

A checklist of the Australian Pseudoscorpionida

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Summary

A checklist of the 82 described species of Australian pseudoscorpions, included in 32 genera and 10 families, is presented. Synonymies, lists of type material, and, where possible, type depositories have been included to facilitate future taxonomic research. A generic key is also provided.

Introduction

Although literature concerning pseudoscorpions dates back to Linnaeus, Australian species received little attention until the turn of the 20th century. Among the earliest publications were those of L. Koch (1885) in Koch & Keyserling's historic work *Die Arachniden Australiens* and papers from C. J. With (1905 to 1908) and A. Tullgren (1909). But it was not until the early 1930s, when the higher classification of the order was sorted out to an acceptable degree by J. C. Chamberlin and M. Beier, that progress was made at a substantial level. These two authors, along with J. A. Tubb, C. C. Hoff, J. C. H. Morris and A. J. Dartnall, have added to the ever-increasing species list of this neglected, yet relatively abundant, group of arachnids.

The Australian pseudoscorpionid fauna is presently known from 82 species which are included in 32 genera and 10 families. A detailed checklist of these species was needed to place in perspective the overall taxonomy of the group. The last "revision" was Beier's (1966) key which, unfortunately, omitted *Neopseudogarypus scutellatus* Morris, and made several unexplained generic changes. Lists of type material and, where possible, type depositories have been included to correct errors (or omissions), and to stimulate much needed revisions previously rendered difficult by the apparent lack of type specimens.

Three families, Pseudogarypidae, Sternophor-

idae and Cheiridiidae, are at present known only by single endemic species. The other seven are variously represented, the largest being the Chernetidae. While it is interesting to note what is present in a continental fauna, it can be even more instructive to note what is absent, especially at the familial level. None of the six families of the superfamily Neobisioidea are known from Australia, whereas every other superfamily has been recorded. Apart from the neobisoid families, only four others are not yet known from Australia: Menthidae, Feallidae, Miratemnidae and Myrmochernetidae. These are all small families known from a limited number of localities and species.

Eight genera are currently recognised as endemic to Australia: *Austrohorus* Beier, *Protogarypinus* Beier, *Neopseudogarypus* Morris, *Austrochernes* Beier, *Conicochernes* Beier, *Calymmachernes* Beier, *Troglochernes* Beier, and *Australochelififer* Beier, six of these being monotypic. Of the 31 indigenous genera, 17 are represented by a single Australian species.

Taxonomically, the Australian fauna is poorly known, and many more species are yet to be described from this large, environmentally diverse continent. Detailed ecological studies have, with one exception, not been carried out on Australian pseudoscorpions. Richards (1971), in an examination of the Nullarbor Plain, presents data on several chelonethid species. Apart from this, the only information that is available on habitat preferences may be gleaned from the locality records noted in taxonomic papers.

With the exception of three, all species are endemic. *Withius piger* (Simon) (= *Withius subruber* (Simon)) is a cosmopolitan species known to be commensal with man (Weygoldt, 1969). *Oratemnus punctatus* (L. Koch), a common species known from the east coast of Australia, has recently been recorded from Lord Howe Island (Beier, 1976a), which is about 600 km east of the Australian mainland. *Sternophorus hirsti grayi* Beier was described from New Guinea and is a subspecies of the nominate Australian form *S. hirsti* Chamberlin (Beier, 1971c).

Two species have been recorded that I do not consider to be part of the Australian fauna. *Chelififer cancroides* (Linnaeus) was recorded from "Monte Lofty, Australia" by Beier (1930a), and is here considered to be a misidentification. This suggestion is

based on three facts: the single specimen was apparently a nymph ("1 semiad. ♀"); subsequent records of this cosmopolitan species are lacking; and it was not included in Beier's list (1948b) or key (1966) to the Australian pseudoscorpions. *Obisium antipodum* was originally described by Simon (1880) from New Caledonia. Beier (1932a) tentatively transferred it to *Ideobisium* Balzan, and confirmed this placement from additional material collected on the island (Beier, 1968). Chamberlin (1934) recorded the species from "Australia, New Caledonia, Tanafuti". This seems to be an incorrect transcription of Beier's (1932a) distribution of the species: "Australien: Neu-Kaledonien, Tanufuti". Beier often used a general term for the area under consideration, followed by a more specific location. I therefore believe that Chamberlin erred in noting that the species was known from Australia, and accordingly it has not been included in the list.

The taxonomic status of several other genera is uncertain or needs clarification.

Lagnochthonius was originally described by Beier (1951) as a subgenus of *Tyrannochthonius* Chamberlin. Subsequently, Chamberlin (1962) elevated it to generic rank, which was supported by Muchmore (1972). Beier continued to retain it as a subgenus (cf. Beier, 1966). Chamberlin's decision is followed here, and hence *T. (L.) australicus* Beier is placed in the genus *Lagnochthonius*.

Morikawia Chamberlin was designated a junior synonym of *Paraliochthonius* Beier by Muchmore (1972). Muchmore pointed out that the Pacific species of *Morikawia* described by Beier, including three Australian species, must be re-examined to finalise their true generic position, whether within *Paraliochthonius* or not. Beier (1976a) transferred the three New Zealand species of *Morikawia* to *Paraliochthonius* and referred to *M. queenslandica* Beier as *P. queenslandicus* (Beier). The other two Australian species, *M. cavicola* Beier and *M. semihorrida* Beier, have here been tentatively placed in *Paraliochthonius*.

Euryolpium Redikortzev is here considered to hold full generic status (Heurtault, 1980), and is not regarded as a synonym of *Xenolpium* Chamberlin (Beier, 1951, 1976a). Mahnert (1978) tentatively placed *X. squalidum* Beier and *X. bornemisszai* Beier into the genus *Beierolpium* Heurtault. These

two species have been retained in *Xenolpium* until future revisions are carried out.

Beier (1968) described *Protochelifer cavernarum aiteni* from specimens collected in Abrakurrie Cave, Western Australia, and later recorded other specimens from the same locality as *P. cavernarum* Beier (Beier, 1974). Even though the type material of both taxa has not been examined, it seems likely that the two are synonymous. A large series of specimens examined by me (kindly provided by Ms J. Lowry) revealed no significant differences to support the retention of the separate subspecies.

Mention should be made of the "family" Synsphyronidae which was erected by Beier (1932a) to accommodate the genus *Synsphyronus* Chamberlin. Beier placed the family in his superfamily Feaellides (Fealloidea) within his suborder Neobisiinea (Diplosphyronida) because members of the genus (then only *S. paradoxus* Chamberlin) possessed fused pedal tarsi. As pointed out by Chamberlin (1930, 1943), *Synsphyronus* is a representative of the diplosphyronid family Garypidae, sharing every other major character with the remaining genera. Beier himself later included the genus as a member of the Garypidae (cf. Beier, 1966), yet unfortunately, some authors persist in following Beier's 1932a account and retain it as a valid family (e.g. Weygoldt, 1969).

