

Arachnida and Myriapoda of the Seychelles islands

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Order **SCORPIONES** C.L. Koch, 1837
scorpions

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Approximately 1,900 Recent (extant) scorpion species in 180 genera and 18 families (depending on the authority), have been described worldwide. They vary in colour from translucent through tan or brown to black, and in size from 10 mm to 21 cm.

Three scorpion species in two families and three genera are recorded from Seychelles. None are medically important. The family Buthidae is represented by two small, mottled brownish species. *Lychas braueri* is endemic. *Isometrus maculatus* is one of the few almost cosmopolitan scorpions (circumtropical with occasional subtropical records) and has probably been introduced by humans to many tropical islands, including Seychelles. Both Seychelles buthid species are readily identified as members of the family by their very slender and delicate pedipalp chelae; they rely exclusively on venom to subdue prey. The two species occur under stones and tree bark, in logs and leaf litter. *Lychas braueri* appears most closely related to the African *Lychas burdoi*. The affinities of *I. maculatus* are with the Oriental scorpion fauna.

The family Liochelidae is represented in Seychelles by *Chiromachus ochropus*, an impressive species with a dark, blackish soma and pedipalps, pale yellowish legs and telson. *Chiromachus ochropus* is immediately recognisable from the two buthid species on the basis of size, coloration, and the large, inflated pedipalp chelae used to mechanically crush prey, e.g. millipedes and cockroaches; the venom is used only to subdue large or struggling prey. *Chiromachus* is a monotypic genus most closely related to *Chiromachetes* from southern India. It does not appear to be endemic to Seychelles. Pocock's (1893a) record from Round Island (Mauritius) has been corroborated by additional specimens from Mauritius in the collections of the Berlin and Paris museums. The first record from Madagascar is reported below. The Zanzibar record has not been confirmed but is more plausible in light of the wider distribution now recognised for this species.

Key to scorpion species recorded from the Seychelles

1. Very large, robust (about 100–120 mm from anterior carapace margin to tip of aculeus); dark blackish, with pale yellow legs and telson; sternum pentagonal; telson subaculear tubercle absent; pedipalp chelae large, inflated; pedipalp trichobothrial pattern Type C (patella ventral surface with three trichobothria); hemispermatophore lamelliform LIOCHELIDAE: *Chiromachus ochropus*
Small, gracile (about 30–60 mm); mottled brown or yellowish-brown; sternum triangular; telson subaculear tubercle present; pedipalp chelae small, slender; pedipalp trichobothrial pattern Type A (patella ventral surface without trichobothria); hemispermatophore flagelliform BUTHIDAE 2
2. Tibial spurs on legs III and IV; dark brown; metasomal segments I–IV, dorsosubmedian carinae terminating in pronounced spiniform granules; adults not markedly sexually dimorphic *Lychas braueri*
Without tibial spurs on legs III and IV; pale yellowish-brown; metasomal segments I–IV, dorsosubmedian carinae terminating in small, inconspicuous spiniform granules; adults markedly sexually dimorphic: pedipalpal and metasomal segments of adult male greatly elongated compared to adult female *Isometrus maculatus*

Abbreviations:

AMNH = American Museum of Natural History, New York.

BMNH = Natural History Museum, London.

MCZ = Museum of Comparative Zoology, Harvard University, Cambridge, MA, USA.

MHNG = Muséum d'Histoire Naturelle, Geneva, Switzerland.

MNHN = Muséum National d'Histoire Naturelle, Paris, France.

MRAC = Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

NPTS = Nature Protection Trust of Seychelles, Silhouette, Seychelles.

UMZC = University Museum of Zoology, Cambridge University, UK.

USNM = US National Museum of Natural History, Smithsonian Institution, Washington, DC, USA.

ZMB = Museum für Naturkunde, Humboldt-Universität, Berlin, Germany.

ZMH = Zoologisches Museum, Universität Hamburg, Germany.

Family **LIOCHELIDAE** Fet & Bechly, 2001

Chiromachus ochropus (C.L. Koch, 1837) Fig. 1

Ischnurus ochropus C.L. Koch, 1837: 69; 1850: 88. Kraepelin 1894: 130, 1898: 4; 1899: 153, 1901: 272, 1913: 187. Lönnberg 1897: 199. Birula 1917: 58. Kopstein 1921: 141. Fage 1933: 26. Werner 1934: 279. Kästner 1941: 234. Mello-Leitão 1942: 125. Vachon 1974: 920. Lamoral & Reynders 1975: 537. Benoit 1979: 460.

