



*D Morgan*  
**NEWS BULLETIN**

ENTOMOLOGICAL SOCIETY  
OF QUEENSLAND



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## THE ENTOMOLOGICAL SOCIETY OF QUEENSLAND

### GENERAL MEETING

Minutes of the General Meeting of the Entomological Society of Queensland Inc., held in Room 402 of the Hartley Teakle Building, University of Queensland on Monday, 9th June, 1980 at 8.00 pm.

### ATTENDANCE

P. McFadyen (President), M. De Baar, P. Boreham, B. Cantrell, J. Conran, T.H. Cribb, G. Daniels, V. Davies, D. Foley, C. Hagan, M. Harris, W. Jorgensen, B.H. Kay, D. Kettle, J. King, R. McFadyen, E.N. Marks, D. Merritt, R.G. Piper, R. Raven, E.J. Reye, V. Salanitri, M. Schneider, B. Sorby-Adams, G. Thompson, G. White.

### VISITORS

J. Craig, N. Harris, C. King, J. Lamy.

### APOLOGIES

E. Dahms, G. Donnelly, J. Grimshaw, G. Monteith, B. Sabine, E. Sinclair, P. Webb.

### MINUTES

Minutes of the last meeting held on the 12th May were circulated in News Bulletin Vol. 8 No. 3. It was moved Professor D.S. Kettle, seconded Dr. P. Boreham that the minutes be accepted.

### NOMINATION

The following nomination was received:-

For Ordinary membership -

Mrs. Beverley Angus,  
96 Mallava Drive,  
PALM BEACH. Qld. 4221.

Nominated M. Schneider  
Seconded C. Hagen

In accordance with the Society rules, the election will be held over until the next meeting of the Society.

### ELECTION

The following nomination was received at the last meeting and was circulated in News Bulletin Vol. 8 No. 3, Mr. Desmond Foley for associate membership. Mr. D. Foley was elected to the Society by a show of hands.

### GENERAL BUSINESS

The President reminded all unfinancial members present that this was the last opportunity to pay before the levy of the \$1 late fee.

The President also discussed the proposed rise in fees for 1981. He pointed out that a fee increase in previous years had been avoided by finding cheaper techniques for producing the news bulletin. However, it has now reached the stage where costs can no longer be absorbed by the Society and fees must rise if the Society is to remain solvent.

The proposed fees for 1981 are as follows:-

Associate	....	\$ 5.00	<u>JOINT MEMBERSHIP</u>	
Ordinary	....	\$10.00	Ordinary	.... \$15.00
Country	....	\$ 8.00	Country	.... \$12.00

Country membership remains unchanged at \$8.00 and \$12.00. Joint membership is calculated at the rate of 1½ times the appropriate subscription rate.

Dr. E.N. Marks commented that a higher fee increase may eliminate a continual series of smaller increases. However the President felt that a higher fee rise might cause an increase in resignations. Mr. E. Reye suggested investing more money, but the President explained that although the Society had \$2,201 in S.E.Q.E.B. stock, increasing this sum was not possible. The Treasurer went on to explain that the proposed increases in subscriptions would result in an approximate increase of \$220, the benefits of which should last for a number of years.

#### MAIN BUSINESS

The main business of the evening was Notes and Exhibits.

#### THE FEEDING PATTERNS OF SOME BRISBANE MOSQUITOES

Brian Kay and Peter Boreham

Our collections in the Brisbane area were initiated when we were asked about mosquitoes in relation to the proposed siting of a TAFE centre off Anzac Avenue, Kippa-Ring. The opportunity was taken to provide supplementary data on host-feeding patterns which could be compared with two major studies which we, at the time, were carrying out at Kowanyama, Cape York Peninsula, northern Queensland and Charleville south western Queensland.

These samples were supplemented by two collections at Samford on Dr. Marks' farm and at Nudgee beach.

#### METHODS

Collections of engorged resting mosquitoes were made by mechanical aspiration between September 1978 and May 1979. The abdominal contents were smeared onto filter paper as soon as possible after collection and stored in a dessicator until dispatched to London for analysis of the source at Imperial College. The host proteins were eluted from the filter papers in saline and the extract overlayed onto a range of specific mammalian, bird, reptile and amphibian antisera which had been prepared in rabbits. A positive result is indicated by a ring of precipitation forming at the interface within 1 hr (Boreham, 1972).

#### RESULTS

Ad hoc collections such as these provide data on actual host range, e.g., general trends such as feeding exclusively on birds (ornithophily), may become apparent and cannot be construed as definitive data on host feeding patterns. These data are however consistent with our findings from Kowanyama and Charleville (Kay *et al.*, 1979).

17 *An. annulipes* tested fed exclusively on mammals compared to 96% at Kowanyama (341 tested) and 98% at Charleville (458 tested). In previous collections, chicken-baited traps, used by Harry Standfast and others in these two localities, attracted few

anophelines. It is not surprising that the arboviruses isolated from anophelines e.g., Trubanaman, Mapputta have mammals as their suspected major vertebrate hosts.