The type status of two specimens is in doubt. The female paratype of *Pseudotyrannochthonius gigas* Beier, 1969, is not labelled as such, even though the locality label agrees well with the published account. While ICZN article 72 (b) appears flexible on this point, it is here considered to hold type status. The South Australian Museum possesses a female of *P. hamiltonsmithi* Beier, 1968, that is labelled (in Beier's handwriting) as a paratype. Unfortunately, the published description does not mention any other specimen besides the holotype. Once again, ICZN article 72 (b) is flexible, and the specimen is here considered to not hold type status.

The type material of *Chthonius caecus* Tullgren (= *Sathrochthonius tullgreni* Chamberlin), *Maorigarypus viridis* Tubb, *Idiochelifer brevidigitatus* Tubb, *Heterolophus australicus* Beier and *Morikawia semihorrida* Beier could not be traced. Weidner (1959) stated that the holotype of *C. caecus* was lost in the mail. Some type material of several other species is also missing, but fortunately, at least one

specimen of each is still present in museum collections.

In the context of this paper, Australia is referred to as the Australian mainland and Tasmania, with associated coastal islands. A problem arises with Murray Island, the type (and only) locality of *Garypus longidigitus* Hoff. Politically this Torres Strait island is Australian, but geographically it is closer to New Guinea than to Australia (130 km SE compared with 190 km NE). Further records will be needed to establish the faunal affinities of this species, which is here retained in the Australian list.

This paper is the result of a literature survey on the taxonomy of the Australian Pseudoscorpionida. The checklist covers papers published up to the end of 1979. References included in the bibliography of each species are those which describe new species, redescribe species, record additional localities, or indicate a change in name, even if this is only done in a key. A complete synonymy has not been given for the cosmopolitan species *Withius piger* (Simon), and the references cited are those which have direct relevance to the Australian fauna.

The following abbreviations were used for distribution:

A.C.T.: Australian Capital Territory.
 N.S.W.: New South Wales.
 N.T.: Northern Territory.
 Qld: Queensland.
 S.A.: South Australia.
 Tas.: Tasmania.
 Vic.: Victoria.
 W.A.: Western Australia.

The following abbreviations were used for depositories:

AM: Australian Museum, Sydney (Mr M. R. Gray).
 AMNH: American Museum of Natural History (Dr N. I. Platnick).
 BM(NH): British Museum (Natural History) (Mr F. R. Wanless, Miss B. Brewster and Mr P. D. Hillyard).
 JCC: J. C. Chamberlin collection, Pacific University, Forest Grove (Prof. D. R. Malcolm and Dr E. M. Benedict).
 MCZ: Museum of Comparative Zoology, Cambridge, Mass. (Prof. H. W. Levi).
 MNHN: Museum National d'Histoire Naturelle, Paris.

NMW: Naturhistorisches Museum, Wien (Dr J. Gruber).

SAM: South Australian Museum, Adelaide (Mr D. C. Lee).

TM: Tasmanian Museum and Art Gallery, Hobart (Dr A. Green).

WAM: Western Australian Museum, Perth (Dr L. E. Koch).

ZML: Zoologiska Museet, Lund (Dr L. Cederholm).

ZSZM: Zoologisches Staatsinstitut und Zoologisches Museum, Hamburg (Dr G. Rack).

Suborder **HETEROSPHYRONIDA** Chamberlin, 1929: 57.

Superfamily **CHTHONIOIDEA** Chamberlin, 1931a: 209.

Family **CHTHONIIDAE** Hansen, 1893: 232.

Genus *Austrochthonius* Chamberlin

Austrochthonius Chamberlin, 1929: 68.

Paraustrochthonius Beier, 1931: 52 (syn.? Beier, 1976a: 203).

Type species: *Chthonius chilensis* Chamberlin, 1923b: 187-190.

Generic distribution: Australia, New Zealand, Pacific, South Africa, South America.

1. *Austrochthonius australis* Hoff

Austrochthonius australis Hoff, 1951: 5-9.

Austrochthonius australis Hoff; Beier, 1966: 281-283.

Austrochthonius australis Hoff; Beier, 1969: 187.

Austrochthonius australis Hoff; Darnall, 1970: 65-66.

Austrochthonius australis Hoff; Beier, 1974: 203.

Austrochthonius australis Hoff; Darnall, 1978: appendix A.

Holotype: 1 ♀, AMNH.

Distribution: A.C.T., N.S.W., Tas., Vic., W.A.

2. *Austrochthonius cavicola* Beier

Austrochthonius cavicola Beier, 1968: 757-758.

Holotype: 1 ♂, SAM (N196828).

Distribution: S.A.

Genus *Lagynochthonius* Beier

Lagynochthonius Beier, 1951: 61.

Type species: *Chthonius johni* Redikortzev, 1922: 550-554.

Generic distribution: Australia, South-east Asia.

1. *Lagynochthonius australicus* (Beier) comb. nov.

Tyrannochthonius (*Lagynochthonius*) *australicus* Beier, 1966: 284-285.

Tyrannochthonius australicus Beier; Beier, 1974: 203.

Holotype: 1 tritonymph, AM (KS 5853).

Distribution: N.T., W.A.

Genus *Paraliochthonius* Beier

Paraliochthonius Beier, 1956: 58-59.

Morikawia Chamberlin, 1962: 311-312 (syn. Muchmore, 1972: 250).

Type species: *Chthonius singularis* Menozzi, 1924: 1-3.

Generic distribution: Australia, Central America, Europe, New Zealand, South-east Asia.

1. *Paraliochthonius cavicolus* (Beier) comb. nov.

Morikawia cavicola Beier, 1967: 199-200.

Holotype: 1 ♂, SAM (N1966165).

Paratypes: 1 ♀, SAM (N1966166); 1 ♂, NMW.

Distribution: N.S.W.

2. *Paraliochthonius queenslandicus* (Beier)

Morikawia queenslandica Beier, 1969: 174-175.

Paraliochthonius queenslandicus (Beier); Beier, 1976a: 206.

Holotype: 1 ♂, depository unknown.

Paratypes: 4 ♂♂, 3 ♀♀, depository unknown; 4 ♂♂, 2 ♀♀, NMW.

Distribution: Qld.

3. *Paraliochthonius semihorridus* (Beier) comb. nov.

Morikawia semihorrida Beier, 1969: 176-177.

Holotype: 1 ♀, depository unknown.

Distribution: Qld.

Genus *Pseudotyranochthonius* Beier

Pseudotyranochthonius Beier, 1930a: 207-208.

Tubbichthonius Hoff, 1951: 10-11 (syn. Beier, 1966: 285).

Spelaeochthonius Morikawa, 1954: 83 (syn. Muchmore, 1967: 134).

Type species: *Chthonius silvestrii* Ellingsen, 1905: 327-328.

Generic distribution: Australia, Japan, North America, South America.

1. *Pseudotyranochthonius australiensis* Beier

Pseudotyranochthonius australiensis Beier, 1966: 287-288.

Holotype: 1 ♀, AM (KS 5323).

Distribution: N.S.W.

2. *Pseudotyranochthonius bornemisszai* Beier

Pseudotyranochthonius bornemisszai Beier, 1966: 286-287.

Holotype: 1 ♀, AM (KS 5854).

