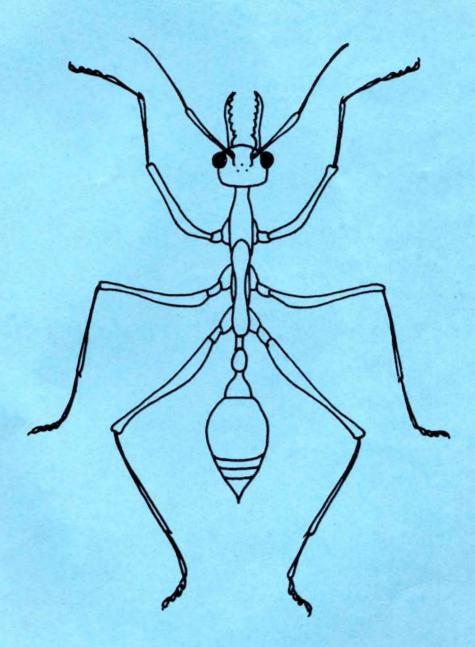
AUSTRALIAN ENTOMOLOGICAL SOCIETY



NEWS BULLETIN

OUR COVER EMBLEM

Our cover emblem, designed by Sybil Curtis, is a conventionalised Myrmecia brevinoda Forel worker. A bulldog ant was chosen both as a typical Australian insect, and as a symbol of the tenacity of those entomologists who worked for the foundation of this Society.

AUSTRALIAN ENTOMOLOGICAL SOCIETY

NEWS BULLETIN VOLUME 2, PART 1, - FEBRUARY, 1966.

CONTENTS

needs mr. K. musteting, Department or Spinery Interior Lea	Page
Office Bearers and Councillors	2
Executive Report	179700044
Subscription Notice	5
New Members Transfer Transfer to Francisco Light Transfer to the Members Trans	6
Changes of Address	7
Affiliation of Victorian Society	7
Regional Meetings	7
Jews from Affiliates	8
Visitors to Australia	9
Visitors to New Guinea	10
Appointments	10
Retirement of Dr. J.W. Evans	11
Comments on Publications	15
Collecting Expeditions	18
Entomological work in progress	20
Scientific Notes	25
Requests for Material	26
Insect collection for Papua Museum	28
Obituaries Annual maio a law. I asuttant	28
Personal Notes	30

T. P. N. G.:

PROVISIONAL OFFICE BEARERS AND COUNCILLORS

President: Dr. I.M. Mackerras, Division of Entomology, C.S.I.R.O., Box 109, Canberra, City, A.C.T.

Vice President: Dr. E.N. Marks, Department of Entomology, University of Queensland, St. Lucia, Queensland.

Secretary: Dr. A.W.S. May, Department of Primary Industries, William Street, Brisbane, Queensland.

Treasurer: Dr. G.H.S. Hooper, Department of Entomology, University of Queensland, St. Lucia, Queensland.

Editor: Dr. B.R. Champ, Department of Primary Industries, Meirs Road, Indooroopilly, Queensland.

REGIONAL COUNCILLORS

Queensland: Dr. R.H. Wharton, Division of Entomology, C.S.I.R.O., 677 Fairfield Road, Yeerongpilly.

N.S.W.: Mr. P.C. Hely, Entomology Branch, Division of Science Services, P.M.B. 10, Rydalmere.

A.C.T.: Mr. I.F.B. Common, Division of Entomology, C.S.I.R.O., Box 109, Canberra, City.

Victoria: Mr. T.W. Hogan, Plant Research Laboratory, Department of Agriculture, Swan Street, Burnley.

Tasmania: Mr. K.L. Taylor, C.S.I.R.O., Tasmanian Regional Laboratory, Stowell Avenue, Hobart.

S.A.: Professor T.O. Browning, Waite Agricultural Research Institute, P.M.B. 1, Glen Osmond.

W.A.: Mr. M.M.H. Wallace, Division of Entomology, C.S.I.R.O., W.A. Regional Laboratory, Nedlands.

Dr. J.J.H. Szent-Ivany, Department of Agriculture, Stock and Fisheries, Konedobu, Papua.

COUNCILLORS REPRESENTING AFFILIATED

SOCIETIES

Entomological Society of Queensland: Mr. H. Standfast, Queensland Institute of Medical Research, Herston Road, Herston, N.9., Queensland.

Royal Zoological Society of New South Wales: Mr. C.N. Smithers,
The Australian Museum, College Street, Sydney.

Entomological Society of Victoria: Mr. J.C. Le Souef, Charles Street,
Blairgowrie, Victoria.

MATERIAL IN THIS BULLETIN MUST NOT BE REFERRED TO NOR
REPRODUCED WITHOUT PERMISSION OF THE AUTHOR OF THE MATERIAL.

Articles, Notes, Letters to the Editor and other material for the News Bulletin should be sent to the News Bulletin Editor, Mr. C.N. Smithers, Australian Museum, 6-8 College Street, Sydney, N.S.W., or to your Regional Councillor.

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REPORT FROM THE EXECUTIVE

Four Executive and one Officers' Meeting were held between 3rd November and 25th January. The principal business and decisions of Executive Meetings were as follows:

Membership. Nineteen new members were elected, but one subsequently withdrew, and two members died. The total at the end of 1965 was 302, and at 25th January, 1966, 310.

Seven distinguished retired entomologists were invited to become foundation members at the rates set for retired members; of these four (Mr. A.P. Dodd, Mr. E.J. Dumigan, Mr. G.H.H. Hardy and Dr. S.J. Paramonov) replied and accepted; their membership dates from their acceptance.

The Executive records with regret the deaths of Mr. G.H.H. Hardy and Mr. J.E.L. Machell.

Affiliated Societies. The Entomological Society of Victoria was admitted to affiliation with the Society, with Mr. J.C. Le Souef as its nominated Councillor.

Finance. At 25th January the Credit Balance was £628.18. 8; 240 members had paid their 1965 subscription.

News Bulletin. Volume 1 was posted to members on 26th November, 1965. In order to have it issued on time it was produced partly in Sydney and partly in Brisbane. Alternative arrangements for future issues are being investigated. A copy of each issue will be sent to the National Library, Canberra.

ANZAAS. The Society's application for affiliation was accepted.

Annual General Meeting, Melbourne, January, 1967. The Executive will appoint a committee of local members who will be responsible for arrangements for the scientific meeting. The tentative Programme is: Sunday, 15th January: Morning - papers. Afternoon - Council meeting; general business meeting; Presidential Address. Evening - Dinner. Tuesday, 17th January: Three-quarters day - Symposium with Section D of ANZAAS.

The Officers are of the opinion that all contributions should be of a standard that would be acceptable for publication.

Journal. The Vice-President had two meetings with the Council of the Entomological Society of Queensland to discuss the proposed merger of journals and the matter is to be put to members of that Society for decision at an early date.

Regional Membership. Members permanently resident overseas will be listed separately from State lists and have no voting right for the State where that member resided previously. Temporary residents overseas will remain under their State of previous residence unless they request otherwise.

Institutional Subscriptions. The Society has no provision in its Constitution for Institutional Membership. Institutions may subscribe to the News Bulletin at its published price, and should apply to the Secretary. When organisation for the journal is further advanced, Institutions from which enquiries have been received will be advised of the arrangements.

