

WINGS ----- AND ----- STINGS

FEBRUARY 1966

CONTENTSPageEditorial2The BeetlesF. Hallgarten.Society of Victoria.3An Historical Outline of the Entomological
Society of Victoria.5Yepoon: Queensland in November.J. C. le Souef.Bentomologist OnceN. Kent Perry:10Book Review.J. S. Barnes.13The Cruel Plant.D.R. Holmes.14Bruchidae.15Progress??19Excursion to Frankston CommonJ.S. Barnes2A Visitor Come to Stay.D.R. Holmes.2No Wings.A.L. Brown.25

MEMBERSHIP.

Membership of the Victorian Entomological Society is open to any person interested in entomology. Subscription Rates are: 2 dollar per annum (Due on the first of June.)

The Statements and the opinions contained in the papers published in this journal are the responsibility of the respective authors.

-----000-----

NO 2

EDITORIAL

If we agree that in human society success is expressed by the monetary control man has, or the level of esteem in which he is held then we must agree that from a biological success point he is in a very different category.

The animal groups which have attained the greatest biological success are those having the largest number of species and individuals, have the widest territory coverage and the greatest variety of habitats, eat the most and the greatest variety of food and are capable of self defence.

The phylum that possesses these attributes is undoubtedly "Arthropoda" and by far the largest class in this group are the insects.

Strange as it may seem this large family is covered by the least research. Literature is scarce, information is hard to get and entomological societies neither abundant nor large.

With this in mind, the formation of the Australian Entomological Society is an event of importance in the entomological sphere.

The inaugural meeting of the Victorian section of the society was a success and its first function a lecture by the well known English entomologist Dr Richards of the University of London Imperial College, who spoke to an interested audience on "Flowers and the Wasps".

The new society will publish a journal which will add to our literature and widen our knowledge.

Perhaps there is some common ground on which both the Australian Entomological Society and our own Victorian Society can get together from time to time to the benefit of both.

Our Society wishes then success and welcomes them to Victoria.

THE BEETLES

Part One

The beetle family <u>Coleoptera</u> is the largest of the insect orders and comprises about 45% of all the known species. Australia is well supplied with approximately 20,000 described species, many more are yet to be described and you or I may do just that one day, even if we do not it is always a relaxing and exciting hobby.

The questions so often asked about them are:- Where to collect, when to collect and how to collect.

<u>Where to collect</u>. This is generally the first one. The answer in short would be - anywhere. Where ever there is organic matter, animal or vegetable, living or dead. You could start in your kitchen, perhaps in the rice or you could go into the garden, the compost heap, under boards laying about in your shrubbery. You could wander in the countryside and look under bark or logs even in the logs, in streams or ponds. I shall deal with these different places specifically again as we discuss the various families

<u>When to collect</u>. In Australia we have no extremes of heat or cold only perhaps in some of our high mountain country, so something can be found all year round. Spring with its profusion of flowers and sunshine is best, summer's heat and winter's cold are not so good. A flood anywhere will always produce some good material.

<u>How to collect</u>. With a quick eye and nimble fingers you can pick them, or you can sweep for them with your net, sieving forest litter and flood debris can add more to your specimen box. You can net-dredge the streams or ponds. You might like to try night collecting with a light, letting them come to you instead of you looking for them.

<u>How to kill</u>. A few drops of ethyl-acetate in a glass container with a good stopper is a cheap, clean and handy chemical for killing. There are many others such ammonia, chloroform or alcohol. However, most of these have some drawbacks, some discolour the specimens, others are highly inflammable, others again tend to harden the insect, making setting difficult and tedious. Ethyl-acetate is a clear mobile liquid and acts quickly on insects making them unconscious almost at once. How to prepare and store your collection Having brought your specimens home, firstly check them over and discard all damaged ones, unless there is a real reason for mounting a faulty specimen. A long series of insects from the same locality is unwarranted and only fills up store boxes.

Taking your small insects, half an inch or less, lay them on their backs on a sheet of white formica, spread the legs and antennae then turn them over right way up.

Then cut into strips about ¾ of an inch wide, heavy quality Bristol board, six or eight ply is best. This can be purchased in sheet form approximately three feet by two feet. Affix your specimens with clear secotine, use the smallest quantity possible to do a satisfactory job. Some collectors use a clear glue made from perspex chips dissolved in ethyl-acetate.

Trim your cards till they are neat and identical and put a pin through the card behind the insect. Write a small label with the locality where collected, the date and the collectors name, put this label or the same pin. It cannot be over-emphasised that the date and the locality is a must, never neglect this essentiality.

For larger insects pin through the right elytra so placed that it comes out between the second and third pair of legs and don't forget the label. Let them dry out and put into a store box with some naphthalene or para-dichlorobenzene and your collection has started.

----00000000----

OVERSEAS COLLECTORS.

This Society receives many enquiries from professional and amateur entomologists in other countries who wish to exchange specimens with Australian collectors.

Any members who wish to avail themselves of this facility to obtain specimens from overseas, should write direct to the persons listed. Society members are reminded that the exporting of specimens should in the interests of entomology in this country be confined to common species.

Coleoptera.

Mr. Eberhardt Foest 5071 Blecher, uber Bergisch-Gladbach, Rosenweg, West Germany.

Dr Fabio Cassola Viale Mazzine, I46, Roma - Italy.

An Historical Outline of the Entomological Society of Victoria.

by Graeme Rushworth.