As expected, Aedes vigilax, the salt-marsh mosquito was extremely abundant at the college site and, consequently, this species was the major one aspirated from the surrounding bush. It feeds predominantly on a wide range of mammals such as man, cattle and horses probably in an opportunistic manner. Such behaviour is likely to be markedly influenced by the abundance and availability of hosts in the area.

Despite the small numbers tested, Culex annulirostris proved to be opportunistic and reasonably catholic in its feeding. 80% fed on mammals at Kippa-Ring similar to both Kowanyama (86%) and Charleville (75%). Broad feeding patterns such as those displayed by Ae. vigilax and Cx. annulirostris are most suitable for the transmission of zoonotic arboviruses which occasionally spill over into man causing disease.

Little or nothing is known of the feeding patterns of species such as Culex pseudomelanoconia (5 reptile feeds from Samford), Cx. orbostiensis (3 mammal at Samford; 2 reptile at Kippa-Ring) so any information is welcome.

We would be happy to receive any blood-engorged mosquitoes from other localities in Brisbane or elsewhere that have been collected from sites with no obvious bias e.g. inside chicken coop.

Dr. B. Kay and Dr. P. Boreham  
Qld. Inst. of Medical Research  
Herston.  
Brisbane. Q. 4006.

#### REFERENCES

- Boreham, P.F.L. (1972) PANS, 18, 205.  
Kay, B.H., Boreham, P.F.L. & Williams, G.M. (1979) Bull. ent. Res. 69, 441.

#### DISCUSSION

- Mr. M. De Baar: What method do you prefer for storage of mosquitoes prior to processing?
- Dr. B. Kay: Freeze in top of refrigerator or place in liquid nitrogen. Otherwise keep dry by placing in a dessicator or tin with silica gel.
- Dr. P. Boreham: Rising humidity causes hydrolysis of blood proteins.
- Mr. E. Reye: Rabbit was listed on both Redcliffe and Samford results. Are there any in Brisbane?
- Dr. B. Kay: These are most probably reactions to hares.
- Dr. P. Boreham: Actually it should read lagomorph - but that is too difficult to put on the result sheet.
- Dr. E. Marks: This data is useful for other studies e.g. a parasitology student (R. Manzanell) is working on filarioid worms in reptiles and was interested to find a record of the mosquitoes biting reptiles.



## A STORAGE AND RETRIEVAL SYSTEM FOR SMALL VIALS

- Mr. E. Reye

1.8 ml ( $\frac{1}{2}$  dram) vials are packed in order in a clear plastic strip containing ten vial pockets and a label pocket. This strip is placed (using an aluminium gutter) inside an envelope of clear plastic open at one end, and with a narrow label pocket on its upper edge.

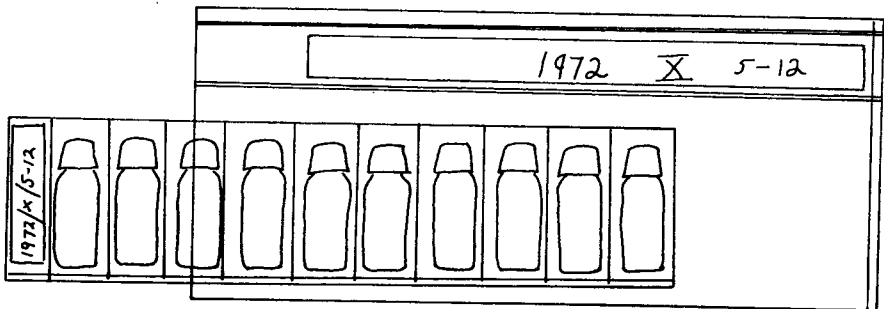
The vial pocket strips and envelopes are made by heat sealing a tube plastic sheet, cut to suitable lengths, using dowel rod of appropriate diameter to form vial and label pockets, and a masonite strip for the envelope cavity.

The envelope can be closed by folding over the open end or by heat sealing - it is made long enough to allow for repeated sealing if need be. The envelopes are kept in lidded leatherboard boxes (64 per 16"x11" box), label edge uppermost (and vials upright): they could be kept under alcohol if desired.

The system has proved very useful for orderly handling of material on highly productive field trips and is now being used to reduce the bulk and weight of our Ceratopogonid collection. This is catalogued by acquisition number in each calendar month on a loose leaf system, keeping the months apart: this allows for later expansion from further acquisition, separation of genera and species, and for notes on the material. Any material of which the catalogue number is known can be retrieved readily from the storage boxes.

This system of storage should be applicable to different sizes of vial by altering the pocket and envelope sizes: labelling and arrangement could be altered to suit the catalogue system preferred.

One can keep track of material moved from the collection by inserting paper slips in the vial pockets, either in place of a vial removed, or alongside a vial from which some contents have been removed - this is a back-up for entries of a similar nature in the catalogue.



