Salticidae (Arachnida: Araneae) of New Zealand: genus Hypoblemum Peckham and Peckham, 1886

Abstract The genus Hypoblemum is redefined and H. albovittatum (Keyserling, 1882) is recorded from New Zealand. Remarks on relationships, biology and distribution of the genus are provided and a distributional map is given.

Keywords Salticidae, Hypoblemum, taxonomy, biogeography, New Zealand

Introduction

The taxonomic research of New Zealand jumping spiders (Salticidae) began well over a century ago and until now, some 50 species have been described or recorded. However, the lack of type specimens, poor original diagnoses, great intraspecific variation in size and colour and interspecific uniformity in genitalic structure make proper verification of species a very difficult task. Consequently, less than 10 New Zealand species are recognisable - usually under wrong generic names (e.g., Marpissa, Attus or Euophrys).

Recent field research and the study of major spider collections (see below) revealed that about 30 genera and 200 species of Salticidae occur in New Zealand (Zabka unpubl.), most of them endemics. Despite expectations, only selected Australian genera reached New Zealand (Zabka et al. 2002, Zabka & Pollard in print). The genus Hypoblemum is one of them and has been known from 2 Australian species: H. albovittatum (Keyserling) and H. villosum (Keyserling). The former is treated here (including the study of the type-specimen), the latter (the generic type) can only be verified from original description as type specimens are not available (lost?).

Materials and Methods

The materials were provided by the curators and institutions listed below. Some specimens have been collected during our own field research. The methods of specimen examination are as described earlier (Zabka 1991). The drawings were made using grid system. Dissected epigynes were cleared in lactic acid. Nikon compound and stereo microscopes were used. The following measurements were taken: AEW - anterior eyes width, AL - abdomen length, CH - cephalothorax height, CL - cephalothorax length, CW - cephalothorax width, EFL - eye field length, L1, L2, L3, L4 - leg lengths, PEW - posterior eyes width.

Collections studied:
AMNZ - Auckland Museum Entomology Collection (John Early),
CMC - Canterbury Museum, Christchurch (Simon Pollard),
CUC - Canterbury University, Christchurch (Robert Jackson & Mathew Anstey), now deposited in CMC,
LUNZ - Entomology Research Museum, Lincoln University, Lincoln (Cor Vink),
MNZ - Museum of New Zealand Te Papa, Wellington (Phil Sirvid).
NZAC - New Zealand Arthropod Collection, Auckland (Trevor Crosby),
OMD - Otago Museum, Dunedin (Brian Patrick, Erena Barker & Simon Wylie),
ZMB - Museum für Naturkunde der Humboldt Universität, Berlin (Jason Dunlop),
ZMH - Zoologisches Institut und Zoologisches Museum, Universität Hamburg (Hieronymus Dastych).

Taxonomic review

Gen. Hypoblemum Peckham et Peckham, 1886
Hypoblemum Peckham & Peckham, 1886: 271.
Acmaea [praecoc.]: Keyserling, 1882: 1420.
Type species: Acmaea villosa Keyserling, 1882.

Generic diagnosis.

Medium size spiders, some 5-8 mm in body length. Eye field surrounded with distinctive light belt. Thoracic slope rather gentle at 2/3rd of the carapace length. Abdominal dorsum not sclerotised. Male eye field with mat of short thick hair. Male 3rd legs the longest and fringed. Chelicerae with a blunt retromarginal tooth (distinctive in males) and with 2 promarginal teeth. Male maxillae laterally pointed. Palpal organ with tegular posterior lobe and anterior lamella, seminal duct meandering, embolus (left palp) antclockwise twisted, set on membranous haematodocha. Conductor present. Epigyne in the form of two oval...
depressions divided by central dam. Copulatory openings surrounded by sclerotised lips. Insemination ducts rather long, with accessory glands. Spermathecae oval.

Relationships.

_Hypoblemum_ belongs to Euophryinae subfamily, which includes a great number of genera from all over the world. Some 3-4 Euophryinae genera also occur in New Zealand. _Lycidas_ and _Maratus_, both known from Australia, are the closest relatives of _Hypoblemum_, sharing many morphological and genital characters (Zabka 1987, Davies & Zabka 1989).

_Hypoblemum albovittatum_ (Keyserling, 1882) comb. nov. _Habrocestum albovittatum_ Keyserling, 1882: 1407 (?)

_Hypoblemum albovittatum_ Simon, 1903: 703. 708.