Chiromachus ochropus: Pocock 1893a: 320, 1902a: 364. Laurie, 1896: 122. Vachon 1950: 137. Lourenço 1983: 403, 1989: 165, 1996b: 39, 1997: 85, 2000: 25, 2001: 5. Sissom 1990: 125. Nenilin & Fet 1992: 15. Gerlach 1995: 68, 1999: 75. Kovařík 1998: 132. Fet 2000: 386. Prendini 2000: 2. Harvey 2001: 692. Soleglad & Fet 2003b: 88. Prendini *et al.* 2003: 186. Kamenz *et al.* 2005: 102. Soleglad *et al.* 2005: 26. Prendini & Wheeler 2005: 482. Fet & Soleglad 2005: 13. Lourenço & Qi 2006: 291. Dupré 2007: 5. Kamenz & Prendini 2008: 11.

Opisthacanthus ochropus: Simon 1893: 211.

Description: Differs from the Seychelles buthid species by its much larger size, about 100–120 mm from anterior carapace margin to tip of aculeus; dark, blackish soma and pedipalps (contrasting pale yellow legs and telson); pentagonal sternum; absence of subaculear tubercle on telson; large, inflated pedipalp chelae; Type C trichobothrial pattern; lamelliform hemispermatophore; and katoikogenic development. The most recent redescription was provided by Lourenço (1983) and a neotype was designated by Fet (2000).

Distribution: The first collections of this species were made in 1868 from Mauritius and neighbouring Round Island (Pocock 1893a; Gerlach 1999). It has not been recorded there since the late 1800s (Gerlach 1999). It was first recorded from Seychelles in 1877 and subsequently confirmed from Frégate, Mahé, Praslin, Recifs and Silhouette. A 1768 record from Mahé attributed to this species by Gerlach (1995) refers to a large black scorpion which may be this species, although the description is too vague for identification. All recent records are from Praslin and Frégate, where the species remains locally abundant (Benoit 1979; Gerlach 1999), the status of other populations is unknown. A single record from Tanzania (Zanzibar) has been questioned: Lourenço (1996a) did not list this species as occurring there, although Lourenço (1983) did; Gerlach (1999) dismissed the record as mislabelling. However, a large amblypygid, *Phrynychus scaber*, may also have the same distribution (Zanzibar, Seychelles, Mauritius). A series of specimens from Tamatave on the east coast of Madagascar, listed below, represents the first record from this island, the absence of which was previously difficult to explain (Lourenço 1996b, 2003; Fet 2000; Harvey 2001).

Ecology: Lives under logs and stones, and in rock crevices, at moderate to low elevations.

Records: [no date], 2 ex. (BMNH). MADAGASCAR: Tamatave, [probably 1890], W.L. Abbott,



Fig. 1 *Chiromachus ochropus*, female (left) and male (right) (photo: E. Ythier).

