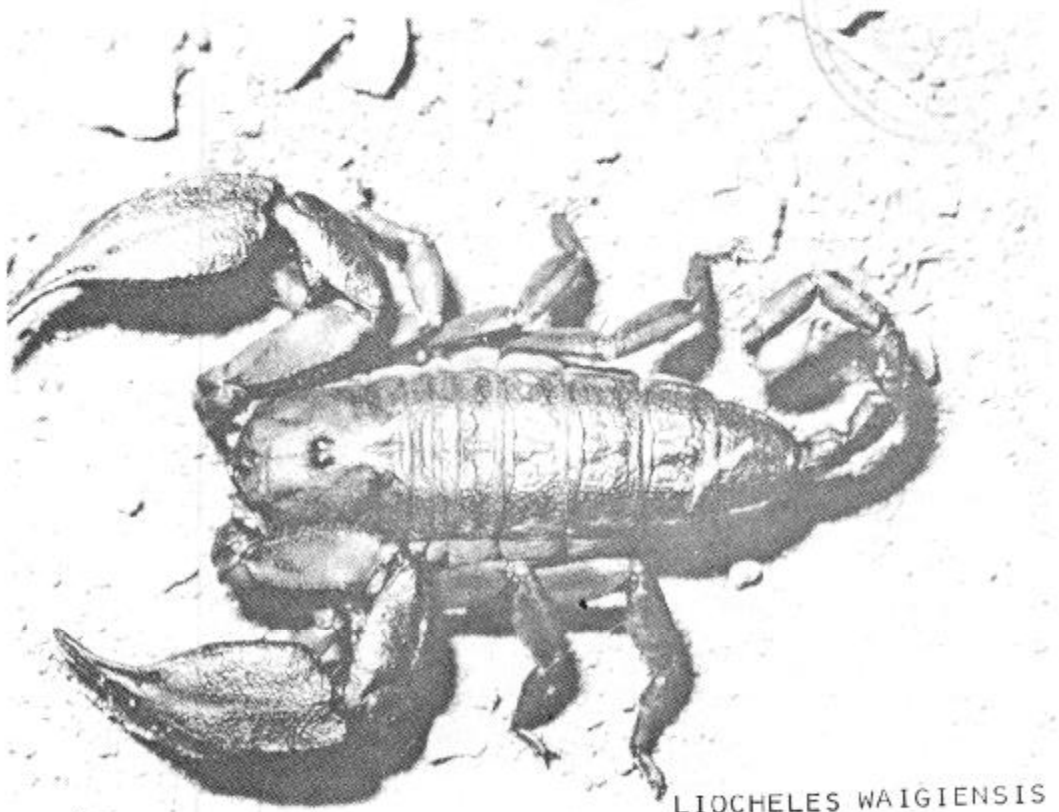


# AUSTRALASIAN



LIOCHELES WAIGIENSIS

# ARACHNOLOGY : 8

PRICE \$1

APRIL 1982

REGISTERED FOR POSTING AS A PUBLICATION CATEGORY B.  
QBH 2909

## AUSTRALASIAN ARACHNOLOGY; 8

## Membership

Membership fees for residents in Australia, \$2; in New Zealand and New Guinea, \$3; other members wishing newsletters sent airmail, \$10, or mailed at surface rate, \$5; Australian institutions, \$3; overseas institutions (surface mail), \$8. If possible, subscriptions should be made out in Australian dollars. Information concerning membership is available from Robert J. Raven, Editor, Australasian Arachnological Society, P.O. Box 573, Fortitude Valley, 4006, Q, Australia.

## Articles

All articles should be sent to the editor at the above address and should be concisely written and neatly typed.

## BOOKS

'Histoire naturelle des araignées'. E. Simon, 1892-1903. 2nd Edition. This vital work is the only publication on the taxonomy of all spiders. For the uninitiated, the language of the books is French with keys and diagnoses in Latin. Although outdated, the two volumes are indispensable to serious arachnologists and to my (editor) delight Jean-Claude Ledoux has initiated the reprinting of these volumes. The cost of reproducing the two volumes is less if a large number are printed; if few orders are received costs would be around \$210 but if a large number of orders are made costs may be as low as \$44. M. Ledoux asks that persons interested in the reprinting send their names and addresses, and answers to the following questions to J-C. Ledoux, 43 Rue Paul-Bert, 30390 Aramon, France: (1) how many copies would you want?; (2) can you pay in advance?; (3) what is the maximum price you are prepared to pay? Members wishing more information on this book can write to Robert J. Raven, P.O. Box 573, Fortitude Valley, 4006, Q. This book is indispensable to arachnologists intending to do serious work on spiders and is of absolute necessity to university, museum and other research libraries.

