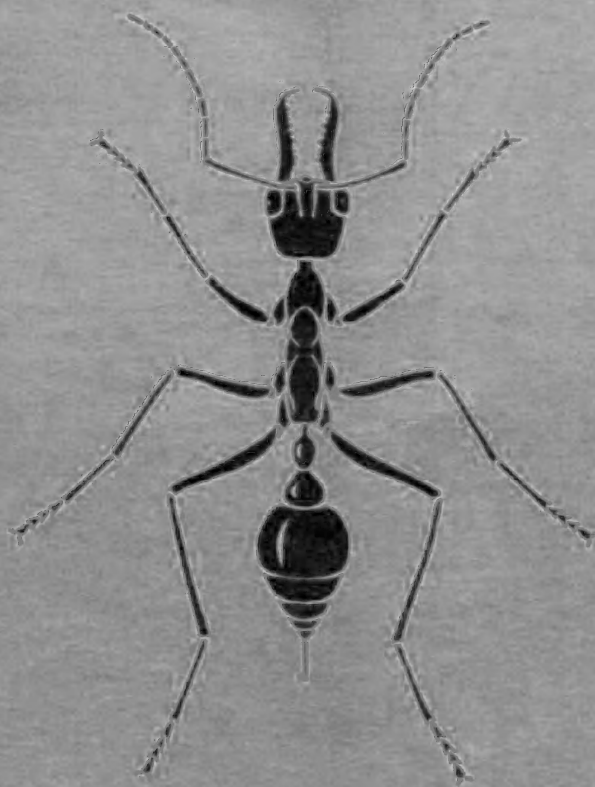


AUSTRALIAN
ENTOMOLOGICAL
SOCIETY



NEWS BULLETIN

Volume 10, Part 4, November 1974

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Articles, Notes, Letters to the Editor and other material for the News
Bulletin should be sent to the News Bulletin Editor.

AUSTRALIAN ENTOMOLOGICAL SOCIETY

NEWS BULLETIN, VOLUME 10 PART 4, NOVEMBER 1974

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EXECUTIVE REPORT

MEETINGS:

The Executive met on 8 August, 5 September and 10 October.

MEMBERSHIP:

Since the last report, 9 new members have been elected, and total membership is now 523. The geographical distribution of members is as follows:

NSW	111	VIC	65	TAS	24
QLD	110	SA	39	WA	25
ACT	87	PNG	20	NT	6
Overseas	33	Address unknown	3		

Outstanding subscriptions: 1973 & 1974 - 14 members
1974 only - 64 members

DELETION OF BY-LAW:

The Society's By-law 10(f) reads:

"(The Treasurer shall): from the 1st January following the adoption of these By-laws, and thereafter, set aside from the subscription of each member and affiliated society a sum equivalent to twenty (20) per cent of the total as a subscription to the Society's News Bulletin and, except in the case of a student or retired member who has elected to pay a reduced subscription without entitlement to receive the Society's Journal, a sum equivalent to sixty (60) per cent of the total as a subscription to that publication; he shall cause these sums to be separately accounted in the yearly balance sheet and to be duly audited;"

Since this By-law was adopted in 1971, the costs of printing the Journal have increased substantially but the increasing membership has led to a relative decrease of the *per capita* cost of administering the Society (which includes production of the News Bulletin). The requirement for separate accounting of Journal and News Bulletin funds was designed solely to meet PMG regulations pertaining to concessional postage rates: these special rates are now being phased out.

It is considered that the Society's Executive should have power to vary the allocation of income between its several accounts without need for repeated amendment of a By-law. Acting under Constitution clause 39, the Executive has revoked By-law 10(f), and has re-numbered By-laws 10(g) to 10(i) as By-laws 10(f) to 10(h) respectively. Ratification of this revocation will be sought at the 11 Council meeting to be held in January 1975.

7th ANNUAL GENERAL MEETING:

A Supplement included with this issue of the News Bulletin includes formal notice of the Annual General Meeting to be held in Canberra on Saturday 18 January 1975, and an enrolment form for the Society Dinner on the same date, and an outing on Sunday 19 January.

Please ensure that your completed form, together with the appropriate remittance is received by Dr Bellas before 20 December. Transport for the outing to the Brindabella Ranges will be limited, and it may not be possible to accept late enrolments for this event.

NEW MEMBERS:

We extend a warm welcome to the following new members:

Elected 8 August

Mr T.S. Angeles, Entomology Section, Animal Industry and Agriculture Branch, Department of the Northern Territory, P.O. Box 5150, Darwin, N.T. 5794. Mr Angeles is a Technical Assistant involved in general entomological studies.

Mr R.A.H. Davies, ICI, Merrindale Research Station, Dorset Road, Croydon, Vic. 3136. Mr Davies is a graduate Entomologist specializing in population dynamics and pest management.

Mr H.A.C. Fay, University Hall, 281 Parramatta Road, Glebe, N.S.W. 2037. Mr Fay is a final year student majoring in Entomology.

Mr D.L. Hancock, 33 Hawken Drive, St. Lucia, Qld. 4067. Mr Hancock is a graduate Entomologist in the Department of Entomology, University of Queensland. He is concerned with the systematics, zoogeography and phylogeny of Lepidoptera, and is undertaking ecological studies in Cape York Peninsula.