## AN IMPROVISED 240V 15W NEW JERSEY LIGHT TRAP

- Mr. E. Reye

This trap was devised to fill a need felt during a field trip in North Queensland last year: its form was dictated by the components available in Cairns.

The casing is a plastic bucket of about 10 l. capacity. The central disc of the bottom is cut out so that the incurving sides support the lower screen which is a truncated cone made of fine terylene curtain material with its larger end stitched over a 200 mm diam. wire ring.

Air flow is provided by a 180 mm 'personal fan' removed from its stand and slung inside the bucket by a frame, made from strips of aluminium sheet, which hooks on to each side of the bucket rim at the handle. Across the top of the bucket a fibreglass fly-wire screen to exclude large insects is held in place by two lengths of curtain spring wire below the bucket rim and hooked to the handle.

The light is a clear 15W pilot bulb carried in a socket let through the centre of a 420 mm diam. black plastic pot plant saucer: the bucket handle is threaded through two small holes (about 250 mm apart) in the saucer which is held aloft by two sheet-aluminium brackets sprung onto the handle: these also serve to stabilize the saucer on the bucket. A small plastic dish is used to cover the socket base and supports clear plastic film held to the saucer with packaging tape to keep rain out.

The trap bottle is a wide mouthed transparent feeding bottle of about 300 ml capacity which attaches to the stem of a 90 mm diam. plastic funnel dropped into the lower screen the smaller end of which is simply hemmed and has a circumference of 210 mm. The globular tip of the rubber teat is cut off and used to hold the bottle's teat retaining screw cap onto the funnel stem. Each trap is provided with two bottles with their numbers marked in different colours.

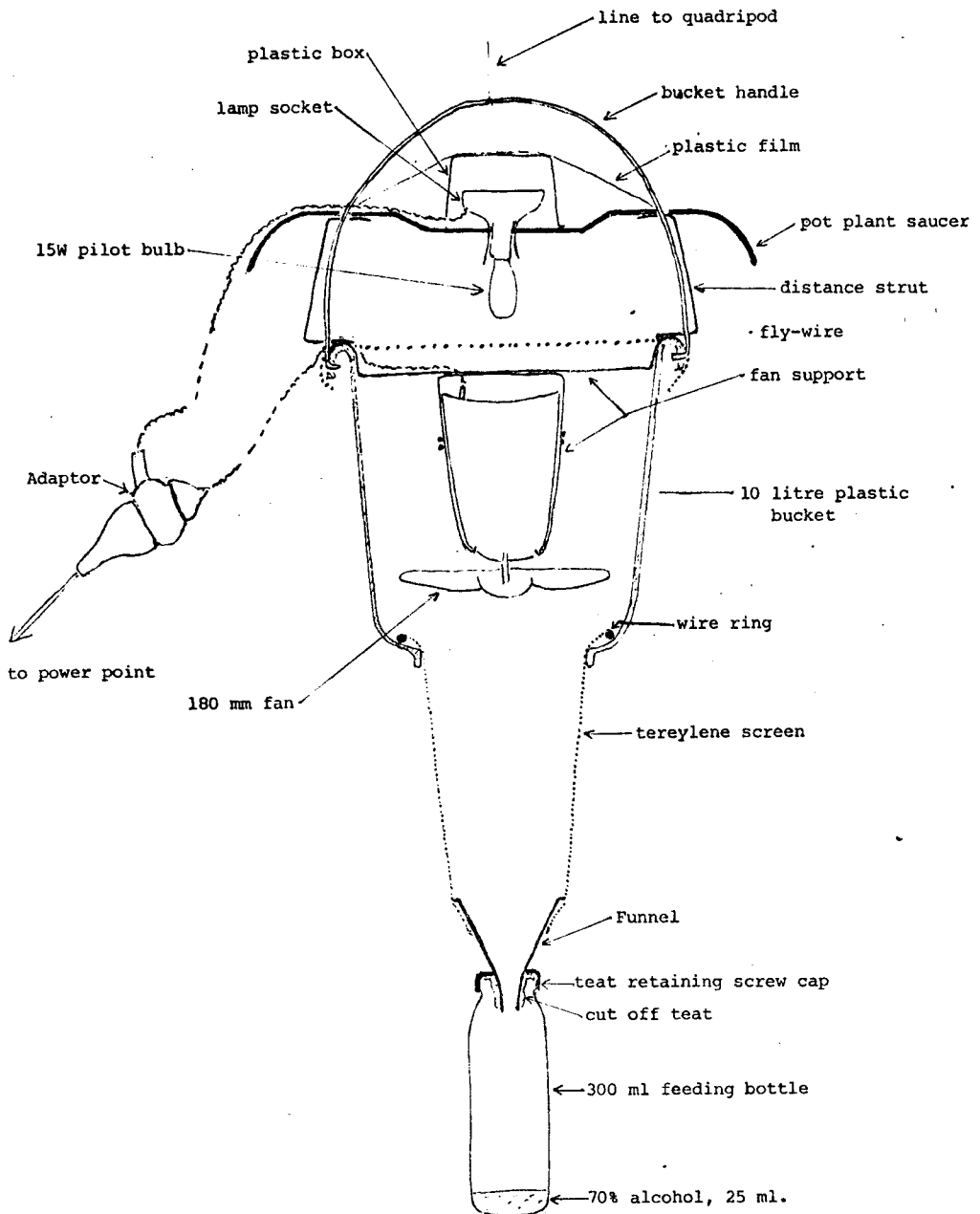
In operation the trap is slung from the apex of one of our standard emergence trap quadripods to give a lamp height of about 1 m from the ground. A lead is taken to a convenient power point, the trap bottle charged with 25 ml of 70% alcohol, the trap is switched on at dusk and left until daylight.