Paratype: 1 deutonymph, AM (lost).

Distribution: Vic.

3. *Pseudotyranochthonius giganteus* Beier

Pseudotyranochthonius giganteus Beier, 1971b: 233-234.

Holotype: 1 ♀, AM (KS 5324).

Paratypes: 1 ♂, AM (KS 5324); 1 ♂, NMW.

Distribution: W.A.

4. *Pseudotyranochthonius gigas* Beier

Pseudotyranochthonius gigas Beier, 1969: 178-179.

Holotype: 1 ♀, SAM (N1980191).

Paratype: 1 ♀, AM (KS 5326).

Distribution: Vic.

5. *Pseudotyranochthonius hamiltonsmithi* Beier

Pseudotyranochthonius hamiltonsmithi Beier, 1968: 759-760.

Holotype: 1 ♀, SAM (N196830).

Distribution: Vic.

6. *Pseudotyranochthonius jonesi* (Chamberlin)

Tubbichthonius jonesi Chamberlin, 1962: 317-319.

Pseudotyranochthonius jonesi (Chamberlin); Beier, 1966: 276.

Pseudotyranochthonius jonesi (Chamberlin); Dartnall, 1970: 67.

Holotype: 1 ♀, AMNH (JC-2014.01001).

Distribution: N.S.W., Tas.

7. *Pseudotyranochthonius queenslandicus* Beier

Pseudotyranochthonius queenslandicus Beier, 1969: 177-178.

Holotype: 1 ♂, depository unknown.

Paratypes: 1 tritonymph, depository unknown; 2 ♂♂, NMW.

Distribution: Qld.

8. *Pseudotyranochthonius solitarius* (Hoff)

Tubbichthonius solitarius Hoff, 1951: 9-13.

Pseudotyranochthonius solitarius (Hoff); Beier, 1966: 286.

Pseudotyranochthonius solitarius (Hoff); Dartnall, 1970: 67.

Pseudotyranochthonius solitarius (Hoff); Beier, 1974: 203.

Pseudotyranochthonius solitarius (Hoff); Dartnall, 1978: appendix A.

Holotype: 1 ♂, AMNH.

Distribution: A.C.T., Tas., Vic., W.A.

9. *Pseudotyrannochthonius tasmanicus* Dartnall

Pseudotyrannochthonius tasmanicus Dartnall, 1970: 66.
Pseudotyrannochthonius tasmanicus Dartnall; Dartnall, 1978: appendix A.
 Holotype: 1 ♂, TM (J613).
 Distribution: Tas.

10. *Pseudotyrannochthonius typhlus* Dartnall

Pseudotyrannochthonius typhlus Dartnall, 1970: 67.
 Holotype: 1 ♂, TM (J602).
 Paratypes: 1 tritonymph, TM (J611); 1 deutonymph TM (J603).
 Distribution: Tas.

Genus *Sathrochthonius* Chamberlin

Sathrochthonius Chamberlin, 1962: 303-304.
 Type species: *Sathrochthonius tuena* Chamberlin, 1962: 304-306.
 Generic distribution: Australia, New Zealand, Pacific, South America.

1. *Sathrochthonius crassidens* Beier

Sathrochthonius crassidens Beier, 1966: 280-281.
 Holotype: 1 ♂, AM (KS 5851).
 Distribution: N.S.W.

2. *Sathrochthonius tuena* Chamberlin

Sathrochthonius tuena Chamberlin, 1962: 304-306.
Sathrochthonius tuena Chamberlin; Beier, 1967: 199.
Sathrochthonius tuena Chamberlin; Beier, 1968: 757.
 Holotype: 1 ♂, AMNH (JC-2014.02001).
 Paratypes: 1 ♂, 2 ♀♀, AMNH (JC-2014.02002-4).
 Distribution: N.S.W.

3. *Sathrochthonius tullgreni* Chamberlin

Chthonius caecus Tullgren, 1909: 414-415 (homonym of *C. caecus* Packard, 1884).
Mundochthonius caecus (Tullgren); Beier, 1932a: 38.
Mundochthonius caecus (Tullgren); Weidner, 1959: 115.
Sathrochthonius tullgreni Chamberlin, 1962: 306-307.
 Holotype: 1 ♂, ZSZM (lost).
 Distribution: W.A.

Genus *Tyrannochthonius* Chamberlin

Tyrannochthonius Chamberlin, 1929: 74.
 Type species: *Chthonius terribilis* With, 1906: 69-73.
 Generic distribution: World-wide.

1. *Tyrannochthonius laevis* Beier

Tyrannochthonius (Tyrannochthonius) laevis Beier, 1966: 283-284.
 Holotype: 1 ♂, AM (KS 5852).
 Paratypes: 7 specimens, AM (KS 5852); 3 specimens, NMW.
 Distribution: W.A.

Family DITHIDAE Chamberlin, 1931: 209.

Genus *Anaulacodithella* Beier

Anaulacodithella Beier, 1944: 175.
Xenoditha Chamberlin & Chamberlin, 1945: 17-18 (syn. Beier, 1947: 287).
 Type species: *Chthonius mordax* Tullgren, 1907: 234.
 Generic distribution: Africa, Australia, Pacific.

1. *Anaulacodithella australica* Beier

Anaulacodithella australica Beier, 1969: 172-174.
Anaulacodithella australica Beier; Beier, 1974: 203.
 Holotype: 1 ♂, depository unknown.
 Paratypes: 11 ♂♂, 11 ♀♀, 2 nymphs, depository unknown; 8 ♂♂, 6 ♀♀, NMW.
 Distribution: N.S.W., Qld.

Genus *Heterolophus* Tomosvary

Heterolophus Tomosvary, 1884: 24.
 Type species: *Heterolophus guttiger* Tomosvary, 1884: 24-25.
 Generic distribution: Circum-tropical.

1. *Heterolophus australicus* Beier

Heterolophus australicus Beier, 1969: 171-172.
 Holotype: 1 ♀, depository unknown.
 Paratype: 1 tritonymph, depository unknown.
 Distribution: Qld.

Suborder DIPLOSPHYRONIDA Chamberlin, 1929: 78.

Superfamily GARYPOIDEA Chamberlin, 1930: 585.

Family GARYPIDAE Hansen, 1893: 231.

Genus *Garypus* L. Koch

Garypus L. Koch, 1873: 38.
 Type species: *Garypus litoralis* L. Koch, 1873: 40.
 Generic distribution: Circum-tropical.

1. *Garypus longidigitus* Hoff

Garypus longidigitus Hoff, 1947: 41-44.
 Holotype: 1 ♀, MCZ.
 Distribution: Qld.

Genus *Synsphyronus* Chamberlin

Synsphyronus Chamberlin, 1930: 616.
Maorigarypus Chamberlin, 1930: 616 (syn. Chamberlin, 1943: 488).
Idiogarypus Chamberlin, 1943: 499-500 (syn. Morris, 1948a: 37).

Type species: *Synsphyronus paradoxus* Chamberlin, 1930: 617.

Generic distribution: Australia, New Zealand.