Mr W. Mollah, P.O. Box 38963, Winnellie, N.T. 5789. Mr Mollah is a graduate Technical Officer in the Animal Industry and Agriculture Branch and works in the general field of economic entomology.

Miss J.J. Murton, C/- Department of Agriculture, St. John's Avenue, New Town, Tas. 7008. Miss Murton is a graduate Entomologist in the Department.

Elected 5 September

Mr D.L. Hardy, C/- Department of Agriculture, Albany, W.A. 6330. Mr Hardy is a graduate Entomologist, presently involved in the entomology of crops and pastures in S.W. Australia. Previously he spent 6 years working on cotton entomology in the Ord River area.

Dr B.R. Hutson, CSIRO Division of Soils, Private Bag No. 1, Glen Osmond, S.A. 5064. Dr Hutson is working on the role of Collembola and mites in litter decomposition and nutrient cycling.

Elected 10 October

Mr J.G. Riley, 67 Alfred Hill Drive, Melba, A.C.T. 2615. Mr Riley is Chief Entomologist of the Australian Department of Agriculture with particular interests in stored products entomology.

INCREASE OF SUBSCRIPTION RATES IN 1975:

Subscription rates have remained unchanged since 1969. Unfortunately, the time has now arrived when they must be increased to meet steeply rising costs, particularly those of publishing the Journal.

Council, in a postal ballot, adopted unanimously the Executive's proposal that the rates in 1975 be as follows:

Non-member Journal subscriptions	\$18 (increase of \$8)
Ordinary membership	\$15 (increase of \$5)
Joint membership	\$20 (increase of \$5)
Student membership with Journal	\$5 (increase of \$2)
Student membership without Journal	\$3 (increase of \$2)
Retired membership with Journal	\$3 (no change)
Retired membership without Journal	\$1 (no change)

15 INTERNATIONAL CONGRESS OF ENTOMOLOGY

The 15th International Congress of Entomology will be held in Washington, D.C., U.S.A., August 19-27, 1976. Sessions will be held in the excellent meeting facilities of the Washington Hilton Hotel, and will cover Systematics, Genetics, Physiology and Biochemistry, Toxicology, Ecology, Behavior, Social Insects and Apiculture, Biological Control, Medical and Veterinary Entomology, Agricultural Entomology and Pest Management, Forest Entomology, Stored Products and Structural Insects, and Pesticide Development, Management and Regulation.

A Congress Brochure and application forms will be mailed in May 1975. If you are interested in receiving future information, including registration forms, please send a postcard with your name and address, typed or in block letters, and the section of your major interest, to Dr Ernest C. Bay, Secretary General, XV International Congress of Entomology, P.O. Box 151, College Park, Md., USA 20740.

LETTER TO THE EDITOR

Dear Sir,

Opinions are being canvassed once more on the contentious issues surrounding Regulation 13A of the Customs Act.

I do not wish to go into either the history behind the promulgation of this regulation or the events subsequent to it. I do, however, wish

to see the whole issue settled speedily and to the satisfaction of all parties.

There are too few entomologists in Australia and their tasks too great for the division and dissention to be allowed to further undermine morale and productivity. We should all be striving for greater effort and adequate recognition of our scientific needs.

I therefore put forward, for all parties to consider seriously, modifications to the guidelines covering Regulation 13A. These modifications stem mainly from an Article in the International Convention on Trade in Certain Species of Wildlife, held recently in the U.S.A. This Article, No. VII paragraph 6, states - "The provisions (regulating trade in species of wildlife) shall not apply to the non-commercial loan, donation, or exchange between scientists or scientific institutions registered by a Management Authority (in the case of Australia the Department of Customs and Excise) or to herbarium specimens, other preserved, dried, or embedded museum specimens, and to live plant material, which carry a label issued or approved by a Management Authority."

Australia is a signatory to this agreement and the Department of Customs and Excise was represented in the Australian delegation.

The principle behind this provision, that of free interchange and availability of scientific material, has been accepted widely by scientists in the past and is more particularly spelled out in the International Code of Zoological Nomenclature wherein it is clearly set down that Holotypes and other primary types are to be regarded as the property of science, and should be deposited in a museum or other institution where they will not only be safely preserved but will be accessible for purposes of research.

Be this as it may, I am sure that most of us will, after serious consideration, agree that the irresponsible export of material for commercial gain is contrary to the best interests of scientific research, and that some form of regulatory mechanism is therefore required to control this activity.

For these reasons I propose that Regulation 13A of the Customs Act be left as it is (although the title could be improved), and the Guidelines covering the administration of the Regulation be altered as shown hereunder.

In this way I am confident we can reach agreement on this divisive issue, and turn our energies towards our own researches and to the improvement of our science.