SUBSCRIPTIONS FOR 1966

The annual subscription of \$5.00 is now due to the Society by all members and affiliated Societies. Applications by student members for remissions will be considered on their merits, and must be made at the beginning of each year. Members who retire, or have already retired, from active employment may apply for remissions (or be nominated for them by a member through the Regional Councillor) making their Annual Subscription (a) £1.10.0 (3 dollars) for those wishing to receive the Journal or (b) 10.0 (1 dollar) for those not desiring the Journal. In general these remissions will be granted only to older members who have given distinguished service to entomology. The attention of members is drawn to Clause 11 of the Provisional Constitution which states:

"The subscription shall be payable to the Honorary Treasurer of the Society immediately on election, and thereafter on the 1st January of each year. No member shall be entitled to the privileges of membership (other than participation in the business of the inaugural meeting) until his first subscription is paid, nor if his subscription thereafter is more than six months in arrears. Any member whose subscription is more than two years in arrears without written authority from the Executive shall cease to be a member of the Society".

For the purposes of applying the "more than six months in arrears" provision, the date of issue of this February News Bulletin will be taken as the starting date.

Prompt payment of your subscription will help the Treasurer and reduce the costs to the Society involved in sending out reminder notices.

Cheques drawn after 15th February, 1966 must be made out in dollars.

(G.H.S. Hooper) Honorary Treasurer.

NEW MEMBERS

Elected by Executive on 2.11.65.

Mr. P.P. Williams, C/- I.C.I. (A.N.Z.) Ltd., Dorset Road, Croydon, Victoria.

Mr. M. Bengston, 26 Stanton Street, Stanthorpe, Queensland.

Mr. R.A. McLachlan, Granite Belt Horticultural Research Station, Applethorpe, Queensland.

Mr. N.C. Stewart, Waite Agriculture Research Institute, Private Bag 1, Glen Osmond, South Australia.

Elected 25.11.65.

Mrs. Katherine Zelonis, 56 Toorak Road, Hamilton, Brisbane, Queensland.

Mr. N. Clark, C/- Department of Agriculture, Stock & Fisheries, Konedobu, Territory of Papua.

Mr. J. Sedlacek, Bishop Museum Field Station, Wau, Morobe District, Territory of New Guinea.

Sir Alan Harbury Mann, Supreme Court, Port Moresby, Territory of Papua.

Elected on 8.12.65.

Mr. B.M. Braithwaite, 14 Dorset Street, Murwillumbah, N.S.W.

Dr. A.R. Brimblecombe, C/- Department of Primary Industries, William Street, Brisbane, Queensland.

* Mr. E.J. Dumigan, 4 Curtis Street, Toowoomba, Queensland.

Elected on 12.1.66.

* Mr. A.P. Dood, 68 Berry Street, Sherwood, Brisbane, Queensland.

* Mr. G.H.H. Hardy, 16 Austinmer Street, Austinmer, N.S.W.

Dr. D.H.S. Horn, Organic Chemistry Division, C.S.I.R.O., P.O. Box 4331, G.P.O., Melbourne, Victoria.

Mr. F.G. Neumann, 8 Spicer Street, Beaumaris, S.10, Victoria.

Mr. A.W. Osborn, 17 Warrimoo Avenue, St. Ives, N.S.W.

* Dr. S.J. Paramonov, University House, Acton, Canberra City, A.C.T.

Mr. H.R. Schurr, Victorian Plant Research Institute, Burnley Gardens, Swan Street, Burnley E.1, Victoria.

Dr. Erik Shipp, School of Biological Sciences, University of N.S.W., P.O. Box 1, Kensington, N.S.W.

Miss Dinah F. White, Department of Zoology, University of Sydney, Sydney. N.S.W.

Elected 25.1.66.

Dr. R.A. O'Brien, C/- Travel Department, Bank of New South Wales, Box 2722, G.P.O., Sydney, N.S.W.

Mr. M.J. Byrne, Victorian Plant Research Institute, Swan Street, Burnley, Victoria.

* Names marked with an astericsk are those of distinguished retired entomologists who were invited to become foundation members.

CHANGES OF ADDRESS

Mr. N. Gough, 37 Waterworks Road, North Ipswich, Queensland.

Dr. K.L.S. Harley, P.O. Box 842, Kealakekua, Hawaii 96750.

Dr. R. Kumar, Department of Zoology, University of Ghana, Legon, Ghana, W. Africa.

Mr. A.P. Walford-Huggins, C/- Post Office, Stratford, Via Cairns, N. Queensland.

Mr. B.S. McIntosh, Burton Hall, P.O. Box 4, Canberra City.

Dr. M.J. Whitten, Plant Industry Division, C.S.I.R.O., Canberra City. (Transferred from Tasmania).

Revised Listing:

Mr. T.J. Risdill Smith, Pastoral Research Laboratory, C.S.I.R.O., University of New England, Armidale, N.S.W. (Previously listed as "Smith, Mr. T.J. Risdill).

AFFILIATION OF VICTORIAN SOCIETY

As mentioned in the Executive's Report the Entomological Society of Victoria has applied for and been admitted to affiliation with our Society.

We look forward to a happy and fruitful co-operation with the Victorian Society.

TASMANIAN MEETINGS

Tasmanian members, in response to a questionnaire circulated to them, woted in favour of holding periodic meetings to hear talks by local members or visiting entomologists. The frequency of such meetings has still to be decided. A meeting of members and a few visitors has been arranged for lith February, to welcome Professor Johnson and to hear a short talk by Mr. Zondag on the nematode parasite of Sirex noctilio in New Zealand. The meeting will also discuss the question of regular gatherings of the group in Tasmania.

MEETINGS IN PAPUA

Dr. Szent-Ivany writes as follows:-

"Now that we have six members in Port Moresby, we plan to have one informal meeting per month which will be in the DASF entomological laboratory and collection. At times, when country members happen to visit Port Moresby, we will arrange a special meeting so that the country members should have a chance to meet the town members, exchange ideas, present exhibits of rare and interesting species or even deliver a short address. Members will have the chance to bring their unidentified insect material with them and some of this could be identified in the DASF collection. If there is a general meeting of the Papua and New Guinea Scientific Society in which the guest speaker is an entomologist, as in November last, we will have a combined meeting of the Papua and New Guinea Scientific Society and the Australian Entomological Society".

MEETINGS OF THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

Twenty four members attended the October Meeting of the Society. Dr. Guy L. Bush of the Department of Zoology, University of Melbourne, addressed the meeting on "Allochronic Speciation in North American Tephritidae".

Dr. May, who has worked extensively with the family, moved the vote of thanks.

A Meeting of the Society was held on the 21st December to take advantage of Professor O.W. Richards visit to Brisbane.

Professor Richards addressed the Meeting on "Wingless Diptera", discussing the family Sphaeroceridae.

Mr. Perkins thanked Professor Richards for the help he had given the Entomology Department over the years.

The next Meeting in March, will be the Annual General Meeting. The title of the Presidential Address will be "Mosquito behaviour and Virus Transmission in North Queensland".

Later this year the Entomological Society of Queensland will hold a symposium, on the problems associated with the control of potential arthropod vectors of imported exotic diseases, in suspected outbreak areas and the control of imported arthropods.

ELECTION OF MR. F.A. PERKINS TO HONORARY LIFE MEMBERSHIP OF THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

In recognition of the vital role played by Mr. Perkins in the formation of the Entomological Society of Queensland and for his active and considerable support through the ensuing years, and for the major contribution he has made to entomology in this country (See News Bulletin Vol. 1: 10),

Mr. Perkins was unanimously elected to Honorary Life Membership at the September Meeting of the Society.

MEETINGS OF THE ENTOMOLOGICAL SOCIETY OF VICTORIA

The meetings of this Society are held at the National Herbarium Hall, The Domain, South Yarra, commencing at 8 p.m. Visitors are always welcome. The Secretary, Mr. G. Rushworth, 29 Hedderwick Street, North Balwyn, will be pleased to deal with enquiries.

<u>Meetings</u>: February 18th: Mr. J. O'Brien of the Department of Agriculture, Victoria, will speak on "A visit to N.W. Australia".