Three traps were made and used as single units in Cairns, Holloway Beach, Port Douglas and at the mouth of the Johnstone R. In the Mackay area, at Rockhampton and Bundaberg they were set in patterns to determine time and distance distributions of various species to give indications of the direction in which breeding areas lay. The traps were dismantled for long distance transport down to three fan cartons of 20 X 18 X 17 cm, the three saucers nested, and the rest fitted into a carton 50 X 30 X 30 cm. Between field headquarters and trap site they were carried assembled, but for leads and trap bottles, in cartons or boxes. The materials cost for each trap is estimated at \$18-\$20 (of which the fan was \$10) exclusive of a spare bulb for each trap and a spare fan for the set.

Catches varied from only a few Ceratopogonidae to many hundreds per night. Many trappings remain to be sorted but one trap at the mouth of the Johnstone R. on the margin of rain forest produced, in Culicoides alone, over 400 specimens covering 12 species.

Mr. E. Reye  
Department of Entomology  
University of Queensland  
St. Lucia. Q. 4067.

# AN IMPROVISED 24V 15W NEW JERSEY LIGHT TRAP





## DISCUSSION

- Mr. D. Merritt: How much does the heat sealing unit cost?
- Mr. E. Reye: Approximately \$30. It is the small variety used for sealing packages for household freezing.
- Mr. W. Jorgensen: Why did you use a pilot bulb? Why not a bulb of higher wattage.
- Mr. E. Reye: A more attractive light source would greatly increase the volume of material to be sorted.
- Mr. R. Raven: What methods do you use for making the pockets in the plastic strip?
- Mr. E. Reye: A piece of dowel rod is inserted into the plastic strip and a continuous series of heat seals are made. For envelopes a piece of masonite is used.
- Dr. P. Boreham: What is the efficiency of your trap compared to a conventional light trap?
- Mr. E. Reye: I have not had the opportunity to test this.
- Dr. P. Boreham: It would be interesting to know if your trap is sampling a different part of the population.
- Mr. E. Reye: It could be, but it is better than a trap without a fan.
- Dr. E. Marks: Have you tried using CO<sub>2</sub> traps?
- Mr. E. Reye: The use of dry ice causes problems with maintaining a supply.

### FIRST RECORD OF ASCOSPHERA IN QUEENSLAND

- Judy King

The genus Ascosphaera Olive and Spiltoir (Ascomycetes; Ascosphaeraceae) includes several pathogens of solitary and social bees. The most important of these is Ascosphaera apis, the causal organism of chalk-brood disease of honey bees. Ascosphaera was detected last year in larvae of Chalicodoma mystacea Michener (Megachilidae) taken from artificial colonies at CSIRO Pasture Research Station, Samford. Dr. D. Pinnock examined infected larvae and found the fungus to be a new species of Ascosphaera and not Ascosphaera apis. At present he is investigating whether the fungus will infect honey bees.

Mrs. J. King  
Department of Entomology  
University of Queensland  
St. Lucia. Q. 4067.

## DISCUSSION

- Professor Kettle: Did Dr. Pinnock manage to keep Ascosphaera going?
- Mrs. J. King: I have not heard from Dr. Pinnock yet as to the outcome. I would like to add that this is the first record of the genus in Queensland and probably in Australia.

AN INTERESTING CASE OF PARASITISM OF SPIDER EGGS BY A FLY  
- Robert J. Raven

THE SPIDER

In the months prior to the heavy rain that fell in Brisbane in early May, I was periodically checking 5 female tent spiders, Cyrtophora moluccensis (fam. Araneidae), that had built webs around my Indooroopilly home. Cyrtophora moluccensis builds a non-sticky web composed of a domed, fine mesh 'orb-web' with an irregular tangle above and below. The spider hangs inverted at the centre of the dome above which eggs, when laid, are suspended in a vertical string of sacs.

From New Guinea to Brisbane and perhaps even further south, Cyrtophora moluccensis occurs in solitary webs or in massive web colonies extending vertically for many metres. However, no sharing of resources between individuals of colonies in New Guinea is known (Lubin, 1974).

