



## A revision of the spider genera *Chaetopelma* Ausserer 1871 and *Nesiergus* Simon 1903 (Araneae, Theraphosidae, Ischnocolinae)

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### Abstract

*Chaetopelma* Ausserer 1871 and *Nesiergus* Simon 1903 are revised. *Cratorrhagus* Simon 1891 is considered a junior synonym of *Chaetopelma*. *Cratorrhagus tetramerus* (Simon 1873) and the female of *Cratorrhagus concolor* (Simon 1873) are conspecific with *C. olivaceum* (C. L. Koch 1841). *Ischnocolus gracilis* Ausserer 1871, *Ischnocolus syriacus* Ausserer 1871, *Chaetopelma shabati* Hassan 1950 and *Ischnocolus jerusalemensis* Smith 1990 are also treated here as junior synonyms of *C. olivaceum*. *Chaetopelma adenense* Simon 1890 is proposed as a junior synonym of *Ischnocolus jickelii* L. Koch 1875. *Chaetopelma gardineri* Hirst 1911 is transferred to *Nesiergus*. Hence, *Chaetopelma* comprises three valid species: *C. olivaceum* (C. L. Koch 1841); *C. karlamani* Vollmer 1997; *C. concolor* (Simon 1873) n. comb. from the Middle East and northeastern Africa. *Nesiergus*, which appears endemic to the Seychelles archipelago, now comprises three valid species: *N. gardineri* (Hirst 1911) n. comb.; *N. halophilus* Benoit 1978; *N. insulanus* Simon 1903.

**Key words:** spider taxonomy, junior synonym, Mediterranean, Middle East, Seychelles

### Introduction

The Ischnocolinae are one of ten subfamilies currently included in the tarantula family Theraphosidae. Representatives of Ischnocolinae occur in the Neotropics, Mediterranean region of Europe and Asia, Africa and India. Since its establishment, the Ischnocolinae has largely been ignored, having long been considered a problematic group (viz., Pocock 1897; Simon 1903; Gerschman de Pikelin & Schiapelli 1973; Raven 1985; Smith 1990; Rudloff 1996). Few revisionary studies concerning Ischnocolinae genera have been undertaken: Gerschman de Pikelin and Schiapelli (1973) carried out a revision of the subfamily at a generic level, but several genera included at that time are no longer included in the Ischnocolinae; Rudloff (1997) published a revision of the genus *Holothele* but did not include all species and the generic diagnosis provided was not consistent. In that study, Rudloff removed the ischnocoline genera *Hemiergus* Simon 1903 and *Schismatothele* Karsch 1879 from the synonymy of *Holothele* Karsch 1879. Smith (1990) compiled data regarding African representatives of Ischnocolinae, gathering important information on the known species and describing several new species. However, a full taxonomic revision was not undertaken.

*Chaetopelma* was originally described as a sub-genus of *Ischnocolus* by Ausserer (1871). *Ischnocolus* was then characterised by the possession of divided tarsal scopulae—a character particularly obvious on tarsi III and IV (Ausserer 1871). The two sub-genera were distinguished by the foveal shape: deep, wide and recurved in *Chaetopelma* but procurved or straight in *Ischnocolus*. Simon (1892) subsequently established three groups based on the number of tarsi with divided scopula: Ischnocolae (all tarsal scopulae divided), Chaetopelmateae (tarsal scopulae III and IV divided) and Crypsidromeae (only tarsal scopula IV divided).

According to Simon, *Ischnocolus* could be distinguished from *Chaetopelma* by having all its tarsal scopulae divided. Pocock (1897) elevated *Chaetopelma* to genus with *Ischnocolus*. Simon (1903) later considered all his previous groups (Ischnocoleae, Chaetopelmatae and Crypsidromeae) comprised a single subfamily, namely the Ischnocolinae. Prior to this revision, *Chaetopelma* comprised eight species predominantly from the Mediterranean region.

*Nesiergus* was described by Simon (1903) using a female from the Seychelles of one species, namely *N. insulanus*. It was primarily characterised by its wide, slightly recurved fovea, undivided scopulae on tarsi I and II and the apical article of the posterior lateral spinnerets being triangular, rather than digitiform as is widespread in the family. Benoit (1978) described a second species *N. halophilus*, also from the Seychelles.

According to Smith (1990), both *Chaetopelma* and *Nesiergus* are closely related because they share the double tibial apophysis, narrow clypeus and structurally similar palpal bulb.

Recently, at the 17<sup>th</sup> International Congress of Arachnology, Brazil, in August, 2007, Guadanucci presented results on the phylogenetic relationships of Ischnocolinae genera which showed *Chaetopelma* and *Nesiergus* are sister-groups because they share the presence of a line or cluster of short spines on the apical end of the retrolateral branch of the tibial apophysis, and undivided scopula on tarsus I. Therefore, both genera are included herein.

## Material and methods

Specimens from the following institutions were examined/cited. Abbreviations, cities and curator are as follows: AMNH = American Museum of Natural History, New York, USA (N. Platnick); BMNH = Natural History Museum, London, United Kingdom (J. Beccaloni); CUMZ = University Museum of Zoology, Cambridge, UK (R. Symmonds); HNHM = Hungarian Natural History Museum, Budapest, Hungary (T. Szuts); MNHN = Muséum National d'Histoire Naturelle, Paris, France (C. Rollard); MRAC = Musée Royal de l'Afrique Centrale, Tervuren, Belgium (R. Jocqué); NMW = Naturhistorisches Museum Wien, Vienna, Austria (J. Gruber); OUMNH = Hope Museum, Oxford, United Kingdom (D. Mann & J. Hogan); RMNH = Nationaal Natuurhistorische Museum ("Naturalis"), Leiden, Netherlands (E. J. van Nieukerken); SMF = Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany (P. Jäger); ZMB = Museum für Naturkunde der Humboldt-Universität, Berlin, Germany (J. Dunlop); ZMUC = Zoological Museum, University of Copenhagen, Copenhagen, Denmark (N. Scharff); ZMUH = Universität von Hamburg, Zoologisches Institut und Zoologisches Museum, Hamburg, Germany (H. Dastych).

All measurements are in millimetres and were taken with a millimetric ocular lens. The length of leg segments was measured between the joints from a dorsal view. The length and width of the carapace, eye tubercle, labium and sternum are the maximum values obtained. Total body length includes the chelicera and opisthosoma, but not the spinnerets. The number and disposition of spines follows the terminology of Petrunkevitch (1925) with modifications proposed by Bertani (2001). All drawings were made with a drawing tube. Spermathecae were cleared with clove oil and illustrated from the dorsal view. Left palpal bulbs were removed from the cymbium and illustrated in dorsal, pro- and retrolateral views. Setae obscuring the male tibial apophyses on leg I were removed to improve visibility.

## Taxonomy

### *Chaetopelma* Ausserer 1871

*Chaetopelma* Ausserer 1871: 190; Simon 1892: 140; Benoit 1978: 415; Smith 1990: 108.

*Cratorrhagus* Simon 1891: 330; Simon 1892: 137; Simon 1903: 926; Smith 1990: 116. **New synonymy.**

**Type species:** *Chaetopelma olivaceum* (C. L. Koch 1841) by subsequent designation of Simon (1892).

**Diagnosis:** *Chaetopelma* is distinguished from the other Ischnocolinae genera (except from *Nesiergus*) by the clavate trichobothria in two rows on the tarsi, maxillary serrula absent, paired tarsal claws of both sexes without teeth, and the tibial apophysis of males comprising two branches. Males may be distinguished from those of *Nesiergus* by the two branches of the tibial apophysis separated at the base and by the apical row of spines on the retrolateral branch, which is shorter than in *Chaetopelma*. Females differ from those of *Nesiergus* by their long and thin spermathecal receptacula.