1♂ 3♀ (USNM). MAURITIUS: 1873, N. Pike, 1♂ 4♀ 1j.♂ (MCZ 92888), 2♂ (MCZ 92889); Île de France [Mauritius], Drøge, 1♂ (ZMB 46); Île Maurice, Roux, 2♀ (MNHN RS 0384); Round Island, Mauritius, 1868, N. Pike, pres. H. Barkly, 1♀ (BMNH 1870.46). **SEYCHELLES:** Îles Seychelles, [no date], 2♂ (MNHN RS 0384), [1877], Lantz, 1♀ (MNHN RS 0388); [1892], M. Alluaud, 1♂ neotype, 1♀ (MNHN RS 0389); Seychelles, [no date], W.H. Toms, 2♂, 2♀ 1subad.♂ 1subad.♀ 1j.♀ (BMNH); [pre-1910], purch. of Rosenberg, 2♂ 2♀ (BMNH 1910.5.3.1–3); [pre-1913], 1♀ (BMNH 1913.8.27.13–14). **Frégate:** B. Beckett, [no date], 1♀, 1j. (NPTS S2000.1); 05.07.1896, A. Brauer, 1♀ (ZMH); 1906, Voyage of the Valhalla [probably M.J. Nicoll], 1♀ (BMNH 1906.9.24.1); [1908], H.P. Thomasset, 2♂, 2♀ (BMNH 1912.11.4.1–5), 1♂ 1♀ (UMZC I.48205); [pre-1928], J. Hornell, 1♀ (BMNH 1928.4.10.2); 23.06.1930, P.R. Dupont (Dir. Agr., Seychelles), 2♂ 2♀ 1subad.♂ 1subad.♀ (BMNH 1930.7.4.2–5); 10.08.1967, J.F.G. Lionnet (Dir. Dept. Agr. Seychelles), from under stones, 2♂ 2♀ (USNM); 10.08.1972, P.L.G. Benoit & J.J. Van Mol, 2♂, 4♀, 2subad♂, 6subad♀, 14 j.♂, 25j.♀ (MRAC 143.510); 03.03.1973, J. Procter, in whaleboat in main house garden, 1j.♂ (BMNH); 22.09.1977, H. Bosch, L. Gillandt & J.M. Martens, under coconut husks, 2♂ 1♀ 1j.♂ 1 j.♀ (ZMH A68/77); 01.10.2002, J. Gerlach, 1j.♀ (AMNH); Palm Forest (seasonally dry) near Grande Anse [04°35'34.3''S 55°56'20.3''E], 16.07.2008, L. Monod, 93 m, under logs and rocks partially buried on the ground, 1♂ 2♀ 1subad.♂ (MHNG), 1j.♀ (AMNH). **Mahé:** 1768 (Gerlach 1995); 11.10.1957, A. Delhomme, 2♀ (MNHN RS 0383); [04°40'S 55°28'E], 07–09.1966, Mission Zoologique MRAC-ULB, 2♀ (MRAC 130.785). **Praslin:** 'Madame la Veuve F. Adam' (Hirst 1913), [pre-1913], >1 ex. [repository unknown]; Cote d'Or, found between leaf bases of growing Coco-de-Mer tree', 28.11.1908, H. Scott, 1♀ (UMZC I.48210); Vallée de Mai, P. Matyot/SIF, 05.1998, 1♂ (AMNH [LP 1256]); 01.2006, ex W.R. Lourenço, 1subad.♀ (AMNH). **Récifs:** Île aux Récifs, 1908, H.P. Thomasset, 1j.♂ (BMNH 1913.8.22.14), 1♀, 1j. (UMZC I.48215). **Silhouette:** 1896, A. Brauer, 1♂ (ZMB 15168), 1subad.♂ (ZMB 15169); 20.02.1900, Lantz, 1♀ (ZMH [ex MNHN]); 1904, S.M.S. Planet, 1♂ (ZMB 15167). **TANZANIA:** Zanzibar: pres. 1876, J.E. Parish, 1♂ 4♀ (BMNH); 1♀ (MNHN RS 0385), Roux, 1♀ (MNHN RS 0386).

Family **BUTHIDAE** C.L. Koch, 1837***Lychas braueri*** (Kraepelin, 1896) Fig. 2*Archisometrus braueri* Kraepelin, 1896: 123, 1899: 46.*Lychas braueri*: Hirst 1913: 32. Weidner 1959: 98. Lamoral & Reynders 1975: 510. Vachon 1986: 893. Kovařík 1995: 189, 1997b: 318, 1998: 112. Lourenço 1996b: 38. Gerlach 1999: 75. Fet & Lowe 2000: 160. Harvey 2001: 692.

Fig. 2. *Lychas braueri* female and juveniles (left) (photo: J. Gerlach), *Isometrus maculatus*, male top and female bottom (right) (photo: M. Cozijn).

Description: Differs from the Seychelles liochelid (*Chiromachus ochropus*), by its much smaller size, about 30–35 mm from anterior carapace margin to tip of aculeus; uniformly mottled, brownish colour of soma, pedipalps and legs; triangular sternum; presence of subaculear tubercle on telson; small, slender pedipalp chelae; Type A trichobothrial pattern; flagelliform hemispermatophore; and apoikogenic development. Differs from the other Seychelles buthid (*Isometrus maculatus*) by the presence of tibial spurs on legs III and IV, dark brown colouration, dorsosubmedian carinae of metasomal segments I–IV terminating in pronounced spiniform granules, and absence of marked sexual dimorphism. The most recent description was provided by Kovařík (1997b), who designated a lectotype.