February 26th: Excursion to Lake Mountain.

April 22nd: Annual General Meeting: Presidential Address.

Address by Dr. O.W. Richards.

On January 5th, Dr. O.W. Richards, Professor of Entomology, Imperial College of Science and Technology, London, who was making a visit to Australia with his wife, addressed a special meeting of Victorian members. Eis subject was "Wasps and Flowers", in which he outlined the present state of knowledge of the Vespoid family Masaridae, which is represented in Australia by several interesting genera.

VISITORS TO AUSTRALIA

- Fr. R.W. Paine is to visit Australia in April and May to study the occurrence of Oryctes rhinoceros L. and related species and the natural enemies associated with them. He will visit the Northern Territory, Cape York and adjacent Islands.
- Dr. J. Rehacek from the Institute of Virology, Bratishava is to work with Dr. T.D.C. Grace for about a year from February.
- Dr. George F. Edmunds Jr., University of Utah, Salt Lake City, one of the leading authorities on Ephemeroptera is spending six weeks in eastern Australia collecting both adults and nymphs of as many of our genera as possible for comparison with the faunas of Chile and New Zealand. He has recently returned from an extended trip to Chile and will spend a short time in New Zealand before returning to the States.
- Er. R. Zondag, of the Forest Research Institute, Rotorua, New Zealand, who for some years has been responsible for work in New Zealand on the biological control of Sirex noctilio, is visiting Australia during February. Apart from

visits to centres in Sydney, Canberra, Melbourne and Adelaide where work on forest entomology is in progress, he will spend about 10 days in Tasmania with the <u>Sirex</u> research team. Mr. Zondag's visit to Hobart has been timed to coincide with a meeting of the <u>Sirex</u> Research Sub-Committee to be held on 14th February.

Mr. C. Ashall from the Anti-Locust Research Centre in the U.K. will be visiting Australia again this year and Dr. Joyce Magor has returned to Australia for a further two years.

AUSTRALIAN AND OVERSEAS ENTOMOLOGISTS VISITING THE TERRITORY OF PAPUA

AND NEW GUINEA

Mr. G. Monteith, of the Department of Entomology, University of Queensland, St. Lucia (Brisbane) will visit the Territory in February, 1966, in order to collect lampyrids and make observations on the so called "synchronous flashing" of fire-flies. During his stay in the Territory Mr. Monteith will visit the Port Moresby and Lae areas and the Central Highlands.

Dr. J.L. Gressitt, Holder of the Linus Allen Bishop Distinguished Chair of Zoology and Chairman of the Department of Entomology, Bernice P. Bishop Museum, Honolulu, Hawaii, will arrive in the Territory at the beginning of March for a stay of 4 to 5 months. He will be accompanied by his wife and his three daughters who will assist him in his field and laboratory work. The team will be based at the Bishop Museum Field Station, Wau (Morobe District of New Guinea) and from there will visit other areas. Besides collecting beetles (especially Chrysomelidae and Cerambycidae) Dr. Gressitt plans to study the life history and ecology of the species of the weevil genus Gymnopholus. These are medium to large weevils many of which have well developed spines on their elytra (one on each elytron) and tubercles on their pronota. Most of them are found at higher altitudes. Recently Dr. Gressitt completed a manuscript of the revision of the genus Gymnopholus in which he describes a large number of new species. The generic revision will be published in "Pacific Insects".

APPOINTMENTS

Mr. I.A. Barber has joined the Entomology Branch of N.S.W. Department of Agriculture and is at present stationed at the headquarters of the Division of Science Services at Rydalmere, where he will be

enged in investigations into certain pests of pasture and field crops.

Mr. Barber graduated B.Sc.Agr. from Sydney University in 1952 and primed the Biology Branch of the Victorian Department of Agriculture as assistant Entomologist, where he spent some five years and conducted investigations on pasture pests and vine pests. He was awarded a Teaching Fellow-in Zoology at Sydney University for three years and from 1962-64 held Research Scholarship and worked on the host preference relationships of Teensland fruit fly. Immediately prior to joining the Entomology Branch, he was employed by Geigy Agricultural Chemicals investigating the effects of experimental chemicals on orchard and pasture pests.

Mr. S.J. Curry has been appointed to the Entomology Branch of the Department of Agriculture in Perth, Western Australia, to work specifically on forest insect problems. Mr. Curry was Forest Entomologist with the Kenya Forests Department for twelve years, working mostly on insects of exotic plantation trees including pine and cypress.

Dr. R. Laughlin has recently taken up a lecturing and research position in the Entomology Department at the Waite Agricultural Research Institute. Dr. Laughlin was for some years a member of Professor Sir Vincent Wiggleworth's Unit of Insect Physiology and worked with Dr. Alec Milne at Newcastle-upon-Tyne, studying physiological problems associated with Milne's ecological work.

Dr. Bruce Johnson has resigned from the Waite Institute, Department of Entomology, to take up the Chair of Zoology in the University of Tasmania.

C.S.I.R.O. APPOINTMENTS

Mr. K.R. Norris has been appointed Assistant Chief of the Division of Entomology, Canberra.

Dr. R. Taylor is to join the taxonomic group in Canberra to work

Dr. R.J.D. Wenslar from Bonn is to join Dr. L. Barton-Browne to work on the Sensory Physiology of Insects.

RETIREMENT OF DR. J.W. EVANS

Dr. John W. Evans retired from the Directorship of the Australian Wiseum, Sydney, on 16th January, 1966. Since his appointment to this position, in 1954, the modernization of the Museum has been notably advanced. Dr. Evans succeeded in obtaining the necessary funds for building and equipping a new wing,

the first major addition to the Museum buildings for about 50 years. Finances were also made available for reconstructing several of the galleries according to modern educational and display principles and for recruiting well qualified and experienced staff and for providing them with the necessary equipment and technical assistants. As an important result, staff relations in general were considerably improved.

The key to this quite remarkable success in the relatively short period of eleven years lies in a combination of the personality of the Director and his training and wide experience in biological and administrative fields. He has a drive and energy and an eye for essentials which does not make it easy for him to tolerate foolishness or inefficiency, and which to casual observation may give an impression of brusqueness. Those who have come to know him, however, are aware of an underlying kindness and sympathy and a sincere desire to encourage ability and worth-while enterprise.

John Evans was born in India, the son of Brigadier W.H. Evans, well known for his work on the higher Lepidoptera. He was educated at Wellington College, Berkshire, England, and Jesus College, Cambridge, where he obtained the degree of M.A. His biological education was wide, including Zoology, Botany and Geology, and this is no doubt reflected in the extensive range of his subsequent research interests, covering systematics, palaeontology, phylogeny, faunistics and geographic distribution. As a result of these researches he was awarded the degree of D.Sc. (Tasmania) in 1939 and Sc.D. (Cantab.) in 1949. He is a Fellow of the Institute of Biology, a Corresponding Member of the Zoological Society, a Fellow of the Royal Entomological Society of London and a Member of the Australian Entomological Society and the Entomological Society of Queensland.

He came to Australia in 1926 and the following year was awarded a Science and Industry Endowment Fund Studentship for study under Dr. R.J. Tillyard. During 1927-29 he worked at the Cawthron Institute, Nelson, New Zealand, an important centre for biological control of insects and weeds, and studied at and visited prickly pear control stations in Queensland, entomological research centres in the U.S.A., and the Parasite Laboratory of the Imperial Bureau of Entomology, Farnham Royal, England. In 1929-31 he worked at the newly established Division of Entomology, C.S.I.R., mainly at headquarters in Canberra, but with periods at the Plant Research Laboratory, Burnley, Victoria and the Waite Agricultural Research Institute, Adelaide, initiating investigations on the ecology of the apple thrips. These investigations were extended at the Waite Institute in 1932-34, and in 1934 he visited England and France.