Early this summer, C. moluccensis thrived and were common. But gradually, with the onset of drier conditions and diminishing insect populations, the spiders died. Wondering whether mature female C. moluccensis could survive Brisbane's Winter, I carefully fed and watered my last surviving female. Eventually, however, it too died. But the eggs, laid long before in the early summer, were unhatched. Hoping that they would yet hatch, I continued to watch one string of egg-sacs and preserved the other. In the latter, I found numerous empty insect puparia. Determined to know the parasite, I removed a string of egg-sacs from each of three empty webs and placed them in an air-tight jar. Finally, from one string came over a hundred spiderlings which I promptly released; from each of the remaining two came a sarcophagid fly. Since I have not observed the dipteran's attack on the egg-sacs I cite from Lubin's (1974) New Guinea study.

Lubin (1974) observed two colonies of C. moluccensis during four periods of the day over 10 days. The periods were 8-9 a.m., 12 noon-1 p.m., 4-5 p.m., and 8-9 p.m. Dipteran parasitism reached a peak at noon when the female hangs only by the claws of the fourth legs in a 'sun-avoidance position'. In that position, the spider did not respond to the dipteran intruder. This was probably a result of the reduced web-contact of the spider.

The spider's reaction to the dipteran varied. When the dipteran flew amongst the tangle web above the dome, the female would violently shake the domed net, climb onto the egg-sacs and encircle them with all of her legs. Then, the spider would wave the first legs, palpate and tap the egg-sacs and pluck the tangled web around the sacs. However, when the fly landed on the tangle, the spider showed no response. Lubin suggested that the spider was sensitive only to the higher frequency wing beat of the fly whereas the low frequency of the fly walking on the web passed undetected.

To Lubin (1974), there was little doubt that female C. moluccensis can detect parasitized egg-sacs which are generally cut out and either moved away from the web or dropped completely out of the web. The dipteran parasitizing the C. moluccensis egg-sac of Lubin's study was identified only as Sarcophagidae.

Mr. R.J. Raven  
Queensland Museum  
Herston. Q. 4006.

## REFERENCES

Lubin, Y.D. (1974). Adaptive advantages and the evolution of colony formation in Cyrtophora (Araneae : Araneidae). Zool. J. Linn. Soc. 54(4): 321-339.

## DISCUSSION

Mr. W. Jorgensen: Is the dome-shaped web characteristic of this particular spider?

Mr. R. Raven: All spiders of the genus Cyrtophora build horizontal mesh-webs, and three species, C. moluccensis, C. hirta and C. examthematica, occur in the Brisbane area. However, C. hirta builds webs with a distinct peak like a Russian tent, and C. examthematica builds a scoop-shaped web; therefore, C. moluccensis is the only spider in the Brisbane area that builds a true dome or inverted saucer shaped web. Also, webs of mature female C. moluccensis are at least 40-50 cms in diameter; whereas, those of C. hirta and C. examthematica are rarely as large as 40 cms across.

## A SARCOPHAGID PREDATOR OF SPIDER EGGS

- Mr. B. Cantrell

The spider Cyrtophora moluccensis has at least two enemies of its eggs, firstly tiny Scelionid wasps (Baeus spp.) and secondly a large fly of the Family Sarcophagidae, Parasarcophaga reposita Lopes. This fly was described only relatively recently (in 1959) from a single specimen bred from spider eggs in 1902. To my knowledge, flies I examined are the only other representatives of this species. The flies themselves appear typical sarcophagids, being large grey flies with three broad dark stripes on the thorax, however the larvae are quite distinctive.

Sarcophagidae belong to the Muscoidea, that group of flies which includes the house fly, blow flies, etc. and while the larvae all look very similar, they can be distinguished. For example most sarcophagids are characterised by the presence of posterior spiracles with an incomplete peritreme and sunk in a deep pit on the last body segment. Most species develop in carrion or similar decomposing organic matter and the spiracular pit is explained as an adaptation to life in a very fluid medium. Larvae can keep the spiracles free by puckering the lips of the pit to squeeze out any liquid that enters. Most higher flies pupate within the last larval skin which hardens and darkens to form a puparium, so that surface features of the larva are retained. Such is the case in Sarcophagidae where the larval spiracular pit is evident in the puparium, and provides a ready means of recognising species of this family. By way of contrast most other muscoid larvae have fully exposed posterior spiracles.

My first encounter with P. reposita was with some empty puparia removed from egg sacs of C. moluccensis, and with a quick glance I saw exposed larval spiracles I assumed the to be puparia of some tachinid and I was quite surprised on some later occasion to see a sarcophagid emerge from similar puparia. A second look revealed that the spiracles had an incomplete peritreme, but no trace of a spiracular pit. The larvae also proved to have a very reduced pit. All specimens I have seen have emerged from egg sacs of C. moluccensis where they presumably feed on the eggs. In such a dry medium there would be no advantage in having sunken spiracles. As previously stated most sarcophagids are carrion breeders, but Parasarcophaga knabi (Parker) and Tricharaea brevicornis Wiedemann apparently preferentially feed in cattle dung, and larvae of the latter also lack a spiracular pit.