Subgenus *Synsphyronus* Chamberlin

1. *Synsphyronus (Synsphyronus) callus* Hoff

Synsphyronus (Synsphyronus) callus Hoff, 1947: 50-53.

Holotype: 1 ♀, MCZ.

Paratypes: 1 ♀, 1 tritonymph, MCZ.

Distribution: W.A.

2. *Synsphyronus (Synsphyronus) mimetus* Chamberlin

Synsphyronus paradoxus Chamberlin; Tubb, 1937: 412 (misdet.).

Synsphyronus (Synsphyronus) mimetus Chamberlin, 1943: 492-496.

Synsphyronus (Synsphyronus) mimetus Chamberlin; Chamberlin, 1949: 4-5.

Holotype: 1 ♂, JCC (JC-619.02001).

Paratypes: 2 ♂♂, 3 ♀♀, 1 tritonymph, JCC (JC-619.02002-9); 1 ♂, 1 ♀, MCZ (JC-619.02013-14); ♂♂, ♀♀, depository unknown (JC-619.02010-12, 15-40).

Distribution: S.A., Vic.

3. *Synsphyronus (Synsphyronus) paradoxus* Chamberlin

Synsphyronus paradoxus Chamberlin, 1930: 617.

Synsphyronus paradoxus Chamberlin; Chamberlin, 1931a: 52, 122, 164, 177.

Synsphyronus paradoxus Chamberlin; Beier, 1932a: 238.

Synsphyronus (Synsphyronus) paradoxus Chamberlin; Chamberlin, 1943: 490-492.

Holotype: 1 ♂, JCC (JC-481.02001).

Paratypes: 3 ♀♀, JCC (JC-481.02002-4).

Distribution: N.S.W.

Subgenus *Maorigarypus* Chamberlin

Maorigarypus Chamberlin, 1930: 616.

Type species: *Maorigarypus melanocheletus* Chamberlin, 1930: 617-618.

4. *Synsphyronus (Maorigarypus) dewae* Beier

Synsphyronus (Maorigarypus) dewae Beier, 1969: 181-182.

Holotype: 1 ♀, NMW.

Paratypes: 2 deutonymphs, AM (KS 5855).

Distribution: S.A.

5. *Synsphyronus (Maorigarypus) elegans* Beier

Synsphyronus (Maorigarypus) elegans Beier, 1954: 13-15.

Syntypes: 8 ♂♂, 11 ♀♀, 1 tritonymph, 1 protonymph, ZML; 3 ♂♂, 3 ♀♀, NMW.

Distribution: W.A.

6. *Synsphyronus (Maorigarypus) fallaciosus* Beier

Synsphyronus (Maorigarypus) fallaciosus Beier, 1966: 294-295.

Synsphyronus (Maorigarypus) fallaciosus Beier; Beier, 1974: 203.

Holotype: 1 ♂, AM (KS 5856).

Paratypes: 2 ♀♀, 1 tritonymph, 1 deutonymph, AM (KS 5857, KS 5858); 1 ♂, NMW.

Distribution: N.S.W., Vic.

7. *Synsphyronus (Maorigarypus) gigas* Beier

Synsphyronus (Maorigarypus) gigas Beier, 1971a: 161-162.

Holotype: 1 ♀, AM (KS 5198).

Paratypes: 1 ♂, 2 ♀♀, 2 deutonymphs, 1 protonymph, AM (KS 5198); 2 ♀♀, NMW.

Distribution: W.A.

8. *Synsphyronus (Maorigarypus) gisleni* Beier

Synsphyronus (Maorigarypus) gisléni Beier, 1954: 9-10.

Holotype: 1 ♀, ZML.

Distribution: W.A.

9. *Synsphyronus (Maorigarypus) grayi* Beier

Synsphyronus (Maorigarypus) grayi Beier, 1974: 205-206.

Syntypes: 1 ♂, 2 ♀♀, AM (KS 0015); 1 ♂, 1 ♀, NMW.

Distribution: W.A.

10. *Synsphyronus (Maorigarypus) hansenii* (With)

Garypus hansenii With, 1908: 12-15.

Garypus hansenii With; Chamberlin, 1930: 612.

Maorigarypus hansenii (With); Beier, 1932a: 226-227.

Idiogarypus hansenii (With); Chamberlin, 1943: 499-500.

Synsphyronus (Maorigarypus) hansenii (With); Morris, 1948a: 37-40.

Synsphyronus (Maorigarypus) hansenii (With); Beier, 1954: 11-12.

Synsphyronus hansenii (With); Dartnall, 1978: appendix A.

Holotype: 1 ♂, BM(NH) (1901.6.4.29).

Distribution: Tas.

11. *Synsphyronus (Maorigarypus) magnus* Hoff

Synsphyronus (Maorigarypus) magnus Hoff, 1947: 47-50.

Holotype: 1 ♀, MCZ.

Distribution: W.A.

12. *Synsphyronus (Maorigarypus) mimulus* Chamberlin

Synsphyronus (Maorigarypus) mimulus Chamberlin, 1943: 496-498.

Holotype: 1 ♂, JCC (JC-619.03001).

Paratypes: 3 ♂♂, 4 ♀♀, 1 tritonymph, JCC (JC-619.03002-8, JC-619.02010); 1 ♂, 1 ♀, WAM (JC-619.03010-11);

WAM 81/329-330); 1 ♂, 1 ♀, MCZ (JC-619.03013-

14); ♂♂, ♀♀, depository unknown (JC-619.03009, 12, 15-28).

Distribution: S.A.

13. *Synsphyronus (Maorigarypus) niger* Hoff

Synsphyronus (Maorigarypus) niger Hoff, 1947: 45-47.

Holotype: 1 ♂, MCZ.

Distribution: S.A.

14. *Synsphyronus (Maorigarypus) nullarborensis* Beier

Synsphyronus (Maorigarypus) nullarborensis Beier, 1969: 179-181.

Synsphyronus (Maorigarypus) nullarborensis Beier; Beier, 1974: 203.

Holotype: 1 ♀, WAM (78-601).

Distribution: S.A., W.A.

15. *Synsphyronus (Maorigarypus) viridis* (Tubb)

Maorigarypus viridis Tubb, 1937: 412-413.

Synsphyronus (Maorigarypus) viridis (Tubb); Chamberlin, 1943: 498-499.

Holotype: 1 ♀, depository unknown.

Distribution: Vic.

Family OLPIIDAE Chamberlin, 1930: 588.

Genus *Austrohorus* Beier

Austrohorus Beier, 1966: 288-289.

Type species: *Austrohorus exsul* Beier, 1966: 289-290.

Generic distribution: Australia.

1. *Austrohorus exsul* Beier

Austrohorus exsul Beier, 1966: 289-290.

Holotype: 1 ♂, AM (KS 5862).

Distribution: W.A.

Genus *Euryolpium* Redikortzev

Euryolpium Redikortzev, 1938: 82.

Type species: *Euryolpium agniae* Redikortzev, 1938: 82-84.

Generic distribution: Australia, South-east Asia.

1. *Euryolpium granulosum* (Hoff)

Xenolpium granulosum Hoff, 1947: 39-41.