**Description:** chelicerae without rastellum. Carapace oval, longer than wide; moderately pilose. Cephalic region slightly raised. Eye tubercle weakly raised, small. Eye group rectangular, anterior eye row procurved, posterior slightly recurved. Fovea deep, ranging from slightly recurved to straight. Maxilla with produced anterior lobe, conical; 60–100 cuspules on inner angle; lyra and serrula absent. Labium nearly as long as wide, with several cuspules restricted to centre of labium (20–60 cuspules). Labiosternal junction moderately deep; sigilla oval, distinct and located near junction. Sternum oval with three pairs of small, rounded sternal sigilla; posterior sigilla one or more than its diameter from sternal margin. Palps and legs slender, moderately pilose. Male tibial apophysis comprising two branches; prolateral branch short with adjacent spine; retrolateral branch long and curved, bearing line or cluster of short apical spines. Male metatarsus I slightly curved, bends over or externally to retrolateral branch of tibial apophysis. Scopulae on ventral surface of metatarsi very dense on legs I, II, less dense on legs III, IV; widening distally. Scopulae on tarsi II–IV divided by band of thick setae, wide on tarsi III and IV. Tarsal and metatarsal scopulae with metallic blue-green iridescence in living material (only live *C. olivaceum* examined). Scopula on retrolateral femur IV absent. Stridulatory setae apparently absent, although *Chaetopelma olivaceum* possesses opposing lateral scopulae on femora of leg I and palp; scopulae which in *Theraphosa blondi* (Latreille 1804) and *Encyocratella olivacea* Strand 1907 function as stridulatory setae (Marshall *et al.* 1995; Gallon pers. obs.). Superior tarsal claws of males and females without teeth; inferior tarsal claws absent; claw tufts well developed. Tarsi with clavate trichobothria in two parallel dorsal rows along segment, separated by longitudinal line of long, thin setae; filiform and clavate trichobothria are interspersed. Filiform trichobothria on metatarsi (single row) and tibiae (two rows); clavate trichobothria in compact group on cymbium. Tarsi without spines. Cymbium longer than wide, bilobed. Palpal bulb with long, thin embolus, without keels. Spermathecae comprising two long, thin receptacles, either single or bi-lobed apically. Abdomen coloration uniformly brown; abdominal markings absent. Urticating hairs absent. Two pairs of spinnerets; posterior median spinnerets very short; posterior lateral spinnerets with all three segments of similar length and bearing spigots; apical article digitiform.

**Species included:** *C. olivaceum* (C. L. Koch 1841); *C. karlamani* Vollmer 1997; *C. concolor* (Simon 1873) n. comb.

**Remarks:** when Simon first described *Cratorrhagus*, he included a Neotropical species, *Cratorrhagus cervinus* Simon 1891 (Simon 1891, 1892). Simon (1903) subsequently removed this species from *Cratorrhagus* and established *Cratorrhagus cervinus* Simon 1891 as the type species of *Hemirrhagus* Simon 1903.

### ***Chaetopelma olivaceum* (C. L. Koch 1841)**

Figures 1–10

*Mygale olivacea* C. L. Koch 1841: 34, fig. 712 (D♀).

*Ischnocolus gracilis* Ausserer 1871: 187 (D imm. ♀); Smith 1987: 88, not figs. 58b, 58h, 58k (imm. ♀), 1990: 127, figs. 787–802 (♀); Schmidt 1993: 57, fig. 30 (♀). **New synonymy.**

*Ischnocolus syriacus* Ausserer 1871: 189 (D♀). **New synonymy.**

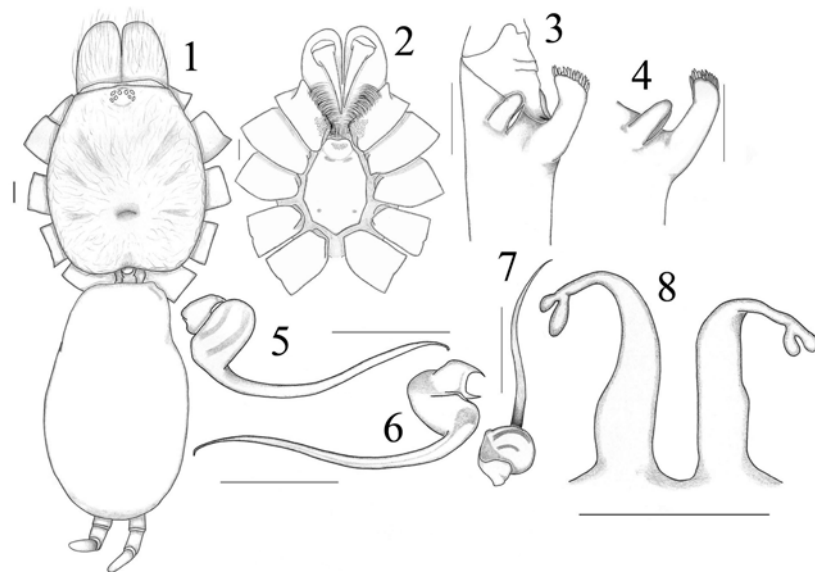
*Chaetopelma aegyptiaca* Ausserer 1871: 191 (D♂ ♀)

*Avicularia tetramera* Simon 1873: 201 (D♀). **New synonymy.**

*Avicularia striatocauda* Simon 1873: 203 (D♂♀).

*Nemesia concolor* Simon 1873: 215 (D♀). **New synonymy.**

*Ischnocolus striatocauda*: Ausserer 1875: 173.  
*Cratorrhagus tetramera*: Simon 1892: 137.  
*Chaetopelma olivaceum*: Simon 1892: 140, fig. 124.  
*Cratorrhagus concolor*: Simon 1903: 926; Schmidt 1986: 40, figs. 3–6 (♂)  
*Chaetopelma olivaceum*: Strand 1907a: 21 (♂♀) syn., 1907b: 217, 1916: 20; Smith 1990: 113, figs. 652–668 (♂♀);  
 Schmidt 1993: 56, figs. 18–19 (♂♀).  
*Cratorrhagus tetramerus*: Reimoser 1919: 8.  
*Chaetopelma shabati* Hassan 1950: 163, figs. 1–10 (D♂♀); Smith 1990: 114, figs. 669–685 (♂♀). **New synonymy.**  
*Cratorrhagus tetramerus*: Bonnet 1956: 1247.  
*Chaetopelma adenense*: Smith 1990: 109, figs. 601–607, 609–616 (D♂). **Misidentification.**  
*Chaetopelma aegyptiacum (lapsus)*: Smith 1990: 110, figs. 617–631 (♂).  
*Cratorrhagus tetramerus*: Smith 1990: 116.  
*Ischnocolus jerusalemensis* Smith 1990: 130, figs. 830–846 (D♀). **New synonymy.**  
*Chaetopelma aegyptiacum*: Schmidt 1993: 56, fig. 17 (♂).  
*Chaetopelma anatolicum* Schmidt & Smith 1995: 1, figs. 1–9 (D♂♀)  
*Chaetopelma gracilis*: Vollmer 1997: 5, figs. 1–2 (♀) syn.; Schmidt 2005: 13, figs. 8 unnumbered, pl. 2 unnumbered  
 (♂♀) syn.



**FIGURES 1–8.** *Chaetopelma olivaceum* (C. L. Koch 1841) (male BMNH 1950.3.30.122–123; female BMNH 1950.3.30.125–127). 1. Habitus, dorsal view, female. 2. Prosoma, ventral view, female. 3, 4. Male tibial apophysis, ventral-prolateral view (3), lateral view (4). 5–7. Palpal bulb, retrolateral view (5), prolateral view (6), dorsal view (7). 8. Spermathecae, dorsal view. Scale=1mm.

**Material examined. Type material:** holotype ♀ (repository unknown) of *Chaetopelma olivaceum* from Egypt; not examined. Holotype imm. ♀ (NMW 114) of *Ischnocolus gracilis* from Cyprus, Dr Kotschy, leg.; examined. Holotype ♀ of *Ischnocolus syriacus* (NMW 166) from Syria; examined. Type series (♂♀) of *C. aegyptiaca* (repository unknown), from Egypt; not examined. Holotype imm. ♂ of *Avicularia tetramera* (MNHN 4620) from Liban (=Lebanon), M. Ch. De la Brùlerie leg.; examined. Syntypes ♂♀ (MNHN) of *Avicularia striatocauda* from Lebanon, M. Ch. De la Brùlerie, leg.; not examined. Paralectotypes, 8♀ (MNHN 4623) of *Nemesia concolor* from Saïda, Syria, M. Ch. De la Brùlerie leg.; examined. Holotype ♂ of *Chaetopelma shabati* (repository unknown) from Egypt, presumably near Fayoum – precise locality not stated; not examined. Holotype ♀ of *Ischnocolus jerusalemensis* (BMNH 95.11.9.45–46) from Jerusalem, Israel, Hew Rolle leg.; examined. Holotype ♂ (SMF) of *Chaetopelma anatolicum* from the Mediterranean coast, Turkey, 1993, I. Skliba leg.; not examined.