Moved by Mr Dean seconded. by Mr Greaves - that an entomological club be formed locally. Carried.

On. April 5, 1927 fourteen people interested in entomology met at the East Malvern home of the late Mr F.E. Wilson for the purpose of forming an entomological club, a preliminary meeting having been held previously at the home of Mr C.L. Barrett. The minutes do not record all the names of those present but mentioned are Rev. E. Nye Messrs. C. DEAN, C.H. Borch, T. Greaves R.R. Blackwood, (now Sir Robert) and W.H. Roger. Mr. Wilson was elected chairman, and this meeting and the motion quoted above, which is taken. from the first Minute Book, led to the eventual formation of the Entomological Society of Victoria.

At first the organisation was known as The Entomologists' Club, this was changed in June 1930, the Minute Book entry being

"The motion, notice of which was made at the last meeting by Mr. Rayment seconded by Mr. V.H. Miller - That the name of the club be amended to The Entomologists' Club of Victoria - was brought forward; Mr. Rayment said that a great deal was to be• gained by giving the Club a place. The motion was put to the meeting and carried". Further entries in the Minute Book relating to the naming of the Society do not occur until May 1930, when "The matter of amending the name of the Club to that of the Entomological Society of Victoria was introduced by Mr K.M. Ward supported by Mr Blackwood, and was discussed by the members." At the June 1935 meeting "The motion relative to the changing of the name of the Club was carried unanimously.

Although references are made to office bearers in the minutes few details of these were given prior to 1929 when Mr. F.E. Wilson was elected President. Apparently the custom was to elect a chairman at each meeting and this was most frequently Mr. Wilson. Subscriptions were at first 2/6, later increased to 5/- and meetings were held at members homes. The first "public" meeting was in July 1928 at the Victorian Horticultural Society Hall, attended by fourteen members and visitors, total membership at that time being twenty-six. Meetings were later held at Latham House, until June 1933 when the venue was changed to Forester's Hall, Latrobe Street which was used until 1941 other than six meetings held at the National Museum in 1934.

In the early years of the Society, excursions - rambles - they are often called in the Minutes, were made to places such as Heathmont Millgrove, Frankston, Ringwood, Blackburn, Noble Park and Fern Tree Gully. An account of the first one in 1937 is worth quoting in full:- "Account of ramble to Eltham 15 May 1927. Eighteen members and friends of the Entomologist's Club assembled at Eltham for the first field day. The weather was perfect. We followed the Plenty River for a while, then made our way to Mr. W.C. Tonge's place on Eltham Heights. After lunch in the open we went for a ramble towards the river, and as each member's attention was given to his own particular study, the party became scattered, the young members receiving practical lessons in field work. The insects found were chiefly small beetles and craneflies <u>Tipulidae</u>. Lepidoptera were scarce. We gathered again for afternoon tea and before leaving saw Mr. Tonge's collection of bird paintings, and butterflies caught near his home. A quiet walk to the station in the beautiful twilight ended a perfect day. T. Greaves, Hon. Sec.

Lecturers for monthly meetings were chiefly drawn from the Society members, Mr. Wilson featuring most frequently with an extraordinary variety of topics: other members who frequently spoke were Mr. A.N. Burns, R.R. Blackwood, C.H. Borch, T. Rayment, Rev Nye, T. Deane, R.T.M. Pescott, A.L. Browne and Miss J. Raffle. Special meetings were often. arranged for visiting entomologists, at one of these held in August 1931, an attendance of seventy was recorded to meet Dr. G.A. Waterhouse, Dr. H.J. Carter and Professor Wheeler. USA

On various occasions attempts were made to publish a journal and in 1936 this reached the stage where Mr Blackwood presented a design for the cover of the publication and this was approved by the meeting, but at a meeting in May 1937, little progress had been made except to choose a title "Insect Life". There is no further mention of the journal in the minutes and the writer assumes it was abandoned. Other activities embarked upon were the preparation of a list of popular names of insects (1928) apparently this remained unfinished, and a collection of members notes and observations(1940).

The latter are still in the possession of the Society and will be published separately in "Wings and Stings" at a later date. Special meetings were arranged for the purpose of furthering the interests of school children in entomology with members providing elaborate exhibits; that held in 1938 attracted sixty visitors from school nature clubs.

Membership of the Society in the years 1927-19140 was from 25 to 40 although attendance at meetings fell to a very low ebb at times By 1941 attendance had fallen to an average of nine and formalities were dispensed with and no minutes kept after May 1942. when meetings at Forester's Hall ceased and reverted to being held at members homes. Because of the pressures of the war the Society lapsed about July 1942 and was not re-established until 1961 when Mr. J.C. Le Soeuf arranged a meeting at the National Herbarium Hall for this purpose.

The proposal to re-establish the Society met with a ready response, and the original constitution, name and purposes were re-adopted.

The Society has continued to grow in status and numbers. Membership today includes several from pre-war years -Mr J.C. Le Souef, Mr A.L. Brown, Mr W. Mules - and in particular Mr C.H. Borch, who is a foundation member of the Society. Outstanding personalities and contributors to entomology in Australia have served as office bearers - Mr F.E. Wilson C.L. Barrett, Sir Robert Blackwood, R.T.M. Pescott, A.N. Burns and many others. Since 1927 the Entomological Society of Victoria as a whole has done much for entomologists and entomology in this country.

The most recent phases of the Society's development have been to affiliate with the newly formed Australian Entomological Society, and the publication of "Wings and Stings."