Xenolpium robustum Beier, 1948b: 525-527 (syn. Beier, 1966: 291).

Euryolpium granulosum (Hoff); Beier, 1966: 291.

Holotype (*granulosum*): 1 ♀, MCZ.

Holotype (*robustum*): 1 ♀, BM(NH) (1931.12.14.5).

Distribution: W.A.

2. *Euryolpium michaelsoni* (Tullgren)

Olpium michaelsoni Tullgren, 1909: 412-414.

Olpium michaelsoni Tullgren; Chamberlin, 1930: 604.

Olpium michaelsoni Tullgren; Chamberlin, 1931a: 50, 77.

Olpium michaelsoni Tullgren; Beier, 1932a: 184.

Xenolpium michaelsoni (Tullgren); Beier, 1948b: 527.

Euryolpium michaelsoni (Tullgren); Beier, 1966: 290-291.

Holotype: 1 ♀, ZSZM.

Distribution: N.S.W., W.A.

Genus *Olpium* L. Koch

Olpium L. Koch, 1873: 33.

Type species: *Obisium pallipes* Lucas, 1846: 277.

Generic distribution: Africa, Asia, Australia, Europe.

1. *Olpium australicum* Beier

Olpium australicum Beier, 1969: 182-183.

Olpium australicum Beier; Beier, 1974: 203.

Holotype: 1 ♂, SAM (N1980190).

Distribution: S.A., W.A.

Genus *Protogarypinus* Beier

Protogarypinus Beier, 1954: 3-4.

Type species: *Protogarypinus giganteus* Beier, 1954: 4-6.

Generic distribution: Australia.

1. *Protogarypinus dissimilis* Beier

Protogarypinus dissimilis Beier, 1974: 204-205.

Syntypes: 1 ♂, 3 ♀♀, 16 nymphs, SAM (N197762a-t);

1 ♂, 2 ♀♀, 5 nymphs, NMW.

Distribution: S.A.

2. *Protogarypinus giganteus* Beier

Protogarypinus giganteus Beier, 1954: 4-6.

Holotype: 1 ♀, ZML.

Distribution: W.A.

Genus *Solinus* Chamberlin

Solinus Chamberlin, 1930: 596.

Type species: *Garypinus corticolus* Chamberlin, 1923c: 366.

Generic distribution: Circum-tropical.

1. *Solinus australiensis* Chamberlin

Solinus australiensis Chamberlin, 1930: 597.

Solinus australiensis Chamberlin; Beier, 1932a: 214.

Solinus australiensis Chamberlin; Tubb, 1937: 412.

Holotype: 1 ♀, JCC (JC-480.03001).

Distribution: N.S.W., Vic.

Genus *Xenolpium* Chamberlin

Xenolpium Chamberlin, 1930: 600.

Antiolpium Beier, 1962: 399 (syn. Beier, 1976a: 210).

Type species: *Olpium pacificum* With, 1907: 75-77.

Generic distribution: Pacific.

1. *Xenolpium bornemisszai* Beier

Xenolpium bornemisszai Beier, 1966: 292-294.
Beierolpium bornemisszai (Beier); Mahnert, 1978: 873.
 Holotype: 1 ♂, AM (KS 5859).
 Paratypes: 1 ♀, AM (KS 5860); 1 ♀, NMW.
 Distribution: N.S.W.?, W.A.

2. *Xenolpium longiventer* (L. Koch)

Olpium longiventer L. Koch, 1885: 50-51.
Xenolpium longiventer (L. Koch); Beier, 1932a: 202.
Xenolpium longiventer (L. Koch); Beier, 1966: 291.
Xenolpium longiventer (L. Koch); Beier, 1969: 187.
Xenolpium longiventer (L. Koch); Dartnall, 1978: appendix A.
 Syntype: 1 specimen, BM(NH) (1913.9.1.455).
 Distribution: Qld, Tas., Vic.

3. *Xenolpium squalidum* Beier

Xenolpium squalidum Beier, 1966: 291-292.
Beierolpium squalidum (Beier); Mahnert, 1978: 873.
 Holotype: 1 ♂, AM (KS 5861).
 Paratype: 1 ♀, AM (KS 5861).
 Distribution: W.A.

Suborder MONOSPHYRONIDA Chamberlin, 1929: 78.

Superfamily FEALLOIDEA Chamberlin, 1931: 230.

Family PSEUDOGARYPIDAE Chamberlin, 1923a: 161.

Genus *Neopseudogarypus* Morris

Neopseudogarypus Morris, 1948b: 43.
 Type species: *Neopseudogarypus scutellatus* Morris, 1948b: 44-46.
 Generic distribution: Australia.

1. *Neopseudogarypus scutellatus* Morris

Neopseudogarypus scutellatus Morris, 1948b: 44-46.
Neopseudogarypus scutellatus Morris; Benedict & Malcolm, 1978: 83, 85.
 Holotype: 1 ♀, BM(NH) (1948.3.24.4).
 Paratypes: 1 ♂, 1 ♀, BM(NH) (1948.3.24.2-3); 1 ♂, AM (KS 5319); 1 ♀, AMNH; ?, MNHN.
 Distribution: Tas.

Superfamily CHEIRIDIOIDEA Chamberlin, 1931: 234.

Family CHEIRIDIIDAE Chamberlin, 1931a: 236.

Genus *Cryptocheiridium* Chamberlin

Cryptocheiridium Chamberlin, 1931a: 238.
 Type species: *Chiridium subtropicum* Tullgren, 1907: 218.
 Generic distribution: Africa, Asia, Australia, Pacific.

1. *Cryptocheiridium australicum* Beier

Cryptocheiridium australicum Beier, 1969: 183-185.
Cryptocheiridium australicum Beier; Richards, 1971: 19, 24, 25, 30, 32, 43.
 Holotype: 1 ♂, SAM (N1980189).
 Distribution: W.A.

Family STERNOPHORIDAE Chamberlin, 1923c: 370-371.

Genus *Sternophorus* Chamberlin

Sternophorus Chamberlin, 1923c: 371.
 Type species: *Sternophorus sini* Chamberlin, 1923c: 371-372.
 Generic distribution: Circum-tropical.

1. *Sternophorus hirsti* Chamberlin

Sternophorus hirsti Chamberlin, 1932: 143.
Sternophorus hirsti Chamberlin; Beier, 1932b: 18.
 Holotype: 1 ♂, JCC (JC-480.01001).
 Distribution: N.S.W., New Guinea.

Superfamily CHELIFEROIDEA Chamberlin, 1931a: 239-240.

Family CHELIFERIDAE Hagen, 1879: 400.

Genus *Australochelifer* Beier

Australochelifer Beier, 1974: 209.
 Type species: *Australochelifer pygmaeus* Beier, 1974: 209-210.
 Generic distribution: Australia.

1. *Australochelifer pygmaeus* Beier

Australochelifer pygmaeus Beier, 1974: 209-210.
 Holotype: 1 ♂, SAM (N197758).
 Paratypes: 2 nymphs, SAM (N197759-60).
 Distribution: N.S.W.