In 1935 he was appointed Government Entomologist in the Tasmanian legartment of Agriculture, where he remained until 1944; his position was later extended to that of Chief Biologist in administrative charge also of plant pathological activities. During this period the entomological and plant pathology services were established on a sound scientific basis.

During 1944-49 Dr. Evans was employed as Senior Entomologist, Imperial (later Commonwealth) Institute of Entomology, working at the British Museum (Natural History). In 1949 he was appointed as Chief Scientist in the Infestation Control Division of the U.K. Ministry of Ariculture and Fisheries, where he was in administrative control of an Entomological Branch (stored products insects), a Chemical Branch, a Branch Control Branch and a Vertebrate Pest Research Branch, and was also responsible for the scientific work of the large staff employed in these Branches. The activities of the Division, which had been initiated in response to war-time needs, were considerably increased in ing Dr. Evans' tenure of this position, and its scientific status correspondingly enhanced. He held this position until his appointment as Director of the Australian Museum in 1954.

Dr. Evans' administrative experience has been extensive. start from the activities already described, he has been a member of the Councils of the following bodies: Royal Society of Tasmania, Instralian Institute of Agricultural Science. University of Tasmania also a member of the Standing Committee and the Finance Committee of the Council), the National Research Council, Royal Entomological Society of London, Association of Applied Biologists, the Systematics Association, Association of the Universities of the British Commonwealth (representing the Vice-Chancellor of the University of Tasmania), the Institute of Biology (Foundation Council), the Biological Council, and the Linnaean Society of N.S.W., a member of the National Parks Board (Tasmania), C.S.I.R. State Committee, the Advisory Board, D.S. I.R. Pest Infestation Laboratory, Blough, England, Home Office Wild Birds Advisory Committee (U.K.), Forestry Immission Grey Squirrel Committee (U.K.), Home Office Toxic Insecticides Committee (U.K.), Colonial Office Stored Products Insects Sub-Committee, Ministry of Agriculture, Myxomatosis Committee, the Executive Committee of the International Council of Museums, Australian National Committee for TESCO, C.S.I.R.O. State Committee, Academy of Science High Mountains Estemment Committee, Academy of Science Fauna and Flora Committee, A.N.Z.A.A.S. ===ral Committee (President, Section D, 1965), Fauna Protection Panel; a Trustee of the Tasmanian Museum; Fellow of A.N.Z.A.A.S.; Tasmanian representative of the Australian Scientific Liaison Bureau; Honorary Associate, Department of Zoology, University of Sydney; Chairman, Public Service Board, Scientific Advisory Panel. He has attended numerous International Congresses and Conferences, including the International Congresses of Entomology -Stockholm (1948), Amsterdam (1959), Vienna (1960), London (1964) (at the Figure and London Conferences, the Australian representative on the Permanent

Congress Committee), the European Plant Protection Organisation (Committee meetings, Florence, 1950, Paris, 1951, Brussels, 1952), International Bird Protection Committee (Paris, 1952), Conference of Association of Universities of the British Commonwealth (Oxford, 1948, Cambridge, 1953), UNESCO Museums Seminar (Tokyo, 1960), British Association Meetings at Newcastle and Belfast, ANZAAS meetings (Canberra, Melbourne, Dunedin, Adelaide, Perth, Brisbane, Sydney, Hobart), Continental Drift Symposium (Hobart, 1956), Royal Society of Victoria, Evolution Symposium (Melbourne, 1959).

John Evans had published numerous papers on the systematics. ecology, bionomics and control of insects and other animals of economic importance. His main love, however, has been the Hemiptera, and in particular the Cicadelloidea. His first publication on an hemipteron was in 1928, and his first on Cicadelloidea was on the biology and morphology of Eurymelinae in 1931. Subsequently, he has thoroughly explored the taxonomy, comparative morphology. phylogeny and distribution of all groups of Cicadelloidea. He has had the advantage of a knowledge of the genera and higher taxa on a worldwide basis, and of having studied the morphology and the palaeontology of Homoptera in general. A high-light in our understanding of the systematics of Cicadelloidea was his series of three papers in Trans. R. ent. Soc. Lond. (1946-47) on "A natural classification of leafhoppers", which substituted extensive and fundamental criteria, based on comparative morphology, for the relatively few and often superficial characters previously used in the classification of the superfamily. His more recent studies have elaborated and refined these The results of his faunistic and taxonomic researches in concepts. the Australian region are shortly to be published in monographic form (The Leafhoppers and Froghoppers of Australia and New Zealand (Homoptera, Cicadelloidea and Cercopoidea), Australian Museum, Memoir XII).

Evans has long been fascinated by problems of distribution, and particularly those involving the faunas of the now widely separated lands of the Southern Hemisphere. This interest has coloured all his work and has also resulted in his becoming the foremost Australian worker on fossil Hemiptera and on the primitive living family of Peloridiidae.

Other subjects to which he has given much thought, particularly in more recent years, are the training of biological scientists and the organisation and functions of natural history museums. Besides publishing on the latter, he has made several trips to the U.S.A., U.K., Europe, Thailand and Singapore, to study and advise on museum matters.

Dr. Evans has retired with the satisfaction of having endeavoured and achieved a great deal in many fields, and with the knowledge,

in his latest career, he has raised the activities and potentialities of the intralian Museum to a new level. But a man of his drive will not remain content with past accomplishments; for many years to come we can hope and expect that and of his energy will be concentrated on the advancement of his chosen fields of research.

T. Woodward, Entomology Department, University of Queensland.

TRANSACTIONS TRANSACTIONS TO SOCIETY

The Papua and New Guinea Scientific Society's Transactions, a immal which is not well known by entomologists, appeared first in 1960 and 6 wilmes have so far appeared. There is at least one paper in every volume discussing New Guinea insects. There are two papers by J.J.H. Szent-Ivany in the Prinsactions on the distribution, individual variation, bionomics and ethology of noctuid Pericyma cruegeri (Butl.), a major pest of ornamental legumes lelonix regia, Peltophorum ferrugineum) in Papua and New Guinea (Vol. 1, 1960 and 121. 4, 1963), a paper by J.J.H. Szent-Ivany and J.S. Womersley on the first record of the gall-forming coccid genus Apiomorpha Ruebsamen in Papua, found in 12 Astrolabe range on Eucalyptus tereticornis Sm. and one by Szent-Ivany and I.E. Ardley on the insect pests of Saccharum spp. in the Territory of Papua and Jew Guinea. (Both in volume 3, 1962). In volume 5, (1964) there is a paper Ter Guinea Stag-Beetles (Lucanidae) by Melchior O. de Lisle (Paris). remarkable papers by Szent-Ivany ("The Zoogeographical Factor in Economic Entomology = Pacific Islands with special reference to New Guinea" and "Notes on the ***rtical distribution of some beetles in New Guinea with new locality data and isst plant records of some high altitude species") appeared in volumes 2, (1961) and f. (1965) respectively.

A PROPOSED NEW BOOK ON THE AUSTRALIAN BUTTERFLIES

Mr. L.E. Couchman is preparing a new book on the Australian materflies which, while acting as a field guide to the identification of the 350 secies to be found in Australia, will include some results of the work on which he has been engaged for many years. The literature of the subject has been a life-ling study, and pending the publication of a full synonymic catalogue of all the instralian species (similar to the Tasmanian catalogue issued in 1956) it is intended to show every name by which a species has been known in Australia.