Past Presidents 1928 - 1965

1928	F.E. Wilson.
1929	F.E. Wilson.
1930	T. Rayment.
1931	J. Clarke.
1932	A.N. Burns
I933	Rev. E. Nye
1934	F.E. Wilson.
1935	R.T.M. Pescott.
1936	F.E. Wilson.
1937	A.N. Burns.
1938	Rev. E. Rye.
1939	G.J.R. Johnston.
1940	A.N. Burns.
1941	A.N. Burns.
1961	J.C. le Souef.
1962	J.C. le Souef.
1963	J.C. le Souef.
1964	J.C. le Souef.
1965	J.C. le Souef.

YEPPOON QUEENSLAND IN NOVEMBER by J.C. Le SOUEF.

Even northern Queensland entomologist's look upon Yeppoon as one of the really good collecting areas. Many butterflies have been recorded from here and it is considered that it is the southern boundary for several species.

It is extremely difficult for a Victorian to decide just where to collect in November, there so many places of interest in his own State.

Although I had been told that this time of the year was the leanest period for insects in Queensland, I felt that when the opportunity to go to Yeppoon arose, it was too good to be missed. So Mrs Le Souef, Nicolas and I flew to Rockhampton on the 22nd of November 1965 for a ten days stay at Farnborough about four miles from Yeppoon.

Probably due to the prolonged drought, the insect fauna was indeed limited, but while we were there some good rains fell with a resultant emergence of many insects.

There were only about thirty species of butterflies noted few in any numbers, mostly only odd specimens. The main collecting was done in the garden of our host's farm on the slopes of the range which runs from Yeppoon northwards to Byfield and beyond. Some species were found only in the rain forest gullies of the range, while others were restricted to the mangroves on the flats at the mouth of the Ross Creek.

Byfield some twenty miles to the north, despite its jungle, swamplands and open forest produced nothing for us. November is definitely not the right time for collecting in the Rockhampton Gardens, although in June the whole place seemed alive with flying insects, there were only a dozen or so to be seen during this visit.

In the Yeppoon area cicadas were in large numbers especially those found in the mangroves. Several species were taken. Dragon-flies too were in abundance, both near the water and in the forest.

The Buprestidae perhaps our strongest lure, were disappointing, the gums at Double Head were not in flower, but we did take two species on gum flowers elsewhere and two on wattles.

The highlight of the trip was collecting with the mercury vapour lamp, which I set up in the gable facing out towards the range. To a southerner it was indeed a thrill to see the great variety of insects fly in and land on the sheet, there were more than 170 species of moths from large hawks to little plumes and smaller. Forty species of beetles were taken varying in size from the clumsy elephants to pinheads. There were six species of antlions and a few bugs.

A surprising feature of this yo-yo like excersize of climbing up and down a sixteen foot ladder taking insects from the sheet, is that it is so much less tiring than the same effort required in house painting. The M.V. light outside the bedroom window has its disadvantages there was a flight of black shield bugs one night and they proved most uncomfortable bed companions; I shut the window on other nights. A list of all species taken will shortly be completed.

Further Overseas Collectors Exchanges For The Lepidopterists.

Butterflies

M. Etienne Berfot, 57 Rue Antione Lumiere, Lyons 8e, France.

Mr. Louis C. Clarke 10435 Georgetown Drive Rancho Condova, California, U.S.A.

Dr A.V. Maslov, State Medical Inst. Lenin Square, Khabarovsk (-vsk) U.S.S.R.

Stephen I. Hawkins, 936-24th Street, Bellingham, Washington- U.S.A.

Mr Q.F. Hess Ontario Forest Ranger School Dorset Ontario Canada.

Butterflies and Moths.

ENTOMOLOGIST ONCE by Nancye Kent Perry.

This entomologist underwent compulsory retirement on marriage, and thereupon entered into an environment surrounded by books and people of a completely non-entomological character.

It was an act not far short of self-defence which motivated this solitary entomologist to begin a book collection on her own account. The time previously spent in haunting secondhand bookshops in search of military books for her husband is now transformed to a source of interest and delight with the always present possibility of finding some rare Australian item. The thrill of chancing upon a scarce edition of some early Australian book carries one on from junk shop to jumble sale, from Opportunity Shop to Spring fete. Only last week, whilst rooting in extreme discomfort through tumbled cartons beneath a laden trestle in a humid tent at a local garden fete a discovery occurred which made the day worth while. This find consisted of two volumes, in good condition, of "Across Australia" by Baldwin Spencer and F. Gillen published in 1912 and priced at this fete at 1/- per volume.

The same books brought fl2. at a recent Melbourne book auction and were quoted at f22-10. in a Sydney catalogue in November. Another recent discovery in similar circumstances was a book for children by the well-known Victorian Naturalist the late Tarlton Rayment - the title, "The Prince of the Totem" published in 1933 by Robertson and Mullens Ltd of Melbourne. This was acquired for the outlay of sixpence.

Another source of possible "gold" for the book collector of modest means or for one to whom the thrill of the chase is paramount, is the Book-Fair. Book fairs take place at irregular intervals throughout Melbourne and its suburbs and are usually located by watching the local papers and by the book collectors grape-vine.

For the wealthy collector or for one with neither the time nor the inclination for lengthy searching, book dealers' catalogues and book auctions provide the answer.

The following list of prices asked in a dealers catalogue and paid at the F.G. Coles Australiana Auction in July 1965 for certain Natural History publications should be of interest to members of this Society.