Genus *Protochelifer* Beier

Protochelifer Beier, 1948b: 552-553.
 Type species: *Protochelifer novaezealandiae* Beier, 1948b: 554-555.
 Generic distribution: Australia, New Zealand.

1. *Protochelifer australis* (Tubb)

Ideochelifer australis Tubb, 1937: 414-415.
Protochelifer (?) *australis* (Tubb); Beier, 1948b: 553.
Protochelifer australis (Tubb); Chamberlin, 1949: 46-49.

Syntypes: 1 ♂, AMNH; 2 adults, 2 nymphs, depository unknown.

Distribution: Vic.

2. *Protochelifer brevidigitatus* (Tubb)

Ideochelifer brevidigitatus Tubb, 1937: 414.

Protochelifer brevidigitatus (Tubb); Chamberlin, 1949: 49.

Holotype: 1 ♂, depository unknown.

Distribution: Vic.

3. *Protochelifer cavernarum* Beier

Protochelifer cavernarum Beier, 1967: 203-205.

Protochelifer cavernarum Beier; Beier, 1968: 764.

Protochelifer cavernarum aitkeni Beier, 1968: 764-765 (syn. Beier, 1974: 203).

Protochelifer cavernarum Beier; Beier, 1969: 187.

Protochelifer cavernarum aitkeni Beier; Beier, 1969: 187.

Protochelifer cavernarum Beier; Richards, 1971: 18, 22, 24, 25, 27, 28, 30, 34, 35, 36, 39, 43, 48.

Protochelifer cavernarum Beier; Beier, 1974: 203.

Syntypes: 3 ♂♂, 2 ♀♀, SAM (N1966167-71); 3 ♂♂, 2 ♀♀, NMW; 1 tritonymph, 1 protonymph, AM (KS 5318); 1 tritonymph, AM (KS 5317).

Distribution: N.S.W., S.A., Vic., W.A.

4. *Protochelifer naracoortensis* Beier

Protochelifer naracoortensis Beier, 1968: 763-764.

Holotype: 1 ♂, SAM (N196831).

Paratypes: 1 ♀, SAM (N196832); 4 ♂♂, 1 ♀, SAM (N196833-7); 2 ♂♂, 1 ♀, SAM (N197910a-c); 3 ♂♂, 1 ♀, SAM (N197911a-d); 2 ♀♀, 1 tritonymph, SAM (N197912a-c); 1 deutonymph, 2 protonymphs, SAM (N197913a-c); 1 deutonymph, 1 protonymph, SAM (N197914a-b); 1 protonymph, SAM (N197915); 3 ♂♂, 3 ♀♀, NMW.

Distribution: S.A.

5. *Protochelifer victorianus* Beier

Protochelifer victorianus Beier, 1966: 301-302.

Holotype: 1 ♂, AM (KS 5863).

Distribution: Vic.

Genus *Withius* Kew

Withius Kew, 1911: 49.

Type species: *Chelifer piger* Simon, 1878: 148-149.

Generic distribution: Cosmopolitan.

1. *Withius piger* (Simon)

Chelifer piger Simon, 1878: 148-149.

Chelifer subruber Simon, 1879: 30 (syn. Heurtault, 1971: 1050).

Withius subruber (Simon); Beier, 1966: 301.

Holotype: 1 ♀, MNHN (2379).

Distribution: N.S.W., cosmopolitan.

Family ATEMNIDAE Chamberlin, 1931a: 243-244.

Genus *Oratemnus* Beier

Oratemnus Beier, 1932c: 588.

Steiratemnus Beier, 1948b: 527-529 (syn.? Beier, 1966: 296).

Type species: *Chelifer articulatus* Simon, 1899: 120.

Generic distribution: Pacific.

1. *Oratemnus cavernicola* Beier

Oratemnus cavernicola Beier, 1976b: 217-272.

Holotype: 1 ♀, AM (KS 0066).

Paratype: 1 tritonymph, AM (KS 0067).

Distribution: N.S.W.

2. *Oratemnus curtus* (Beier)

Steiratemnus curtus Beier, 1954: 15-16.

Oratemnus curtus (Beier); Beier, 1966: 278.

Holotype: 1 ♀, ZML.

Paratype: 1 ♀, NMW.

Distribution: W.A.

3. *Oratemnus distinctus* (Beier)

Steiratemnus distinctus Beier, 1948b: 531-532.

Oratemnus distinctus (Beier); Beier, 1966: 278.

Oratemnus distinctus (Beier); Beier, 1969: 187.

Oratemnus distinctus (Beier); Richards, 1971: 18.

Holotype: 1 ♀, BM(NH) (1979.8.23.1).

Distribution: N.S.W., W.A.

4. *Oratemnus punctatus* (L. Koch)

Chelifer punctatus L. Koch, 1885: 45-46.

Chelifer brevidigitatus L. Koch, 1885: 48-49 (syn. Beier, 1948b: 529).

Chelifer punctatus L. Koch (as *C. brevidigitatus*); With, 1905: 112, 328.

Anatemnus brevidigitatus (L. Koch); Beier, 1932b: 56.

Anatemnus (?) punctatus (L. Koch); Beier, 1932b: 56.

Anatemnus brevidigitatus (L. Koch); Beier, 1932c: 586-587.

Steiratemnus punctatus (L. Koch); Beier, 1948b: 529-531.

Oratemnus punctatus (L. Koch); Beier, 1966: 296.

Oratemnus punctatus (L. Koch); Beier, 1969: 187.

Oratemnus punctatus (L. Koch); Beier, 1974: 203.

Oratemnus punctatus (L. Koch); Beier, 1976a: 213.

Syntypes (*punctatus*): 2 specimens, BM(NH) (1891.8.1.1076-1077); 5 specimens, BM(NH) (1913.9.1.352-356).

Syntypes (*brevidigitatus*): 2 specimens, BM(NH) (1913.9.1.218-219).

Distribution: A.C.T., N.S.W., Qld, S.A., Vic., W.A., Lord Howe Island.

Family CHERNETIDAE Chamberlin, 1931a: 241.

Genus *Austrochernes* Beier

Austrochernes Beier, 1932b: 170.

Type species: *Chelifer australiensis* With, 1905: 101.
Generic distribution: Australia.

1. *Austrochernes australiensis* (With)

Chelifer australiensis With, 1905: 101.
Austrochernes australiensis (With); Beier, 1932b: 171.
Syntypes: 2 ♂♂, BM(NH) (1893.12.17).
Distribution: Qld.

Genus *Calymmachernes* Beier

Calymmachernes Beier, 1954: 24-25.
Type species: *Calymmachernes angulatus* Beier, 1954: 25-26.
Generic distribution: Australia.

1. *Calymmachernes angulatus* Beier

Calymmachernes angulatus Beier, 1954: 25-26.
Holotype: 1 ♀, ZML.
Distribution: W.A.

Genus *Conicochernes* Beier

Conicochernes Beier, 1948b: 532-533.
Type species: *Chelifer brevispinosus* L. Koch, 1885: 46-47.
Generic distribution: Australia.