Yours faithfully,

(Signed: Murray S. Upton)

26 September 1974

108 Anzac Park, Campbell, A.C.T. 2601.

SUGGESTED MODIFICATIONS TO GUIDELINES FOR THE CONTROL OF THE EXPORT OF INSECTS (INCLUDING TICKS AND SPIDERS) FROM AUSTRALIA

1. Regulation 13A under the Customs Act 1901-1973, which was promulgated on 19th July 1973 (Statutory Rules 1973 No. 138), provides that the export from Australia of "live or dead insects (including ticks and spiders)" is prohibited except with the approval of the Minister for Science, or of a person authorised by him.
2. Persons designated by the Minister for Science to approve export under this regulation are listed in the attachment to these guidelines.
3. Except for purposes of loan the export of holotypes, syntypes, lectotypes, or neotypes of Australian native insects, ticks or spiders will not be approved.
4. (a) Paragraph 5 of these guidelines shall not apply to non-commercial loans, donations or exchanges of scientific material made by recognised Australian institutions and/or scientists.
 - (b) Institutions and/or scientists wishing to engage in the non-commercial loan, donation or exchange of scientific material should make application to the Secretary, Department of Science, P.O. Box 449, Woden, A.C.T. 2606, for a blanket permit to cover these transactions.
 - (c) On being granted permission the Department of Customs and Excise will issue or approve special labels to cover these transactions.
5. (a) Other persons wishing to export insects, ticks or spiders from Australia should submit to an authorised person an application for an export permit on Australian Customs Form G64, Restricted Goods - Export Permit, obtainable from the Secretary, Department of Science, P.O. Box 449, Woden, A.C.T. 2606, Australia, or from any authorised person. The application should specify whether the specimens represent:-
 - i. a *loan* made to, or the *return of a loan* the property of, a recognised overseas institution or person.
 - ii. material not native to Australia.
 - iii. paratypes.
 - iv. material believed to belong to well known species and intended for destruction, laboratory experimentation, or for release overseas for purposes of biological control.
 - v. specimens other than the above.
- (b) An authorised person to whom application is made *shall approve* export if:-
 - i. he is satisfied that the material is as described in categories (i) to (iv) above.
 - ii. the name of the overseas recipient appears in a schedule, held by the Department of Science, of persons who have signed a blanket declaration that all holotypes that may at any time be designated from among any native Australian insects, ticks or spiders received by him or his institution after 19th July 1973 (other than borrowed specimens being returned) will be lodged in an Australian museum or in the Australian National Insect Collection, Canberra.
- (c) An authorised person to whom application is made *may approve*

export of material in category (v) above consigned to a recipient whose name does not appear in the schedule referred to if:-

- i. the application is accompanied by a declaration by the intended recipient that he will, in respect of that consignment, return all holotypes as in 5(b)ii above.
- ii. in the opinion of the authorised person all specimens belong to named species of Australian insects, ticks or spiders.

The schedule of persons and institutions whose blanket declarations have been accepted will be maintained by the Department of Science and circulated to all authorised persons. Copies of the schedule may be obtained on request from the Department.

6. Persons within Australia who wish to export insects, ticks or spiders in category 5(a)v above should ensure, before entering into any contractual arrangement, that the intended overseas recipient has fulfilled all requirements for the issue of an export permit. Overseas persons or institutions proposing to collect specimens in Australia for lodgement overseas should similarly ensure, before making any other arrangements, that they are qualified to do so.

FUTURE TRENDS IN INSECT TAXONOMY

E.G. Matthews, The South Australian Museum

The brief for a biological survey of the insects of Canada (Ent. Soc. Canada Bulletin No. 6, 1974, insert) raises a number of points pertinent to our own efforts to get a biological survey under way. It also outlines predicted future trends in the development of insect taxonomy as a whole, and it is this aspect that I wish to discuss here.

Dissatisfaction with the way things have been going in the field of traditional taxonomy has been voiced for a generation or more by taxonomists themselves, as well as by biologists in other fields. Basically, it is the overburden of nomenclatorial rules and regulations, and the consequent importance which is bestowed on type specimens (types are name-bearers — "onomatophores" or "nomenifers"), which the biologically-inclined taxonomist finds increasingly hard to tolerate. In the words of L.A.S. Johnson (Syst. Zool. 19, 204, 1970): "Although systematics continues to attract more than its fair share of unshakable conservatives and legalists, much of its accumulated dross must eventually be swept away. If it is not, we may find that traditional systematics has been by-passed, whether we like it or not."

Added to this impatience with the legalities of nomenclature is the increasing realization that traditional (morphology-based) taxonomic procedure (whether phenetic, phyletic, or whatever) simply does not uncover all the species that actually exist, even when the specimens are available. The Canadian brief mentions several cases of biological species discovered only after chromosomal, behavioral, or ecological studies, and we all know of many more. They add: "It is now becoming

evident that these and other examples represent a distinctive trend of discovery in insect systematics."

The Canadian prediction as to how these problems will be solved (or, more correctly, by-passed) in the future is the following (I have added some embellishments of my own).

Traditional taxonomists will be encouraged to concentrate on producing order or family-based manuals of classification and identification down to the genus level. The model they give is Curran's "Families and Genera of North American Diptera". Down to this level, traditional taxonomic procedure is unexcelled and will never be superseded. There are, in addition, genera of insects which are amenable to standard taxonomic procedures at the species level (the subspecies should be entirely forgotten in entomology). These are the ones with relatively few, morphologically distinct species, and they could continue to be named, and types designated, as before.

As for the problem of the biological species, they say merely that traditional taxonomic procedures will have to be reassessed. I venture to predict that they will be modified as follows.