**Additional material examined:** **SAUDI ARABIA:** 1♂2♀ (SMF 2661) E. Rùppell leg.; **EGYPT:** 4♂ (ZMB 144); 2♂ (NMW 103) Phasan leg., 17.III.1878; 1♀ (NMW 100) 6.I.1852; 1♂1♀ (BMNH 90.7.1.398-

400) Keyserling collection; Alexandria: 2♂3♀ (NMW 102) Kirchner *leg.*, 1.IV.1868; Cairo: 1♀ (BMNH 1950.3.7.60) A.G. Biggam *leg.*, 13.IV.1937; 1♀ (BMNH 14.10.2.1); 1♀ (BMNH 1948.11.23.19) A.I. Hassan *leg.*, III.1948; 3♀ (MNHN 4677); 1♀ (SMF) Dr. E. Bannwarth *leg.*, 10.I.1913; 1♂ and 1 imm. (ZMB) Dr. Valentinar *leg.*, 1879/80; Mansurah: 1♀ (ZMUC 631) I. Sorensen *leg.*, 24.IV.86; Thebes: 1♀ (SMF 8573); Tor: 1♀ (SMF 4923) E. Rüppell *leg.*; CYPRUS: 2♀ (BMNH 09.9.8.1.2) J. Buck *leg.*; Asprokremnos: 1♂ (BMNH) 13.VIII.1927, T.R.R. Stebbing *leg.*; Ayia Napa: 1♂ (BMNH), hotel reception area, Dave James *leg.*, V.2002; Lapta: 1♂1♀ (BMNH), stonewalls from houses, Volker von Wirth *leg.* IV.1996; 1♂1♀ (OUMNH), stonewalls from houses, Volker von Wirth *leg.* IV.1996; ISRAEL: 1 imm. (ZSM 987) G. Müller *leg.*, 4.IV.1987; Acca (=Acre): 1♂1♀ (CUMZ) J. Cropper *leg.*, 30.VIII.1899 (registration date); Jaffa: 1♂3♀ (NMW 105) Steindachner *leg.*, 15.II.1885; Jerusalem: 1♂ (BMNH) 29.V.1962, W. Wermuth *leg.*; 1 imm. (ZMUC 623) I. Sorensen *leg.*, 24.IV.86; 1♂ and 1 imm. (NMW 108) Rhimoser *leg.*; 1♀ (NMW 104) Reitter *leg.*, 30.IV.1882; 1♀ (ZMB) J. Rotte *leg.*; 1♂ (BMNH), captive raised, Yinnon Dolev *leg.*; 1♂ (BMNH) Yinnon Dolev *leg.*, 11.XI.2005; Haifa: 1♂ (SMF 2662); Latrun: 1♂ (BMNH), missing emboli, Yinnon Dolev *leg.*; 1♂ (BMNH) Yinnon Dolev *leg.*, collected 18.IV.2005, matured VI.2005 (died X.2006); Shoham: 1♂ (BMNH) Yinnon Dolev *leg.*; JORDAN: Amman: 1♂ (BMNH) J.B. Philly, 3–19.X.1924; LEBANON: 1♂ (ZMUH 1003); Amyun: 2♂ (BMNH 1950.3.30.122.123), H.B. Cott *leg.*, 1944; 2♀ (BMNH 1950.3.30.125.127), H.B. Cott *leg.*, 1944; 2♀ (BMNH 1950.3.30.20.21), H.B. Cott *leg.*, 1944; 1♂1♀ (BMNH), H.B. Cott *leg.*, 1944; Beirut: 7♂15♀ and 2 imms. (MNHN 975); 3♀ and 3 imms. (NMW 106) 2.I.1886; 1 imm. (ZMUH A71/74) U. Lechner *leg.*, 4.XII.1973; 2♂1♀ (ZMUH A71/74) U. Lechner *leg.*, 5.X.1974; Yatar: 2♂ (RMNH) J. Woluekamp *leg.*, 1979; PALESTINE: 1♀ (BMNH 1893.11.5.1) A.S. Woodward *leg.*; 1♂ (ZMB); SYRIA: 1♂ (OUMNH) Hensederer *leg.*, 1863 (Hope-Westwood dry tray Arachnida 16); 2♂8♀ and 1 imm. (NMW) Plason *leg.*, 1879; 1♂1♀ and 2 imms. (ZMB 30754), Ehrnberg *leg.*; 1♂1♀ (ZMB 30755) Ehrnberg *leg.*; 1♀ (ZMB) Dr. Baumgarten *leg.*, 1982; 2♂1♀ and 1 imm. (ZMUH) Sehlüter *leg.*, 1895; Jobet Birkghal: 1♀ (BMNH) Vladimír Šejna *leg.*, VII.1994; Salahudin temple: 1♀ (BMNH) Vladimír Šejna *leg.*, collected VII.1994 (died X.1995); SUDAN: Wadi Halfa: 1♂1♀ (MRAC 147161) F.L. Tomkins *leg.*, 1949; TURKEY: Aintab: 1♂ (BMNH 89.10.16.2) J.H. Leech *leg.*; Cevlik: 1♂ (BMNH) Vladimír Šejna *leg.*, 1999; Istanbul: 1♂ (SMF 2663).

**Diagnosis:** Males are distinguished from those of other species by the morphology of the tibial apophysis (Figs. 3–4) and palpal bulb (Figs. 5–7) (except *C. karlamani*). Males differ from those of *C. karlamani*, which shows very similar genitalia morphology, by the retrolateral branch of the tibial apophysis being wider at the apical portion and bearing a row of more than 9 spines (Figs. 3–4). Females are distinguished by spermathecal morphology consisting of two long, thin receptacula which curve outwards with bilobed termini (Fig. 8).



**FIGURES 9–10.** *Chaetopelma olivaceum* (C. L. Koch 1841), habitus. 9. Male, from northern Israel. 10. Female, from Jerusalem. Pictures: R. Gallon.

**Description:** Male (BMNH 1950.3.30.122-123). Total length 35.3. Carapace: length 16.1, width 13.7. Eye tubercle: length 1.6, width 2.0; anterior row procurved, posterior row slightly recurved, clypeus very narrow. Labium: length 2.0, width 2.6. Sternum: length 6.7; width 5.9. Chelicerae with 12 teeth of similar size on

promarginal groove. Labium as wide as long with *ca.*55 cuspules. Maxillae with *ca.*110 cuspules on inner angle. Sternum oval. Fovea slightly recurved. Palp: femur 9.0/ patella 5.3/ tibia 6.7/ cymbium 2.7/ total 23.7. Legs **I**: femur 14.1/ patella 7.6/ tibia 11.1/ metatarsus 9.7/ tarsus 5.5/ total 48.0. **II**: 12.5/ 7.1/ 9.2/ 8.8/ 5.4/ 43.0. **III**: 11.0/ 6.1/ 7.7/ 9.4/ 5.4/ 39.6 **IV**: 14.2/ 6.7/ 11.1/ 13.5/ 6.2/ 51.7. Spines. Palp: tibia (p) 0–2–0. Legs: **I**: tibia (v) 0–1–1, (p) 0–1–1, metatarsus (v) ap1. **II**: tibia (v) 1–1–ap3, (p) 0–0–1, metatarsus (v) ap1. **III**: tibia (v) 2–3–ap2, (p) 0–0–1, (r) 1–0–1, metatarsus (v) 2–2–ap3, (p) 1–1–1, (r) 0–1–1. **IV**: tibia (v) 2–2–ap2, (p) 0–0–1, (r) 1–0–2, metatarsus (v) 2–2–ap3, (p) 1–1–1, (r) 0–2–2. Palpal bulb with long very thin embolus, with helicoid torsion (Figs. 5–7). Tibial apophysis comprising two branches: prolateral branch short, with one adjacent spine inserted at base of branch; retrolateral branch long and curved, wider at distal portion, with apical row of 12 spines (Figs. 3–4). Metatarsus I curved, bends over retrolateral branch of apophysis. Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on distal half; IV on distal third. Tarsal scopulae (ventral surfaces only): I entire with longitudinal band of setae; II–IV divided.

