appreciated if anyone knowing their current address could advise the News Bulletin Editor at his address inside the front cover.

Mr M.B. Debowski (formerly of  
Winterford, W.A.).

Mr P.J. Deighton (formerly of Tamworth,  
NSW).

Mrs J. Tan Choo Haw (formerly of  
Singapore).

## DIRECTORY OF ENTOMOLOGISTS

The new edition of the Directory is currently with the printer and will be posted to those who have ordered it in the next fortnight. Those who have not yet ordered it may do so by sending \$5.00 to the Treasurer at this address inside the front cover.

## THESIS SUMMARIES

Coincident with the impending increase in size of the *J. Aust. ent. Soc.* to 96 pages a decision has been taken to publish thesis summaries on behalf of members. Requirements are that summaries must come from theses for which the appropriate degree has been awarded. They should be accompanied by a statement from the Head of Department in which the work was undertaken certifying that the degree was awarded and that the thesis summary is the original from the final form of the examined thesis or is a suitably shortened version of the original. The length of the summary should not exceed one printed page, i.e. 1,000 words and should be submitted in duplicate, typed double spaced in Journal Manuscript format.

N.W. Heather  
Chief Editor

## MACKERRAS MEDAL APPEAL

The Society is most grateful to the following who have contributed to this fund since the last issue of the New Bulletin:

Mr D.W. De Little  
Dr E.M. Exley  
Prof D.S. Kettle  
Dr R.N. McCulloch  
Mr A.T. Mills  
Dr J.A.L. Watson

## HONORARY MEMBERS

Dr J.W. Evans  
Dr E.N. Marks  
Dr K.R. Norris  
Dr C.N. Smithers

## 1983 SUBSCRIPTIONS

	Normal Rate	If paid before March 1, 1983
Full members	\$30.00	\$25.00
Student members	\$15.00	\$12.50
Retired members	\$15.00	\$12.50
Joint members	\$35.00	\$30.00

## REGIONAL NEWS

### AUSTRALIAN CAPITAL TERRITORY

#### CSIRO - DIVISION OF ENTOMOLOGY

Inmates of the ANIC have been relatively active in field activities over recent months with the following trips of note. In February, Andrew Calder and Tom Weir spent two weeks in north-eastern NSW collecting in Wiangaree, Richmond Range and Beaury (Toooloom Scrub) State Forests. Ebbe Neilsen and Ted Edwards spent a month in April/May in the South West corner of WA, returning with an enormous number of lepidoptera. Ian Naumann, Jo Cardale, Dave Rentz and John Balderson paid a flying two week visit to the Mitchell Plateau area in the Kimberleys (WA) in May where they endeavoured to sample the fauna in as many orders as possible.

There have been quite a few comings and goings and changes of positions in the past few months which can be detailed as follows: Barry Filshie of the electron microscopy unit and Section Head of Support Research left the Division on 11th March after many years here to take up the position of Officer-in-Charge, Centre for International Research Co-operation, CSIRO. Barry Moore has taken over as Section Head and Colin Beaton will be in charge of the electron microscopy unit. John Lawrence has recently donned the mantle of Section Head, Taxonomy, for a short term, taking over from Bob Taylor who professes a desire for more time to spend on research. After 16 years as Manager of the ANIC, Murray Upton has transferred to a new administrative role where he will assume responsibility for the Division's engineering services and buildings. His absence will be sorely felt!

Tony Wapshere returned to Canberra in February after many years in charge of the CSIRO Biological Control unit in Montpellier, France and his place has been taken by Jim Cullen. Reg Roberts has also moved to Canberra from Armidale in February, following the closure of the CSIRO Laboratory there. Jim Desmarchelier has returned to Canberra after an absence of 18 months in Germany on a Humboldt Fellowship, exchanging the joys of

metropolitan Berlin for rural Queanbeyan. He brings his wife Günhild, whom he met in Berlin. Andrew Atkins, formerly an illustrator with the ANIC, left the Division in March to take up a position as Lecturer in Natural History Illustration at Newcastle CAE.

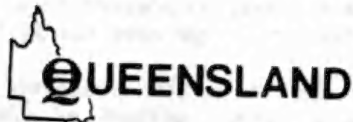
Penny Gullan, a lecturer in Dept. of Zoology at ANU, was recently appointed a Visiting Research Fellow in the Division. Penny is conducting research on the systematics of Australian Coccoidea (Hemiptera) and undertakes part of her work in the ANIC. She has accepted responsibility for the curation of the coccid collection as part of the deal. Still on Hemiptera, Mary Carver has been appointed curator of that order in the ANIC, thereby filling a long standing gap in the coverage of all the major orders of insects. Mary has transferred there from her previous position where she was working on parasites of aphids.

Following the death of Mr. V.J. Robinson of Wollongong, whose obituary appears elsewhere in this issue, the ANIC acquired his large collection of some 60,000 specimens of Australian moths. This was probably the largest and most representative collection of microlepidoptera in private hands in Australia.

The Stored Grain Research Laboratories have had a steady stream of visitors of late with some delegates from the recent highly successful international symposium on Controlled Atmosphere Grain Storage visiting for a few days. These included characters well known in the stored grain entomology field. Dr Chris Bell from the Slough Laboratories, England (formerly PICL), Dr Ed Jay from USDA at Savannah, and Dr Bob Have, now retired but formerly of Slough Laboratories. Bob Have stayed for several weeks to conduct a review of research and allow the staff to draw on his 40 years of experience as a stored product entomologist. Other visitors included Mr J. Viljoen from Plant Protection, Pretoria, Mr D. Caley of the Zimbabwe Maize Marketing Board, and a group from the Philippines concerned with rice storage. With the involvement of the stored grain group in ACIAR projects, there will be much two way traffic with countries in the region as various collaborative investigations get under way.

Visitors to the Division have included Dr R. Soper from USDA Boyce Thomson Institute at Cornell for 1 month in January-February. He has been studying, for the past 3 years, the fungus *Entomophaga grylli* which attacks grasshoppers and was making a survey with Richard Milner of fungal diseases of grasshoppers in Australia. Dr Eugene Munroe, Hon. Research Associate, Lyman Entomological Museum and Research Laboratories, Quebec, Canada, spent 1½ months in the ANIC where he busied himself with pyralid moths, while Miss Yoshiko Sahurai, a Ph.D. student from Dept. of Zoology, University of New England spent a similar amount of time looking at ants as part of her studies. Mrs O. Munding, Dept. of Primary Industries, Philippines was in the Division from 9-20 May as part of her trip to Australian institutions and spent most of her time looking at biological control programmes and the identification of parasite and predators involved therein. A longer term visitor is Dr Arthur Retnakaran, Forest Management Institute, Canadian Forestry Service, Marie, Canada who is with us for 1 year and is working with Ron Hackman on various cuticle problems.

Tom Weir  
Regional Councillor



Department of Primary Industries

Dick Drew visited the Philippines for 4 weeks from April 16th on a USDA consultancy to investigate the dacine fruit fly species infesting mangoes in that country. Following this he intends spending a week around Kuala Lumpur in Malaysia and hopes to sample native fruit flies in rainforest areas both there and in the Philippines.

Dan Smith, of the Nambour laboratory, has just returned from a 3 month FAO consultancy in Thailand where he was to advise on pest management problems with citrus.