Distribution: Endemic to Seychelles. Recorded from Mahé, Praslin and Silhouette. Previous authors erroneously listed all the type material as originating from Praslin; however, six specimens were taken on Mahé. The only recent records are from Silhouette. The status of the Mahé and Praslin populations is unknown.

Ecology: Lives under stones, in logs and leaf litter, in primary forest at high elevation.

Records: SEYCHELLES: **Mahé:** 08.05.1896, A. Brauer, 1j.♂ 1j.♀ 4j. paralectotypes (ZMH); 06.03.1899, Deutsche Tiefsee Expedition 1898–1899, 1♂ 1♀ (ZMB 30800); 1908–1909, Gardiner Expedition, in high jungle, 1♀, 1subad.♂ (BMNH), 2j. (UMZC I.48245). **Praslin:** 05.07.1896, A. Brauer, 1♀ lectotype, 1subad.♂ 4j. paralectotypes (ZMH), 1♀ paralectotype (BMNH 1898.3.5.7); 1908, Gardiner Expedition, 1♀ (BMNH 1913.8.27.5), 1♀ (UMZC I.48255). **Silhouette:** 1908, Percy Sladen Trust Expedition [=Gardiner Expedition], 1♀, 1subad.♀ (BMNH 1913.8.27.3–4); 1908, Gardiner Expedition, 1 juv. (UMZC I.48250); 1990, P. Matyot, killed and eaten by ants (*Technomyrmex albipes*) (Gerlach 1999); Mon Plaisir, 04°28.90S 55°14.00E, 10.2006, J. Gerlach, 1 juv. (AMNH); 30.06.2009, J. Gerlach, 550 m, primary high forest, in *Cinnamomum verum* and *Dillenia ferruginea* litter, 1♀ 2j. (AMNH).

***Isometrus maculatus* (De Geer, 1778) Fig. 2**

? *Scorpio europaeus* Linné, 1758: 625. Fabricius 1775: 399. Guérin-Ménéville 1843: 11.

Synonymized by Thorell 1876: 8.

? *Scorpio americanus* Linné, 1758: 624. Synonymized by Thorell 1876: 8.

Scorpio americanus: Linné 1775: 1091.

Scorpio maculatus DeGeer, 1778: 346.

Scorpio dentatus Herbst, 1800: 55. Synonymized by Pavesi 1881: 537.

Buthus (Isometrus) filum Ehrenberg in Hemprich & Ehrenberg, 1828: pl.1 (f. 3). Moritz & Fischer 1980: 314. Braunwalder & Fet 1998: 32.

Tityus aethiops C.L. Koch, 1843: f. 856, 1845a: 11. Synonymized by Karsch 1879: 114.

Tityus longimanus C.L. Koch, 1843: f. 857, 1845a: 13. Synonymized by Thorell 1888: 330.

Lychas paraensis C.L. Koch, 1845a: 6. Moritz & Fischer 1980: 321. Synonymized by Thorell 1888: 406.

Lychas maculatus: C.L. Koch 1845b: 1.

Lychas americanus: C.L. Koch 1845b: 2. Lamoral & Reynders 1975: 510.

Scorpio (Lychas) gabonensis Lucas, 1858: 430. Lamoral & Reynders 1975: 511. Synonymized by Peters 1862: 515.

Scorpio (Lychas) guineensis Lucas, 1858: 432. Synonymized by Peters 1862: 515.

Isometrus maculatus: Simon 1876: 219. Thorell 1876: 8. Oates 1888: 250. Pocock 1890: 236, 1893b: 376. Kraepelin 1899: 66, 1905: 334, 1908: 183, 1913: 134. Hirst 1913: 32. Kopstein 1921: 126, 1923: 184. Fage 1929: 72, 1936: 181, 1944: 71. Roewer 1929: 611. Lamoral & Reynders 1975: 508. Vachon 1982: 90. Kovařík 1997a: 362, 2003: 2. Gerlach 1999: 75. Harvey 2001: 692. Huber *et al.* 2002: 53. Soleglad & Fet 2003a: 5. Kamenz & Prendini 2008: 8.

? *Isometrus sonticus* Karsch, 1879: 116. Moritz & Fischer 1980: 324. Synonymized by Kraepelin 1891: 245.