Female (BMNH 1950.3.30.125–127). Total length 43.3. Carapace: length 16.3, width 14.3. Eye tubercle: length 1.5, width 2.2; anterior row procurved, posterior recurved, clypeus very narrow. Labium: length 2.1, width 2.7. Sternum: length 6.7, width 5.8. Chelicerae with 13 teeth of similar size on promargin. Labium as wide as long with *ca.*56 cuspules. Maxillae with *ca.*100 cuspules on inner angle. Sternum oval. Fovea transverse. Palp: femur 8.3/ patella 5.2/ tibia 5.4/ tarsus 5.8/ total 24.7. Legs **I**: femur 11.7/ patella 7.3/ tibia 8.4/ metatarsus 7.1/ tarsus 4.8/ total 39.3. **II**: 10.6/ 6.6/ 7.1/ 6.7/ 4.4/ 35.4. **III**: 9.3/ 5.7/ 6.1/ 7.3/ 4.5/ 32.9. **IV**: 12.1/ 6.4/ 9.3/ 10.8/ 5.5/ 44.1. Spines. Palp: tibia (v) 0–1–ap3, (p) 0–1–0. Legs: **I**: tibia (v) ap1, metatarsus (v) ap1. **II**: tibia (v) ap2, (p) 0–0–1, metatarsus (v) 1–0–ap1. **III**: patella (p) 1, tibia (v) 2–2–ap2, (p) 0–0–1, (r) 1–0–1, metatarsus (v) 2–2–ap3, (p) 1–1–1, (r) 0–1–1. **IV**: tibia (v) 2–3–ap2, (r) 1–0–1, metatarsus (v) 3–2–ap3, (p) 1–1–1, (r) 0–1–1. Spermathecae comprising two receptacula, each longer than wide, very thin in apical quarter, terminally bilobed and outward facing (Fig. 8). Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on slightly more than distal half; IV on slightly less than distal half. Tarsal scopulae (ventral surfaces only): I entire with longitudinal band of setae; II–IV divided.

**Distribution:** Known from Cyprus, Egypt, Israel, Jordan, Lebanon, Palestine, Saudi Arabia, Sudan, Syria and Turkey. Hassan (1950) also notes that this species occurs in Iraq.

**Ecology:** Spiders were found under stones and boulders in open and lightly wooded areas and also in gardens (Simon 1873; Smith 1990; Pedersen 2006; V. von Wirth pers. comm.). They do not appear to construct separate burrows, instead excavating a silk-lined chamber beneath rocks. In both Israel and Cyprus, the spiders are associated with dry stone walls (V. von Wirth & Y. Dolev pers. comm.). They also occur in dark damp places, such as drains, lavatories, ruins and old wells within towns (Hassan 1950, 1988). *C. olivaceum* occurs sympatrically with *C. karlamani* in Cyprus (V. von Wirth pers. comm.). Males are mature between February and May, and also in August and October.

**Remarks:** Concerning the synonyms proposed here, examination of the genitalia of all the types showed no significant structural differences. Distribution records are those of the senior synonym.

### ***Chaetopelma karlamani* Vollmer 1997**

Figures 11–18

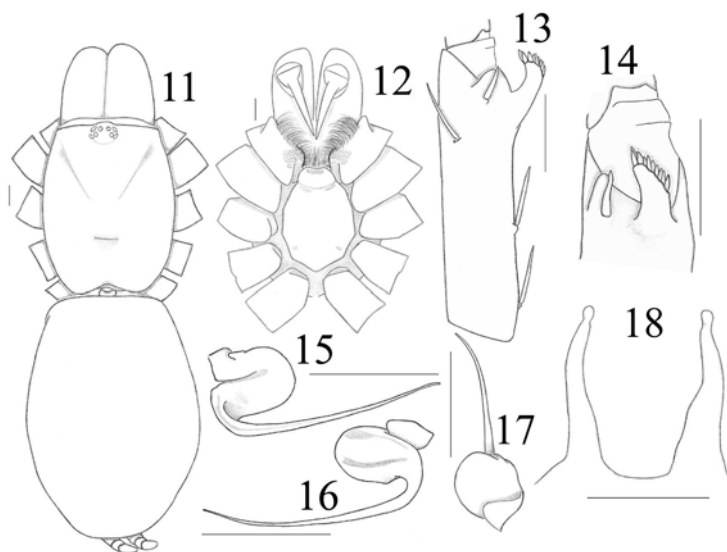
*Chaetopelma karlamani* Vollmer 1997: 5, figs. 3–13, pl. 1–7 (D♂♀).

**Material examined. Type material:** Holotype ♂ (NMW 18253) from Lapta, northern Cyprus, 28.III.1995, R. Karlaman *leg.*; examined. Paratype ♀ (NMW 18254) from Karaman, Cyprus, 3.I.1995, P. Vollmer *leg.*; examined. Paratypes 1♂1♀ (ZMB 31464, 31465) from Lapithos, Besparmak Mountain, northern Cyprus, P. Vollmer *leg.*; male examined, female ZMB paratype not at museum yet, J. Dunlop pers. comm. Paratypes 1♂1♀

(AMNH); not examined. Paratypes 1♂1♀ (BMNH); not examined. Paratypes 1♂1♀ (Güzelyurt Museum of Archeology & Natural History, Northern Cyprus); not examined. Paratypes 2 (private collection of Patrick Vollmer); not examined. Paratypes 1♂1♀ (Phyllodrom zoo collection, Leipzig, Germany); not examined.

**Additional material examined:** CYPRUS: 3♀ (ZMB); 1♂ (ZMB 47179); 1♂ (ZMB 47180); 1♀ (BMNH) 17.XII.1952; 3♂1♀ and 1 imm. (NMW 101) Katschy leg., 5.I.1862; 4♂4♀ (ZMB 32236); Larnaca: 4♀ (BMNH) C. Glasznes leg.; 2♀ (HNHM) Glaszer leg.; Nicosia: 2♂2♀ and 2 imms. (BMNH) Dept. Agriculture; 2♂1♀ (BMNH) H. Guillermand leg.

**Diagnosis:** Males differ from those of *C. concolor* by the morphology of the tibial apophysis (Figs. 13–14) and palpal bulb (Figs. 15–17) and from those of *C. olivaceum* by the retrolateral branch of tibial apophysis being narrower, shorter and bearing 10 spines or fewer (Figs. 13–14). Females are distinguished by spermathecal morphology which comprise two very long, thin receptacula surmounted by a single terminal lobe (Fig. 18).



**FIGURES 11–18.** *Chaetopelma karlamani* Volmer 1997 (holotype male NMW 18253, paratype female NMW 18254). 11. Habitus, dorsal view, female. 12. Prosoma, ventral view, female. 13, 14. Male tibial apophysis, ventral-prolateral view (13), ventral view (14). 15–17. Palpal bulb, prolateral view (15), retrolateral view (16), dorsal view (17). 18. Spermathecae, dorsal view. Scale=1mm.

**Description:** Male (holotype, NMW 18253). Total length 11.4. Carapace length 5.1, width 4.4. Eye tubercle length 0.6, width 0.8; anterior row procurved, posterior recurved, clypeus absent. Labium length 0.6, width 1.0. Sternum length 2.5, width 1.4. Chelicerae with 9 teeth of similar size on promargin. Labium as wide as long with 27 cuspules. Maxillae with ca. 80 cuspules on inner angle. Sternum oval, slightly longer than wide. Fovea transverse. Palp: femur 2.9/ patella 1.8/ tibia 2.3/ cymbium 0.9/ total 7.9. Legs **I**: femur 4.3/ patella 2.8/ tibia 3.4/ metatarsus 2.6/ tarsus 1.8/ total 14.9. **II**: 3.9/ 2.4/ 2.7/ 2.5/ 1.8/ 13.3. **III**: 3.4/ 1.9/ 2.2/ 2.8/ 1.8/ 12.1. **IV**: 4.5/ 2.3/ 3.6/ 4.1/ 2.3/ 16.8. Spines. Palp: tibia (p) 0–2–1. Legs: **I**: tibia (v) 1–2–1, (p) 0–0–1, metatarsus (v) 0–0–ap1. **II**: tibia (v) 2–1–ap3, (p) 0–0–1, metatarsus (v) 0–2–ap1, (p) 0–1–0. **III**: patella (p) 1, tibia (v) 3–3–ap2, (p) 0–1–0, (r) 1–1–0, metatarsus (v) 3–2–ap3, (p) 1–1–1, (r) 0–1–1. **IV**: tibia (v) 2–3–ap2, (r) 1–1–0, metatarsus (v) 2–2–ap3, (p) 0–1–1, (r) 0–1–1. Palpal bulb with long, thin embolus, inserted proximally on tegulum (Figs. 15–17). Tibial apophysis (Figs. 13–14) comprising two branches: prolateral branch short with adjacent spine; retrolateral branch slightly curved, distal and proximal portion same width. Metatarsus I slightly curved, bends over retrolateral branch. Metatarsal scopulae extent (ventral surfaces only): I on distal three-quarters; II on slightly more than distal half; III on distal half; IV on distal third. Tarsal scopulae (ventral surfaces only): I–IV divided by longitudinal band of thick setae.