Catalogue No 76 of Messrs. Berkelouw, Sydney.

The	Australian	Museum	Magazine,	vol. 1 no. I to vol. 13 no. II.
				Sydney 1921-1961 (some bound)£105
The	Australian	Museum	Memoirs.	nos 1 to 10.
				Sydney, 1890- 1947 £50.

Belcher, C.F. - The birds of the district of Geelong Australia 1914....£50. Broinowski, G.J.- The birds of Australia. 6 vols. 1887 - 1891..... £112-10. Buller, W.L. -A history of the birds of New Zealand. 2 vols, 2nd ed. Lond. 1888.. £150. Buller, W.L. - Manual of the birds of New Zealand. Wellington 1882..... £10-50. Campbell, A.J. - Nests and eggs of Australian birds. Sheffield 1900. £40. Cayley, N.W. - Australian finches in bush and aviary. Sydney . 1932..... £21. Cayley, N.W. - Budgerigars in bush and aviary. Sydney. 1933 £17-10. Cox, J.C. - A monograph of Australian land shells. Sydney 1868..... £75. French, C. - Handbook of the destructive insects of Victoria. Parts 1 to 5. Melb. £15 Frogatt, W.W. - Australian insects. Sydney. 1907 £21. Hudson, G.V. -; New Zealand moths and butterflies. Macro-Lepidoptera. Lond. 1898..... £22-10. Lucas, A.H.S., and le Souef, W.H.D. - The birds of Australia. Melb. 1911..... £16 Mathews, G.M. - A list of the birds of Australia. Lond. 1913..... £31-10. Memoirs of the National Museum, Melbourne. nos 1- 22. 1906 - 1957..... £50. Mosely, M.E. and Kimmins, D.E. - The Trichoptera of Australia and New Zealand. Lond. 1953..... £50. Memoirs of the Queensland Museum, vols 1 to 11 Brisbane 1912 - 1937..... £75. Ruhn, J.A.G. - The grasshoppers and locusts (Acridoidea) of Australia. - 3 vols. Melb. 1952 - 1957£12-10.

-11-

Tillyard, R.J. - The insects of Australia and New Zealand. Sydney 1926 £42. Waterhouse, G.A. -What butterfly is that? Sydney. 1932 £31-10. F.G. Coles Auction - July 1965. Diggles, S. - The ornithology of Australia. Brisbane 1870..... £475. Donovan, E. - An epitome of the natural history of the insects of New Holland, New Zealand & New Guinea 1805.... £200 Lewin, J.W.- A natural history of the birds of New South Wales. - 1838.... £400. Lucas, A.H. & le Souef, W.H.D.- The animals of Australia. Melb. 1909..... £10. Musgrave, A. - Bibliography of Australian Entomology. 1775-1930. Sydney 1932... £12. Rainbow, W.J. $\ensuremath{\cdot\cdot}\xspace A$ guide to the study of Australian butterflies. - Melb. 1907.. £3-10. Saville-Kent, W. - The naturalist in Australia. 1897.. £21. Smith, G. - A naturalist in Tasmania. 1909..... £11. Waterhouse, G.A. & Lyell, G. - The butterflies of Australia. Sydney 1914..... £32-10. The above list serves to give an idea of the prices obtained at book auctions and by some dealers to-day. Book collecting may indeed be an expensive hobby, but it need not be if initiative is used and a certain amount of time set aside for searching in unlikely and promising places.

A sound grounding in methods of entomological collecting provides an excellent basis for being a book collector. The necessary alertness, quickness of eye, tenacity and thrill of the chase are little different when applied to the hunting out of rare insects or of rare books.

The Vegetation of Wyperfield Park.

by Ros. J. Garnet. This is only a small book but packed with information. It covers a survey of the vegetation and plant communities in this most interesting corner of North-West Victoria.

Written and arranged by the President of the Native Plants Preservation Society of Victoria a well-known personality in field naturalist circles, it is excellently illustrated and indexed. The fold up map will prove invaluable to the visitor in the area for the first time.

Although this little book doesn't mention the insect world it is so much a story of insect potential that its pages could be a guide to the entomologist eager to search new corners of the State for specimens.

My copy was purchased at the Herbarium for fifteen shillings on the back cover is marked one dollar fifty cents, Right up to date and worthy of a place in your reference library.

The Insect Factor in Wood Decay. by Norman E. Hicken.

No book on timber insects has yet been published with so much easy to read information. Its terminology is for the layman, for those whose task it is to conserve our buildings -. from the suburban home to the historic monument.

It deals with insects of far-reaching economic importance such as the Furniture Beetle <u>Anobium punctatum</u>. It also describes many species of lesser and some of no importance. Its two hundred and sixty line or scraper-board drawings by the author and its many fine photographic reproductions help the reference work and keys.

The book not only deals with Coleoptera but includes history of Siricidae and Isoptera

Hardly a day passes that "Hicken" does not leave my library shelf.

BOOK REVIEW

THE CRUEL PLANT by David R Holmes

My curiosity was aroused by the finding of four <u>Dispar compacta</u> caught in a creeper I had planted on the outside wall of my glass-house. I had thought this creeper a Mandevillia, however subsequent investigation identified it as <u>Araujia sericifera</u> the Cruel Plant or the White Bladder Flower.

This creeper is a member of the family <u>Asclepiadaceae</u> to which is related the Hoyas. It is a native of South America and the plant is a useful source of a strong fibre used in South American textile work.