? *Lychas mabillianus* Rochebrune, 1884: 28. Pocock 1891: 447. Synonymized by Simon 1886: 86.

Isometrus europaeus: Lönnberg 1897: 180. Pocock 1898: 326, 1899: 835, 1900: 46, 1902b: 38. Wu 1936: 119. Takashima 1945: 85, 1948: 76, 1950: 18.

Isometrus europaeus quinquefasciatus Franganillo, 1931: 118, 1934: 166. Synonymized by Moreno 1940: 43.

Isometrus madagassus Roewer, 1943: 217. Vachon 1969: 417. Probst 1973: 330. Lamoral & Reynders 1975: 509. Synonymized by Lourenço 1996a: 444.

Isometrus (Isometrus) maculatus: Vachon 1972: 177, 1976: 38. Kovařík 1994: 197, 1995: 187, 1997a: 8, 1998: 111, 2002: 8. Fet & Lowe 2000: 147.

Isometrus (Isometrus) madagassus: Vachon 1972: 177, 1976: 38, 1982: 90. Kovařík 1994: 202.

Isometrus (Reddyanus) europaeus: Tikader & Bastawade 1983: 286.

Description: Differs from the Seychelles liochelid (*Chiromachus ochropus*), by its much smaller size, 45–60 mm from anterior carapace margin to tip of aculeus; uniformly mottled, brownish colour of soma, pedipalps and legs; triangular sternum; presence of subaculear tubercle on telson; small, slender pedipalp chelae; Type A trichobothrial pattern; flagelliform hemispermatophore; and apoikogenic development. Differs from the other Seychelles buthid (*Lychas braueri*) by the absence of tibial spurs on legs III and IV, pale yellowish-brown colour, dorsosubmedian carinae of metasomal segments I–IV terminating in small, inconspicuous spiniform granules, and presence of marked adult sexual dimorphism: male pedipalpal and metasomal segments much longer than those of females. There is no recent redescription of this well-known and ubiquitous species. Lourenço (1996a) provides a recent diagnosis. Kovařík (2003) provides relevant records and a key to the species of *Isometrus*. Discussions of

I. maculatus in the context of Western Indian Ocean provided by Hirst (1913), Benoit (1979), Lourenço (1996b) and Gerlach (1999).

Distribution: Cosmopolitan, probably introduced from the Oriental region (Hirst 1913; Benoit 1979; Lourenço 1996b; Gerlach 1999; Fet & Lowe 2000; Kovařík 2003). In the Western Indian Ocean, from the east African coast (Somalia, Kenya, Tanzania, Mozambique), Madagascar, Mauritius, Reunion and Seychelles (Probst 1973; Lourenço 1996b; Fet & Lowe 2000).

Ecology: Hides under stones, exfoliating rock flakes and tree bark, in rock crevices, logs and leaf litter, mostly at low elevations (often close to the beach). A synanthropic species often collected in and around houses (Benoit 1979).