I waluable bibliography of the relevant literature will be included. The chief feature of the book is intended to be the colour and black and white plates, largely

prepared by Mr. D.M. Reeves; depicting almost all the Australian species and many of the geographical races, illustrating the geographical variation and distribution of every form, together with the more usual aberrations. Plates of typical habitats and distributional maps will be featured. The classification used will conform to the more modern arrangements now in use in Europe and America.

It is hoped that anyone currently working on any part of the group who is not in touch with Mr. Couchman will inform him of the research being undertaken so that the book may be as up-to-date as possible.

Mr. Couchman's address is 35 Browne Street, West Hobart, Tasmania.

"WINGS AND STINGS"

The Victorian Entomological Society is to be congratulated on the issue of the first part of its new journal "Wings and Stings", which was distributed to its members in August, 1965. The contents provide a sure indication that the Society is in a flourishing condition since the articles have obviously all been contributed by those who like Alice "rejoice in insects".

J.W. Evans

REVIEW

THE MOSQUITOES OF VICTORIA

By N.V. Dobrotworsky

This book consists of a systematically arranged account of Victorian mosquitoes. After an introduction consisting mainly of a brief historical review of work on Australian mosquitoes there are four sections devoted to general subjects. The first of these deals with the external anatomy of adult mosquitoes, their periodicity of activity, mating, feeding and oviposition. The second deals with the immature stages. The subject of eggs and hatching are followed by description of the external anatomy of the larvae, their biology and larval habitats. A brief description of the mosquito pupa is included but unfortunately no details are given of some essential pupal characters, such as chaetotaxy, which are used in pupal identification. The third section deals with general aspects of distribution and seasonal abundance of Victorian species. The fourth section, consisting of only two pages, deals with mosquitoes as disease vectors

= that State. This section concludes the First Part of the book.

The bulk of the book, the Second Part, consists of a systematic meant of the species and subspecies found in Victoria. Keys, descriptive and essential figures are given for the identification of adults and large. Under distinct headings adult characters (male and female), larval maracters, biology and distribution are dealt with for each species. Pupae virtually ignored.

The book ends with an appendix on collecting and preserving secimens for study, a list of references, a systematic list of mosquito species in Victoria and an index. The insides of the front and back covers used to provide a map of Victoria.

The type is clear and headings are well used so that it is quite for the reader to find his way about the book. The illustrations are large. Paper quality and binding are adequate. The price is high.

Entomologists engaged on work on mosquitoes in Victoria will find this book indispensable; workers in other areas, moreover, will find it very than it is a second in the second in the

For a considerable time now the description of Australian insect species has been going on apace. In most groups there has been comparatively little published in the way of synopses, revisionary work or monographs with material-wide coverage or even on a regional basis. The time spent by the instralia-wide coverage or even on a regional basis. The time spent by the insertion in making identifications for others is usually time taken from the research; more publications like that of Dr. Dobrotworsky would enable the interest in non-taxonomic fields to make their own identifications. This they had do, of course, whenever possible leaving the taxonomist to produce more in the same vein. This book is a good example of the kind of thing much much go for Australia at present. It is to be hoped that many more volumes will their with similar content and coverage for other insect groups and areas.

C.N. Smithers

BIOLOGICAL CONTROL INFORMATION BULLETIN

The need for improved communication between entomologists working in the biological control field has led to the recent establishment of an international Advisory Committee for Biological Control (I.A.C.B.C.). Among the objectives of this committee are the publication, at intervals, of a bulletin moviding current information on activities in biological control and also of world list of workers in this field. The first aim has been realised by the

appearance in October, 1965 of the Biological Control Information Bulletin. The list of biological control workers is to be published at a later date.

The first issue of the Bulletin comprises 40 pages and gives up to date information of interest to entomologists engaged in biological control work throughout the world. The Australian contribution occupies four pages, and lists, among other items, current biological control projects, natural enemies of which stocks are available, and recent liberations of beneficial insects. The more important insect releases listed for Australia include the following:-

Rhyssa persuasoria, R. himalayensis, Ibalia leucospoides and I. ensiger against Sirex wood-wasp (Sirex noctilio).

Copidosoma koehleri and Apanteles subandinus against Potato moth (Phthorimaea operculella). Mecas saturnina and Nupserha antennata against Noogoora burr (Xanthium pungens).

The Bulletin is compiled and edited by the European Station of the Commonwealth Institute of Biological Control, Delemont, Switzerland. Enquiries may be addressed to Dr. F.J. Simmonds, Secretary, I.A.C.B.C., Commonwealth Institute of Biological Control, Curepe, Trinidad, West Indies.

E. McC. Callan.

BIOSPELEOLOGICAL EXPEDITION TO NEW CALEDONIA, 1965-66.

The return to Sydney of an Australian party, on 22nd January, 1966, marked the end of a successful and enjoyable scientific expedition to the caves of New Caledonia. During a period of about four weeks, ten speleologists, joined by four local, French-speaking counterparts, explored, mapped and collected fauna in some two miles of river-caves near Poya on the central west coast of the island. Shorter visits were also made to caves at Koumac (northwest), Houailou and Hienghene (east coast) and in the New Hebrides.

The entomologists of the party (G.F. Gross of Adelaide and B.P. Moore of Canberra) collected extensively in both aboveground and underground habitats and material of most insect orders should shortly be available.

The expedition was sponsored by the South Australian Museum and financed largely by the individual members. E. Hamilton-Smith (Melbourne) and J.P. Siorat (Noumea) were jointly responsible for

liaison and organization.

A summary of the main scientific findings will be prepared for publication in an international speleological journal.

B.P. Moore

A FIELD TRIP TO NORTH QUEENSLAND

During November-December, 1965, the writer made a five week collecting trip to Northern Queensland. The main object was to collect fireflies (Coleoptera-Lampyridae) for study by Miss L.A. Powell at the University of Queensland. Since firefly collecting is limited to the first few hours of darkness general insect collecting was carried out during the day time. Sex attractant traps for fruit flies for Dr. A.W.S. May were used at most localities and a portable generator was used to run a mercury vapour light for collection of nocturnal insects. All material collected will be deposited in the collections of the Entomology Department, University of Queensland.

Departing Brisbane by sedan on November 9th two hard days driving reached the rainforests of the Cairns area. Collecting camps were made at Mission Beach and Crystal Cascades before continuing on to Cooktown on November 13th. From Cooktown the extensive scrubs of the Bloomfield River were reached via the greatly improved Helenvale Road. Two rainy days were spent camped on Gap Creek, 6 miles north of the Bloomfield.

On November 16th I flew 200 miles north to Iron Range and base camped for a week in a deserted shack on the east bank of the East Claudie River. Collecting was done on foot in the depauperate rainforests of the river flats and on nearby Mt. Lamond. Results were poor due to the particularly dry season and recent bushfires. My thanks go to Mr. Claude O'Reilly, the D.C.A. caretaker, for his helpful co-operation at Iron Range.

Returning to Cooktown on the 23rd an unsuccessful attempt was made to drive to the McIvor River north of Cooktown. Endless bushfires had cut the road in many places with fallen trees and a two day camp was made at Miller's Crossing near Hopevale Mission in a vain wait for the road to be cleared.

The 27th and 28th were spent at 3,600° on Mt. Lewis behind Mossman. Collecting was carried out up to the summit at 4000° where stunted, mossy cloud forest prevailed. Working south camps were made at Upper Mulgrave, Millaa Millaa Falls and Palmerston National Park on the Atherton Tableland. At the last three camps I enjoyed the company of fellow collectors, Dr. Guy L. Bush and his wife, from Melbourne University.

Moving south again the isolated mountain rainforest localities of Mt. Spec near Townsville and Eungella near Mackay were sampled before arriving back in Brisbane on the 14th December followed closely by drought-breaking rains.