For the many large and "difficult" genera the traditional taxonomist will not go beyond the description of species complexes easily recognizable on morphological grounds. Perhaps one "type" of a complex could be formally named, although in most cases this will have been done already. The real "independent biological units" (biological species) will be discovered by a new breed of taxonomists, the systematic ecologist, who works with them in the field and can recognize their biological role. In many cases, the discovery of such species will be by the ecologist, not the taxonomist, and will follow inevitably from studies on agriculturally and medically important insects, as well as from studies of natural ecosystems.

In any case, such species will not receive formal names, and will be represented in collections only by voucher specimens bearing a code designation. Some of these could be formally named later if this is desirable for some reason, but the science of biology will not suffer in any way if most of these species remain formally unnamed for ever. Taxonomic works will simply note that genus such-and-such contains x species, of which y are unnamed and undescribed but are deposited in the following collections and bear the following code designations: ... The voucher specimen system is even now being used for systematic-ecological work on ants.

The traditional taxonomist currently feels that he is obliged by the rules of nomenclature painstakingly to describe, key, and name every species he can recognize, with no matter how much difficulty, in the group he is revising. In fact, he can throw off this burden right now, if he wants to, by simply not doing this! That is, he can and must recognize his species (preferably with the help of systematic-ecological work), but he does not have to *name and describe* them. He can just put specimens in a public collection under a code designation. The time he used to spend writing out descriptions and devising laborious keys to

include every single species (which hardly anyone reads or uses, anyway), he can now spend going on to another group. His *biologically useful* output should greatly increase accordingly.

It will be argued that the voucher specimens now become even more important than types because no published description accompanies them. In fact, their loss, although inconvenient, would detract little from the study of the functioning of the ecosystems in which their species participate, and which led to their discovery in the first place. It is the biology of populations, ecosystems, etc., and the sort of role species *x* plays in a certain ecosystem, which are important, not the exact identity, morphologically speaking, of species *x* (unless it is a pest, or a "keystone" species in its system, in which case it would be named, anyway). As soon as the name-bearer function is stripped from a specimen it loses much of its importance, and we as taxonomists will learn to overcome the name (and therefore type) fixation psychology which we have inherited. Rather than automatically naming every species, we should first ask ourselves: "Is the naming and describing of this species going to contribute to the study of the biogeography, evolution, ecology, genetics, or agricultural importance of this group?" I think the honest answer in most cases would be "NO".

If this predicted trend materialises, the number of insect species *discovered* in the future will rise sharply through the activities of systematic ecologists, while the number formally *named* will drop markedly, although never completely to zero. When this happens, the Linnean system of nomenclature will no longer be a burden to us, but will retain its usefulness at supra-specific levels and as providing convenient tags for the species which biologists talk about, for whatever reason.

The role of museums will increase in importance as they become repositories for voucher specimens, as well as for name bearers, and curators will have to see to it that these voucher specimens do not fall into the hands of persons suffering from the mihi-itch, who would put a formal name on them. Eventually, loans to overseas persons will greatly decline, as it is impossible to do systematic ecology work from the other side of an ocean.

The amateur namer-describer will be squeezed out of the field, since, although he will continue to happily name every specimen he can get his hands on, his names will be ignored by the taxonomist as the importance, and present obligatory role, of the Linnean system declines.

I believe that these future trends in taxonomy are inevitable and that they should be welcomed, even hurried along. We have two advantages over the Canadians: we have "The Insects of Australia" and we already have a Biological Resources Study Council.

"The Insects of Australia", which contains keys to families, can be used as a point of departure for the family-based manuals, which should not go below the level of species complex (in large genera) in order for these manuals to be produced in a finite time.

The Biological Resources Study Council can do much to provide guide-

lines, formulate national policy in taxonomy and systematic ecology, and through its financial grant function see to it that its guidelines are followed by channelling funds accordingly. In other words, it can support work by traditional taxonomists to produce handbooks of general usefulness to biologists, while encouraging the development of systematic ecology, which has relatively few practitioners in Australia, even though it is the field of the future as far as taxonomy is concerned. Inevitably this would mean withdrawal of support for the traditional "fat" monograph, three quarters of which consists of species descriptions. While in an ideal world the continued production of such monographs would be desirable, our limited resources and the urgent need for manuals usable by ecologists require that we shift our priorities accordingly.

Editor's Note: Members wishing to comment on these suggestions may write directly to Dr. Matthews at the South Australian Museum, North Terrace, Adelaide, S.A. 5000; however, why not share your opinions with your colleagues and write to the News Bulletin instead? I will be pleased to publish comments in future issues, in digest form if many are received, and in all cases I will forward a copy of the full letter to Dr. Matthews.

ENTOMOLOGICAL NEWS AROUND AUSTRALIA

WESTERN AUSTRALIA:

Mr Kevin Richards and Dr Wynn Bailey were able to join the faunal survey of the Prince Regent River Reserve in the N.W. Kimberleys sponsored by the Australian Biological Resources Council and the Fisheries and Fauna Department of W.A. The reserve is normally only accessible by sea, but with the use of a helicopter a more intensive collection could be made. About 4,000 insect specimens were collected, including interesting new records for W.A. such as the elusive *Drosophila serrata*, unknown from the state though present in New Guinea, the Northern Territory and eastern states. The predominant orders collected were Orthoptera, Diptera and Lepidoptera.