Unlike most plants the Cruel Plant contracts its stamens on contact thus firmly holding the moth or butterfly by the proboscis.

Below is a list of the insects caught by the White Bladder Flower between the 5th of March and the 14th of April 1965. These were the only butterflies in the locality while the creeper was in flower. otherwise it is quite reasonable to believe that many more varieties would have been caught.

Insects caught by Araujia sericifera.

Date.	<u>No</u> .	Variety.
5.3.65.	4	Dispar compacta.
	1	Trapezites symmomus soma.
6.3.65	6	Signeta flammeata.
	2	Dispar compacta.
	1	Trapezites symmomus soma.
10.3.65.	4	Signeta flammeata.
	2	Dispar compacta.
12.3.65.	2	Hesperilla idothea idothea.
	3	Dispar compacta.
	4	Signeta flammeata.
14.3.65.	3	Dispar compacta.
	2	Signeta flammeata.
16.3.65.	2	Pieris rapae
	2	Dispar compacta.
	2	Signeta flammeata.
17.3.65.	2	Pieris rapae.
	5	Signeta flammeata.
	3	Dispar compacta.
	1	Asura cirvicalis.

20.3.65.	2	Signeta flammeata.
14.4.65.	12	Pieris rapae.
	1	Hesperilla ornata ornata.
		(larva from N.S.W. placed on
		Sword-grass near by.)
Total	66.	

BRUCHIDAE.

by J.S. Barnes.

A little known insect in Leguminaceae. No family appears to be more underestimated than Bruchidae. Most literature merely cites these insects as the bean and pea weevils. Nothing, however, could be more misleading. Tillyard notes fourteen known species native in Leguminacae seed, Acacia etc. in Australia. It is unfortunate that literature on identification is scarce.

Most of the specimens collected come from food and seed parcels in migrants baggage. Some in seed samples others in mung-beans and various Near-East commodities. Most literature deals with <u>Bruchus pisorum</u>. L. the pea weevil, <u>Bruchus rufi-</u> <u>manus</u>. Boh. the broad-been weevil and <u>Acanthoscelides obtectus</u>. the bean weevil.

The family Bruchidae is divided into various sub-families and is dealt with in sub-family order.

Bruchus.

<u>Bruchus pisorum L.</u> Appears to be already established in some parts of Australia. This weevil measures from 4.0 to 4.5 m/m. The antennae mainly black other than the first four segments which are red. The tibia and tarsi of the front legs are red, but the remainder of the legs are black. The basic colour of <u>B. pisorum</u>. is black with a brown pubescent covering and distinctive white markings on the elytra. The weevil has been collected in peas from various Mediterranean countries. The female lays its eggs singly in the green growing pods in the field, the resulting larva feeds in the pea-seed, matures, pupates, and cuts its way from its host; but the adult females do not re-infest the dried peas.

Bruchus rufimanus. Boh. is distinguished from <u>B. pisorum</u> by its completely red front legs. The basic colouring of this bruchid

is more grey than brown and the white markings on the elytra are less defined. The apical spur on the hind tibia is long and prominent, however the pygidium protruding beyond the elytra is smaller than in <u>B. pisorum</u>. The insect measures from 3.5 to 4.5 m/m in length. Commonly called the broad bean weevil its life cycle follows the same pattern as the pea weevil, though often more than one larva is found in the one bean. This bruchid is found in other Vicia spp. and specimens have been taken in tick beans from Egypt and in broad beans from Greece and Italy.

<u>Bruchus signaticornis</u>. Gyll. Collected in lentils from Greece this bruchid is widespread in Europe. From 2.6 to 3.5 m/m it is characterised by one or two bands of white hair patches across the elytra. The pygidium shows two round black spots divided by a white hairline. The second segment of the antennae is always black and the front legs are yellow. B. signaticornis is a pest of lentils and vetches, however it has never been found in lentils from Algeria. A small wasp Tetrastichus spp. parasitizes this bruchid.

<u>Bruchus lentis</u>. Frohl. Infesting lentils and vetches this bruchid was taken in lentils from Italy. Somewhat smaller than <u>B. signaticornis</u>. from 2.5 to 3.0 m/m though much the same shape, nevertheless there are certain characteristic differences. The first five segments of the antennae are reddish as also are the two front pairs of legs, with the exception that the femurs of the second pair are dark. The males have a simple spine on the tibia of the second leg. Cheloninae Sigalphus thoracius. Curt. parasitizes B. lentis.

Bruchus brachialis. Fahrs. Found in a small type of pea from China this bruchid appears to be cosmopolitan and is established in America. From 3.0 to 3.5 m/m in length it has a dense covering of grey hairs with many white spots on the elytra and two white patches one on the scutellum and one on the postnotum. The front legs are red the other legs being black. In the male the antennae is red, the female, however, has the first five segments and the last segment red whilst segments six to ten are black. The male carries a notched apical spine on the intermediate tibia.

Bruchus emarginatus. All. This bruchid although of secondary importance in Europe has been found in chick-peas from both the Mediterranean basin and China. The antennae and legs are red and the elytra is well marked with white lines, the basic colouring of the insect is reddish. Bruchus tristiculus. Fahrs. This little bruchid of 2 to $4 \cdot m/m$ is found in Lathyrus spp. It is reddish and covered with grey hairs, the antennae completely red, the legs also are red although the back legs are somewhat darker.