Another interesting feature of this species can be found in the first instar larvae. Larvae of sarcophagids normally have segmental bands of sharp cuticular spines, the band on segment two being most obvious. Larvae of the genus Blaesoxipha are internal parasites of grasshoppers, and have broader body spines than carrion feeding species, but these are still quite pointed. In P. reposita however, the spines, particularly on segment two, are replaced by heavy, blunt teeth. The function of these is unknown, and it is certain that an investigation of the biology of this fly would be most interesting.

I would like to obtain more specimens of this fly, preferably alive, and I would be grateful if anyone coming across spider egg sacs with evidence of them would send them to me.

Bryan Cantrell  
Entomology Branch D.P.I.  
Indooroopilly. Q. 4068.

#### DISCUSSION

- Mr. V. Salinitri: Are the spine bands on the later instar larvae as pronounced as those on the first instar?
- Mr. B. Cantrell: The bands are still present, but the spines tend to be colourless particularly in the third instar, so the banding is not as obvious.
- Mr. D. Merritt: What month do the flies emerge?
- Mr. B. Cantrell: I have only seen the flies on one occasion, and these emerged in late April, but breeding should occur most of the year, provided eggs are available.
- Mr. W. Jorgensen: How does the fly get past the spider to oviposit?
- Mr. B. Cantrell: I have never seen the flies in the field, but presumably they can out-manoeuvre the spider. Mr. Raven, reporting on Lubin's study, stated that the spider only takes avoiding action while the fly is flying, and ceases once the fly lands, so this must make it easier for the fly.
- Dr. V. Davies: The web is not sticky, so lessening the chance of the fly being caught.
- Mr. V. Salinitri: Why is the rate of parasitism greatest around midday?
- Mr. B. Cantrell: During the hottest part of the day the spider assumes Lubin's "sun avoidance position" where it exposes the minimum body area to the sun and hangs from its web by only the hind legs. In this position it is unable to shake the web when the fly approaches, as it does at other times. The flies are also most active at this time of day.
- Dr. E.N. Marks: What is the average length of the fly?
- Mr. B. Cantrell: The body length of my specimens ranges from 8-12 mm.
- Mr. V. Salinitri: Considering the limited food source, is there great competition between larvae for food?
- Mr. B. Cantrell: I have no data on larval mortality, and have seen up to ten puparia per egg sac. The eggs are highly nutritious and this must be an advantage to the larvae.

Prof. D.S. Kettle: Do the female flies need to land to oviposit, or can they squirt out larvae like Oestris ovis?

Mr. B. Cantrell: Sarcophagids usually land when ovipositing, and I assume this species is no different. Most species lay first instar larvae. These are still enclosed in the chorion but break out immediately on deposition.

#### VOTE OF THANKS

Professor D.S. Kettle proposed the vote of thanks. He congratulated all speakers on the high standard of their contributions and on the wide variety of interesting topics presented. The vote of thanks was carried by acclamation.

#### FURTHER BUSINESS

The President made the following announcements.

- (1) There will be no July meeting.
- (2) The next meeting will be on August 11th - topic will be "Vectors of Bluetongue in Australia" by Mr. Harry Standfast.
- (3) The V International Symposium on Biological Control of Weeds will be held at the Bardon Professional Development Centre for one week, commencing 22nd July 1980.

The President then closed the meeting and invited all present to supper.

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#### WHO WAS FRT. FREY?

Can any member help Dr. J.B. Kitzmiller, Florida Medical Entomology Laboratory, P.O. Box 520, Vero Beach, Florida 32960, U.S.A.

Dr. Kitzmiller wrote to Dr. E.N. Marks:-

I am in the process of finishing a book on the derivation of anopheline names. I am down to four hard-core cases with which I am having trouble. One of these persons is (I think) Australian. In 1957 Meng described a new species, Anopheles freyi. In a footnote on page 36 Meng writes: "This is to introduce Mr. FRT. Frey from Australia who has done so much work for the Republic of China and is such a good friend of the Republic of China. It is in his honour that we name the new species after him". I think that the translation is accurate, but at least one translator thought that it said "from Europe".

My question is this: Does anyone know of an FRT. Frey who might have had contact with Meng (and China) prior to 1957? Incidentally Meng is still alive and I have written to him, but so far no answer.

Anyone who can supply information please contact Dr. J.B. Kitzmiller at the above address.

RHOPALOCERA HOSTS AND NOTES FROM IRON RANGE TRIP

JUNE, JULY 1978

M, De Baar\* and S.J. Johnson\*\*

Family : HesperIIDae

Tractrocera dolon dolon (Plotz)

A larva was collected 22nd June, 1978 at Hann River crossing on a common grass. Larva remained in a prepupation state for about two months before pupating and emerging 4th October, 1978.

Family : LycaenIDae

Deudorix epirus agimar Frohstorfer

Two larvae were collected at Iron Range feeding on fruit of Harpullia angustifolia. One adult emerged 31st July, 1978.

Pseudodipsas eone iole Waterhouse & Lyell

Larvae of this species were collected at Iron Range on Smilax australis vines and were attended by a small black ant probably Iridomyrmex gilberti.