CSIRO and the W.A. Department of Agriculture are cooperating in preliminary trials of biological control of doublegee, an important introduced weed of wheat-growing areas, using the South African weevil *Apion antiquum*, bred in Queensland from imported stock.

Mr Tom Greaves, while on a visit from Canberra, gave a seminar at the CSIRO laboratories in October, on 'Termites in Forest Trees'. He gave an interesting and stimulating account of his work, before retirement from CSIRO, on termite attack of eucalypts in Queensland and N.S.W.

Monitoring of insect populations in contrasting habitats in Karri forest, using day and night traps, was recently started by the Departments of Forestry and Agriculture, as part of a study of possible effects on the environment of the proposed wood-chip project near Manjimup.

Dr Hal Reynolds of the University of California, Riverside, a world authority on the integrated control of cotton pests, visited Kununnurra in August, to review the pest situation and talk on integrated pest control to local cotton growers and agriculturists.

Mr Brian Levy, who is working at the British Museum on a revision of the genus *Melobasis*, spent some time checking the extensive collection of Buprestidae (Coleoptera) in the Department of Agriculture in connection with this work.

Mr Ted Dahms, Curator of Entomology at the Queensland Museum, visited the W.A. Museum and the Department of Agriculture to inspect Girault material.

S.J. Curry

SOUTH AUSTRALIA:

Waite Agricultural Research Institute

Visitors

- 2 September - Dr R.P. Pottinger, Officer in Charge, Insect Control Group, Ruakura Research Centre, Hamilton, New Zealand.
- 12 September - Miss A.M. Giannakakis from the Fruit Fly Unit, School of Biological Sciences, University of Sydney, who gave a seminar on sex pheromones in *Dacus tryoni*.
- 2 October - Mr E.J. Hammerton of the Waikerie Red Scale Committee, in connection with his work on biological control of red scale.
- 9 October - Dr Peter Blood from the Department of Entomology, University of Queensland, who is working on integrated control of insect pests of cotton.

New Arrivals

Mr Ahmad bin Mohammad from the A.P. Agricultural University, Hyderabad, India, who has enrolled for a postgraduate degree, studying biological control of the black bean aphid, *Aphis craccivora* Koch.

Departures

Dr R.H. Maddern, on completion of his work on *Stethorus* and the biological control of *Tetranychus urticae*, which he has carried out under a grant from the Rural Credits Fund.

Professor T.O. Browning has left for a year's study leave. He is at present working in the International Centre of Insect Physiology and Ecology, Nairobi, Kenya as Director of Research of an ecological study of ticks. At the end of 1974 he will travel to France where he will work in the laboratory of J.R. le Berre at Orsay, Paris. In May 1975 he will go to Imperial College, Silwood Park, England, where he will carry out further research on the uptake of water by insect eggs with Professor A.D. Lees. He is expected to return to Adelaide in early September 1975.

Dr F.D. Morgan left Adelaide on the 23rd August. He is spending six months in the Entomology Department, Russell Laboratories, University of Wisconsin, Maddison, U.S.A., as a visiting Professor giving lectures in Entomology to undergraduate students and supervising six postgraduate

students. He expects to return to Adelaide late in August 1975.

Mr Baskoro Winarno, Dean of the Faculty of Agriculture of Brawijaya University, Indonesia, left on 10 October to return home. He spent 3 months at the Institute collaborating with Dr Morgan on a textbook of general entomology for Indonesia.

Mr D. Hopkins, a postgraduate student, has been invited to present a paper on the house dust mite at a symposium entitled "The Asthmatic Child" to be held at Monash University on the 26th and 27th October.

Department of Agriculture

Peter Birks attended the SCA Entomology Committee Meeting in Hobart during September, and Peter Allen presented a paper on sequential sampling and damage assessment for *Aphodius tasmaniae* pasture cockchafer, to the Australasian Conference on the Ecology of Grassland Invertebrates held in Armidale from 26 to 30 August.

Dr R.P. Pottinger visited the Department on 4 and 5 September.

South Australian Museum

Gordon Gross is in England working on the biology of Heteroptera and butterflies of the New Hebrides, with particular reference to the Percy Sladen Trust Expedition to the New Hebrides in 1972. He will also take holidays before returning at the end of November.

Eric Matthews presented a paper on the ecological biogeography of dung beetles, and another on the behaviour of birds in relation to the colours of insects, at the 6th Latin American Zoological Congress which was held in Mexico City from 30 September to 5 October.

Joe Szent-Ivany has just returned from six months at the Wau Ecology Institute, working on the biology and ecology of Lepidoptera (especially Geometridae), and lecturing visiting groups of University students. He attended the unveiling of plaques to the memory of the entomology pioneers Louis Biro and Sam Fenichel in the Science Building of the University of Papua New Guinea, Port Moresby. The residual finance has been devoted to the establishment of the Biro-Fenichel Biology Prize for the student obtaining highest marks in entomology, zoology or botany in the University of Papua New Guinea.