Neil Gough organised a very successful workshop on soil entomology at the Indooroopilly laboratory on 12-13 April. Topics covered included populations sampling methods, damage caused by soil insects and

many aspects of their biology. The reaction of pasture plants to root feeding by scarab larvae, energetics of scarab larvae and resistance to insecticides were discussed as well as the more conventional aspects of chemical control. Workers from as far afield as Cairns and Sydney, with a large contingent from Armidale, attended this workshop.

Tom Passlow, Peter Twine and Dave Murray, together with Bruce Pyke and Meron Zalucki of the University of Queensland, spent three days in Tamworth in late May in discussions on pyrethroid resistance in *Heliothis* with local cotton entomologists.

Merv Bengston visited the CSIRO Stored Grain Group in Canberra in mid-May as part of arrangements for a coordinated research project on storage of grains in wet situations.



Queensland Institute of Medical Research

The retirement dinner hosted by the Institute for Pat Marks (pictured above) on April 29 proved a gala affair with 83 people attending. The diverse range of groups and activities with which Pat became involved during her distinguished career in Medical Entomology was highlighted by delegations of guests from Q.I.M.R., the University of Queensland, the Royal Society of Queensland, the Entomological Societies of Queensland and Australia, the Queensland Naturalist's Club, the Queensland Museum, Local Authorities, the medial profession and many others. Addresses



of appreciation were made by Dr Elizabeth Exley of U.Q. Department of Entomology, Professor Ralph Doherty, former Director of Q.I.M.R. and now U.Q. Pro-Vice-Chancellor, Mr Harry Standfast of CSIRO and Mrs Joan Cribb of the Queensland Naturalists Club.

#### University of Queensland, Entomology Dept.

June 30 will see the end of an era in the Department of Entomology with the retirement of two senior members of the teaching staff, Professor Doug Kettle and Dr Tom Woodward. The Department is planning a dinner, open to all their friends, at the University Staff Club to give them a joint farewell. This will be held at 7.30 pm on the evening of Friday, July 15 and the cost will be \$17.00 per head for the 3-course meal. Bookings for what will be an evening to remember can be made with the Departmental Secretary, Mrs Ruth Crombie, by June 27 on 377 3658.

Greg Daniels visited UK and Europe for 9 weeks from March 26-May 22. He planned to study types of Asilidae at the British Museum and Hope Collection in the UK as well as at the Paris Museum and other European collections.

Gerrit Van der Klashorst has been appointed as a temporary lecturer for two years to replace the position vacated by Gordon Hooper during his period at IAEA in Vienna.

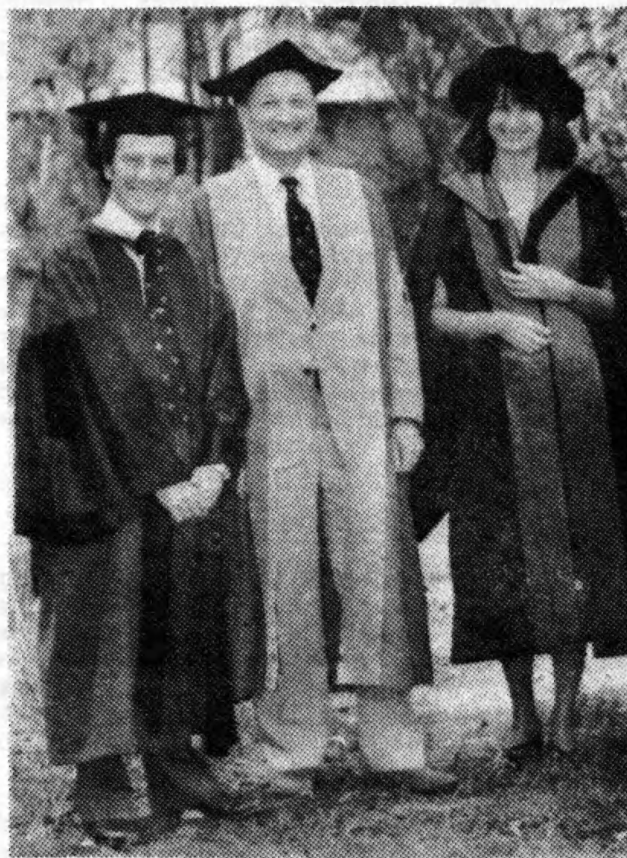
#### Griffith University

Mike Bull, Senior Lecturer at Flinders University, Adelaide, arrived in May for 4 months sabbatical in the School of Australian Environmental Studies. He intends to pursue his interest in reptile ticks as well as looking at the ecology of wanderer butterflies with Roger Kitching and Meron Zalucki.

Professor Dick Southwood F.R.S., Professor of Zoology in the University of Oxford, spent two weeks in Brisbane in March as the guest of Griffith University. Dick was the first Michael D. Sabath memorial lecturer in the School of Environmental Studies and delivered a public lecture on the topic: "Mankind and Ecosystems: Perturbation and Resilience" to an audience of over 300 at the University on March 15th. The remainder of his visit, Dick spent with entomologists and

other ecologists in the School, as well as spending some time at the University of Queensland. He was taken on field trips to Lamington National Park and North Stradbroke Island by Roger Kitching, Angela Arthington and other Griffith ecologists.

On March 19th, Griffith honoured Dick with the award of D.Sc. without examination in recognition of his distinguished scientific and public record in Entomology, Ecology and Environmental Studies. This was the first such degree the University has ever awarded. He is pictured here (centre) with Roger and Angela after the degree ceremony.



Dick left for the U.K. at the end of March after a short visit to the Barrier Reef. He promised to return for a longer research-orientated trip in the not-too-distant future.

#### Alan Fletcher Research Station

The Station has seen a burst of activity following windfall funding from the Commonwealth Wage Pause Employment

Programme sufficient to employ ten extra temporary staff for 12 months. These positions have been filled mostly by unemployed graduates in Entomology and Agriculture who will work on mass-rearing of biocontrol insects being released in Queensland.

Following recent rains in the inland parthenium weed has proliferated and become a worrying pest in NSW. Station Director, Bill Haseler, escorted a visiting delegation from NSW to examine Queensland's own parthenium problem area in the Central Highlands during May.

A new biocontrol insect against parthenium, the delphacid Stobaera concinna, has been received from Dr Alex McClay of CIBC at Monterey in Mexico and is currently undergoing testing.

#### Queensland Museum

Dr Eugene G. Munroe, Canadian authority on pyraloid moths and recently retired from a long career with the Biosystematics Research Institute in Ottawa, visited the Museum for two days in February to photograph A.J. Turner types in the Barnard Collection. With his wife he spent a weekend with old friends Ian and Jill Common who had just moved into their new retirement home in Toowoomba.

#### CSIRO Long Pocket Laboratories

Rob Sutherst visits USA and UK during the period May 9 to June 3. In Florida he attends the International Conference on the Impact of Diseases on Livestock Production in the Tropics at Kissimmee and then undertakes an FAO consultancy on the economics of tick control at Gainesville. In London he is to visit Dr G. Norton at Imperial College.

Ken Harley and Peter Room both attended the Ecological Society's Symposium on the Wet-Dry Tropics in Darwin in mid-May prior to examining progress of biocontrol of Salvinia and Mimosa pigra in the area.

Martin Taylor came on duty for a brief period during leave in Europe to examine the type of Cyrtobagous singalaris in the Paris Museum. This weevil is an introduction against Salvinia in Australia; its taxonomy is being examined by Don Sands who suspects a new species may also be involved.

#### Department of Forestry

Dr Wayne Berisford, from the University of Georgia, visited the Department for a week in early May to advise on problems associated with the recently discovered infestations of Ips grandicollis in South Queensland pine plantations.