Records: SEYCHELLES: **Aldabra:** Esprit, 30.12.1908, 2♀, 1lj. (BMNH 1913.8.22.9–12), 01.1909, 1♂, 1subad.♂ (BMNH), 2♂ 1♀ (UMZC I.48240), 14.12.1974, *Mystroxydon* litter, 1lj. (BMNH), 04.04.2004, 1♂ (NPTS S.2010.2); Takamaka [Grande Terre], 12.1908, 1♀, 1subad.♂ (BMNH), 1♀ (UMZC I.48235), Grande Terre, 21.03.1974, sand floor of hut at Cinq Cases, 1♀, 3j. (BMNH), J. Wilson, 03.1974, in hut, 1♀ (BMNH); Malabar, R. Prys-Jones, 16.01.1975, Middle Camp, on tarpaulin, 1♀ (BMNH), 24.02.1975, Middle Camp, in tent, 1♀ (BMNH), R. Wanless, 29.02.2000, found alive on bed in Middle Camp hut, 1♀ (AMNH); Île Michel, 10.1908, 1♀ (BMNH), 1lj. (UMZC I.48225); Picard, F. Topliff, 21.01.1974, from box in thatched building, 1♂ (BMNH), 29.05.1974, research station, woodstore, 1♂ (BMNH), 14.04.1975, research station, woodstore, 1lj. (BMNH), R. Wanless, 27.03.2000, found alive in warden's house, 1♀ (AMNH). **Alphonse:** 2008 (Betts 2009). **Aride:** 1979 (Rowley & Warman 1979). **Astove:** 1905, Gardiner Expedition, 1♀ (UMZC I.48220). **Bird:** 07.1908, Gardiner Expedition, 1♀ (BMNH 1913.8.22.8); 1979, under the bark of *Casuarina* (Hill 2002), 'Île aux Vaches', P.L.G. Benoit & J.J. Van Mol, 15.08.1972 1♀ (MRAC 143.631). **Cousin:** Cousin Island Expedition, 1971, 1♂ 2♀ (BMNH), 1999 (Hill 2002); **Denis:** 08.1908, 2♀ (BMNH), 1♂ (UMZC I.48230). **Mahé:** [no date], 1lj. (ZMB); Victoria, P.L.G. Benoit & J.J. Van Mol, 02.08.1972, 1♀ (MRAC 143.629); Anse à la Mouche, P.L.G. Benoit & J.J. Van Mol, 18.08.1972, 1subad.♂ (MRAC 143.630). **North:** 2000 (Hill 2002). **Praslin:** Anse Lazio, NE tip [04°17'32.0"S 55°42'08.6"E], 20.07.2008, L. Monod, 56 m, scrubby vegetation with palms, in rock crevices (granite), 1 subad.♂ 1lj.♂ (AMNH). **Silhouette:** Pte. Varreur, 18.01.1999, M. Saaristo, 1lj.♀ (NPTS S1999.1); La Passe 2009, R. Gerlach, 1♂ (NPTS S2010.1)

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Smaller Arachnid Orders

A synopsis of the smaller arachnid orders of the Seychelle Islands (Arachnida: Pseudoscorpiones, Schizomida and Palpigradi)

Mark S. Harvey

Many arachnid groups are represented amongst the Seychelles fauna, including spiders, mites, harvestmen, scorpions, pseudoscorpions, schizomids, whip spiders and palpigrades. This contribution provides a synopsis of the Pseudoscorpiones, Schizomida and Palpigradi known to occur on the Seychelles islands. Information on these arachnid groups has accumulated slowly in the literature, usually based on specimens collected during various expeditions to the islands or on specimens collected sporadically by collectors.

This contribution covers the entire political area governed by the Republic of Seychelles, including the granitic islands, the Amirantes group, the Farquhar group, and the miscellaneous coral islands to the north and south of the granitics.

The specimens newly examined for this study are lodged in the Western Australian Museum, Perth (WAM) and the Royal Museum for Central Africa, Tervuren (MRAC). The specimens were studied using a Leica MZ16A dissecting microscope and an Olympus BH-2 compound microscope. Whole specimens were examined in 70–75% ethanol, and dissected structures (such as chelicerae, legs, and genitalia) were examined by dissecting them from the specimen, and placing them in 50% lactic acid on a microscope slide with a small glass cover slip supported by two pieces of nylon fishing line of appropriate thickness. Some specimens were examined without dissection and mounted in glycerol on a microscope slide. After the examination was completed, the specimens were rinsed and returned to ethanol.

Order PSEUDOSCORPIONES De Geer, 1778

Pseudoscorpions were first recorded from the Seychelles Islands by Tullgren (1907a) who described *Garypus insularis*, and later by Ellingsen (1910) who recorded the European *Chthonius tetrachelatus* (Preyssler) from unspecified locations within the Seychelles islands. Hirst (1911; 1913) reported on specimens collected during the Percy Sladen Trust Expedition to the Indian Ocean, and described *Feaella affinis* Hirst from Silhouette and Praslin Islands. Specimens collected on later British expeditions to Seychelles led by J. Stanley Gardiner were described by Chamberlin (1930) and Beier (1940). The latter also described a further species collected in 1938, and a small litter dwelling tridenchthoniid from Mahé (Beier 1974). Mahnert (1978) analysed a large collection of pseudoscorpions collected during the 1972 expedition led by P.L.G. Benoit and J.J. van Mol of the Musée Royal de l'Afrique Centrale, Tervuren. Amongst the samples of pseudoscorpions submitted to me by Justin Gerlach were representatives of several different species.

Family CHTHONIIDAE Daday, 1888

Chthonius (Ephippiochthonius) tetrachelatus (Preyssler, 1790)