## PEOPLE

Mr Ramon Mascord, author of 3 beautifully illustrated and informative books on Australian spiders, was in Brisbane from April 1st. Ramon did give a talk and slide show at the Queensland Museum, north-western, lower ground entrance, on Wednesday night, at 7:30 PM.

The following arachnological theses have been submitted; for nomenclatural and other reasons only one abstract will be published at present.

Austin, A. 1982. Waite Agricultural Research Institute, Adelaide. Ph.D. thesis submitted is titled: 'The biology and ecology of *Clubiona* (Araneae: Clubionidae) and their scelionid parasitoids (Hymenoptera)'.<sup>†</sup>

## NEWSLETTER OF THE AUSTRALASIAN ARACHNOLOGICAL SOCIETY

Pollard, S.D. 1981. Zoology Department, University of Canterbury, New Zealand. M.Sc. thesis submitted is titled: 'The reproductive biology of Clubiona cambridgei (L. Koch) (Araneae:Clubionidae)'

ABSTRACT (See below for conditions of using information herein.)

Clubiona cambridgei is a short-sighted hunting spider that lives on New Zealand flax bushes, Phormium tenax, and constructs silken nests within tunnels formed by rolled up leaves.

The life history of this species was investigated in two habitats on the South Island in New Zealand: Spencer Park (coastal) and Arthurs Pass (subalpine). Oviposition occurred from October to March with postembryos emerging from November to April in the coastal habitat. In the subalpine habitat, oviposition occurred in November and December with postembryos emerging in December and January. Cohabitation of males with subadult females, with mating taking place after the females moulted and matured, was a major precopulatory tactic in this species. Cohabiting pairs were present from November to March in the coastal habitat and during December and January in the subalpine habitat. Interpopulational variation is discussed in relation to climatic differences in the two habitats.

The communicatory behaviour of C. cambridgei seemed primarily adapted to nests. Males employed vibratory courtship on the nests of conspecific adult and subadult females. Mating was never observed outside the nest. Virgin females were receptive and copulated with males, but non-virgin females were always unreceptive. Males entered the nests of subadults and attempted to mate; then they built a second chamber on the nest of the subadult and cohabited. After the subadult moulted, the male re-entered her chamber and mated.

Vacant nests of conspecific adult and subadult females elicited courtship behaviour from males, who discriminated these nests from ones of conspecific males, immatures and a sympatric jumping spider, Trite planiceps (Salticidae). These observations suggest the presence of contact sex pheromones.

Females were observed in the field feeding on unattended eggs of conspecifics, an unusual prey for a spider. In the laboratory conspecifics readily ate unattended eggs, but attended eggs were successfully guarded by the resident against predation. Intraspecific egg predation is implicated as an important factor favouring maternal females that remain with their eggs. Although 'egg guarding' is a label commonly applied when spiders remain with their eggs after oviposition, this is one of the few cases in which the adaptive significance of this behaviour has been investigated.

Records are provided of Epipompilis insularis (Pompilidae) attacking C. cambridgei. All attacked spiders were maternal females, inside their nests with postembryos. After eating the spiders, the parasitoid fed on the postembryos, a behaviour not previously recorded in the Pompilidae.

(Note: this abstract is printed here for the information of members. Persons wishing to use that information must first contact Simon Pollard, Zoology Department, University of Canterbury, Christchurch, New Zealand. - Editor)

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Raven, R.J. 1981. Zoology Department, University of Queensland, Brisbane. Ph.D. thesis submitted is titled: 'Taxonomy, cladistics and biogeography of Australian Dipluridae and Hexathelidae (Araneae, Mygalomorphae)'.

A son, Jonathan, was born to Lebbie and Robert Raven in October 1981.

Ms Mandy Kotzman may be in Brisbane in May 1982 examining the Queensland Museum's collection of Theraphosidae.