Bruchidius.

Bruchidius perparvulus. Boh. From trefoil of Italian origin a little black bruchid measuring only 1.0 to 1.5 m/m it possesses a conical prothorax more or less curved from front to back.

Bruchidius trifolii. Motschulsky. This bruchid measures 1.3 to 2.3 m/m and has two colour variations. The typical form is entirely black having two sometimes three segments of the antennae red. In the second form the elytra is covered with a grey pubescence and flecked with a profusion of short clear lines.

Bruchidius poupillieri. All. Measuring 2.0 to 2.5 m/m is of two distinct types. The first type <u>poupillieri</u>. possesses both legs and elytra yellow with a dark spot on the anterior margin of the mesothorax. The antennae is black though often the basal segment is red. Type <u>antramentarius</u>. Schilsky. possesses both antennae and legs black. This bruchid is found infesting <u>Hedysarum coronarium</u>. L. throughout the Mediterranean area.

Bruchidius bimaculatus. Ol. A pest of <u>Medicago sativa</u> this member of the family measures 1.7 to 2.2 m/m. The antennae pectinate and the first three segments and the last three yellow. Possesses a clearly defined white spot at the base of the prothorax. The elytra is well marked with white hair patches, however, two deep black blotches show one on each side of the elytra in line with the back legs which are also dark. The other legs are yellowish.

Acanthoscelides.

<u>Acanthoscelides obtectus</u>. Say. Measuring 2.5 to 3.0 m/m this bruchid is reddish and covered with a deep grey pubescence. The elytra is marked with olive rectangular markings. The hind tibia carries two small teeth as well as the apical spur. The antennae has the first four segments yellow as is also the last one, while the remainder are black. This bruchid is a world-wide pest in <u>Phaseoli</u>. spp., wherever they are grown. <u>A. obtectus</u>. infests and re-infests beans in storage although its original attack is in the field.

<u>Callosobruchus maculatus</u>. F. This bruchid is reddish brown, the elytra is marked with two prominent black square spots The antennae black, other than the first four segments which are red. The males have pectinate antennae, while some females have a completely red antennae. This bruchid has world-wide distribution and will infest and re-infest pulse in storage.

<u>Callosobruchus chinensis</u>. L. The species is dark red in colour measuring 2.2 to 3.0 m/m in length. Two very white spots show on the base of the prothorax. The elytra is fawn colour with three brownish markings and one white line in the middle third. The first five antennal segments are red and the last seven segments pectinate in the males but never in the females. Like A. obtectus it infests and re-infests stored legumes.

Pachymerus.

Species of unknown tropical origin living in the seeds of various Acacias.

<u>Pseudopachymerus lallemonti</u>. Marceul. The specimen from 4.0 to 5.0 m/m in length is oval in shape of a more or less deep reddish brown with undulating stripes large and well marked, bordering the interstices.

Taken in <u>Acacia farnesiana</u> from Greece it is also found in <u>A. arabica</u> and has recently been reported from Algeria in carob seeds <u>Ceretonia siliqua</u> although this does not appear to be a regular habitat.

One other bruchid Bruchus arvillii has an identical habitat.

Amblycerinae.

The Bruchids in this subfamily are identified by a generally globular form. Their colour a uniform dark brown to black the eyes slightly projecting and the antennae filiform. Slender legs carry two simple spines on the hind tibiae. In the Paleartic regions the family is confined to two genus' <u>Euspermophagus</u>. Zacher and <u>Zabrotes</u>. Horn. The latter has not been intercepted here to date however, as this bruchid infests <u>Phaseolus</u> spp. especially the haricot bean the eventual interception of this insect is probable

from the America's

Euspermophagus sericeus. Geoff. is of some economic importance though mainly secondary. A black bruchid of 1.8 to 2.8 m/m. It was found in Rosella seed from India.

REFERENCES.

Balashowsky, A.S. (1962) Entomologie appliquee a L'Agric. Vol., 1. part 1. (Coleopteres.)

PROGRESS.?? by R. Bell.

In the August issue of "Wings and Stings" a most interesting article on butterflies appeared, written by. David Crosby. This article is very informative because it tells where various species may be taken and more important, when. Most of the places were considerably distant and a collector would need the use of a car to visit the various localities.

I remember a time when I boarded a train - not having a car in those days - and within an hour's travelling I was in the bush collecting many of the species David Crosby mentions.

Until quite recently areas in the foothills of the Dandenongs were well known for the many and varied species of butterflies to be found there, providing one knew exactly what month to go and this was only learnt, as in my case, by trial and error. Sometimes I came home with a box full of specimens but other times I could not find a single specimen of interest, simply because I went in the wrong month.

Within the Ringwood, Croydon and Bayswater area I have taken as many as eighteen different species over a season's collecting. Before one particular area "progressed" I would start off in October by taking <u>Argynnina hobartia cyrila</u> followed by the first of the "skippers" in November <u>Trapezites phiglia</u> while in the same month I have in the same locality taken <u>T. phigalioides</u>. <u>Dispar compacta</u>. <u>Signeta flammeata</u>. <u>Hesperilla donnysa patmos</u>. and <u>H. ornata</u>. In December I would return again where many of the "skippers" were still on the wing, but getting tattered by now and I would be sure of seeing various members of the <u>Pieridae</u>. family. Delia aganippe. D. harpalyce. and usually <u>Anaphaeis java teutonia</u>. On the wing in January were the "browns" <u>Satyrinae</u>. <u>Heteronympha merope</u>. <u>Geitoneura klugi</u>. and <u>G. acantha</u>. In February I have taken <u>Trapezites symmomus</u> <u>soma</u>. and in March <u>H. banksi</u>. <u>Oreixenica lathoniella herceus</u>. and <u>O. kershawi kershawi</u>. this only leaving April when I was sure of finding females of <u>H. banksi</u>. and odd specimens of <u>Tisphone abeona albifascia</u>. <u>Pieris rapae</u>. and of course the common grass-blue. <u>Zizieria otis labradus</u>. When one considers that all these came from the same small area of roughly one acre, within twenty miles of the G.P.O. it is all the more remarkable.