G. Monteith.

COMMONWEALTH AND STATE COLLABORATIVE INVESTIGATIONS

The Australian Apple and Pear Board have offered finance which, if matched by a Commonwealth contribution, might be used for a joint field study in different States of the possibility of developing an integrated control programme against pome fruit pests which could be developed without heavy reliance upon broad spectrum insecticides and with minimum side effects on non-target organisms.

In order to explore the possibilities of these proposals and to secure co-operation between States and Commonwealth, Dr. P. Geier, Division of Entomology, C.S.I.R.O., was entrusted with the task of organising a party of State and Commonwealth Entomologists to tour some representative pome fruit growing districts in Victoria, N.S.W. and A.C.T. to obtain first hand knowledge of conditions and possibilities, and finally to consider and present a firm plan of suggested procedure to implement the A.A. & P.B. proposals to Australian Agricultural Council at its February meeting.

Immediately following the Conference of State and Commonwealth Entomologist in Melbourne in November, a party of entomologists from Tasmania, South Australia, Victoria, N.S.W., Queensland and C.S.I.R.O. inspected orchards at Mornington Peninsula and the Goulburn Valley in Victoria, the Murrumbidgee Irrigation Area in N.S.W. and at Canberra, A.C.T. As a result of these very informative visits and the animated onthe-spot-discussions, it was possible to arrive at general agreement in regard to the nature and scope of proposed investigations and to recommend specific areas in which the work might be carried out, and also to provide an estimate of the finance required.

These general proposals envisaged a uniform system of orchard procedures to be carried out at selected apple blocks in Southern Tasmania, Blackwood, S.A., Mornington Peninsula, Victoria, M.I.A. and Bathurst, N.S.W. and Canberra, A.C.T. Regular routine assessments of pest infestation, parasite and predator activity, together with ancillary horticultural data, will be made in uniform pattern by resident entomologists and assistants under the general guidance of a C.S.I.R.O. training team, and results will be assembled and processed at a central point by C.S.I.R.O.

If Australian Agricultural Council approval is forthcoming for these proposals, it can be anticipated that this co-operative effort, with at least 4 States and C.S.I.R.O. actively engaged, will represent an important forward step in collaboration in an applied entomological problem in Australia.

BLUE TONGUE VIRUS

Mr. D. Murray and Mr. A. Dyce of the McMaster Laboratory visited Queensland in late November and early December to advise on the control of potential arthropod vectors of Blue Tongue virus in the Mt. Crosby area, where semen illegally imported from British Columbia had been used to inseminate a number of dairy cows.

Local workers, Dr. D. Moorehouse, Dr. E. Reye and Mr. H. Standfast were grateful for the opportunity offered to discuss problems associated with the control of <u>Culicoides</u>.

WORK ON ODONATA AND APTERYGOTES

Dr. J.A.L. Watson, a Queen Elizabeth II Fellow, has completed 32 months at the Western Australian Museum, where he resumed his research on the Odonata, after a lapse of seven years. The work included a study of the structure and function of the gill tufts in larvae of the Amphipterygidae (Zygoptera), a monograph of the isolated dragonfly fauna of north-western Australia, including systematics, ecology and zoogeography, a description of the larva of Synthemis leachii Selys, with a new key to the larvae of Western Australian Synthemidae and the collection of extensive material for revision of the Argiolestes pusillus group of south-western Australia. In addition. Dr. Watson has identified and rearranged the Odonata in the collection of the Western Australian Museum. On moving to Canberra Dr. Watson will devote much of his time to studies of endocrine physiology in apterygote insects, particularly the Thysanura. He commenced these studies in 1959 in Professor Wigglesworth's laboratory in Cambridge and continued them from 1962 to 1965 in Professor Schneiderman's laboratory in Cleveland. He hopes, however, to continue work also on the Odonata.

NEWS FROM TASMANIA

Entomological work at the University of Tasmania at the present time is being done by Dr. I.S. Wilson. He is working on the hatching stimulus of Aedine mosquitoes, and also on the physiology of hibernation in in Chysophtharta bimaculata, a leaf-eating beetle which is important in Tasmanian eucalypt forests.

The important <u>Sirex</u> problem is perhaps unique in Australian entomology in that it is being tackled by a team of research workers embracing entomological, forestry and mycological aspects. Since the work began in 1962 there has been a sharp decline in the <u>Sirex</u> population, and this is making it difficult to obtain research material as well as to establish parasite species from overseas. However, much progress has been made, and several papers covering some aspects of the work are now being prepared for publication. Tasmanian members of the Society engaged in this work are K.L. Taylor, J.L. Madden and Mrs. H. Hocking (C.S.I.R.O.), and G. Dolezal (Forest Research Institute).

QUEENSLAND INSTITUTE OF MEDICAL RESEARCH FIELD STATION

Mitchell River Mission: For some years members of the Institute staff have worked in the Mitchell River area of Cape York, collecting mosquitoes for virus isolation and avian and human blood for virus isolation and antibody studies. The work has been greatly facilitated by the completion of a field station built with a grant from the Rockefeller Foundation.

The new building contains two laboratories, a store room and an insect proof cage room for holding experimental animals, a 240 volt power supply has been provided.

The field station will provide a base for further studies of mosquito bionomics as well as studies of the vertebrate hosts of the viruses transmitted by arthropods in the region.

GRADUATE RESEARCH IN QUEENSLAND

Graduate research in the Entomology Department of the University of Queensland has increased in recent years and this trend continues with ten students this year. Misses Charlotte Speed and Josephine Cardale will continue their studies on the systematics of the Osmylidae (Neuroptera) and biology of Anthophorid bees respectively, while Mr. T. Houston, formerly of the Waite Agricultural Institute, will commence a study of the systematics and biology of the bee genus Hylaeus and Miss A. May, in addition to demonstrating, will study micro-Lepidoptera. Mr. A. Macqueen will finalise his studies on the biology of ants of the genus Myrmecia in April.

Mr. J. Dunwoody continues to study the biology and insecticide susceptibility of Epiphyas postvittana and Mr. H. Rose will investigate similar problems in Cydia pomonella under a three year grant from the Rural Credit Development Fund. Other work to be undertaken includes a study of the chemosterilants by Mr. T. Weir, a study of aliesterase activity in houseflies by Mr. M. Wan and an investigation of Macadamia Nut pests by Mr. J. Rand under a two-year grant from the Colonial Sugar Refining Company. Recent grants from the Australian University Commission for a UV spectrophotometer and from the Australian Research Grants Committee for a gas chromatograph and laboratory assistance will aid these investigations.

NEWS FROM DEPARTMENT OF PARASITOLOGY

UNIVERSITY OF QUEENSLAND

In the Department of Parasitology, following a grant by the Myer Foundation Dr. Douglas E. Moorehouse was appointed in January, 1964, as Lecturer in Parasitology (Entomology), to organise teaching and research on Arthropods of Medical and Veterinary importance. Previous to this appointment Dr. Moorehouse was with the World Health Organisation, Division of Malaria Eradication. Grants from the Rural Credits Development Fund, the Australian Cattle and Beef Research Committee and the Australian Universities Commission have enabled the construction and equipping of an insectary suitable for work on arthropod vectors.

Research projects in progress are concerned with the attachment and feeding processes of Ixodid ticks, the vectors of Onchocerciasis of cattle, and the reproduction of the cattle tick (Boophilus microplus) under field conditions, the last two projects being made possible by the award of two research fellowships by the Australian Cattle and Beef Research Committee. The Department has also been fortunate in that Dr. William Bemrick, Assistant Professor in the Division of Veterinary Pathology and Parasitology, University of Minnesota, has spent his year of sabbatical leave working within the Department on the transmission of Dirofilaria immitis, the heart-worm of dogs.