## RECENT PUBLICATIONS ON AUSTRALASIAN ARACHNIDA

- Downes, M.F. 1981. Sexual dimorphism in *Latrodectus* (Araneae, Theridiidae). *Aust. J. Ecol.* 1981 6, 289-90.
- Fisher, M.McD., J. Raftos, R.T. McGuinness, I.T. Dicks, J.S. Wong, K.R. Burgess and S.K. Sutherland. 1981. Funnel-web spider (*Atrax robustus*) antivenom. 2. Early clinical experience. *Med. J. Aust.*, 1981, 2, 525-6.
- Gray, M.R. 1981. A revision of the spider genus *Baiami* Lehtinen (Araneae, Amaurobioidea). *Rec. Aus. Mus. Syd.* 33(10), 779-802.
- Gray, M.R. 1981. Getting to know funnel webs. *Aust. Nat. Hist.* 20(3), 265-70.
- Harvey, M.S. 1981. A checklist of Australian Pseudoscorpionida. *Bull. Brit. Arachnol. Soc.* (1981) 5(6), 237-252.
- Jackson, R.R. 1981. The biology of *Portia fimbriata*, a web-building spider (Araneae, Salticidae) from Queensland: intraspecific interactions. *J. Zool. (Lond.)* 196(2), 295-305.
- Jackson, R.R. & A.D. Blest. 1981. The biology of *Portia fimbriata*, a web-building jumping spider (Araneae, Salticidae) from Queensland: utilization of webs and predatory versatility. *J. Zool. (Lond.)* 196(2), 255-293.
- Lehtinen, P.T. 1981. Spiders of the Oriental-Australian region. III. Tetrablemmidae, with a world revision. *Acta Zool. Fenn.* 162, 1-151.
- Sutherland, S.K. 1982. Management of spider bites in Australia. *Australian Prescriber* 5(4), 83-7.
- Sutherland, S.K., J. Tibballs & A.W. Duncan. 1981. Funnel-web spider (*Atrax robustus*) antivenom. 1. Preparation and laboratory testing. *Med. J. Aust.*, 1981, 2, 522-4.

## BOOK WANTED

Anyone wishing to sell (postage included) a good copy or who can purchase a copy of 'Spiders' by B.Y. Main, 1976, should write to Mr Denis Gibbs, 19 Beech Crescent, Hamilton, New Zealand.

## OTHER ARACHNOLOGICAL SOCIETIES AND CLUBS

By request, the following list of addresses of secretaries of other arachnological societies and clubs is provided.

## NEWSLETTER OF THE AUSTRALASIAN ARACHNOLOGICAL SOCIETY

American Arachnological Society, Dr N.I. Platnick,  
 American Museum of Natural History, Central Park West  
 at 79th Street, New York, New York, 10024, U.S.A.  
 Arachnological Society of East Asia, c/- Oteman Gakuin  
 Daigaku, 230, Ai, Ibaraki-shi, 567, Japan.  
 British Arachnological Society, Mr D.B. Nellist, 15 Newlyn  
 Close, Bricket Wood, St Albans, Herts., AL 2 3UP U.K.  
 Spider Club of southern Africa, Arachnological Society,  
 8 Cedar Str., Lindhaven, Roodepoort, Republic of South  
 Africa.

## MEMBERSHIP FEES ARE NOW DUE.

If a cross appears at the end of this statement, your  
 fees have not yet been paid. X

## ARTICLES

The bite of Hexathele sp

Simon D. Pollard, Zoology Dept, University of Canterbury,  
 Christchurch, New Zealand.

Although the toxicity of Australian funnel-web spiders (Atrax spp.) is well known, no New Zealand spiders are equally notorious. Atrax is a hexathelid (but was in the Dipluridae) and there are numerous hexathelid species in New Zealand. Once I was bitten by an immature Hexathele sp. (Hexathelidae). The effects of that bite are here described because of their interest in comparison with the known effects of the bite of Atrax.

I was bitten on the palm of the hand by an immature Hexathele (body-length, 15mm). The spider was found under a loose rock, and I picked it up in one hand and placed it in the palm of the other hand. On being placed in my palm, the spider struck one fang through my skin penetrating up to where the fang articulates with the chelicera. My hand flexed somewhat and the spider withdrew its fang. After a pause of about 3 seconds the spider buried both fangs into the palm of my hand. That caused a rapid waving of my hand (not unlike the Queen but much faster) and the spider was dislodged. The fangs were in my hand for 1-2 seconds. Other than the pain of the fangs penetrating through my skin I suffered no ill effects and no local swelling was experienced.

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Tetragonophthalma (Pisauridae) and its nursery web.

Robert J. Raven, Queensland Museum, Gregory Terrace, Fortitude Valley, 4006, Q.

Nursery web spiders is one of the common names applied to the spider family Pisauridae. Knowing that the classification of spiders is constantly under review and that some of the least known spiders are Australian species, I was curious to see just how many Australian groups that had been placed in 'European' families had similar behaviour. Having only twice seen pisaurids with nursery webs I was still sceptical that even genera like Dolomedes that occur in Europe deserve the name nursery web spiders.

One morning in early February I found to my delight that one of the grass-inhabiting pisaurids had built a small nursery web and the female was in residence. The spider was a female Tetragonophthalma. The web was about 6-8 cms in diameter and the female was close to the eggs. The spider remained with the egg-sac for a day after I had first observed it. The egg-sac was then left unattended. Several days later the eggs had hatched and the young spiderlings had dispersed away. Nevertheless, I had further confirmation that spiders which morphologically deserved inclusion in the Pisauridae also built nursery webs as do their northern hemisphere relatives.