Within this distance of Melbourne I have also taken <u>Paralucia aurifer</u>. the other beautiful "copper" <u>Lucia limbaria</u>. and the fringed blue <u>Neolucia agricola agricola</u>. all in the same place in favourable years.

At Heidelberg I have collected <u>Danais plexippus</u>. <u>Z. labradus</u> <u>D. chrysippus petelia</u>. <u>Precis villida calybe</u>. <u>D. compacta</u>. <u>Vanessa cardui kershawi</u>. <u>V. itea</u>. <u>Lampides boeticus and the</u> <u>common migrant <u>Catopsilia pyranthe</u>. On one occasion I saw <u>Papilio anactus</u>. feeding on the Buddleia, but due to my <u>surprise at such a visitor</u>, I was too excited to strike accurately and saw it fly gaily up and over the fence gone forever.</u>

In all these areas I have seen "progress" come and the butterflies have gone. One of my delights when in 1954 I came to Heidelberg was on a warm summer evening, to watch <u>Heteronympha merope merope</u> jostling for a place to feed on my shrubs, but over the years even this common butterfly has steadily decreased and only the odd specimen visits me now. So much for progress. In 1964 I took four <u>Eurema smilax</u>. within a few weeks, truly a good year for this <u>species</u>.

Whilst I agree that a collector is likely to take more specimens by travelling afield, he may find it worth while to stay "in his own back yard". In this day of progress our near bush areas are fast disappearing but collectors may be rewarded as I have been with a series of the more common species of butterflies.

Excursion to Frankston Common Sunday 31st October 1965. by J.S. Barnes.

The vagaries of Melbourne weather once again upset what could have been an entomological heyday. To the few who. spent the last day of October on the Frankston common, it was a most rewarding day. This is an area which could cater for a collector in almost any of the fields of entomology. For the naturalist it is real pleasure. The four hours of fine weather with odd bursts

of sunshine dried the tea-tree and walking was quite pleasant.

Birds sang in the trees and the whole area was a riot of blossom. Wedding-bush vied with swamp tea-tree, while here and there to break the whiteness, pink tea-tree flowered. like an artist's splash of colour on a white canvas.

Melaleucas with their creamy brushes enticed literally thousands of blow-flies, while in the tea-tree, moths fluttered and dipped out of sight in the flickering of an eyelid. On the edge of an arid bank a flannel-flower bloomed. Fringelilies held their deep blue faces skyward. On sandy rises Conesticks with sharp unfriendly leaves competed with the Coast Banksia for living space.

Bordering the swamp patches, sword-grass with deep brown seed heads bent with the weight of pregnant maturity, held in their larval fastened leaves, chrysalis of "skippers". Some had already flown. On the ground, ants hurried about in their usual seemingly haphazard way. Bull-ants both black and brown raised their heads and with open jaws stood their ground.

Resting on the roadway, "Painted Ladies" opened and closed their wings in characteristic fashion - now you see me, now you don't - and with closed wings their's is a near perfect camouflage. Small robber-flies <u>Asilidae</u>. darted here and there looking for Sunday's dinner, while stalk legged golden eyed flies flew low in the shelter of the tea-tree. Bright blue flea-beetles leapt out of range at the first sound of danger.

A Bush-brown, moving in that lazy-hurrying motion some butterflies have, flopped around a clump of banksias right into an eager net. On a sandbank edging the road a toothed nightshade sprawled its purple flowers centred with a spot of gold. In the sedges I found a pair of thin elongate beetles, <u>Hispinae</u> and wandering solitary over a sand patch <u>Nethra grandis</u> a strange member of the bug family, flat and squarish. Handled carelessly this queer little fellow isn't above giving a vicious stab.

Driving homeward in pouring rain it was hard to believe that we had had four hours of open air enjoyment.

A VISITOR COME TO STAY. by David R Holmes.

I arrived home from work on December 22nd 1965, and it was with a great deal of delight that I found a friend who had come to visit me for the first time.

I had gone to the Mountains many times over my collecting years, but this was the first time <u>Papilio macleayanus</u>. had ever come to visit me at Red Hill.

Shimmering above the Buddleia flowers (grown expressly for the purpose) as only a papilio could shimmer, I invited her into my net to place on record that this delightful creature had come 40 or 50 miles to be my guest, and to stay with me.

So many questions arose in my mind about this butterfly Why had it come to Red Hill? Why pick an entomologists garden to lodge in? Had any of its kind ever come before to find me away, and to pass on to destruction in the sea at Flinders? Those and many other questions came to mind and perhaps we can speculate enough to make these deductions.