1. *Conicochernes brevispinosus* (L. Koch)

Chelifer brevispinosus L. Koch, 1885: 46-47.
Chelifer brevispinosus L. Koch; With, 1905: 110.
Chelifer keyserlingi With, 1907: 53-55 (syn. Beier, 1948b: 533).
Chelifer (Lamprochernes) silvestrii Beier, 1930a: 198-199 (syn. Beier, 1948b: 533).
Haplochernes brevispinosus (L. Koch); Beier, 1932b: 111.
Haplochernes keyserlingi (With); Beier, 1932b: 112.
Austrochernes silvestrii (Beier); Beier, 1932b: 171.
Thalassochernes brevispinosus (L. Koch); Beier, 1940: 182.
Conicochernes brevispinosus (L. Koch); Beier, 1948b: 533-535.
Conicochernes brevispinosus (L. Koch); Beier, 1966: 297.
Syntypes (*brevispinosus*): 1 specimen, BM(NH) (1891.8.1.1085-1086); 18 specimens, BM(MN) (1913.9.1.220-237).
Holotype (*keyserlingi*): 1 ♀, BM(NH) (1874.55).
Types (*silvestrii*): 1 adult, 1 semiadult, depository unknown.
Distribution: A.C.T., Qld, S.A., Vic.

2. *Conicochernes crassus* Beier

Conicochernes crassus Beier, 1954: 21-24.
Syntypes: 1 ♂, 2 ♀♀, 1 tritonymph, ZML; 1 ♂, 1 ♀, NMW.
Distribution: W.A.

3. *Conicochernes globosus* Beier

Conicochernes globosus Beier, 1954: 19-21.
Syntypes: 4 ♂♂, 1 ♀, 1 nymph, ZML; 2 ♂♂, 1 ♀, NMW.
Distribution: W.A.

4. *Conicochernes incrassatus* (Beier)

Haplochernes incrassatus Beier, 1933b: 644-645.
Conicochernes incrassatus (Beier); Beier, 1966: 279.
Holotype: 1 ♀, BM(NH) (1933.1.27.17)
Distribution: Vic.

Genus *Haplochernes* Beier

Haplochernes Beier, 1932b: 108.
Type species: *Chelifer boncicus* Karsch, 1881: 37.
Generic distribution: Australia, Madagascar, Pacific.

1. *Haplochernes pygmaeus* (L. Koch)

Chelifer pygmaeus L. Koch, 1885: 49-50.
Chelifer pygmaeus L. Koch; With, 1905: 110.
Haplochernes pygmaeus (L. Koch); Beier, 1932b: 110-111.
Syntypes: numerous specimens, BM(NH) (1891.8.1.1078-1084 and 1913.9.1.357-396).
Distribution: Qld.

2. *Haplochernes ramosus* (L. Koch)

Chelifer ramosus L. Koch, 1885: 47-48.
Austrochernes ramosus (L. Koch); Beier, 1932b: 171.
Haplochernes ramosus (L. Koch); Beier, 1966: 296-297.
Haplochernes ramosus (L. Koch); Beier, 1969: 187.
Syntype: 1 specimen, BM(NH) (1913.9.1.391).
Distribution: N.S.W., N.T., Qld, W.A.

Genus *Megachernes* Beier

Megachernes Beier, 1932b: 128.
Type species: *Chernes grandis* Beier, 1930b: 295-297.
Generic distribution: Australia, South-east Asia.

1. *Megachernes penicillatus* Beier

Megachernes penicillatus Beier, 1948a: 478-479.
Syntypes: 3 ♀♀, BM(NH) (1924.10.27.24-26).
Distribution: Qld.

2. *Megachernes queenslandicus* Beier

Megachernes queenslandicus Beier, 1948a: 480-481.
Holotype: 1 ♀, BM(NH) (1924.10.27.23).
Paratype: 1 ♀, BM(NH) (No. 41).
Distribution: Qld.

Genus *Nesidiochernes* Beier

Nesidiochernes Beier, 1957: 50.
Type species: *Nesidiochernes maculatus* Beier, 1957: 50-52.
Generic distribution: Australia, New Zealand, Pacific.

1. *Nesidiochernes australicus* Beier

Nesidiochernes australicus Beier, 1966: 298-299.
Nesidiochernes australicus Beier; Beier, 1974: 203.
Holotype: 1 ♂, AM (KS 5864).
Paratypes: 1 ♀, AM (KS 5865); 1 ♀, NMW.
Distribution: N.S.W., S.A., Vic., W.A.?

2. *Nesidiochernes slateri* Beier

Nesidiochernes slateri Beier, 1974: 208.
Holotype: 1 ♂, AM (KS 0014).
Paratype: 1 ♀, AM (KS 0014).
Distribution: W.A.

Genus *Parachernes* Chamberlin

Parachernes Chamberlin, 1931b: 192-194.
Type species: *Parachernes ronnaii* Chamberlin, 1931b: 194-195.
Generic distribution: World-wide.

1. *Parachernes sabulosus* (Tullgren)

Chelifer sabulosus Tullgren, 1909: 411-412.
Parachernes (Argentochernes) sabulosus (Tullgren); Beier, 1932b: 123.
Parachernes sabulosus (Tullgren); Beier, 1966: 279.
Holotype: 1 ♀, ZSZM.
Distribution: W.A.

Genus *Paraustrochernes* Beier

Paraustrochernes Beier, 1966: 299-300.
Type species: *Paraustrochernes victorianus* Beier, 1966: 300-301.
Generic distribution: Australia, New Guinea.

1. *Paraustrochernes victorianus* Beier

Paraustrochernes victorianus Beier, 1966: 300-301.
Syntypes: 3 ♂♂, 1 ♀, 1 deutonymph, AM (KS 5867, KS 5868); 2 ♂♂, 2 ♀♀, NMW.
Distribution: Vic.

Genus *Sundochernes* Beier

Sundochernes Beier, 1932b: 162.
Type species: *Chelifer modiglianii* Ellingsen, 1911: 37-39.
Generic distribution: Australia, South-east Asia.

1. *Sundochernes australiensis* Beier

Sundochernes australiensis Beier, 1954: 16-18.
Holotype: 1 ♀, ZML.
Distribution: W.A.

2. *Sundochernes dewae* Beier

Sundochernes dewae Beier, 1967: 200-202.
Holotype: 1 ♂, AM (KS 5867).
Paratypes: 1 ♀, 2 tritonymphs, 2 deutonymphs, 1 proto-nymph, AM (KS 5868); 1 ♂, 2 ♀♀, 1 nymph, NMW.
Distribution: N.S.W.

3. *Sundochernes dubius* Beier

Sundochernes dubius Beier, 1954: 18-19.
Holotype: 1 ♀, ZML.
Distribution: W.A.

4. *Sundochernes guanophilus* Beier

Sundochernes guanophilus Beier, 1967: 202-203.
Holotype: 1 ♂, SAM (N1966163).
Paratypes: 1 ♀, SAM (N1966164); 1 ♀, NMW.
Distribution: N.S.W.

5. *Sundochernes queenslandicus* Beier

Sundochernes queenslandicus Beier, 1974: 207-208.
Holotype: 1 ♂, SAM (N197761).
Distribution: Qld.