Philiris nitens lucina Waterhouse & Lyell

Larvae of this species were collected at Iron Range on gen. et sp? Euphorbiaceae.

Larvae are pale green as is the leaf undersurface, and have a thin yellowish dorsal line, and scalloped sides. Larvae have dense marginal hairs and their shape tapers from anterior to posterior end. They are somewhat flattened, resting between veins of undersurface of leaf base. Adults emerged during July, August 1978.

Eggs of a PierIDae were also present on foliage of this host.

Further records of the trip can be found in Sands, De Baar and Johnson (1979) and Johnson and De Baar (1980).

\* Department of Forestry, 80 Meiers Road, Indooroopilly. Q. 4068.

\*\* Oonoonba Veterinary Laboratory, P.O. Box 1085, Townsville. Q. 4810.

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Johnson, S.J. and De Baar, M. (1980). First record of Charaxes latona Butler (Lepidoptera : NymphalIDae) from Australia. Aust. ent. Mag. 6(5):94-96.

Sands, D.P.A., De Baar, M. and Johnson, S.J. (1979). First record of Hypochrysops cleon Grose-Smith (Lepidoptera:LycaenIDae) from Australia. Aust. ent. Mag. 6(2):23-24.

SANDS, D.P.A. (1980). The identity of Philiris nitens (Grose-Smith) (Lepidoptera : LycaenIDae) with description of a new subspecies from Papua New Guinea. Aust. ent. Mag. 6(5):81-86.

## ABOUT PEOPLE

Dr. Valerie Davies (Curator of Arachnids, Qld. Museum), Leaves Australia on July 2nd. to attend the International Congress of Arachnology in Vienna. Other Australasian Arachnologists attending the conference are, Dr. B. Main (Univ. of W.A.) and Dr. R. Forster (Director, Otago Museum N.Z.). From the Congress Dr. Davies will visit London, then return "Westabout" via S. America, the Pacific and New Zealand.

Bob Teakle (DPI, Indooroopilly). Leaves Australia in mid-July to visit England and the U.S.A. Whilst in the U.S.A. Bob will be attending the Annual meeting of the Society for Invertebrate Pathology in Seattle, as well as visiting laboratories on the West Coast. The visit to England is mainly holiday, but he intends looking in on some laboratories in Oxford. Bob will return in mid-September.

Robert Raven (Qld. Museum). Is travelling South to Tasmania by car, collecting spiders as he goes and contacting other Arachnologists en route, notably Dr. V. Hickman in Tasmania.

Dr. Eric Sinclair (DPI, Indooroopilly). Whilst holidaying near Canberra will visit the Australian Academy of Science on July 23rd to attend a meeting on behalf of the Entomological Society of Queensland. The meeting is being called to discuss the interrelationship between the Academy, the National Committee and scientific societies, such as ours. As well as looking at ways to act as an effective channel for input into National Science policy, they will also look at ways such groups can complement and support one another more effectively.

Dr. Erik Shipp and Chris Arton (School of Zoology, U. of NSW). Visited Entomology at the U. of Qld. to see Dr. Martin Rice, Phil Webb and Dave Merritt for discussions on blowfly physiology and behaviour.

Welcome to Richard Piper and James Craig, both graduates of the U. of Qld, who are now working within the Entomology Department U. of Qld, as research assistants. Richard is working with Professor Kettle on pathogens of the Culicidae, whilst James is working with Eric Reye on a National Health and Medical Research Council grant. This is being used to study the ecology of Ceratopogonidae. Eric Reye is presently in the field, at Noosa, collecting biting midges as part of this study.

Belated congratulations to Dr. Gordon Hooper (U. of Queensland) who in April, this year, was awarded a D.Sc. in a ceremony at the University.

## LECTURES AT GRIFFITH UNIVERSITY on ANTS

There will be two lectures, mainly intended for the students, in the Environmental Studies Building.

Monday September 8th. Dr. B. Holldobler, "Territorial Strategies in Ants".  
Room 0.05 at 1.30 pm.

Tuesday September 9th. R.W. Taylor, "The Rediscovery and Study of the Fossil Ant Nothomyrmecia acrops". Room 0.05 at 1.30 pm.

The time is not definitely fixed, so it might be a good idea to check with Dr. R. Kitching if you intend going.



## CALENDAR OF ENTOMOLOGICAL SOCIETY OF QUEENSLAND EVENTS.

- August 11. "Vectors of Bluetongue Virus in Australia". H.A. Standfast.
- Sept. 8. "Application of Modern Techniques in Descriptive Taxonomy of Insects". Bob Taylor. NOTE CHANGE OF TOPIC.
- Oct. 22. A joint meeting with Australian Institute of Agricultural Science and Plant Pathology Society. "Developing of Plant Resistance to Pests and Diseases".
- Nov. 10. No title as yet. Angela Arthington.
- Dec. 8. Notes and Exhibits meeting.