Investigations on the attachment of ticks to host animals has shown that members of five genera, Amblyomma, Aponomma, Boophilus, Haemaphysalis and Rhipicephalus secrete a cement which is firmly adherent to the host's tissues, and in which the mouthparts of the tick are embedded, whilst the only species of Ixodes examined, (I. holocyclus) does not secrete cement and relies on very deep penetration of the host's tissues by its well-armed mouthparts. It is hoped to extend this study to other species of Ixodes and Dr. Moorhouse would be most grateful for live specimens of any species of Ixodes which members may come across.

NEW PLANT RESEARCH LABORATORY

A laboratory for research into insect pests and plant diseases is nearing completion at Irymple, four miles from Mildura, Victoria. It is being built and financed by the Victorian Department of Agriculture with the help of funds subscribed by Australian Dried Fruits Association, the Mildura and District Citrus Growers' Co-operative Association, and the Mildura Wine-grape Growers' Association, supplemented by a grant from the Commonwealth Government.

Laboratory accommodation is being provided for an entomologist and a plant pathologist, but at first, work will be on entomological problems of citrus and vines, with the accent on biological control. Initially the staff will consist of an entomologist, Mr. H.R. Schurr, together with a field officer and a laboratory assistant.

Two insect breeding rooms are being provided, each designed to operate independently under controlled conditions over the ranges 60° to 80°F., and 40% to 80 % R.H. A sealed hanger-type glasshouse will be divided internally into separate compartments, the first two of which will be controlled at 80°F. and 60% R.H. The other sections will be provided with controlling equipment as the need arises and as the special requirements become known. Other features are a dark room, transfer room and office accommodation.

Entomologists visiting the area are cordially invited to visit the laboratory.

Mr. Harold Schurr, the Officer-in-Charge, is a graduate of the University of Glasgow. Born in England, he received his schooling in New Zealand. During the World War he served with the Royal New Zealand Naval Volunteer Reserve, attaining the rank of Lieutenant. In 1949 he obtained his B.Sc., with Honours in Zoology. After serving with the Oceanographic Laboratory, Leith, he worked for a time in the Republic of the Sudan on secondment to the government, and with commercial companies in Britain. In 1961 he joined the staff of the Victorian Department of Agriculture and has since been working within the Department of biological control of insects, and citrus and vine entomology.

A NOTE ON THE MARBLED LONGICORN, Dysthaeta anomala

PASCOE (LAMIIDAE)

By N.W. Heather

(Department of Forestry, Brisbane).

This longicorn is known for its habit of initiating an attack on dying trees and newly felled logs of hoop pine, Araucaria cunninghamii. Although the larva continues its development as the wood seasons and dries, attacks have always been found to have originated in green timber. In 1963 at Somerset Dam live larvae were taken from hoop pine nogging, an original part of a building constructed 26 years previously. These larvae were determined as D. anomala but no adults were bred. One was possibly the penultimate instar and several were smaller - probably half grown.

As the nogging was perfectly enclosed by undamaged plywood it must be assumed that these larvae were the result of one or more re-infestations of seasoned timber and as such must be taken as a record of an Australian species of longicorn being capable of infesting seasoned timber. As the nogging timber, however was behind plywood lining offering no exit to the emerged adults this is possibly merely an unusual record, demonstrating the ability of the species rather than its normal habit. It is not anticipated that it will become a pest of the status of Hylotrupes bajalus Linn., the European House Borer. There have been many records of the Hoop Pine Buprestid Prospheres aurantiopictus L. & G. taking 8-10 years to complete its development and one record of over 20 years but the presence of small active larvae in the instance of the longicorn and the extent to which tunnelling had occurred in the piece of wood make it most unlikely that this could apply.

UNUSUAL OCCURRENCE OF CICADAS

By L. Greenup

During October a small cicada, <u>Melampsalta</u> sp., was reported to have injured wine grape vines at Pokolbin. Large numbers of adult cicadas swarmed into vines from adjacent pasture land and females oviposited heavily on the tender current season's canes. These oviposition sites were scattered randomly over the surface of the young shoots, as many as 39 punctures per inch of cane were counted. These egg chambers penetrate to the pith at an angle and contain elongate, milky-white curved eggs, about 5 eggs per chamber being noted. The damage caused as a result of these punctures resulted in some shoot tip dieback, but generally this was not serious and there does not seem to have been any decrease in production as a result.

Froggatt recorded Melampsalta incepta (Walk.) as damaging fruit trees in the Penrith district in 1913 and periodically damage to various types of plants has been reported since then. The recent infestation, which extended through much of the central coast area, was the heaviest seen for many years and the cicadas occurred in such swarms as to cause them to be referred to by many people as 'blowfly locusts'.

CONSERVATION OF INVERTEBRATES

I have accepted an invitation to contribute to a proposed book on wildlife preservation in Australia a 5,000 word essay on the invertebrate fauna. This, it is suggested, should indicate the beauty, interest and uniqueness of selected examples, discuss behaviour and some of the most fascinating adaptations of Australian invertebrates, and illustrate why certain habitats should be in National Parks. I should be most grateful for suggestions, and/or references to appropriate articles, particularly as without help from other States it will be hard to avoid a bias to the fauna of the north-eastern part of the continent with which I am most familiar.

Elizabeth N. Marks, Department of Entomology, University of Queensland, St. Lucia, Brisbane. Q'ld.

SPECIMENS OF CRICKETS REQUIRED

In connection with an investigation into the geographical races of the common field cricket, <u>Teleogryllus commodus</u> (Walk.), Mr. T.W. Hogan, Principal Entomologist of the Department of Agriculture, Victoria, is anxious to obtain specimens of this insect from various localities within a 200 miles radius of Rockhampton, Queensland. Anyone who is able to help in this regard is asked to write to Mr. Hogan at the Victorian Plant Research Institute, Department of Agriculture, Swan Street, Burnley, Victoria.

APPEAL FOR LEAFHOPPER COLLECTIONS

During the past 9 years, as time has permitted, I have been engaged in the preparation of a comprehensive work on Australian and New Zealand leafhoppers (Cicadelloidea, including Membracidae) and froghoppers (Cercopoidea).

This work, which is now in the press, will be published as a Memoir of the Australian Museum.

My retirement, which has recently taken place, does not mean that I have lost interest in these insects and I hope to be able to spend a great deal more time on them in the future than I have been able to in the past and I also hope to travel widely for collecting purposes.

Such collections as I obtain will be added to my private collection where they will be retained so long as I am actively working. Thereafter, the whole of this collection will become the property of the Australian Museum.

Possibly a collection which has been identified by a specialist is even more useful than a written account of a group of insects and the more comprehensive such a collection becomes the greater its importance to students.

The co-operation of entomologists in all parts of Australia is accordingly sought in adding to this collection which already is very much more comprehensive than any other in existence. While collections with no strings attached will be most acceptable, others will be welcomed as long as I am given full discretion in the matter of retaining such material (apart from types) as I may need.

Collections sent solely for identification and return are not required as I prefer to spend time assembling a single worthwhile study collection than in scattering odd, identified, specimens around the continent where they will serve but little useful purpose.

While pinned and labelled specimens are particularly desirable and food plant records valuable, unsorted collections, either dry or in spirit, will also be welcomed (provided they are accompanied by general locality labels).

These Homoptera may be collected by beating and light traps, and isolated trees often yield an abundance of specimens. Some leafhoppers are to be found in ants' nests.

J.W. EVANS, 47 Bundarra Road, Bellevue Hill. Sydney. N.S.W.

CRANE FLIES WANTED

Tipulidae (Crane-flies) papered, pinned or preserved in alcohol. Specimens with data, from all States are wanted for a revision of this family.