On the day in question it was 90 degrees in temperature, with a strong North-East wind blowing. Miss or Mrs Macleayanus was flying high in the tree tops, when she was carried by a thermal air current well up to perhaps 2,000 feet. The wind then took her directly 40 miles or so, where at four o'clock, the air near the coast started to cool which allowed the descent. The habit of these butterflies is to find flowers to hover and shimmer over, so what better place than a garden -23-

with the butterfly tree, the buddleia, to alight on.

We can only assume that something like this happened, we will never know. Whether or not <u>P. macleayanus</u>. has ever migrated away from home before is hard to say. I have collected for twenty years and have never seen it here.

I venture to say it was sheer chance which brought it down, and luck that made it possible for me to be there at that time of the day to capture it.

A GREAT AUSTRALIAN. by J.S. Barnes.

Not long ago I was at a discussion group and the talking point was "A Great Australian." I wondered about those who might be considered to be great Australians. Pharlap was at least those people who put their money on him thought so.

My Great Australian is much smaller than Pharlap - indeed, smaller than the kangaroo or the platypus. Fully grown it would not be more than 1/8" In diameter. It is a tiny black and red ladybird <u>Rodolia cardinalis</u> whose fame spread throughout America and South Africa in the latter part of the 19th century.

If on the one hand we have famous Australians - then because we must always have an harmonic balance in nature - on the other hand we must have infamous Australians, and this is once again the good old plot of "Goodies and baddies".

In the year 1880 or thereabouts, some Australian shrubs (probably Pittosporum species) were shipped to California. In those days import restrictions were not as strict as they are to-day. The shrubs were planted and thrived but unfortunately, attached to some of them were specimens of one of our scale insects <u>Icerya purchasi</u>. the Cottony Cushion scale.

This scale insect is very partial to orange-trees and with the Californian climate suitable and the orange grooves plentiful, it was not long before it had reached plague proportions. One can imagine the devastation wrought in the citrus groves. Trees quickly became unsightly, many died and the citrus crop was reduced by half.

In Australia this scale had not been a problem and the reason why was soon investigated. <u>R. cardinalis</u>. then became a popular migrant into California. Its larva a pinkish, hairy little grub, is a voracious feeder and can be observed tearing the scale insect to pieces as dog would tear a piece of meat.

This little lady-bird did very well in the Californian climate and multiplied at an unprecedented rate. Within a few years it had complete control of the situation so that the scale although still present in America, is now of little consequence. <u>R. cardinalis</u>. is found everywhere in the U.S.A. to-day, and feeding on other scale insets too. The little fellow has made himself so much at home that some American journals quote him as a native! But to Australian entomologists who are interested in him, he will always be an Australian. Maybe only a little one, But a great one.

This completes your list of overseas collectors anxious to exchange specimens with Australian entomologists.

Butterflies.

Dr. D. Weiss Bruselska 3. Praka 2 Czechoslovakia.

Belgium.

Saint-Ghislain (Hainaut)

NO WINGS. by Alex L. Brown.

Collecting in a bad season up north, around Cairns and Kuranda can be more than just a little disappointing, in fact, well below expectations. Normally this area is teeming with life that appeals to any collector, whether a moth, beetle, or butterfly enthusiast. This was not so during November and December of 1965. All the country was dry with a great deal burnt out by fire, varying from a couple of acres to perhaps hundreds of acres. No useful rains had fallen for months and none were expected in the near future.

Of the many moths known to inhabit these environs, a few common Noctuid pests of sombre colours and one fruit moth was all there was to be found. The butterfly collection was not enlarged by much either. In the sunshine, flying over those few highly situated Lantana blooms at Kuranda, there was an occasional quick glimpse of <u>H. bolina</u>. and <u>Cynthia ada</u>. plus one male birdwing. As to the beetles, there were not many of them either. The only ones to be found were the large black elephant beetle and a smaller brown one known to be a sugar cane pest, both in everyone's collection. After travelling thousands of miles from home, the net generally had to remain folded.

Green Island, also, had nothing to offer, save numerous edible fish within easy reach of its popular jetty, where many people spent their time engrossed in fishing. As the train travelled further south, large ares of arid and burnt out terrain alternated. Even Magnetic Island, normally capable of supplying a variety of wanted wogs was now a dry, rocky patch capable only of giving a visitor a really good meal at Arcadia and many scenic colour photographs along its coastline. Townsville, too, was at that time hot and dry. Its city bounds spread for many miles but its magnificently multicoloured illuminated fountain in the Gardens was well worth stopping the night to admire.

The well laid out Botanical Gardens of Brisbane are situated on the bend of the river. In the rays of sunlight passing through the foliage, could be seen a small variety of butterflies - a couple of species of Danaids, a <u>H. bolina</u> plus a common blue and a skipper or two. After a leisurely ambling trip home via Sydney, with its round fountain at the Tooronga Park Zoo and its Kings Cross, the train arrived back in Melbourne, the holiday over. It did not take long to relax and set out the specimens obtained during those two months, but the scenic beauty which appeared en route, compensated for the other disappointments.

Dear Member, For your information the meetings for 1966 will be held on the following dates. 22nd April. 17th June. 19th August. 21st October. 18th November. probable 9th December. Commencing at 8p/m in the Lecture Hall, National Herbarium The Domain, South Yarra.

Don't forget to bring along your exhibits.

Your Editor is anxious to receive your contributions for your Journal. Bring them along to the meetings or forward to

Mr J Barnes 42 Lucknow Street Mitcham. VIC.

Yours sincerely,

GRAEME RUSHWORTH

Hon. Secretary.