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## **The V International Symposium on the Biological Control of Weeds**

The V International Symposium on the Biological Control of Weeds will be held in Brisbane at the Bardon Professional Centre at the base of Mt Coot-tha from the 22nd to the 29th of July 1980.

Almost 100 Entomologists will attend the Symposium, the majority coming from overseas.

Papers and films to be presented at the meeting will cover such topics as Exploration and Discovery, Quality Control, Pathogens, Evaluation and project status reports relevant to weed biocontrol. On the weekend of the 26th and 27th, delegates will visit weed biocontrol laboratories in Brisbane and on Sunday a bus tour is planned to inspect insect release sites and various weed problems on a route via Gatton, Toowoomba, along the eastern Darling Downs and return to Brisbane via Cunninghams Gap.

Lennons Hotel has been chosen to provide accommodation for visiting delegates. Full membership fee is \$80 and student or associate membership fee is \$25.

Further details can be obtained from Dr. K.L.S. Harley,  
Chairman, Organizing Committee,  
V International Symposium on Biological  
Control of Weeds,  
Division of Entomology, CSIRO,  
Private Bag 3,  
Indooroopilly. Q. 4068.



## TERMINATION OF MEMBERSHIP

The following unfinancial members have had their membership terminated by council. All are unfinancial since 1977 and in most cases the reason for the termination is due to non reply from the last known address, others have formally resigned. If you intend allowing your membership to lapse, the council would prefer to receive a letter of resignation, it saves a lot of time and letter writing on the part of the treasurer and secretary.

Mr. H. Burton  
Mr. S. Wallade  
Mr. R. Boxall  
Mr. W. Day  
Mr. L. Doggrell  
Mr. O. Fakalata  
Miss M. Giacca  
Miss G. Mulligan  
Mr. G. Shaw  
Mrs. A. Shimada  
Mr. P. Tilney

Mrs. Lan Vo Thi Phuong  
Miss R. Wilson  
Dr. K. Zelonis  
Mr. R. Bishop  
Mr. I. Humphrey-Smith  
Mrs. L. Lawrance  
Mr. B. Pinese  
Miss P. Turner  
Miss M. Syndham

# EXPO. UNI. '80

Expo Uni is on again! The dates are -

August 1st. 10.30 am - 9.00 pm  
August 2nd. Noon - 5.00 pm

This time the Clinical sciences will be represented.  
Free program books and special guides (for those who get lost on Campus).

This special effort by the University of Queensland is to celebrate the 70th Anniversary of its founding.

Entomology Department claim that their display will be BIGGER and better than ever!  
So "roll up - roll up"\*.

HAPPY BIRTHDAY UNI. QUE.!

## NOTE TO POTENTIAL CONTRIBUTORS.

While this Bulletin is a little fatter than previous ones (if you paid your fee that is) there is still an urgent need for more material to add to that arising from the general meeting. So, pull out a typewriter and a heap of A4 paper and send in a note to me, the Publications Convenor.

\* The mating call of the Greater Dung Beetle.

## OFFICE BEARERS 1980

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Dr. E. Sinclair,  
Entomology Branch,  
Dept. of Primary Industries,  
Meier's Road,  
Indooroopilly, Q. 4068.

### NOTICE OF NEXT MEETING

The next meeting of the Entomological Society of Queensland will be held at 8.00 pm on Monday August 11th in Room 323 of the Hartley Teakle Building, University of Queensland.

The main business of this meeting will be an address by Mr. H. Standfast, of CSIRO Long Pocket, entitled:-

### "VECTORS OF BLUETONGUE VIRUS IN AUSTRALIA"

Harry works with CSIRO in the Division of Animal Health. He has been involved with arbovirus research since 1962, first with QIMR, and later with CSIRO. He is a long standing member of the Society and past President of the Entomological Society of Queensland.

### THE SOCIETY

The Entomological Society of Queensland is an association of over 300 people with a professional or amateur interest in Entomology. It is dedicated to the furtherance of Pure and Applied Entomological Science and, since its inception in 1923, has promoted liaison amongst entomologists in academic, private and governmental institutions. It has a concern for the conservation of Queensland's natural resources. Further information is available from the Honorary Secretary at the address given above.

### MEMBERSHIP

Membership is open to anyone interested in Entomology and entitles the member to attend monthly Society meetings, held on the second Monday night of the month and to receipt of the News Bulletin. There are three classes of subscription membership:

**Ordinary:** persons residing in the Brisbane area (\$9.00 p.a.)

**Country:** persons residing outside Brisbane (\$8.00 p.a.)

**Associate:** persons not in receipt of a full salary (\$3.00 p.a.)

### THE NEWS BULLETIN

The monthly News Bulletin reports on the Society's monthly meeting, keeps members informed of Society events and news, and provides a vehicle for debate and discussion. Contributions in the form of articles, notes, letters, news clippings and photographs are always welcome, and should be sent to the Convenor of the Publication Committee at the address given above. The deadline for contributions is the Wednesday following the monthly Society meeting.