Murdoch De Baar, who looks after the Forestry Department's insect collection, was able to spend three weeks at ANIC in Canberra last November-December as part of a Public Service exchange programme. He spent much of his time with the Lepidoptera, Coleoptera and Isoptera collections.

Geoff Monteith  
Regional Councillor

#### NORTH QUEENSLAND

Graham White, from D.P.I. Brisbane spent several days in north Queensland with Ian Titmarsh and local tobacco growers discussing fumigation problems of tobacco.

John Donaldson and Judy Grimshaw spent two weeks collecting as far north as Kowanyama on the Gulf of Carpentaria in April as part of a survey for potential rice pests. Some adventures were had on the black soil plains during the sudden onset of unseasonal rains.

Ian Cunningham, of D.P.I. Mareeba, attended the Pacific Science Conference in Christchurch, New Zealand, in February and gave a paper on the insect problems in the local rice industry.

Ross Storey  
Regional Councillor



Paul Rapley from the Tasmanian Department of Agriculture was in Melbourne for a week in April to attend a "Spray Application Workshop" at the Keith Turnbull Research Institute at Frankston in Victoria. About 30 people attended with representatives from AVCA, Ag. Engineering, Entomologists

and Plant Pathologists. The aim of the workshop was to familiarize people in each State with research and extension activities going on in pesticide application and to define goals for future research. Paul reported the workshop a great success.

Ian Gauld from the British Museum and John Harvey from the Commonwealth Institute of Entomology visited Tasmania for 3 weeks in February to collect ichneumonid wasps from all over the State. Margaret Williams (TDA) accompanied them briefly on several occasions.

Jenny Cox, also from the British Museum, made a flying trip to Tasmania collecting mealy bugs of Nothofagus and Leptospermum as part of a more extended collection trip in New Zealand.

Christine Dahl from Uppsala University, Sweden, recently visited the Museum, University and TDA. Her interest is in the dipteran family Trichoceridae.

Don and Jocelyn Cawley recently spent 2 months in Tasmania. Don is a senior lecturer at Auckland University and was here collecting caddis flies. Jocelyn has just finished her Ph.D. and has a particular interest in webworms. They visited the Tas. Department of Agriculture and talked to John Ireson and Peter McQuillan about pasture problems.

Bob Mesibov from the Forestry Commission at Smithton is visiting Chile on a working holiday for a few months. He is reported to be studying the ecology of South American temperate forests, collecting insects and generally having a good time.

Arnon Shani from the Chemistry Department of the Ben-Gurion University of the Negev, Israel, visited the University where he gave several lectures on pheromones. Arnon is on sabbatical leave in Australia and is based at the CSIRO Division of Entomology in Canberra. While in Hobart, he also visited New Town Research Laboratories to talk with entomologists on aspects of his work and the potential for pheromones.

A new termite species for Tasmania, Bifiditermes condonensis, was recently found attacking a house at Orford. Rob Barret was dispatched from Tony Watson's termite group at the CSIRO Canberra, to investigate. Rob found more specimens at Bicheno. Fortunately from mainland experience this termite is not normally a pest of houses. Rob reported his

termite collecting trip was very successful.

Rod Brieze-Stegeman  
Regional Councillor



#### South Australian Museum

The museum has seen a number of visitors during March-April. Ken Walker from the National Museum of Victoria visited to borrow some of the bees from the collection, and Ted Dahms, Queensland Museum, came to look at other Hymenoptera.

Eugene Munroe from Canada and Mike Jefferies from Canberra spent time looking at the Pyralidae and flies, respectively, and John Doyen from the University of California, Berkley and John Lawrence from CSIRO examined the tenebrionid collection.

Eric Matthews has been absent for a period of long service leave; and Penny Greenslade is still in Paris.

#### Department of Zoology, University of Adelaide

Shelley Barker has been out in the field again, with trips to Tasmania in January-February and back to Esperance again in February-March. The rare Stigmodera rudis (Buprestidae) taunted and eluded him on the top of Ben Lomond in Tasmania, but not so the Themognatha spp. near Condinup in the West.

Graeme Browning accompanied Shelley to Western Australia and collected seven or eight species of Myrmecia. He also combed Eyre Peninsula for ants in early March and Kangaroo Island more recently.

Ken Walker from NMV dropped in for a short time in April.

#### Department of Agriculture, Entomology Unit

Geoff Baker joined the Department's Entomology Unit at the Northfield Research Laboratories in January, after a two-year visit to Portugal to examine the possible biological control of the black Portuguese millipede. His programme is a collaborative effort of the South Australian Department of Agriculture and CSIRO.

Richard Milner (CSIRO, Canberra) visited Adelaide during 7-9 February to have discussions on the biological control of pests of glasshouse vegetables and to visit the glasshouse areas of Virginia and Murray Bridge.

John Wightman (Entomology Division, DSIR, Christchurch, New Zealand) gave a seminar at Northfield on 11th February in which he discussed his studies in New Zealand and South Australia on pollination and insect pest management of lucerne seed crops.

Les Readshaw (CSIRO, Canberra), Ian McLean and David Williams (VPRI, Melbourne) and Bob Seem (BCRI, Rydalmere, and Geneva, New York), along with entomologists from the Waite Institute and the Department of Agriculture, attended a workshop on Integrated Pest Management for Australian Deciduous Fruits on 22-23 March.

#### Waite Institute, Entomology Department

Professor Dr J. de Wilde is a Distinguished Visiting Scholar to the Department of Entomology during April and May, 1983. Professor de Wilde has held the Chair of Entomology at the Wageningen Agricultural University since 1954, and has been awarded many honours in The Netherlands and internationally for his work on insect behaviour and communication, endocrine control of growth and development of insects, and Integrated Pest Management. He is also known for his contributions to biological education and research in East Africa and in China. Professor De Wilde is working in Adelaide principally with Professor T.O. Browning, the Waite Professor of Entomology, on the endocrine control of diapause in *Heliothis*, but will also contribute widely to the Department's work on insect-plant relations and pest management. Professor de Wilde will give seminars and lectures on aspects of his work and will show films on insect microsurgery and endocrine systems.

Mr George D. Hoffman from the Department of Entomology, Oregon State is working in the Department to pursue studies related to his Master's thesis, i.e. plant architectural barriers to feeding site selection by the meadow spittlebug, *Philaenus spumarius*. In particular he will investigate how xylem sap tension and the amino acid concentration of the sap affect feeding rates and efficiencies. Mr Hoffman will be in the Department until the end of March 1984.

Dr Barbara Ogaza of the Institute of Applied Zoology, Cracow, Poland, visited the Department on 15 February to examine the Coccoidea collection. Ms Helen Brookes kindly acted as host to Dr Ogaza and her husband, who will be in Canberra for 2 years while he is studying at the Department of Nuclear Physics at A.N.U.

Dr P.W. Miles has been granted short-term overseas leave to attend the International Conference on Integrated Plant Protection held at Budapest from 4-9 July, 1983. Dr Miles has accepted the Organizing Committee's invitation to present a paper ("Integrated control of weeds, plant pathogens, vertebrate and invertebrate pests in dryland agriculture") and to chair the session on Integrated and Complex Plant Protection of Field Crops.

On 4 March, 1983 Dr Maelzer conducted a field day at Keith for local farmers, beekeepers and crop-spraying personnel on the pest management and pollination research programme on seed lucerne being carried out in the South-East with support from the United Farmers & Stockowners of S.A. (Inc.), Seeds Section. Dr Peter Bailey of the S.A. Department of Agriculture, Dr Miles, Dr Pinnock and Mr Peter Mew of the Entomology Department, and a number of temporary and casual research assistants funded by the project, also participated.