Female (paratype, NMW 18254). Total length 23.5. Carapace length 8.0, width 6.4. Eye tubercle length 0.9, width 1.3; anterior row procurved, posterior recurved, clypeus absent. Labium length 1.0, width 1.8. Sternum length 3.8, width 3.3. Chelicerae with 10 teeth of similar size on promargin. Labium as wide as long with *ca.*40 cuspules. Maxillae with *ca.*100 cuspules on inner angle. Sternum oval, slightly longer than wide. Fovea transverse. Palp: femur 4.2/ patella 2.6/ tibia 2.4/ tarsus 2.2/ total 11.4. Legs **I**: femur 5.5/ patella 3.7/ tibia 3.7/ metatarsus 2.8/ tarsus 2.0/ total 17.7. **II**: 4.7/ 3.2/ 2.9/ 2.5/ 1.8/ 15.1. **III**: 4.2/ 2.6/ 2.1/ 2.9/ 1.7/ 13.5. **IV**: 5.5/ 3.2/ 3.8/ 4.2/ 2.1/ 18.8. Spines. Palp: tibia (v) ap2. Legs: **I**: metatarsus (v) ap1. **II**: metatarsus (v) 1–0–ap1. **III**: patella (p) 1, tibia (v) 1–2–ap2, (p) 0–1–0, (r) 0–1–0, metatarsus (v) 2–1–ap3, (p) 0–1–1, (r) 0–1–1. **IV**: tibia (v) 2–2–ap2, (r) 1–1–0, metatarsus (v) 2–1–ap3, (p) 0–1–1, (r) 0–1–1. Spermathecae comprising two straight receptacula with single apical termini (Fig. 18). Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on slightly more than distal half; IV on slightly less than distal half. Tarsal scopulae (ventral surfaces only): I–IV divided by longitudinal band of thick setae.

**Distribution:** Known only from Cyprus.

**Ecology:** Spiders were found in gardens under rocks, logs and leaf litter where they construct a silk-lined tubular burrow. *C. karlamani* occurs sympatrically with *C. olivaceum* in Cyprus (V. von Wirth pers. comm.). Males are mature from January to March.

### ***Chaetopelma concolor* (Simon 1873) n. comb.**

Figures 19–25

*Nemesia concolor* Simon 1873: 215 (D♂).

*Cratorrhagus concolor*: Simon 1891: 330; Simon 1903: 926, figs. 1073D, 1074E, 1075F (♂); Schmidt 1986: 40, figs. 3–6 (♂); Smith 1990: 116, figs. 702–705 (♂); Schmidt 1993: 56, figs. 20–23 (♂).

**Material examined. Type material:** Lectotype ♂ (MNHN 2848) from Saïda, Syria. Paralectotypes: 4♂ (MNHN 2848) from Saïda, Syria, M. Ch. De la Brûlerie *leg.* All examined.

**Additional material examined:** EGYPT: El Giza: 1♂ (MRAC 130698) P.L.G. Benoit *leg.*, VI.1959; SYRIA: 1♀ (ZMB 47174); 1♀ (ZMB 47175) W. Kurbishar *leg.*; TURKEY: Cilicien: 1♀ (ZMB 47177) Holtz *leg.*; Nemrut Dag: 1♀ (BMNH) Vladimír Šejna *leg.*, collected VII.1993, died 1998; Tarsus: 1♀ (ZMB 47179); Asia Minor: 1♀ (ZMB 47176) Holtz *leg.*, 1897.

**Diagnosis:** Males differ from those of their congeners by the palpal bulb morphology (Figs. 22–24). In males of *C. concolor*, the embolus is short and attached to the tegulum medially but, in males of *C. olivaceum* and *C. karlamani*, the embolus is long and attached to the tegulum basally. Females are distinguished by their spermathecae which comprise two long, narrow receptacula, facing each other and bearing double, or partially double, termini (Fig. 25).

**Description:** Male (paralectotype). Total length 12.0. Carapace length 4.6, width 4.2. Eye tubercle length 0.6, width 0.8; anterior row slightly procurved, posterior row slightly recurved, clypeus absent. Labium length 0.6, width 0.9. Sternum length 2.2, width 2.1. Chelicerae with 10–11 teeth of similar size on promargin. Labium as long as wide with 20 cuspules. Maxillae with *ca.*50 cuspules on inner angle. Sternum oval, slightly longer than wide. Fovea narrow, transverse. Palp: femur 2.8/ patella 1.7/ tibia 2.1/ cymbium 1.0/ total 7.6. Legs **I**: femur 4.1/ patella 2.4/ tibia 3.0/ metatarsus 2.3/ tarsus 1.6/ total 13.4. **II**: 3.7/ 2.1/ 2.4/ 2.2/ 1.6/ 12.0. **III**: 3.2/ 1.7/ 1.9/ 2.4/ 1.6/ 10.8. **IV**: 4.2/ 2.0/ 3.3/ 3.7/ 2.0/ 15.2. Spines. Palp: tibia (p) 0–1–2. Legs: **I**: tibia (v) 1–1–ap1, (p) 0–0–1, metatarsus (v) 0–0–ap1. **II**: tibia (v) 1–1–ap3, (p) 0–1–0, metatarsus (v) 0–1–ap1, (p) 0–1–0. **III**: patella (p) 1, tibia (v) 1–2–ap2, (p) 1–2–0, (r) 1–2–0, metatarsus (v) 0–1–ap1, (p) 2–2–2, (r) 0–2–ap2. **IV**: tibia (v) 2–2–ap2, (p) 0–0–1, (r) 1–1–0, metatarsus (v) 1–1–ap2, (p) 2–2–ap1, (r) 0–1–1. Palpal bulb with short embolus slightly curved distally, inserted medially on tegulum (Figs. 22–24). Tibial apophysis (Fig. 21) comprising two branches: prolateral branch short with adjacent spine; retrolateral branch with apical clus-

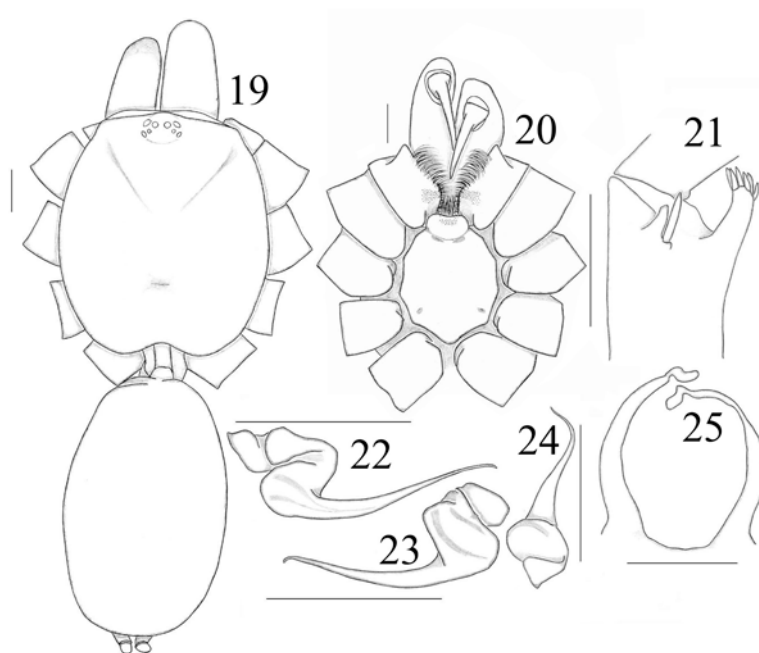


ter of spines. Metatarsus I slightly curved, bends externally to retrolateral branch. Metatarsal scopulae extent (ventral surfaces only): I on distal half; II–III on slightly less than distal half; IV on distal third. Tarsal scopulae (ventral surfaces only): I–IV divided by longitudinal band of thick setae.