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## Spider Books Galore (Part II)

Judy F. Grimshaw, Entomology, Department of Primary Industries, Indooroopilly, 4060, Q.

In this second section I propose to give a review of the books classified in Australasian Arachnology 6 as the general spider reading books. That is, books for humans to read written about spiders.

These books provide ample general information and observations about spiders, their life cycles and behaviour. After reading such a text you will still not be able to rush out into the garden and start 'hanging names' on all its eight-legged residents. However, you will feel that you are better able to observe araneid behaviour and you may even start to 'think' like a spider. Apart from simply adding enormously to the enjoyment of simply observing spiders, you will find that such knowledge makes them much easier to find. If you notice a change in your own behaviour, such as pouncing at passing beetles, then stop reading until the symptoms pass.

## NEWSLETTER OF THE AUSTRALASIAN ARACHNOLOGICAL SOCIETY

Over the years that Natural History has been popular many many books have been written about spider behaviour. Many of the early ones were extremely anthropomorphic and largely inaccurate. However, people are still writing about spiders, and some publishers are still prepared to print such 'strange' texts. Most of the older books are unobtainable now unless you are good at searching second-hand book stores, though you might find some sitting on the shelves of your local library.

I have three of the more recent such books sitting on my bookshelf, these are given below.

Australian Spiders by Keith C. McKeown. Sirius Books. Angus and Robertson, 1952, Sydney. 280 pp., 15 plates (black and white).

This is the book I cut my 'chelicerae' on, so to speak - it was my introduction to the amazing world of spiders. Though many of the names are dated, this still makes excellent reading for the beginning spider-student. The photographs are excellent. The text is interspersed with line drawings and excerpts from other peoples notes on spider behaviour. Since spider behaviour is so variable, the book is set out as a series of short chapters, sometimes on one species, sometimes on a group with similar behaviour patterns. The funnel-web and wolf spiders rate two 'chapters' each. There are a few pages at the back on scorpions and ticks. Unfortunately, the book is now a rare find in the bookstores so keep looking for it on the shelves.

New Zealand Spiders - an introduction. By R.R. and L.M. Forster. Collins, 1973, Auckland, 248 pp., 132 colour plates, 164 drawings. I paid \$10.60 in 1973.

Don't let the title put you off purchasing this book (non-New Zealand people). Australia has many spiders in common with our near neighbours to the east and in fact the book even includes some excellent photographs and drawings of spiders introduced to New Zealand from Australia, particularly some of our magnificent Sparassidae.

The introductory sections (Part I) include a chapter on spider relatives, whilst Part II sets out the spiders, grouped according to their similar behaviour. Twenty-eight families, other than the Mygalomorphae, are covered, plus a small chapter (14 pp.) on the Mygalomorphae.

Though groups<sup>1</sup> in family headings, the text does not aim to give the key morphological characters of its members, but once again sets out to acquaint the reader with their behaviour. The information is backed up by excellent drawings and photographs of various domestic scenes in a spider's life, from the series showing the final moult of a male

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Dolomedes sp. to a mother Lycosa hilaris out and about with her young family.

Spiders. By Barbara York Main. Collins (Australian Naturalist Library), 1976, Sydney, 280 pp., 44 colour plates, 12 black and white plates, 51 text figures. Original price \$12.95, now available in some shops at a much reduced price - so look around.

This book is very easy reading. It is even compact enough in shape to make it suitable bedtime reading. An introductory section (Part I, again) describes the evolutionary history of the morphology and behaviour we see in our present day spiders. There is scant mention in this text of near relatives of spiders. In Part II, fifty-two pages are given over to the mygalomorphs, with five pages on Gradungula that ancient 'missing link'. Part III deals with the Modern spiders, again treating them in behavioural groups. In some cases, this means that a particular family may be treated more than once, reflecting the variations in behaviour found within a family which is substantially formed by grouping on morphological and anatomical similarity. Spiders are related to their environment in Part IV. Brief collection data are presented for habitats as diverse as tropical wetlands and inland deserts. A second chapter in this part discusses the patterns of distribution within Australia. Part V, Spiders and Man, includes a short list of some known poisonous spiders found in Australia. Also included is a brief note on the collection and preservation of spiders.

I find it impossible to recommend one book over another. I think you need all, or a friend who has them and is prepared to lend them out.

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LATE NEWS

Another publication: Laing, D.J. 1982. Snail eating behaviour of the Tunnel web spider Porrhothele antipodiana (Mygalomorphae: Dipluridae). Tuatara 25(2), 74-81.

Robert Raven has been admitted to the degree of Doctor of Philosophy.