Dr F.D. Morgan's book 'Pysilloidea of South Australia' has been completed and should be available later this year.

Mr Stuart Hill has taken up M.Ag.Sc. studies in the Department on pollination of almonds. His project will be supervised jointly by Dr Maelzer and Dr B.G. Coombe (Plant Physiology Department). Mr Phil Dyer, an Honours candidate, is studying the effect of insecticides on predatory insects in lucerne crops, under the supervision of Dr Maelzer.

Penny Greenslade  
Regional Councillor  
(per Alice Wells)



## NORTHERN TERRITORY

### D.P.P., Agric. Quarantine Service Sectn.

Ted Fenner attended a meeting of Plant Quarantine Entomologists in Canberra during February. Matters of particular interest to NT included exotic fruit flies, mango insects and timber borers.

Releases of the coconut palm leaf beetle parasite Tetrastichus brontispae are being continued in the Darwin area. Limited searching for parasitised host pupae in the field had not turned up any to the end of March, but more work is in progress.

An interception on cut orchid flowers from Singapore dating back to October, 1982 has proved remarkable. A few roundish eggs about 2 mm diameter were spotted by an inspector on the perianth parts of one orchid. These were tentatively identified to Lepidoptera: Saturniidae. One larva hatched and was bred through on avocado foliage, yielding an adult female Attacus, perhaps A. atlas which is one of the world's largest moths. Development occupied almost 3 months.

### D.P.P., Weeds Section

Bill Woods of the W.A. Department of Agriculture visited John Gillett in Darwin between 6-11 April to look at Parkinsonia aculeata. He was en route to Texas to join Dr W. Palmer searching for potential biocontrol agents of Parkinsonia. Richard Kassulke of CSIRO Long Pocket Laboratories visited the Territory between 12-14 April to release the bruchids Acanthoscelides spp for the biocontrol of Mimosa pigra. Biological control of Salvinia molesta on the Howard River by Cyrtobagous singularis continues to be very promising.

### Health Department, Medical Entomology Section

Dr Imam Soetartio from Jakarta visited in March under an International Civil Aviation Organization Scholarship and discussed the Section vector surveillance programme around airports.

Neville Rajapaksa from Canberra also inspected the vector surveillance programme in April and reviewed the joint Commonwealth and N.T. mosquito surveys of the north coast of the N.T. being carried out as part of the

quarantine surveillance programme. Peter Whelan is currently part of a joint committee looking at the rectification of major mosquito breeding areas by engineering measures, around Darwin, and the works have already been considered for funding by the N.T. government. Peter attended the WHO South West Pacific meeting in Sydney in February as the N.T. observer and attended a meeting of state and federal representatives to discuss the spread and control of Aedes aegypti. Wendy Kelton, Kevin Hodder and Geoff Davis conducted Aedes aegypti surveys of the Barkley and Roper River areas, and Nhulumbly, and confirmed the continued absence of Aedes aegypti in these areas. They combined their survey with mosquito week activities in major towns and the effects of this public awareness programme are being currently assessed.

The Section's Virus Research Programme has so far caught, identified and processed over 21,000 mosquitoes for virus isolation in a joint programme with the Department of Primary Production. The virus laboratory under Dr Geoff Gard has so far isolated 4 viruses from a small section of the catch.

### Northern Territory Museum

Dr Malipatil has recently completed a small display on the theme "Insects and Man". It is already proving popular, particularly with school children. Mali will be spending 2 weeks identifying the Museum beetle collection with Dr John Lawrence at the ANIC in Canberra before attending the Annual General Meeting in Armidale in May.

M.B. Malipatil  
Regional Councillor



## WESTERN AUSTRALIA

### Anzaas Conference

Entomologists attending ANZAAS in Perth during May heard a number of relevant papers. The Zoology Section had a session entitled "Sex in Invertebrates" which consisted of papers by Darryl Gwynne (Evolution of Sexual Differences in Orthoptera), Ian Dadour (Male Calling Strategies in Bush Crickets), Mike Calver and Stuart Bradley (Ecology of Sexual Dimorphism in Acrida conica), Barbara Main (Reproductive Strategies of Trapdoor

Spiders), Zen Mazanec (Sex Ratio in the Jarrah Leaf Miner) and John Matthiesson (Reproductive Strategies in the Bushfly).

The Agriculture, Horticulture and Forestry Section staged a half-day Symposium entitled "Biological Control". This included papers by Rod Mahon (Genetic Manipulation), Andy Sproule (Sterile Male Release), Tony Wapshere (Biological Control of Weeds), John Sandow (Biological Control of Pasture Legume Aphids) and John Moulden (Role of Insect Pathogens). An intersectional symposium entitled "Minesite Rehabilitation - is it sustainable?" contained a contribution from Jonathan Majer on the role of insects and other fauna in rehabilitation.

#### CSIRO Division of Entomology

Visitors to the laboratory, for general discussions, were Lindsay Barton-Browne and Bill Vogt from the dung beetle unit in Canberra, and Tony Wapshere, formerly O.I.C. of the biocontrol unit at Montpellier, France, but now back at CSIRO Canberra.

Christopher Codd has commenced a Ph.D. and will be studying under Win Bailey at the University of W.A. and James Ridsdill-Smith. His project is on the mating systems of dung beetles.

#### W.A. Museum

Recent visitors to the W.A. Museum include Ed Callan, formerly of CSIRO Canberra, who examined the wasp collections; Mr M.G. Jefferies of the Department of Primary Industries, Canberra, who looked at the collection of acrocerid flies; and David de Little of Associated Forest Holdings, Tasmania, who is interested in paropsine leaf beetles.

Terry Houston undertook field studies of the masarid wasp, *Paragia tricolore*, near Gidgiegannup in March. A manuscript dealing with the findings on this interesting species is in preparation.

Tony Postle  
Regional Councillor

## VICTORIA

#### Plant Research Institute, Burnley

Dick Drew, D.P.I. Indooroopilly and Tony Courtice, Mt. Glorious, Queensland, spent a week at the P.R.I. in February in order to review research and control programmes on Queensland fruit fly.

Dr Chris Bell from MAAF, Slough Laboratories, U.K., visited Terry Amos, Bill Minett and Peter Savage to discuss stored products research, prior to his return to the U.K.

Dr Brian Croft, from Oregon State University, gave a very interesting seminar on Integrated Pest Management in pome fruits in February.

Roger Broadley, QLD Department of Primary Industries, visited Garry McDonald, Mark Smith and Peter Ridland prior to attending the Ground Application of Pesticides workshop at the Keith Turnbull Research Institute.

Peter Williams attended the International Grain Symposium in Perth to present a paper, and whilst in W.A. visited Dept. of Agriculture personnel to discuss the control of pasture pests.

Garry McDonald and Mark Smith visited both CSIRO and N.S.W. Department researchers of the Cotton Research Unit, Narrabri, as well as Rydalmere and CSIRO Division of Entomology, Canberra. Their aim was to discuss SIROTAC and gain an overview of the commercial pest management programme in operation at Narrabri, which they hope to use as a guide for the development of pest management programmes in field crops in Victoria.

Ian Barrass and Peter Savage have recently joined the P.R.I. as trainees in pome and stone fruit pest control. Ian will eventually be located at Tatura. Peter previously worked with the Stored Products group.