N.V. Dobrotworsky, School of Zoology & Genetics, University of Melbourne, Parkville. N.2. Victoria.

INSECT COLLECTION FOR PAPUA MUSEUM

The collection of Sir Alan Mann is to form the nucleus of the insect collections of the Papua and New Guinea Public Museum and Art Gallery. During the past seven years Sir Alan has had opportunities for collecting widely.

For the time being, all the Museum's insect material is being kept in the air conditioned entomological laboratory of the Department of Agriculture, Stock and Fisheries. At present there is one air conditioned room in the Museum where a butterfly exhibition collection is housed.

DEATH OF G.H.H. HARDY.

It is with considerable regret that the death, at the age of 83, of George Huddlestone Hurlstone Hardy is recorded. He died on 9th January, 1966 after a cerebral haemorrhage on New Year's Day. To his widow and only daughter, Mrs. Peggy Fallding, a very sincere sympathy is extended.

Hardy was born in Twickenham, London, on 14th August, 1882. His father was the author of one of the earliest books on the housefly entitled "The book of the fly", and no doubt this inspired Hardy junior to devote practically all his life to the study of Diptera. His early training was for the engineering profession. He came to Perth, Western Australia, in 1911 and remained there for two years. In 1913 he was appointed Acting Curator and Secretary to the Trustees of the Tasmanian Museum in Hobart and held this position for five years. During this period he collected on every possible occasion and the knowledge he gained of Tasmanian Diptera proved a great asset in all his subsequent work. This was because so many of Macquart's species, so inadequately described, came from Tasmania. In 1918 he came to Sydney where he spent In 1922 he was appointed Walter and Eliza Hall Fellow in Economic Biology at the University of Queensland and held this position During this period he published many papers on the until 1932. systematics and biology of higher Diptera. He was an authority on the Asilidae, Muscidae, Calliphoridae, Sarcophagidae and published many papers on related groups. In all he published 144 papers on the biology and systematics of Australian Diptera, finishing the last paper only six weeks before his death. A truly magnificent contribution to

Australian Entomology. He remained in Brisbane until 1949 and then retired to Katoomba in New South Wales.

Hardy was a great enthusiast and had the ability to inspire other students with his enthusiasm. Mainly because of his drive and help both Dr. F.H.S. Roberts on the Bombyliidae and Mr. J. Mann on the Therevidae made valuable contributions to Australian Entomology. Hardy collected widely in all States and had a wonderful eye for a species. Unfortunately he did not take great care with his collections and many valuable specimens were destroyed.

It was almost entirely due to the persistent agitation and work of Hardy that the Entomological Society of Queensland was formed in 1924. He was the first Treasurer, a position he held for many years. He joined the Linnaean Society of New South Wales in 1917 and the Royal Society of Queensland in 1922, serving as librarian in 1930.

F.A. Perkins.

DEATH OF JOHN E.L. MACHELL

It is with regret that we record the death of John Edward Lewis Machell, one of the foundation members of the Australian Entomological Society.

After spending many years with the Department of Education in South Australia, Mr. Machell was appointed Lecturer in Biological Subjects at the Queensland Agricultural College, Lawes (Gatton) in November 1949. He held this position at the time of his death on the 12th January, 1966 when he was involved in a traffic accident near Gunnedah, New South Wales.

During his 15 years at the Agricultural College, Mr. Machell introduced many hundreds of students to the subject of Entomology. He also took part in organising student extra-curricular activities, especially rifle shooting.

He is survived by his two sons and one daughter all of whom reside in South Australia and to whom our sympathies are extended.

T. M. Rula.

DEATH OF MR. E.C. VALLIS

Mr. E.C. Vallis, known to his many friends as "Closie", died in May last year, at the age of 75. Although he was interested in all branches of

natural history, his main interest lay in insects. In his younger days he avoidly collected anything that moved and flew (provided it was not too small), and was either grotesque or gay. Consequently he amassed an amazing field knowledge of the insect world in general but he never was a Systematist and his specimens reposed side by side in a jumbled mixture of families.

He had a remarkable gift for finding things and where those of us accompanying him would perhaps fail to secure specimens Closie would invariably turn up some interesting entomological treasure of some kind or other.

He began in the first place collecting butterflies (as did his father before him) and then turned his attention to beetles. This in turn led to wasps, bugs and cicadas, dragonflies, damselflies and antlions, though in his later years he mainly collected only beetles, his first love.

As a coleopterist he concentrated on the Buprestidae, Cetonidae and Cerambycidae and it is in these fields that he was mostly known to collectors. He had an extensive collection of these groups from the coastal areas between Gladstone and Cooktown. Always ready to collect for the sheer fun of it he also collected for others who asked it of him. Because of his wide collecting activities and due to his help in this way to others it was only natural that he should find many new species, and to have his name attached to some of them.

There is only one adjective, used in its true sense, that could describe this amazingly tireless, dedicated to collecting man, namely "undefatigable".

S. Brock.

PERSONAL NOTES

Mr. W.E. Wright, entomologist engaged on cotton pest investigations in the Entomology Branch of the N.S.W. Department of Agriculture, recently enjoyed a holiday tour of some Pacific Islands. He was delighted to see Michael Watt, a former entomologist with the same organization, arrive by launch while the ship lay at anchor at Apia, in his official capacity of Quarantine Officer, to inspect the vessel. Michael is now Government Entomologist in the Department of Agriculture, Western Samoa, and he conducted Walter on an interesting short inspection of some of the entomological activities, including the unit where biological control of the Rhinocerus beetle, Oryctes rhinocerus, is being studied.

Mr. B.F. Stone of the Division of Entomology, C.S.I.R.O. at Yeerongpilly, Queensland has been awarded a C.S.I.R.O. Divisional Overseas Research Studentship in Insecticide and Acaricide Resistance and will undertake a period of study with Professor A.W.A. Brown at the University of Western Ontario, London, Ontario, Canada. He will be leaving Australia on 4th April, 1966 and expects to be absent for about 2 years. En route to London, Ontario he hopes to visit the Canada Department of Agriculture, Entomology Laboratory at Kamloops, British Columbia where research work is in progress on the tick, Dermacentor andersoni.

Dr. G.H.S. Hooper in late 1964 attended an eight-week course on the use of radioisotopes and radiation in entomology at the University of Florida. The course was sponsored by the International Atomic Energy Agency and the Food and Agriculture Organization of the United Nations and Dr. A.W. Lindquist was Technical Director. There were nineteen participants from the following countries: Phillipines, Chile, New Zealand, Canada, Australia, Japan, Hungary, Turkey, Poland, Brazil, Bulgaria, India, Czechoslovakia, Argentine, Malta, Peru, Fiji Islands, Greece and Thailand.

The course was divided into two parts, with the first part of three weeks being devoted to the basic nature of radiation and radioisotopes. The second part dealt with the practical application of these to entomology. Many topics were covered including lectures and practical work on the following: biological aspects, including tagging (Drs. W.J. Kloft, H.F. Schoof); insecticide metabolism (Drs. F.W. Plapp, A.S. Perry); gamma sterilization; chemosterilants (Drs. C.N. Smith, G.C. La Brecque, P.B. Morgan); the screwworm campaigns (Dr. A.H. Baumhover) and autoradiography.

The University of Florida was well equipped for a course of this type possessing its own nuclear research reactor, a cobalt irradiator with a source of 6,000 curies of Cobalt-60 capable of a maximum radiation level of 4,500 roentgens per minute, other smaller gamma sources and numerous X-ray machines. Instrumentation at the course was excellent with several instrument companies providing equipment which ranged from simple survey meters to automatic, liquid scintillation, three-channel spectrometers.

Mr. I. Common has been elected 1st Vice President of the Lepidopterists Society.