The Museum's Entomology Department, including the reference collection, has moved from the Museum buildings in North Terrace to Goldsborough House, 172 North Terrace, Adelaide. The postal address remains unchanged.

P.G. Allen

TASMANIA:

State and Commonwealth entomologists met in Tasmania in September. Those attending were Tom Passlow, Gordon Pasfield, Tom Hogan, Peter Birks, John Button, Terry Bourke, Doug Waterhouse, Phil Carne, Allan Allwood, Jack Morschel and John Riley. They met at Devonport, to visit the Forthside Research Farm and several properties on which the Department of

Agriculture was involved with work on sub-clover stunt virus and its vectors on broad beans. They also visited some power stations and made brief stops to look at infestations of winter corbie, *Oncopera rufobrunnea*. After meetings in Hobart they visited Grove to see work on integrated control of orchard pests.

Phil Carne stayed on for a few days after the meeting. He visited the University to discuss eucalypt-defoliating insects and litter sampling in wood-chip areas with John Madden, David de Little and John Hickman; he also spent a morning with CSIRO entomologists.

Also during September Bill Kain, of the New Zealand Department of Agriculture and Fisheries, made a brief visit to Tasmania after attending a conference in Armidale. He is interested in pasture insects.

The University of Tasmania has appointed Lionel Hill, a Queensland graduate, to assist with the collection and identification of insects in litter, and studies on the impact of forestry operations on invertebrates.

Miss Jennifer Murton, a graduate of the University of Tasmania, and Mr Iman Abdelrhman, formerly at the Waite Institute, Adelaide, have been appointed to the Department of Agriculture.

The Forestry Commission has appointed Humphrey Elliott as its first Forest Entomologist.

K.L. Taylor

VICTORIA:

Forests Commission

Dr G. Marks will present a 'position paper' regarding Victoria at a conference on forest insects and diseases, to be held in April 1975 by the International Union of Forestry Research Organizations, in New Delhi, India. He will be assisted by Mr F. Neumann, who is collating information on economically important forest insects.

The Commission has in preparation a study of the flora and fauna of mixed eucalypt forest and of adjacent pine plantations at Myrtleford, N.E. Victoria.

Victorian Plant Research Institute

The quarterly report on new species of insects found in Victoria is now being compiled. These reports are distributed to Chief Entomologists in all states.

An outbreak of millipedes in nuisance numbers continues in the suburb of Avondale Heights - anyone with a good control method should contact the demented householders! The Institute has also had several phone calls about 'huge hairy black masses' - an outbreak of *Perga* sawfly larvae is evidently on hand.

National Museum of Victoria

Mr Arturs Neboiss is away for 3 months on long service leave, during which he will attend a conference on Trichoptera in Austria. He is due to return in November.

Genetics Department, University of Melbourne

Prof. M.J.D. White is working on triploid hybrids between the parthenogenetic grasshopper *Moraba virgo* and its bisexual relative. He is planning an expedition to arid areas of Western Australia next January and February to collect more material.

Dr J. Martin is visiting New Mexico on a joint study on midges in water storage areas. He expects to be back by Christmas.

Department of Zoology, Monash University

Dr George Ettershank is collaborating with John French of CSIRO on alternative methods of control for Argentine ants. Studies so far indicate possible resistance in the ants to chlorinated hydrocarbons.

CSIRO Division of Building Research

Mr Doug Howick recently visited the Queensland Forestry Department to discuss the status of infestations of the drywood termite, *Cryptotermes brevis*, at Maryborough, Qld. He will be revisiting Queensland before Christmas to collect *Mastotermes*, for laboratory studies including bioassay experiments on threshold toxicity levels.

Dr John French is continuing studies on attractants and repellents of termites. He recently obtained isolates of nitrogen-fixing bacteria from the hindgut contents of *Coptotermes*, *Mastotermes* and *Nasutitermes*.

J.R.J. French

AUSTRALIAN CAPITAL TERRITORY:

Dr Franklyn H. Perring, Director of the Biological Records Centre at Monks Wood Experimental Station, U.K., visited Canberra for several days at the beginning of October. Dr Perring came to Australia with the support of the Biological Resources Interim Study Council, to advise on the possible establishment of a biological resources data bank in Australia. While in Canberra he addressed a wide spectrum of biologists at both CSIRO and the Australian National University on aspects of the operation of a biological recording network, and held discussions with a number of people concerned with the future Biological Survey of Australia.

P. Ferrar

NEW SOUTH WALES:

Dr Andrew Osborn attended the 15th International Congress of Sugar Cane Technology in Durban, South Africa, in June. He acted as chairman of both the entomology section and the sugar cane bibliography section,

and he also read papers on the sugar cane leafhopper, *Perkinsiella saccharicida*, and on the biological control of the soldier fly, *Inopus rubriceps*.

University of Sydney

Dr Fred McDonald has returned after a year's leave spent mainly in Baton Rouge, Louisiana. He visited a number of universities on his way to Baton Rouge, including University of California at Santa Barbara, University of Alberta, Lakehead University and University of Minnesota. Most of his leave was spent in the Entomology Department, Louisiana State University, where he studied soybean pest problems and the taxonomy of U.S. Pentatomidae. Brief visits were made to USDA labs in Gainesville and Beltsville to consult with personnel involved in insect chemosterilant problems. Dr McDonald returned to Australia via London and Prague.