Geoff O'Loughlin has just retired after over 30 years research on fruit fly and aphids. His extensive knowledge and friendly presence will be sorely missed.

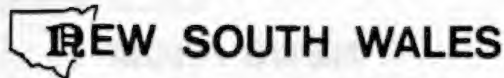
Keith Turnbull Research Institute

Mr Paul Dalgleish, a 1982 graduate in Agricultural Engineering from the University of Melbourne has been appointed to the Pesticides Research Section of the Agricultural Chemicals Application Research Unit (A.C.A.R.U.) to work on engineering the physical aspects of the processes of pesticide application. He is based at Keith Turnbull Research Institute.

On behalf of S.C.A., A.C.A.R.U. organised a workshop on pesticide application at the Keith Turnbull Research Institute from 19-22 April. Delegates from each state and A.V.C.A. attended and profitably shared ideas and progress on research programmes. Many Spray Machinery Manufacturers attended one afternoon of the workshop for a fruitful sharing of problems and successes.

Mr Eligio Bruzzese recently returned from the CSIRO Montpellier station where he was conducting host specificity studies on the blackberry rust Phragmidium violaceum. Conflicts surrounding the importance of blackberry need to be resolved before seeking approval to import the rust.

Gordon Berg  
Regional Councillor

Biological and Chemical Res. Inst., Rydalmere

Gary Fitt has been appointed to a temporary position to work with Murray Fletcher on an investigation of Iridomyrmex humilis Mayr, the Argentine ant, at Lane Cove. The large infestation at Lane Cove is the first in Sydney to be based in bushland rather than in industrial or domestic sites. The project is designed to determine the effects of the I. humilis infestation on the diversities of other ant species and will serve as a basis for comparison with the effects of treating the infestation on the native ant fauna.

Dr D. Allison of Dupont (U.S.A.) and Dick Daines of Dupont (Australia) visited John Gellatley on 3rd March to discuss future trends in the needs for insecticides and miticides.

Graham Brown and Alan Westcott spent a week collecting insects in Kosciusko National Park area in mid March.

Khyn Yooki, Mrs Prachit and Dr Ampol of the Thailand Department of Agriculture visited Entomology Branch on 17th March to discuss the administration of research and services with Max Casimir. Barry Wallbank spoke to a visiting delegation of Thai farmers on insecticide resistance problems on 29th March.

Murray Fletcher and Graham Brown have both recorded programmes for the joint N.S.W. Entomological Society and Macquarie University series on 2SER-FM entitled "The Insects' Who's Who". Murray and Max Moulds covered the orders Hemiptera and Lepidoptera and Graham's programme dealt with the Hymenoptera.

University of Sydney, Zoology Department

Georgina Kelly has started a Ph.D. project on wasp parasitism of Pentatomidae, while Mark Fletcher is continuing his Ph.D. project on wasp parasitism of citrus scales. Georgina and Mark are both working with Alfie Meats.

Mark Stevens is using cladistic analysis to investigate the genus Eurymeloides (Hemiptera, Eurymelidae) for his Honours project. Marnie Holmes is also doing an Honours year in zoology and is studying laboratory adaptation of Dacus tryoni.

Macquarie University

Alan Bishop of the N.S.W. Department of Agriculture at Narara has enrolled as a Ph.D. student. Alan will be working on the ecology of invertebrates associated with lucerne.

Forestry Commission of New South Wales

Phil Hadlington, Forest Entomologist with the Commission since 1947, went on leave pending retirement from 8th February, 1983. During his time with the Commission Phil wrote several books including the much used Guide to Pest Control in Australia. He also developed the certificate course in Pest Control at the N.S.W. Institute of Technology, a course which is highly regarded by the Pest Control Industry and which was taught for many years by Phil himself. His many friends in Entomology wish him much happiness in his retirement.

Ted Taylor and Jenny Carter have transferred from the Forest Operations Division located at the Commission's head office in Sydney to the Wood Technology and Forest Research Division at West Pennant Hills. This is the initial step in a review of entomological research within the Commission and the establishment of a single entomological unit within the Biology Group at West Pennant Hills. The Forestry Commission Insect Collection will now be housed solely at West Pennant Hills under the curation of Ken Fairey.

Christine Stone, who has returned to Australia after receiving her M.Sc. from Imperial College, London, has been appointed to a temporary research position under the Wage Pause Programme. Christine will be analysing litter fauna samples collected during a survey of the effects of repeated prescribed burning in eucalypt forests. Currently she is developing a photographic key to the families of soil mites so that the samples can be sorted with a stereomicroscope.

Bob Eldridge from the Commission and Ross Wylie (Qld. Department of Forestry) spent 3 days early in March becoming acquainted with the pine engraver beetle, *Ips grandicollis* (Eichhoff) in the Adelaide and Mt. Gambier areas of South Australia.

Murray Fletcher  
Regional Councillor

## PAPUA NEW GUINEA

The Department of Primary Industry hosted a visit by Dr Zdenek Boucek to PNG in December of last year. Dr Boucek examined the chalcid collections of D.P.I. and the University and gave considerable help and advice to several of the entomologists here.

Brian Thistleton reports from the Highlands Agriculture Experiment Station that *Apanteles plutellae* has been imported from Hawaii and is now being bred for release. Trial releases will be monitored at H.A.E.S. to evaluate its parasitism of the diamond back moth, *Plutella xylostella*. Further releases will be made in the Southern Highlands and if successful other parts of the country will be considered.

At the CSIRO Screw Worm Fly Unit Phil

Spradbery reports that a major evaluation of SIRM was conducted at Musa Valley during October, November and December of last year. The trial involved the dropping of 300,000 flies per week from light aircraft over an area of 750 km<sup>2</sup>. Trapping showed that during the trial 33% sterility was achieved in the native fly population. A comparison was also made on the survival of flies dropped as pupae versus those dropped as chilled adults. It was found that when conditions are hot and dry pupal survival is low but when conditions are cloudy they survive well.

In mid-March Mike Parsons "went finish" from the Insect Farming and Trading Agency based in Bulolo. He is making his way home to Britain by the circuitous route of Brisbane, Sydney, Canberra, Los Angeles, Columbia (South America), San Francisco, Seattle and Nashville. We wish Mike a happy entomological trip and trust he will keep in touch with the more static members of the Society.

Elaine Brough attended the 15th Pacific Science Congress in Dunedin N.Z. in February where she gave a paper on the insect pests of citrus and their control agents in PNG - a review of what is known to date.

Elaine Brough  
PNG Correspondent

## NEWS FROM AFFILIATED SOCIETIES



## ENTOMOLOGICAL SOC. OF VICTORIA

Recent meetings have included instruction sessions on 'basic entomology'. The first two of these, by Tim New, were on 'external morphology' and 'life histories and early stages'. Other recent speakers have included Ken Walker on 'The world of ants' and Ross Field on 'Biology of mites'.

The Zoo Le Souef Memorial Fund has now been established to form the basis of awards to amateur entomologists in Australia. Final conditions are to be considered by Council at their next meeting.

Tim New





## ROY. ZOOL. SOC. OF N.S.W. ENTOMOLOGY SECTION

The February meeting was addressed by Graham Brown who spoke on the European Wasp, a pest which in this State at the present time is confined to the Sydney district.

The April meeting was a members' night. Rudy Mulder spoke on collecting in the Goonoo State Forest, near Dubbo. Jack Wilson discussed members of the Family Hesperidae which occur in the vicinity of Sydney. Clarry Chadwick outlined and illustrated the life history and habits of *Theclinesthes onycha*, the burrawang butterfly. Eugene Hodgins demonstrated some spiders of the Sydney district.