Female (ZMB 47174). Total length 20.5. Carapace length 6.5, width 5.5. Eye tubercle length 0.8, width 1.1; anterior row procurved, posterior slightly recurved, clypeus absent. Labium length 0.8, width 1.2. Sternum length 3.1, width 2.8. Chelicerae with 10 teeth of similar size on promargin. Labium as long as wide with 60 cuspules. Maxillae with *ca.* 100 cuspules. Sternum rounded. Fovea transverse. Palp: femur 3.1/ patella 2.1/ tibia 1.7/ cymbium 2.1/ total 9.0. Legs **I**: femur 4.2/ patella 3.1/ tibia 2.7/ metatarsus 2.2/ tarsus 1.8/ total 14.0. **II**: 3.7/ 2.7/ 2.2/ 2.1/ 1.6/ 12.3. **III**: 3.3/ 2.2/ 1.9/ 2.5/ 1.6/ 11.5. **IV**: 4.7/ 2.6/ 3.4/ 3.6/ 2.0/ 16.3. Spines. Palp: tibia (p) 0–0–ap2. Legs: **I**: metatarsus (v) 0–0–ap1. **II**: metatarsus (v) 0–0–ap1. **III**: patella (p) 1, tibia (v) 0–1–ap2, (p) 0–2–0, (r) 0–1–0, metatarsus (v) 0–2–ap3, (p) 0–1–1, (r) 0–0–1. **IV**: tibia (v) 2–2–ap2, (r) 1–0–1, metatarsus (v) 2–1–ap3, (p) 0–1–0, (r) 0–1–1. Spermathecae comprising two long inwardly curved receptacula, bent apically (Fig. 25). Metatarsal scopulae extent (ventral surfaces only): I along entire length; II on distal three-quarters; III–IV on distal half. Tarsal scopulae (ventral surfaces only): I–IV divided by longitudinal band of thick setae.

**Distribution:** Known from Egypt, Syria and Turkey.

**Ecology:** Unknown; presumably fossorial. Males are mature in June.



**FIGURES 19–25.** *Chaetopelma concolor* (Simon 1873) (paralectotype male MNHN 2848, female ZMB 47174). 19. Habitus, dorsal view, female. 20. Prosoma, ventral view, female. 21. Male tibial apophysis, ventral pro-lateral view. 22–24. Palpal bulb, pro-lateral view (22), retrolateral view (23), dorsal view (24). 25. Spermathecae, dorsal view. Scale=1mm.

#### Misplaced species and further notes

The taxonomic placement of both *Chaetopelma webborum* Smith 1990 and *Chaetopelma arabicum* (Strand 1908) will be dealt with elsewhere (Gallon & Guadanucci in prep., Gallon, in press respectively), neither species belong in *Chaetopelma*.

*Chaetopelma adenense* Simon 1890 (holotype female, MHNH, from Yemen, Goldmore-Valley, Aden, March 1889, Eugène Simon *leg.*; examined) is here transferred to *Ischnocolus* and made a junior synonym of *Ischnocolus jickelii* L. Koch 1875 (holotype female, BMNH 19–9–18–5698–99, from Hamazen, Ethiopia, Jickeli *leg.*; examined) because they share the same spermathecal morphology. **New synonymy.**

## *Nesiergus* Simon 1903

*Nesiergus* Simon 1903: 927; Benoit 1978: 410; Smith 1990: 132.

**Type species:** *Nesiergus insulanus* Simon 1903, by original designation.

**Diagnosis:** Males differ from those of *Chaetopelma* by their tibial apophysis branches being strongly fused basally, with the retrolateral branch being short and wide, rather than being longer than wide. Females differ from those of *Chaetopelma* by their short spermathecae receptacula, which are nearly as wide apically as basally.

**Description:** Chelicerae without rastellum. Carapace oval, longer than wide; sparsely pilose. Cephalic region slightly raised. Eye tubercle weakly raised, small. Eye group rectangular, anterior eye row procurved, posterior row recurved. Fovea transverse. Maxilla with produced anterior lobe, conical; 60–100 cuspules on inner angle; lyra and serrula absent. Labium nearly as long as wide, with 30–50 cuspules restricted to centre of labium. Labiosternal junction moderately deep; sigilla oval, distinct and located near junction. Sternum oval with three pairs of small, rounded sternal sigilla; posterior sternal sigilla one or less than one diameter from sternal margin. Palps and legs slender, sparsely pilose. Male tibial apophysis comprising two branches strongly fused at base; prolateral branch short and rounded, with adjacent spine; retrolateral branch slightly longer, bearing line of short apical spines. Male metatarsus I straight, bends externally to retrolateral branch of tibial apophysis. Scopulae on ventral surface of metatarsi very dense on anterior legs, less dense on posterior legs. Scopulae on tarsi I–II entire, III–IV divided by band of thick setae. Scopula on retrolateral femur IV absent. Stridulatory setae absent. Superior tarsal claws of both sexes without teeth, inferior tarsal claws absent, claw tufts well developed. Tarsi with clavate trichobothria in two parallel dorsal rows along segment, separated by longitudinal line of long, thin setae; filiform and clavate trichobothria are interspersed. Filiform trichobothria on metatarsi (single row) and tibiae (two rows); clavate trichobothria in compact group on cymbium. Tarsi without spines. Cymbium longer than wide, bilobed. Palpal bulb with long, thin embolus. Spermathecae comprising two long receptacles without lobes. Abdomen coloration uniformly brown, abdominal markings absent. Urticating hairs absent. Two pairs of spinnerets; posterior median spinnerets very short; posterior lateral spinnerets elongated, all three segments of similar length and bearing spigots, apical article digitiform or triangular (as in *N. insulanus*).

**Species included:** *N. gardineri* (Hirst 1911) n. comb.; *N. halophilus* Benoit 1978; *N. insulanus* Simon 1903.

## *Nesiergus insulanus* Simon 1903

Figures 26–28

*Nesiergus insulanus* Simon 1903: 928 (D♀); Benoit 1978: 412, figs. 3a–e (♀); Smith 1990: 134, figs. 878–882 (♀).

**Material examined. Type material:** Holotype ♀ (MNHN 14090) from the Seychelles (without precise locality); examined.

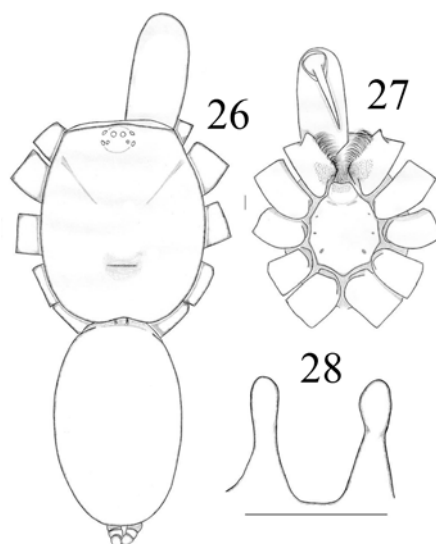
**Diagnosis:** Females differ from those of their congeners by the apical segment of the posterior lateral spinnerets being triangular rather than digitiform. Males unknown.

**Description:** Female (holotype). Total length 27.1. Carapace length 11.0, width 9.2. Eye tubercle length 1.5, width 1.9; anterior row procurved, posterior row recurved, clypeus absent. Labium length 1.4, width 1.9. Sternum length 4.7, width 4.6. Chelicerae with 12 teeth of similar size on promargin. Labium as long as wide, with ca.50 cuspules. Maxillae with ca.70 cuspules. Sternum rounded. Fovea wide, transverse. Palp: femur 5.9/ patella 3.7/ tibia 3.7/ tarsus 3.3/ total 16.6. Legs **I**: femur 8.3/ patella 5.4/ tibia 6.1/ metatarsus 5.3/ tarsus 2.6/ total 27.7. **II**: 7.4/ 4.7/ 5.0/ 4.9/ 2.6/ 24.6. **III**: 6.4/ 3.7/ 3.8/ 5.1/ 2.4/ 21.4. **IV**: 8.8/ 4.5/ 6.6/ 8.0/ 3.1/ 31.0.

Spines. Palp without spines. Legs: some spiniform thick setae on dorsal surface of all femora. **I**: metatarsus (v) 0–0–ap1. **II**: metatarsus (v) 0–0–p1. **III**: patella (p) 1, tibia (v) 0–1–ap2, (p) 0–2–0, (r) 0–1–0, metatarsus (v) 2–2–ap3, (p) 0–1–1, (r) 0–1–1. **IV**: tibia (v) 0–1–ap3, (r) 1–1–1, metatarsus (v) 1–3–ap3, (p) 0–1–1, (r) 0–1–1. Spermathecae comprising two receptacula, longer than wide, swollen distally (Fig. 28). Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on slightly less than distal half; IV on distal third. Tarsal scopulae (ventral surfaces only): I–II undivided; III–IV divided by longitudinal band of thick setae.