Przybyszynski, 1971: 422.


Type locality: Peak Downs (Australia).


Comparative material: *Habrocestum albovittatum* Keyserling, 1882, Holotypus, Australien, Peak Downs, Mus. Goddefroy, Nr. 7724*, ZMH.

**Diagnosis.**

See diagnosis for the genus.

**Description.**

Male (Fig. 1). Eye field black, surrounded by distinctive wide lighter belt, anteriorly covered with mat of short thick hairs - orange in preserved and reddish in live animals. Thorax dark-brown with white adpressed hairs. Abdomen dirty-grey, with darker cardiac mark and lighter chevrons as in the female (see Fig. 5) or more uniform in colour. Whole abdomen with greyish and brown protruding hairs. Anterior spinnerets dirty-orange, median and posterior ones - dark-grey. Clypeus dirty-orange, anterior eyes surrounded with scale-like reddish and yellowish hairs and with light-brown protruding bristles. Chelicerae (Fig. 2) orange. Maxillae light-orange, laterally pointed (Fig. 3). Labium dirty-orange. Sternum yellow, with dark narrow margin and numerous white and few brownish hairs. Venter yellow, with blackish Dalmatian-like spots. Femora of 1st legs nearly black on sides, dorsally and ventrally orange, distal podomeres generally lighter - especially dorsally and ventrally, joint areas dark, tarsi yellow. Tibiae with 3 pairs of ventrolateral spines, metatarsi with 2 pairs of prolateral and one with a pair of retrolateral spines. Other legs lighter than the first ones. Third legs (Fig. 4) with a fringe of dark hairs - mostly on patella, tibia and metatarsus. Palp organ contrasting yellow, distally orange. Palpal organ structure as shown in Fig. 7-9. CL 2.91, CW 1.13, CH 1.35, AEW 1.76, PEW 1.76, AL 3.17, L1 4.94, L2 4.83, L3 7.28, L4 5.92.

Female (Fig. 5). Eye field shiny black, surrounded with contrasting yellow belt. Behind fovea carapace dirty-grey. Thorax and sides dirty-grey, lighter towards lower margins. Hairiness yellowish and orange or grey on light and dark surfaces, respectively. Lateral eye field margins with white scale-like setae, orange setae around anterior eyes. Clypeus with dense white and yellow hairs and with darker and long bristles, two of the latter protrude below AME. Abdomen egg-shaped, generally dark-grey with yellowish median chevrons and rows of yellowish spots and dots - one of them terminally. Whole abdominal surface with protruding brown bristles - more distinctive on anterior margin. Spinnerets dirty-grey. Chelicerae honey-yellow, with single
Fig. 1-6. Hypoblemum albovittatum (Keyserling): general appearance of male (1) and female (5), cheliceral dentition of male (2) and female (6), leg III of male (4) and maxilla of male (3)
Fig. 7-9. *Hypobleumum albovittatum* (Keyserling): male palpal organ
Fig. 10-15. *Hypoblemum albovittatum* (Keyserling): variation of epigyne (10, 12) and internal genitalia (11, 14), the course of internal genitalia from ventral (13) and dorsal (15) side.
• Hypoblemum albovittatum

Distribution of *Hypoblemum albovittatum*
retromarginal tooth and two promarginal teeth (Fig. 6). Maxillae round at the top, yellow, labium darker. Sternum yellow with narrow darker margin, and with brownish hairs. Venter yellow with scattered dark-grey spots. Pedipalps yellow. Legs dirty-yellow, particular podomeres darker distally, tibiae I and II with 3 pairs of vertrolateral spines, metatarsi with two pairs of spines. Leg hairiness moderate, yellowish and brown. Epigyne and internal genitalia as shown in Fig. 10-15. CL 2.81, CW 2.23, CH 1.35, AEW 1.76, PEW 1.82, AL 4.52, L2 4.52, L3 5.98, L4 5.92.

Remarks.
In New Zealand the species has been known as “Euophrys parvula” Bryant, but has, in fact, nothing to do with the species described by Bryant (1935). The mating behaviour of the species (as “E. parvula”) was studied by Jackson & Willey (1995).

Distribution (Map 1).
A wide-spread species, found in various habitats across New Zealand. Its common name “house hopper” shows its synanthropic character and possibility of anthropodispersal from Australia. Interestingly, in Australia the species is less common - probably because much more natural character of biota.

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