Members have chosen the diamond beetle, *Chrysolopus spectabilis* (F.) as a logo or symbol, plus the words "Preserve the Habitat". The weevil is one of the extremely few insects which can with virtual certainty be said to have been collected at Botany Bay by members of Cook's expedition, and thus to be of historic interest. Although not confined to N.S.W. the Sydney area appears to be the geographic centre of its distribution. It is probably the most attractive of all Australian weevils and is not a pest species. The necessity for habitat conservation for insect protection is obvious.

C.E. Chadwick  
Representative Councillor



## ENTOMOLOGICAL SOCIETY OF NEW SOUTH WALES

The annual meeting of the Society was held on 2nd March. Officers for this year are:

President:	Courtenay Smithers
Vice President:	Max Moulds
Secretary:	Harley Rose
Assistant Secretary:	Doug Rugg
Treasurer:	Ted Taylor
Editor:	Dinah Hales
Business Manager:	Alan Clift
Councillors:	Murray Fletcher, David Jones, John McDonald, Ken Brown.

In February, Phil Colman spoke to the Society on "Quarantine in Australia" and in April, Ken Fairey spoke on his work on *Pterolocera*, the Anthelid moths on which he worked for his M.Sc. degree.

We have made a series of tapes on insect classification and these have been broadcast from Macquarie University's 2SER FM. The tapes will later be supplemented by text and illustrations for use especially in schools. The material has particular relevance to one of the options open to Higher School Certificate students in New South Wales.

The Society now has 154 members. We are always pleased to welcome new members, and guests and visitors will certainly be made to feel at home at our meetings.

With the start of a new "year" we are in a "planning" phase.

Courtenay Smithers  
Representative Councillor



## ENTOMOLOGICAL SOCIETY OF QUEENSLAND

The Annual General Meeting of the Society was held on the evening of March 14 and the main event was the Presidential Address by retiring President Don Sands entitled: "Trends in Research on the Biological Control of Weeds". The new council elected for 1983 were:

President:	Dr R.W. Sutherst
Senior Vice-President:	Miss M.A. Schneider
Junior Vice-President:	Dr D.P.A. Sands
Hon. Treasurer:	Dr R.E. McFadyen
Hon. Secretary:	Ms M. Elson-Harris
Publication Convenor:	Mr I. Fanning
Councillors:	Miss J. Grimshaw Mr E. Dahms Dr M.P. Zalucki

## OBITUARY



VICTOR JOHN ROBINSON (March 17, 1898 -  
Jan. 20, 1983).

On 20 January, 1983, Mr V.J. Robinson passed away peacefully in his garden at Wollongong. Robbie, as he was widely known, was born at Rous in the Richmond River District of N.S.W. on 17 March, 1898, the seventh of ten children. His father died when he was aged six and from an early age he helped his elder brothers on the dairy and banana farm. He fought in France in World War I and was wounded.

He developed an early interest in Lepidoptera and collected moths extensively in the Rous area, particularly in Davis' Scrub (a remnant of which is now a Nature Reserve) and at Wardell, between 1919 and 1936. He assisted Dr G.A. Waterhouse with his *Tisiphone* studies and collected a number of new microlepidoptera described by Dr A.J. Turner in this period.

In 1926 he married Viola Audrey Nicholas who predeceased him in 1976.

Leaving Rous in 1936 he spent 6 years at Marulan N.S.W. where he ran a general store

and post office and became an excellent fox and rabbit shooter. In 1942 he moved to Wollongong where he worked in a series of hardware stores. He became an expert fisherman but soon the escarpment rainforests of the Illawarra stimulated his interest in moths and he started collecting again particularly at the scout camp on Mt Keira. He retired in 1963 and from then on devoted much time to collecting. He made two very successful trips to southern Western Australia in 1963 and 1964. Other areas where he collected extensively were in south-western Queensland near Barrington (N.S.W.) and Round Hill N.S.W. as well as Barren Grounds, Minnamurra Falls and Wilton in the Illawarra district.

His warm personality and enormous enthusiasm inspired many people to collect for him or to exchange moths with him and in this way he acquired much interesting material. Fellow lepidopterists in the Sydney area were always welcome at Robbie's place to talk about moths and with them he made many joint collecting trips to various parts of N.S.W.

By his enthusiastic collecting he discovered probably hundreds of new species, a fact not reflected in the single *Thalamarchella robinsoni* Common (Oecophoridae) named after him. He donated his magnificent collection to the Australian National Insect Collection Canberra in 1969 but retained custody and control of it until his death. It became by far the largest collection of microlepidoptera in private hands in Australia and the whole collection numbered approximately 60,000 specimens.

Robbie will be sadly missed by his fellow lepidopterists as well as by his two sons Lloyd and Ross and their families.

E.D. Edwards  
CSIRO, Canberra

## INSECT ALLERGY SURVEY

This report presents the results of the survey which was conducted by a questionnaire in the August 1982 issue of the News Bulletin. Responses were received from 43 persons, 33 male and 10 female, who show or have shown allergic reactions associated with their entomological activities. Thirty two were members of the Society. The eleven persons who were not members were employed at institutions where studies on insects are conducted. The ages of the respondents

ranged from 21 to 64 years with a median age of 36.

The reported sources of the allergies are shown in Table 1 (Tables 1-3 contain data from the 43 respondents who gave multiple responses to some questions). The order which gave rise to most reports was the Orthoptera. These results are quite different from those of a similar survey in the U.S.A. (R.A. Wirtz, Bulletin of the Entomological Society of America 26: 356-360 (1980)) where the Lepidoptera provided over two thirds of the 115 reports and the Orthoptera only two, both of which implicated Locusta migratoria.

About two thirds of the individuals had daily exposure to the source of allergens. The length of exposure before symptoms developed ranged from immediate to about 15 years. Of the 31 persons who gave an estimate of the time, 25 estimated it as three years or less, 14 had had less than twelve months exposure before the symptoms appeared. In two persons the allergies had developed while they were working in laboratories overseas.

The most frequent modes of transmission of the allergens were through airborne materials and contact with the organisms (Table 2). Bites, stings, or contact with urticating hairs of caterpillars were the cause of symptoms in eight persons. As to be expected, the Hymenoptera produced adverse reactions to stings but one person reacted to emanations from an ant.

TABLE 1: Sources and frequencies of allergies attributed to arthropods, diets, and host animals. There were responses from 43 persons some of whom listed more than one source.

Category	Number	%
Orthoptera	14	33
<u>Chortoicetes terminifera</u>	9	
<u>Locusta migratoria</u>	5	
<u>Austracris guttulosa</u>	4	
<u>Heteropternis obscurella</u>	2	
<u>Phaulacridium vittatum</u>	2	
<u>Caledia captiva</u>	1	
<u>Valanga irregularis</u>	1	
Diptera	9	21
<u>Lucilia cuprina</u>	6	
<u>Bradysia</u> spp.	1	
<u>Musca domestica</u>	1	

Acarina	6	14
Mites	5	
Ticks	1	
Coleoptera	6	14
<u>Rhyzopertha dominica</u>	3	
<u>Cryptolestes</u> spp.	1	
<u>Sitophilus</u> spp.	1	
<u>Tenebrio molitor</u>	1	
<u>Tribolium</u> spp.	1	
Lepidoptera	6	14
<u>Euproctis edwardsii</u>	1	
<u>Galleria mellonella</u>	1	
<u>Leptocneria reducta</u>	1	
<u>Ochrogaster lunifer</u>	1	
= <u>Teara contraria</u>		
<u>Persectania</u> spp.	1	
<u>Phthorimaea operculella</u>	1	
<u>Uraba lugens</u>	1	
Hymenoptera	5	12
<u>Apis mellifera</u>	2	
<u>Vespa germanica</u>	1	
<u>Solenopsis invicta</u> (USA)	1	
Hemiptera	3	7
<u>Dindymus versicolor</u>	1	
Blattodea	2	5
<u>Periplaneta americana</u>	1	
Diet	1	2
Host animal	1	2
<u>Oryctolagus cuniculus</u>	1	

TABLE 2; Suspected mode of exposure to the allergens.