Mr Humphrey Elliott has submitted his Ph.D. thesis entitled "Structure and physiology of the reproductive and neuroendocrine systems of the cowpea aphid, *Aphis craccivora* Koch", and is now working with the Forestry Commission in Tasmania. Initially he will be studying the loss of productivity of forests caused by insect defoliators.

Associate Professor Richard Freitag, from Lakehead University at Thunder Bay in Ontario has been awarded a Pawlette Visiting Scholarship and is spending his sabbatical leave working on the taxonomy of Australian cicindelids (tiger beetles). His other research interests include investigation of pollution problems associated with the Kraft Mill in Thunder Bay. He has a wife and two children and the family hopes to visit North Australia and spend some time in Brisbane.

N.S.W. Department of Agriculture, Rydalmere

Dr Alan Clift has now resumed duties after convalescing from injuries sustained in a car accident. He was walking across a road in heavy rain after a meeting of the Ent. Soc. Aust. (N.S.W.) when the accident occurred.

During a brief visit in May, Dr Harold Madsen, from the Summerland Research Station, Canada Department of Agriculture, British Columbia, talked about integrated control programmes in apple orchards in both South Africa and Canada.

H.A. Rose

QUEENSLAND:

Visitors to the far north

In mid July Geoff Monteith (Brisbane) passed through Cairns for a short collecting trip in the Cooktown area. He was quite pleased with his catch.

In mid August Greg Daniels and his wife (Sydney) had a short stay in Cairns before continuing to Iron Range. Their main interest was Diptera, but the last report that I had was that collecting was not very good.

Max and Barbara Moulds (Sydney) arrived in Cairns at the same time, and after a couple of weeks in this area proceeded to Iron Range, where they were to set up camp for extensive collecting in various parts of the Peninsula for the next three or four months. Their principal interests are Odonata, Lepidoptera (hawk moths), and cicadas.

In late August Sue Beattie (Melbourne) arrived in Cairns, hopefully to collect Lucanidae and Cetoniinae, and also to study the northern environment. I took her on several unsuccessful trips. Most areas were far too dry, and much of the country has been ravaged by bushfires. The exception was Mt. Lewis, where the road was very slippery and the predominant animal life was leeches.

In mid September Geoff Monteith flew to Coen to join his vehicle, to drive to the "Tip". He was on a "dry" season collecting trip in the Bamaga, Lokeby Scrub and Somerset areas. I saw him on his return journey south. He called in at Iron Range to see the collectors in that area. He had reasonable collecting, and was pleased with his results. He hopes to return to the same area in January for "wet" season collecting.

Allan Ey (Ayr) has gone to Iron Range to collect, and hopes to remain in that area until March. Due to the many creeks and rivers his movement during the wet season will be very limited by flooding.

On 10 October Roger Overland and Peter Kennedy (Brisbane) called on me. They were on a short collecting trip for Coleoptera and Lepidoptera, but were meeting with little success due to the dry conditions. On the way they had visited Ernie Adams at Edungalba, Eungella and Mt. Spec, and they continued from Cairns on to Daintree.

J.G. Brooks

NORTHERN TERRITORY:

Mr T. Weir spent most of September at the A.N.I.C., Canberra, identifying material from the N.T. collection and also arranging parts of the Hemiptera collection at A.N.I.C.

Dr Mike Robinson and his wife, Barbara, visited Darwin en route from Papua New Guinea to Malaysia. During their stay they collected, and looked at the mating behaviour of, spiders of the family Argiopidae. They spent five days in the Darwin-Adelaide River area.

A.J. Allwood

PAPUA NEW GUINEA:

Professor J. Boeckh from the University of Regensburg, and Professor D. Schneider from the Max Planck society at Seewiesen in West Germany, made a three week visit to P.N.G. during October to study insect olfaction and sex pheromones. Professor Schneider has worked in Europe and Africa on the sexual behaviour of male danaid butterflies, and is well known for his electrophysiological studies on insect olfaction.

Dr J. Szent-Ivany recently unveiled a memorial plaque to Dr Lajos Biro and Samuel Fenichel - two early Hungarian collectors. The plaque,

which was donated by Hungarians living in P.N.G., was erected at the Biology Department of the University of P.N.G.

A.D. Johnston

FISH AS A "LURE" FOR COLEOPTERA

J.G. Brooks

Addenda and Corrigenda to the records in Bulletins 7(1): 17-18 and 9(3): 54-56.

Staphylinidae

Hesperus semirufus Fab.

Thyrecephalus lorquini Faust.

Thyrecephalus hummieri Bern, nec *Xantholinus orthodoxus* Oll.
(BM(NH) communication)

Scarabaeidae

Lepanus palumensis Matth. (ex *Lepanus* sp.)

Temnoplectron reyi is now a synonym of *T. politulum* Macl.

Temnoplectron involucre Matth. (ex *Temnoplectron* sp.)

Amphistomus pectoralis Matth. (ex *Amphistomus* sp.)

Boletoscapter cornutus (Macl.) (ex *Cephalodesmius cornutus* Macl.)