Genus *Troglochernes* Beier

Troglochernes Beier, 1969: 185.
Type species: *Troglochernes imitans* Beier, 1969: 185-187.
Generic distribution: Australia.

1. *Troglochernes imitans* Beier

Troglochernes imitans Beier, 1969: 185-187.
Troglochernes imitans Beier; Richards, 1971: 19, 24, 25, 27, 28, 30, 43.
Troglochernes imitans Beier; Beier, 1974: 203.
Holotype: 1 ♂, SAM (N1980192).
Paratypes: 1 ♀, SAM (N1980193); 2 ♀♀, NMW.
Distribution: W.A.

Key to the genera of Australian Pseudoscorpionida

The following key is based primarily on keys published by Chamberlin (1931), Beier (1966) and Muchmore (1972). Abbreviations and other terminology are discussed in Chamberlin (1931).

- 1. Heterotarsate (Heterosphyronida) 2
- Homotarsate 9
- 2. Spiracles transversely orientated; genital area of female non-sclerotic (Chthoniidae) 3
- Spiracles obliquely orientated; genital area of female sclerotic (Dithidae) 8
- 3. *ib* and *isb* situated distally on chelal hand; coxal spines present on coxa I *Pseudotyrannochthonius*
- *ib* and *isb* situated medially or proximally on chelal hand; coxal spines, if present, on coxa II 4
- 4. Palpal teeth blunt, closely spaced and contiguous; intercoxal tubercle present 5

- Palpal teeth acute and spaced, not contiguous; intercoxal tubercle absent 6
- 5. Coxal spines absent, only a hispid area on coxa II; *ib* and *isb* basal on dorsum of chela *Sathrochthonius*
- Coxal spines present on coxa II; *ib* and *isb* medial on dorsum of chela . *Austrochthonius*
- 6. Palpal chela with three or more slenderly lanceolate, interior, forwardly projecting setae larger than other setae *Paraliochthonius*
- Palpal chela with at most one seta larger than other setae 7
- 7. Chelal hand more or less strongly constricted proximad of base of fixed finger; digital condyles and apodemes of moveable finger prominent and heavily sclerotised *Lagynochthonius*
- Chelal hand not strongly constricted; digital condyles and apodemes not large or conspicuous *Tyrannochthonius*
- 8. Palpal teeth acute and well-spaced; strongly sclerotised digital condyles and apodemes *Anaulacodithella*
- Palpal teeth blunt and contiguous; unsclerotised digital condyles and apodemes . *Heterolophus*
- 9. Diplotarsate; if monotarsate, then with a triangular carapace, but without pleural plates or carapacial alae (Diplosphyronida) 10
- Monotarsate; if carapace triangular, then with pleural plates and carapacial alae (Monosphyronida) 17
- 10. Carapace triangular; four eyes on ocular tubercles; pleural membrane granulo-hispid or wrinkled plicate (Garypidae) 11
- Carapace not triangular; four eyes never on ocular tubercles; pleural membrane smoothly plicate (Olpiidae) 12
- 11. Arolia shorter than claws; vitreous pseudoderm absent *Garypus*
- Arolia longer than claws; vitreous pseudoderm present *Synsphyronus*
- 12. Arolia entire; *ib*, *isb*, *ist* and *it* on proximal half of finger and closely grouped *Protogarypinus*
- Arolia entire or distinctly bifurcate; *ib*, *isb*, *ist* and *it* not closely grouped, at least *it* on distal half of finger 13
- 13. Arolia bifurcate; abdominal tergites divided; moveable chelal finger with two trichobothria *Solinus*
- Arolia entire; abdominal tergites undivided; moveable chelal finger with four trichobothria 14
- 14. Carapace with transverse furrow; *isb* approaching *est*, and distant from *esb* *Austrohorus*
- Carapace without transverse furrow; *isb* distant from *est*, and approaching *esb* 15
- 15. *ist* distant from *ib*, and approaching *est*; *st* midway between *sb* and *t* *Olpium*
- *ist* approaching *ib*, and distant from *est*; *st* closer to *sb* than to *t* 16
- 16. Carapace finely granulate anteriorly; trochanteral tubercles of pedipalps large and granulate *Euryolpium*
- Carapace smooth; trochanteral tubercles of pedipalps inconspicuous and smooth . *Xenolpium*
- 17. Abdomen with pleural plates; carapace with alae . (Pseudogarypidae) . *Neopseudogarypus*
- Abdomen without pleural plates; carapace without alae 18
- 18. Homofemorate 19
- Heterofemorate 20
- 19. Pseudosternum present; cuticle smooth (Sternophoridae) *Sternophorus*
- Pseudosternum absent; cuticle coarsely granulate (Cheiridiidae) *Cryptocheiridium*
- 20. Venom apparatus developed in both chelal fingers (Cheliferidae) 21
- Venom apparatus developed in only one chelal finger 23

21. Flagellum of three blades; interfemoral articulation of leg I broad and oblique. 22
 — Flagellum of four blades; interfemoral articulation of leg I narrow *Withius*
22. Coxal sacs present and ramshorn organs small (males only). *Protochelifer*
 — Coxal sacs and ramshorn organs absent (males only). *Australochelifer*
23. Venom apparatus developed only in fixed chelal finger (*Atemnidae*) *Oratemnus*
 — Venom apparatus developed only in moveable chelal finger (*Chernetidae*) 24
24. Flagellum of four blades 25
 — Flagellum of three blades 27
25. Eyes or eye spots absent; pedipalpal femur at least five times longer than broad . . . *Troglochernes*
 — Eye spots present; pedipalpal femur two to three times longer than broad 26
26. Carapace uniformly reddish-brown; *it* subdistal and far from *ist*; chelal hand sparsely hairy *Austrochernes*
 — Carapace with metazone brownish yellow; *it* medial and approaching *ist*; chelal hand rather densely hairy *Paraustrochernes*
27. Tarsus of leg IV without a long and acute tactile seta; vestitural setae short and clavate 28
 — Tarsus of leg IV with a long and acute tactile seta; vestitural setae elongate and never prominently clavate 29
28. Carapace uniformly reddish-brown; sub-basal transverse furrow slightly closer to hind margin than to anterior furrow; *it* on distal half of fixed chelal finger and far from *ist* *Sundochernes*
 — Carapace with metazone yellowish; sub-basal transverse furrow much closer to hind margin than to anterior furrow; *it* medial and approaching *ist* *Nesidiochernes*
29. Trichobothria of internal series all situated on basal half of fixed chelal finger. 30

- Trichobothria of internal series not all basal, at least *it* situated on distal half of finger 32
30. Tactile seta of tarsus of leg IV proximad
 *Haplochernes*
 — Tactile seta of tarsus of leg IV distad. 31
31. Trichobothrium *it* distal to *ist* . . . *Conicochernes*
 — Trichobothrium *it* opposite *ist* . . . *Parachernes*
32. Hind margin of carapace straight; coxae of leg IV with hind corner inflated and well rounded *Megachernes*
 — Hind margin of carapace angulate; coxae of leg IV with hind corner not inflated and well rounded. *Calymmachernes*

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