Exposure	Number	%
Airborne	30	70
Contact	24	56
Sting	5	12
Bite	2	5
Other	1	2
Unknown/no response	3	7

Hayfever-like symptoms were the most frequent type of allergic reaction but irritation of the skin and eyes also scored highly (Table 3). One person reported an incident involving anaphylaxis (an intense systemic allergic reaction which can be life threatening) which resulted from exposure to Periplaneta americana. Difficulties with breathing were reported by 18 persons. Allergic reactions which affect breathing are potentially serious and medical advice should be sought if an

allergic reaction produces this result.

TABLE 3: Type of allergic reaction

Reaction	Number	%
Sneezing, runny nose	32	74
Skin irritation	25	58
Eye irritation	22	51
Difficulty breathing	18	42
Anaphylaxis	1	2
Other	3	7

A previous history of allergy was reported by 21 persons and 26 had sought medical advice about their allergy. The advice most commonly received was to control or to end exposure to the allergens (16 cases); medication was suggested in 8 cases and hyposensitisation was suggested for two persons sensitised to bee stings and for one person with reactions to garden mites. Two persons did not state the advice received.

Protective equipment and clothing were used for at least part of the time by 26 persons. For 16 of the respondents it had become necessary to cease work on a project or to transfer to another project. Knowledge of other persons with similar problems was indicated in 29 of the reports and 15 of these stated that the respondent know of three or more persons with an allergy to arthropods.

In France, the frequency of allergies among researchers in contact with insects in laboratories was estimated to be 10-15 percent, but higher frequencies among workers handling insects have been reported from institutions studying locusts; around 40% at one in England and 100% at another in Germany. That among the various groups of insects implicated in this survey the Acrididae have been responsible for the largest proportion of responses seems to confirm the high allergenicity of members of this family.

From this survey, the frequency of allergies to insects among members of the Society is around five percent, but since at least two thirds of the members with allergies are associated with institutions where entomological research is conducted and that all eleven non-members are similarly placed means that persons in these institutions run the greatest risk of becoming sensitised.

From the wide range of species implicated both here and elsewhere it is obvious that anyone with intensive exposure to insects is at risk and precautions should be taken to

minimise exposure to insect derived allergens. Advice on the control of exposures can be found in the latter part of the E.S.A. report referred to earlier.

Copies of the returned forms have been sent to Capt Wirtz in Washington for inclusion in his data which cover entomologists in the U.S.A., Canada and Mexico. I would like to thank all those who have participated in this survey and the Executive of the Society for its cooperation.

Tom Bellas  
CSIRO Division of  
Entomology, Canberra

## RESEARCH REQUEST

### SPARE A THOUGHT FOR THOSE PESKY FLIES ...

Next time a fly parasite emerges from that long-cherished pupa instead of the perfect specimen you hoped for, don't throw it away in a fit of disappointment - it could provide valuable host data.



FAM. TACHINIDAE

I am interested in taxonomy of the parasitic fly family Tachinidae. These flies are internal parasites of a wide range of insects, but particularly Lepidoptera. Australia has a diverse fauna of tachinids but for many species information on host ranges is scanty, and I would be glad to receive any reared specimens as they can provide useful data.

Pinning of the flies is not essential (although preferable) and they may be placed

together with puparia in a vial containing some loosely packed cotton wool to restrict movement and forwarded to me at the address below. Details of the host, identified as far as possible (or its remains if identity is uncertain), locality, date of capture and/or emergence of parasite together with your name and address for a reply should accompany the specimen(s).

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## BOOK REVIEWS

"The Macquarie Dictionary" : Macquarie Library Pty. Ltd., St Leonards, N.S.W., 1918. Pp. 2049. \$29.95.

"The Concise Macquarie Dictionary" : Doubleday Australia Pty. Ltd., Lane Cove, N.S.W., 1982. Pp. 1532. \$17.95. (The "Macquarie" is also available as "The Budget Macquarie", soft covers, "economy" paper, about one third of the price).

"The baby prune is like its dad, but it's not wrinkled half as bad ...", sang a comedian of bygone years. The younger of the two prunes under review does lack many of the wrinkles that dis-figure the parent tome. It has derived great benefit from the omission of the figures. Thus we miss the ludicrous illustration of "metamorphosis", which shows a mosquito pupa as a grub with a sort of beaked head protruding from its midriff; gone is the "insect", which is a "grasshopper" with prothorax labelled "thorax", mesothorax unlabelled, but bearing the single pair of wings, and metathorax bracketed with "abdomen"; likewise the "(dog) flea", which lacks the characteristic black combs, but in compensation has unique six-segmented tarsi; also missing is the "bull ant", whose original model must have been a recently mugged Camponotus, standing in uneasily for the gracile, long-jawed Myrmica.

Deletion of entries from the "Concise" has also eliminated many errors. Thus we are no longer told that a "meat ant" is "any of various ants of the genus Leptomymex ..." (not Iridomyrmex!); or that a "screw-worm" is "the larva of a dipteran insect, Callitroga macellaria ..." (half a century out of date); almost unbelievably, the celebrated United States campaign for the eradication of the true screw-worm, Cochliomyia hominivorax, is not mentioned.

Neither dictionary mentions lice as vectors in the entry on "typhus", or mosquitoes in relation to "elephantiasis". "Yellow fever" is stated to be transmitted by "Aedes calopus", a name for the same insect, but fifty-six years junior to Linnaeus' Aedes aegypti, and the entry on "dengue" (causative agent not cited) mentions no vectors. There is no indication that typhus and yellow fever never were endemic in Australia, and, indeed, both books are very poor in this regard. Thus, after reading about Colorado beetle, slave-making ants, bumble bees and tortoise-shell butterflies, one must check other sources to be sure that these do not occur in Australia.

Insect classification, particularly in the orthopteroid and "neuropteroid" orders, is archaic, and no attempt is made to use standard popular names for species : unforgivable is the description of the bright green Australian sheep blowfly, Lucilia cuprina, as "the blue blowfly" (under "blowfly"), and "the blue-arsed fly". These indelible graffiti are now on our walls for the foreseeable future.

How does the reader fare outside of the field of entomology? Not very well at all. Again the "Concise" has gained from the omission of illustrations, which has removed evidence of much guess-work in relation to animal anatomy. In the "Macquarie" there are many grievous errors in the number, arrangement and relative sizes of the digits of birds and beasts, whose general habitus and feathers and fur do little to recall living organisms. Human anatomy also suffers; thus the floating ribs (under "rib") have proliferated considerably, and the cystic and hepatic ducts (under "stomach") have been made to pass in front of, instead of behind, the duodenum.