**Distribution:** Known from an unspecified island in the Seychelles.

**Ecology:** Unknown.



**FIGURES 26–28.** *Nesiergus insulanus* Simon 1903 (holotype female MNHN 14090). 26. Habitus, dorsal view. 27. Prosoma, ventral view. 28. Spermathecae, dorsal view. Scale=1mm.

### *Nesiergus halophilus* Benoit 1978

Figures 29–34

*Nesiergus insulanus*: Hirst 1911: 383 (♀). **Misidentification.**

*Nesiergus halophilus* Benoit 1978: 412, figs. 4a–e (D♂♀); Smith 1990: 133, figs. 861–877 (♂♀); Schmidt 1993: 57, figs. 31–32 (♂♀).

**Material examined. Type material:** Holotype ♀ (MRAC 145439) from Frégate, Seychelles, 10.VIII.1972; Paratypes 1♂ (MRAC 143293), 2♀ 1 imm. (MRAC 143297) from Frégate, Seychelles, 10.VIII.1972; Paratypes 3♀, 3 imms. (MRAC 143272) from Laraie Bay, Curieuse, Seychelles, 3 and 17.VIII.1972. All examined.

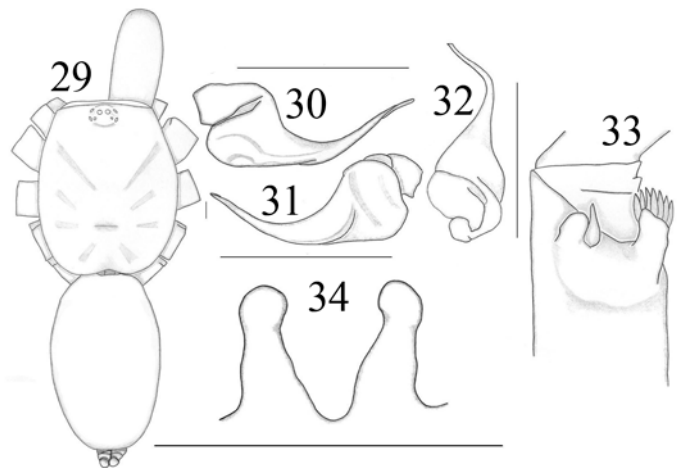
**Additional material examined:** 1♀, (BMNH 10.5.1.4), from the Seychelles, Percy Sladen Trust Expedition leg.

**Diagnosis:** Males differ from those of *N. gardineri* by the presence of a distinct embolic keel (Figs. 30–32), by the prolateral branch of the tibial apophysis being wide and rounded (Figs. 33) and by metatarsus IV being curved laterally. Females differ from those of *N. gardineri* by spermathecal morphology (Fig. 34).

**Note:** very likely to be a junior synonym of *N. insulanus*; however the species should remain valid pending examination of additional material.

**Description:** Female (holotype). Total length 13.6. Carapace length 5.2, width 3.7. Eye tubercle: length 0.8, width 1.0; anterior row procurved, posterior row slightly recurved, clypeus absent. Labium length 0.7,

width 1.0. Sternum length 2.2, width 2.2. Chelicerae with 8 teeth of similar size on promargin. Labium as long as wide with *ca.* 50 cuspules. Maxillae with *ca.* 60 cuspules. Sternum rounded. Fovea transverse. Palp: femur 2.6/ patella 1.8/ tibia 1.6/ tarsus 1.7/ total 7.7. Legs **I**: femur 3.8/ patella 2.5/ tibia 2.7/ metatarsus 2.2/ tarsus 1.6/ total 12.8. **II**: 3.2/ 2.2/ 2.1/ 2.0/ 1.3/ 10.8. **III**: 2.8/ 1.7/ 1.6/ 2.2/ 1.5/ 9.8. **IV**: 4.2/ 2.2/ 3.2/ 3.6/ 1.9/ 15.1. Spines. Palpal and leg femora with medial row of thick setae. Palp: tibia (v) 0–0–ap1. Legs **I**: metatarsus (v) 0–0–ap1. **II**: metatarsus (v) 0–0–ap1. **III**: patella (p) 1, tibia (r) 1–1–0, (p) 0–2–0, (v) 2–0–ap2, metatarsus (r) 0–1–1, (p) 0–2–1, (v) 2–0–ap3. **IV**: tibia (r) 1–1–0, (v) 2–0–ap3, metatarsus (r) 0–1–1, (p) 0–1–1, (v) 1–3–ap3. Spermathecae comprising two receptacula, each longer than wide and broader than in *N. insulanus* (Fig. 34). Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on slightly less than distal half; IV on distal third. Tarsal scopulae (ventral surfaces only): I–II undivided; III–IV divided by longitudinal band of thick setae.



**FIGURES 29–34.** *Nesiergus halophilus* (Benoit 1978) (holotype female MRAC 145439; paratype male MRAC 143.293). 29. Habitus, dorsal view, male. 30–32. Palpal bulb, pro-lateral view (30), retrolateral view (31), dorsal view (32). 33. Male tibial apophysis, ventral-pro-lateral view. 34. Spermathecae, dorsal view. Scale=1mm.

Male (paratype MRAC 143.293). Total length 17.0. Carapace length 7.2, width 5.2. Eye tubercle length 0.9, width 1.1; anterior row procurved, posterior row slightly recurved, clypeus absent. Labium length 0.7, width 1.1. Sternum length 2.9, width 2.6. Chelicerae with 10–12 teeth of similar size on promargin. Labium as long as wide with *ca.* 50 cuspules. Maxillae with *ca.* 60 cuspules. Sternum rounded. Fovea transverse. Palp: femur 3.6/ patella 2.3/ tibia 2.7/ cymbium 1.4/ total 10.0. Legs **I**: femur 5.6/ patella 3.8/ tibia 5.1/ metatarsus 4.6/ tarsus 3.0/ total 22.1. **II**: 5.1/ 3.3/ 4.1/ 4.7/ 3.0/ 20.2. **III**: 4.9/ 2.6/ 3.3/ 5.1/ 2.7/ 18.6. **IV**: 6.3/ 2.9/ 5.1/ 5.4/ 3.1/ 22.8. Spines. Palpal and leg femora with medial row of thick setae. Palp without spines. Legs **I**: femur (d) 0–0–2, tibia (p) 0–1–1, (v) 0–1–0, metatarsus (v) ap1. **II**: femur (d) 0–1–1, patella (p) 1, tibia (p) 0–1–1, (v) 1–0–ap2, metatarsus (v) 1–0–ap2. **III**: femur (d) 0–2–2, patella (p) 1, (r) 1, tibia (p) 1–1–0, (r) 1–1–0, (v) 2–2–ap3, metatarsus (p) 0–1–1, (r) 0–1–1, (v) 4–2–ap3. **IV**: femur (d) 0–2–2, (r) 1, tibia (p) 1–1–0, (r) 1–1–0, (v) 3–3–ap3, metatarsus (p) 1–1–1, (r) 1–1–1, (v) 3–3–ap3. Palpal bulb with tapering embolus, slightly spiralled, bearing keel along embolus (Figs. 30–32). Tibial apophysis comprising two branches, strongly fused basally (Fig. 33). Pro-lateral branch short, wide, apically rounded, with adjacent strong, short spine. Retrolateral branch long, thin, with apical row of 5–6 short spines, and short curved spine on inner side. Metatarsus I straight, bends externally to tibial apophysis. Metatarsi I–IV laterally curved. Metatarsal scopulae extent (ventral surfaces only): I along entire length; II on distal three-quarters; III on distal half; IV on distal quarter. Tarsal scopulae (ventral surfaces only): I–II undivided; III–IV divided by longitudinal band of thick setae.

**Distribution:** Known from Frégate, Silhouette, Récif and Curieuse, Seychelles.

**Ecology:** Spiders inhabit sandy beaches where they construct vertical burrows in the sand, beneath rocks and coral fragments. The burrows were situated just above the mean spring tide level, at the upper limit of the crab-hole zone (Benoit 1978). Males are mature in August.