MISCELLANEA

Request for specimens

The Executive has received a request for specimens of Australian Coleoptera and Lepidoptera for studies on the chemistry of insect pigments. Any member who would be willing to assist this research should write to - Dr G. Bastian, Fondation Curie - Institut du Radium, 26 rue d'Ulm, 75005 Paris, France.

Scholarships

Each year the French Government offers a limited number of scholarships to enable Australians working in professional and technical fields to visit France, to further their experience through observation and, where appropriate, participation. Further information, and application forms, may be obtained from the Secretary, Department of Education (French Government Professional and Technical Scholarships), P.O. Box 826, Woden, A.C.T. 2606.

Conference on Climate

The Australian Branch of the Royal Meteorological Society is organizing a conference on aspects of climate and climatic change, to be held at Monash University from 8-11 December 1975. Further information, including a list of topics to be covered, may be obtained from

Dr. A.B. Pittock, C/- CSIRO Division of Atmospheric Physics, P.O. Box 77, Mordialloc, Vic. 3195.

BOOK REVIEW

Genetic Mechanisms of Speciation in Insects: Symposia held at the XIVth International Congress of Entomology, Canberra, Australia August 22-30, 1972, sponsored by the Australian Academy of Science and the Australian Entomological Society. (ed., M.J.D. White)
Sydney: Australia and New Zealand Book Co., 1974, pp.1-170.
\$A9.50. ISBN 0 85552 017 5.

This fine little volume presents, in two sections, the contents of separate but related symposia convened during the 14 International Congress of Entomology in 1972.

The first section, Genetic Analysis of Speciation Mechanisms, includes first a paper by Guy L. Bush on the work of his group at the University of Texas, analysing mechanisms of apparent sympatric host race formation and speciation in tephritid fruit flies of the genus *Rhagoletis*. Three related papers by Australian authors (Elyse M. Craddock, K.H.L. Key and M.J.D. White) follow, which review studies on the formation and interaction between "chromosome races" of the orthopteroids *Didymuria violescens* (Phasmatodea) and morabine grasshoppers, notably those of the "coastal complex" in the *viatica* species group. Together these papers very comprehensively review speciation models of the "sympatric" and "stasipatric" types.

The second section, Evolution of the Hawaiian Drosophilidae, includes contributions from five members of the cooperative research programme organized by the Universities of Hawaii and Texas to study the remarkable explosive speciation of Hawaiian drosophilids. This continuing programme, undoubtedly one of the most exciting events in contemporary biological research, has been in operation for about 10 years. The present volume comprises the most recent of several progressive summaries of general conclusions, and, as such, assumes great value and significance. D. Elmo Hardy presents introductory and background information and an updated bibliography of work accomplished; K.Y. Kaneshiro summarises morphological data on phylogenetic relationships; Herman T. Speith reviews courtship behaviour and its role in evolution of the group; and Elyse M. Craddock usefully discusses the data on reproductive isolating mechanisms between various populations differing in age, along with geographical and distributional characteristics. She skilfully synthesises the data, revealing several possible modes of speciation in these insects. Several of these modes are discussed in further detail by Hampton L. Carson and R.H. Richardson.

The unifying theme emerges that not one but a number of modes of speciation must have occurred in insects. Clarification of this concept provides a major value to this heuristic book, which confounds the some-

what cut and dried viewpoints of some recent texts on evolution. It deserves close attention by all those interested in the evolution of diversity, and copies belonging to the thoughtful will doubtless soon become respectably dog-eared (could there be a better commendation of a scholarly work?).

Despite all I have said, however, it is disappointing that the papers of Carson, Speith and Kaneshiro were not more extensive as reviews of their subjects, especially considering other recent and more comprehensive contributions by some of these authors. None the less they do provide valuable access to the growing output of the Hawaiian project. The absence of L.H. Throckmorton's original symposium contribution from the first section is equally disappointing. Dr Craddock's paper in the Hawaiian section, and the four in section one are exemplary in their range and comprehensiveness.

R.W. Taylor

A Supplement pertaining to the 7th AGM and mentioned on page 55 as being an insert in this issue of the News Bulletin was absent from the copy scanned.

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MISCELLANEOUS PUBLICATIONS
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OF THE AUSTRALIAN ENTOMOLOGICAL SOCIETY  
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MISCELLANEOUS PUBLICATION NO. 1

"The Entomology of Citrus in New South Wales"

(W.W. Froggatt Memorial Lecture)

by P.C. Hely, N.S.W. Department of Agriculture

20 pp. Price: \$A1.00

MISCELLANEOUS PUBLICATION NO. 2

"Directory of Australian Entomology"

Lists professional and non-professional entomologists, their fields of interest and places of employment.

51 pp. Price: \$A1.00 (50¢ to Society members).

MISCELLANEOUS PUBLICATION NO. 3

"The Collection and Preservation of Insects"

by K.R. Norris and M.S. Upton, CSIRO Division of Entomology

This publication has been fully revised and expanded, and replaces Handbook No. 1. It is indispensable to all who collect insects, whether amateur, professional or student.

40 pp. Price: \$A2.00.

Obtainable from the Business Manager, C/- Long Pocket Laboratories, CSIRO,
Private Bag No. 3, Indooroopilly, Qld. 4068.

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