The entries in the text of both dictionaries also have many errors in fields other than entomology; "horsepower" is defined as "... rate of doing work ... defined as 550 pounds-force per second.", whereas it should be "... 550 foot-pounds per second."; "pleuropneumonia" is alleged to plague our cattle still, although it was eradicated from the continent some years ago, and "smallpox" (causative agent not cited) is stated to be ravaging mankind still, although the world's last case was reported by the World Health Organisation some years back; "coevolution" is defined in both dictionaries as "the contemporaneous evolution of two different plants or animals from a common ancestor.", whereas it is the interacting evolution of two

unrelated groups, producing mutual adaptations, as flowering plants and pollinators; "megapode" is given as "any of the Megapodiidae, a family of large-footed gallinaceous birds, ... which constructs a mound of earth or vegetation, either for use in display, as the superb lyrebird, or as an incubator for its eggs, as the brush turkey ..."; in fact, the lyrebird(s) and the megapodes proper are in separate orders.

As with the entomological topics, the "Concise" has lost some crudities through deletions. Thus "brooder pneumonia", caused by the "bacterium" *Aspergillus fumigatus* (a fungus) is one howler put to rest, likewise "Charles' law", which, in the "Macquarie", fails to include the important condition "... of its volume at 0°C". In the "Concise" we are also spared "wet sheep 1. a sheep the fleece of which is wet.": in fact it is a plural term, whose utterance by a union rep. spells trouble in the shearing shed. Also gone is the "slaughterman" "... whose job is to kill animals and remove the hides and stomach contents.". Mercifully missing from the "Concise" is "gossypol", which the "Macquarie" states is "undecorticated cotton seed cake or meal, which causes loss of appetite in pigs ..."; in fact, gossypol is a toxic chemical occurring in cotton seed, which was extracted and named in 1899!

One cannot resist citing two of the numerous wrong and artless entries, because they actually convey the reverse of the truth. Thus a "pastoralist" is given as "one who grows cereal crops in addition to raising livestock.", and a "traveller's cheque" is defined as "a cheque issued ... to a traveller, which may be cashed only by endorsement in sight of the payee."

A grandbaby prune has appeared in recent months, in the form of "The Pocket Macquarie Dictionary". The avidity of my fellow Australians for "knowledge" has precluded my securing a copy of the first printing, but due to the operation of the unconscious erosive processes listed above, it is reasonable to guess that the "Pocket" will exhibit fewer wrinkles than the "Concise", and many fewer than the "Macquarie". However, not all will have disappeared unless a good deal of facelifting has been done.

These books pose a serious threat to the standard of education in Australia.

K.R. Norris  
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"Insect Pests of Fruit and Vegetables in NSW" by P.C. Hely, G. Pasfield and J.C. Gellatley, Inkata Press, Melbourne, 1982; Pp. 312, illus. \$40. (12 or more copies \$30). (Available from Dept. of Agriculture, McKell Bldg, Rawson Place, Sydney 2000, from the publisher and from selected retail bookshops in Sydney).

This book was made possible through sustained endeavour by the late Carl Hely in the 1960's and then by Gordon Pasfield and John Gellatley. Was it worth all the effort? To this, a resounding yes.

The book commences with an introductory chapter on the safe and effective use of insecticides. This is a very sound approach because currently and into the foreseeable future insecticides are and will be necessary to ensure high yields and high quality of the vast majority of fruits and vegetables. Users of insecticides, however, should be aware of the types of insecticides available, their effective use, their limitations and the legal requirements surrounding their use. This chapter discusses briefly these aspects in a very understandable manner. All who attempt to control mite and insect pests by insecticides should read this chapter carefully.

The chapters that follow are each concerned with the pests of a particular crop or related groups of crops - citrus; pome fruits; stone fruits; grape; tropical fruits; miscellaneous fruit and nut trees; trailing berries, bush fruits and strawberry; vegetables.

An introduction to each crop is given at the beginning of each section followed by descriptions and life histories of pests and how the pests can be controlled (by non-insecticidal means or the currently recommended insecticides). The information concerning each pest is the essence of the book. Here, the quality is excellent. Much of the material had been unpublished but more importantly the information is gathered in one publication. Where pests are injurious to several crops, cross indexing and the thorough index makes it easy for the reader to obtain the relevant information. Only one mistake has been sighted and this was a printing error made at the final printing stage. Unfortunately, it concerns the photographs of *Heliothis punctiger* and *H. armiger* on p. 219. They have been transposed.

The overall quality of the book is not only a tribute to the authors but to all

entomologists (past and present) of the NSW Department of Agriculture. They have helped in procuring the much needed information on pests which was a prerequisite for the production of this book and also forms a basis for true pest management in the various crops.

I do have a few criticisms, however, which may be taken into account when the second edition is planned.

1. Unevenness in content of chapters. Citrus takes up a large proportion of the book - this is no doubt due to the interests of the authors but the apple section in particular has received insufficient attention. The section on pest management investigations is now quite dated. I would prefer to have in the introduction of each crop a mention of the key pests and the strategy surrounding pest control measures for each crop. The reader should be made more aware of the problems with which he/she is faced in pest control.
2. Outdated references. This again is no doubt due to the long gestation of the book. There are admittedly, a number of references in the 1970's and some in 1980's but not enough.
3. Photographs. How much more would the book have cost to produce all the photographs in colour? Some are coloured but over one-half are not.
4. Family names absent. A point that may be annoying especially to entomologists is that family names are not given along with the scientific names of pests. If family names are given this often helps the reader in a quicker understanding of the pest because the life histories of species in any particular family basically follow the same pattern. Most entomologists recognise family names.
5. Coverage of pests. This book concerns pests of fruit and vegetables. In this, there is no objection. The entire spectrum of agricultural pests, however, should have been included i.e. pests of crops such as cotton, sorghum, maize, soybeans, cereals and pastures. After all, the information now exists on the pests attacking these crops. As stated in the preface, the book deals with about 90 per cent of significant crop pests of NSW. The information on the remaining 10 per cent would be too meagre to be published

separately and should be included in a book of this type.

Despite these criticisms, this book will be a boon for lecturers who give courses in economic entomology, students, agricultural extension agents, alternative life stylers and home and market gardeners.

Harley Rose  
University of Sydney

## COMING EVENTS

### Third Australian Trichoptera Conference

The third of this most successful series of residential conferences on caddis flies will be held at the Grampians in Western Victoria on the weekend of 3-4 December, 1983. For further information those interested should contact:

John Dean  
MMBW Laboratories  
G.P.O. Box 4342  
MELBOURNE VIC 3001

### XVII International Congress of Entomology

The 1984 Congress will take place in Hamburg, West Germany, during the period August 20-26. Members interested should contact the Secretary of the Australian Entomological Society who has information and enrolment forms.

### Aphid Virus Vectors

A workshop/meeting on biological control of aphid virus vectors will be held at the Plant Research Institute, Burniey, Vic., on Monday, August 15, 1983. Further information can be obtained from the Convenor, Dr G.R. Johnstone, Tasmanian Dept. of Agriculture, G.P.O. Box 192B, HOBART TAS. 7001.

### 18th International Ethological Conference

This major conference will be held at the University of Queensland, St. Lucia during the period 29 August - 6 September, 1983. Further information is available from the Conference Secretary, Animal Behaviour Unit University of Queensland, ST. LUCIA QLD 4067.

### Cancellation

It had been planned to hold a Conference on Management of Arthropods of Leguminous Pastures in Adelaide from 7-11 November, 1983. However, because of the poor response to the First Circular (over 300 sent out, with only 21 positive replies) the Conference has been cancelled.