***Nesiergus gardineri* (Hirst 1911) n. comb.**

Figures 35–40

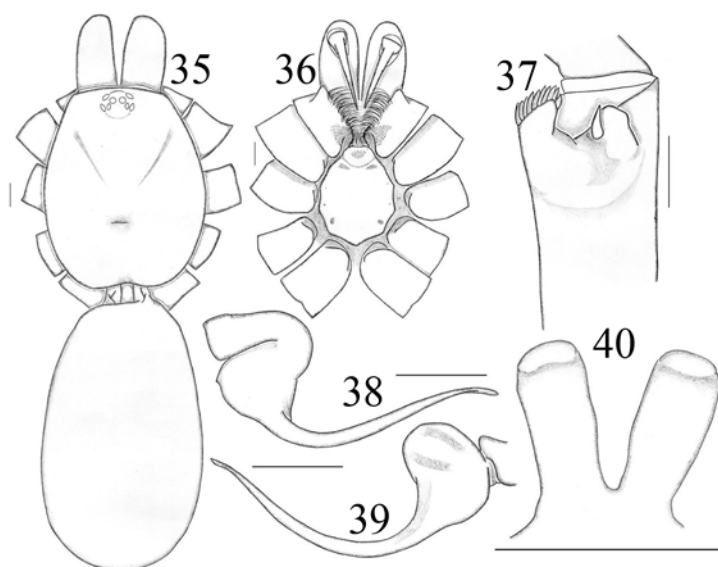
*Chaetopelma gardineri* Hirst 1911: 383, fig. 1 (D♂♀); Benoit 1978: 417, figs. 5a–f (♂♀).

*Chaetopelma gardineri* (*lapsus*): Smith 1990: 112, figs. 632–651 (♂♀).

**Material examined. Type material:** Holotype ♂ (BMNH 10.5.1.5–6); Paratype 6♀ (BMNH 10.5.1.5–6) from Silhouette, 1905; Paratype 1♀ (BMNH 10.5.1.5–6) from Cascade; Paratype 1♀ (BMNH 10.5.1.5–6) from Félicité; Paratype 1♀ (BMNH 10.5.1.5–9) from Mahé; Paratypes 2♀ 2 imms. (BMNH 10.5.7–9) from Praslin. All from the Seychelles islands, collected by the Percy Sladen Expedition. All examined.

**Additional material examined: SEYCHELLES:** 1♀ (BMNH 10.5.1.5–6) Percy Sladen Expedition *leg.*; **Big Sister:** 1♂ (MRAC 177120) Mühlenberg *leg.*, 17.IX.1975; 1♂ (MRAC 177140) Mühlenberg *leg.*, 17.IX.1975; 2♀ (MRAC 177118) Mühlenberg *leg.*, 17.IX.1975; **Silhouette** 1♀ (ZMB 32337); **Mahé:** 1♀ (MRAC 145699), Benoit *leg.*, 16.VIII.1972.

**Diagnosis:** Males are distinguished from those of *N. halophilus* by the absence of a keel on the palpal bulb embolus (Figs. 38–39), by the tibial apophysis (Fig. 37) not being as wide and developed as in *N. halophilus*, and by metatarsus IV not being curved laterally. Females differ from those of *N. halophilus* by their spermathecal receptacula being even in width throughout their length (Fig. 40).



**FIGURES 35–40.** *Nesiergus gardineri* (Hirst 1911) (holotype male, paratype female BMNH 10.5.1.5–6). 35. Habitus, dorsal view, male. 36. Prosoma, ventral view, male. 37. Male tibial apophysis, ventral-prolateral view. 38, 39. Palpal bulb, prolateral view (38), retrolateral view (39). 40. Spermathecae, dorsal view. Scale=1mm.

**Description:** Male (holotype). Total length 15.7 (note: only chelicera and carapace – abdomen missing). Carapace: length 11.3, width 8.6. Eye tubercle: length 1.2, width 1.6; anterior row procurved, posterior row slightly recurved, clypeus very narrow, nearly absent. Chelicerae with 14 teeth of similar size on promargin. Labium as long as wide with *ca.*30 cuspules (Smith 1990 – specimen now with labium and part of sternum damaged). Maxillae with *ca.*100 cuspules. Sternum oval. Fovea transverse. Palp: femur 5.3/ patella 3.5/ tibia

4.4/ cymbium 1.9/ total 15.1. Legs **I**: femur 8.5/ patella 5.5/ tibia 7.2/ metatarsus 5.9/ tarsus 3.6/ total 30.7. **II**: 7.6/ 4.7/ 5.8/ 5.7/ 3.3/ 27.1. **III**: 7.3/ 3.9/ 5.2/ 7.1/ 3.5/ 27.0. **IV**: 9.8/ 4.5/ 8.1/ 11.0/ 4.3/ 37.7. Spines. Palp: tibia (v) 0–0–1, (p) 0–1–0. Legs: **I**: femur (d) 0–0–p1, metatarsus (v) 0–0–ap1. **II**: femur (d) 0–0–p1, tibia (v) 2–0–ap3, (p) 0–0–1, metatarsus (v) ap1. **III**: femur (d) 0–r1–4, patella (p) 1, tibia (v) 1–2–ap3, (p) 1–1–1, (r) 1–0–1, metatarsus (v) 2–3–ap3, (p) 0–1–1, (r) 0–1–1. **IV**: femur (d) 0–0–r2, patella (p) 1, tibia (v) 2–2–ap4, (p) 0–0–1, (r) 1–1–1, metatarsus (v) 2–1–2+ap3, (p) 1–1–1, (r) 1–0–1. Palpal bulb with long thin embolus, slightly helicoid (Figs. 38–39). Tibial apophysis comprising two branches, strongly fused basally (Fig. 37). Prolateral branch short, wide with adjacent spine. Retrolateral branch slightly longer than prolateral, bearing apical row of short spines. Metatarsus I straight, bends externally to apophysis. Metatarsal scopulae extent (ventral surfaces only): I along entire length; II on distal three-quarters; III on slightly more than distal half; IV on slightly less than distal half. Tarsal scopulae (ventral surfaces only): I–II undivided; III–IV divided by longitudinal band of thick setae.

Female (paratype BMNH 10.5.1.5–6). Total length 23.0. Carapace length 8.2, width 6.6. Eye tubercle length 1.1, width 1.3; anterior row strongly procurved, posterior row recurved, clypeus very narrow. Labium: length 0.9, width 1.4. Sternum: length 3.3, width 3.2. Chelicerae with 14 teeth of similar size on promargin. Labium as long as wide with 31 cuspules. Maxillae with *ca.* 100 cuspules. Sternum rounded. Fovea transverse. Palp: femur 3.8/ patella 2.5/ tibia 3.2/ tarsus 2.2/ total 11.7. Legs **I**: femur 5.9/ patella 3.9/ tibia 4.5/ metatarsus 3.6/ tarsus 2.3/ total 20.2. **II**: 5.0/ 3.4/ 3.7/ 3.3/ 2.1/ 17.5. **III**: 4.8/ 2.8/ 3.2/ 4.3/ 2.3/ 17.4. **IV**: 6.8/ 3.4/ 5.7/ 7.1/ 3.0/ 26.0. Spines. Palp: tibia (v) 0–0–ap1. Legs: **I**: metatarsus 0–0–ap1. **II**: metatarsus (v) 0–0–ap1. **III**: femur (d) 0–0–r1, patella (p) 1, tibia (v) 0–1–ap2, (p) 1–2–ap1, (r) 1–1–0, metatarsus (v) 2–2–ap3, (p) 0–1–1, (r) 0–1–1. **IV**: femur (d) 0–0–r1, tibia (v) 1–1–ap3, (p) 1–1–0, (r) 1–0–1, metatarsus (v) 3–2–ap3, (p) 1–1–1, (r) 0–1–1. Spermathecae comprising two receptacula, each slightly longer than wide, distal portion swollen and more sclerotised (Fig. 40). Metatarsal scopulae extent (ventral surfaces only): I–II along entire length; III on slightly more than distal half; IV on slightly less than distal half. Tarsal scopulae (ventral surfaces only): I undivided; II–IV divided by longitudinal band of thick setae.

**Distribution:** Known from the islands of Silhouette, Mahé, Félicité, Praslin and The Sisters, Seychelles.

**Ecology:** Spiders inhabit endemic forests, presumably fossorial. Males are mature in September.

**Remarks:** Males of *N. gardineri* have the branches of their tibial apophysis strongly fused basally and the prolateral branch is as long as wide. For these reasons *Chaetopelma gardineri* is transferred to *Nesiergus*.

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