New and poorly known species of the genus *Aelurillus* Simon, 1884 from Central Asia, Asia Minor and the eastern Mediterranean (Araneae: Salticidae)

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Summary

Ten *Aelurillus* species are treated in the present paper, seven of which are described as new: *A. cretensis* sp. n. (♂♀; from Crete), *A. improvisus* sp. n. (♂♀; from northern India), *A. marusiki* sp. n. (♂♀; from Iran), *A. minimontanus* sp. n. (♂♀; from northern India), *A. minutus* sp. n. (♂; from Syria), *A. nenilini* sp. n. (♂; from Uzbekistan and Turkmenistan), and *A. unitibialis* sp. n. (♂♀; from southern Iran). A new combination, *Aelurillus leipoldae* (Metzner, 1999) (ex *Asianellus*), is proposed, with a description of the female for the first time. A lectotype (♀, HMNH) is designated for *A. m-nigrum* Kulczyński in Chyzer & Kulczyński, 1891. New faunistic records for *A. blandus* and *A. m-nigrum* are also given. All species are (re)described and illustrated, and distributional maps are provided.

Introduction

The genus *Aelurillus* (type species:*Araneus v-insignitus* Clerck, 1758) was established by Simon (1884) and now comprises 59 species (Platnick, 2001; Prószyński, 1990, 2001). This is a rather difficult genus needing revision, with most of its species still being known only from original descriptions and/or single sexes. Therefore, it is not surprising that the taxonomic composition of the genus, as well as the taxonomic assignment of many of its species, remains poorly understood.

For instance, Próchniewicz & Heçiak (1994) described a new species from Kenya, *Aelurillus lymphus*, which was then transferred to *Rafalus* by Prószyński (2000) solely on the basis that this species possesses a single tibial apophysis. However, the embolic division and characters of the female copulatory organs of *A. lymphus*, e.g. embolus with embolic membrane, fossae and epigynal flaps present, and compact spermathecae (all these characters are absent in *Rafalus* — see Próchniewicz & Heçiak, 1994: fig. 1 and Wesołowska & Russell-Smith, 2000: figs. 2–5), are evidence that this species belongs to *Aelurillus*. In this paper I describe a further three new species having a single tibial apophysis, all of them being true members of *Aelurillus*. Thus, the presence/absence of the second (dorsal) tibial apophysis is of little taxonomic significance and cannot be taken into consideration when delimiting *Aelurillus*.

While treating the central Asian salticid collection of Nenilin (1984), I found a new species erroneously identified as *Aelurillus m-nigrum* Kulczyński in Chyzer & Kulczyński, 1891. The taxonomic status and distribution of the latter species has therefore been redefined.

Additional comments are needed concerning three new *Aelurillus* species described here from India and Iran. Until now, a single species, *Aelurillus quadrimaculatus* Simon, 1889, has been described from a single ♀ from the Himalayas. I have been unable to locate and re-examine the type of this species, and the original description does not allow identification. Therefore, the taxonomic relations of *A. quadrimaculatus* to the two new Himalayan species described herein remain unknown.

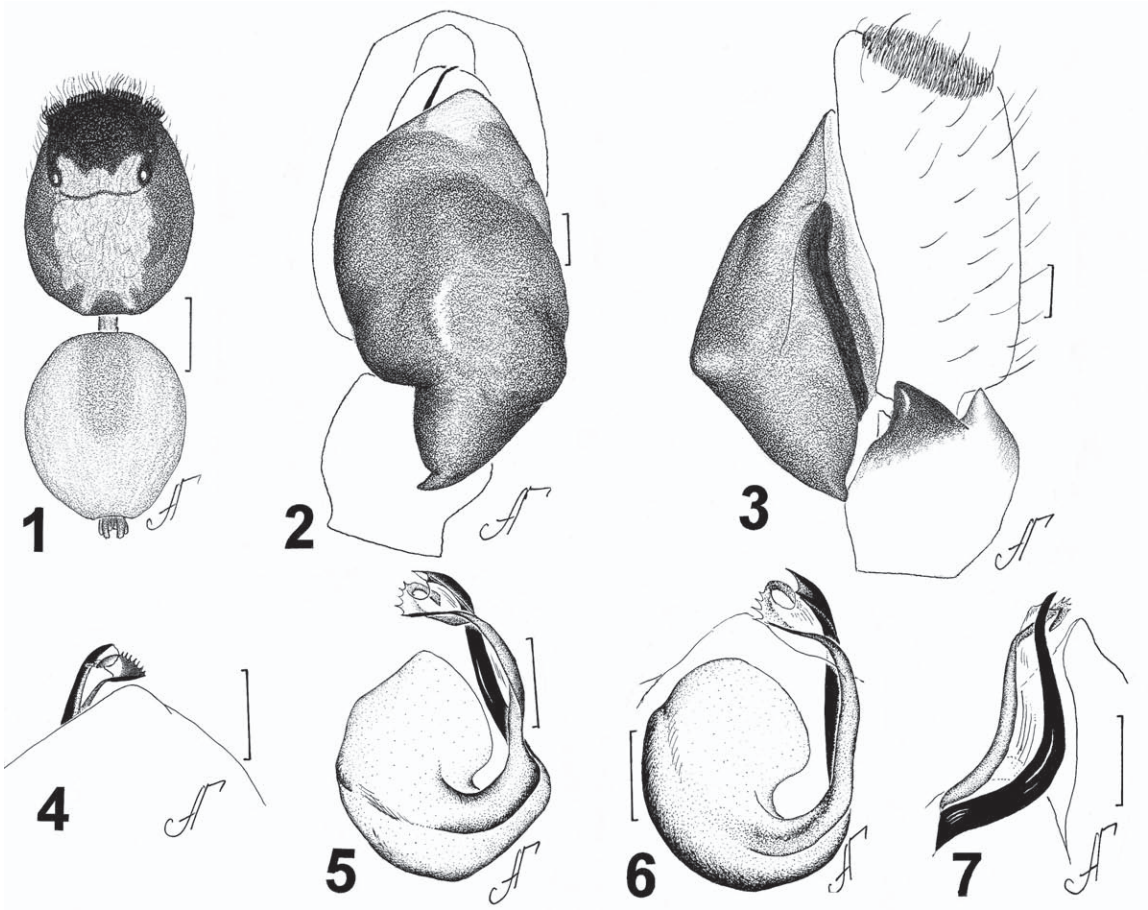
On the basis of the figures of Butt & Beg (2000: fig. 1A–C), their new species, *Marpissa tenebrosa* Butt & Beg, 2000, recently described from Pakistan, also seems to be a member of *Aelurillus*. Unfortunately, the quality of the original figures and description do not allow a reliable taxonomic conclusion. As I have been unable to obtain the type material of this species, its taxonomic status and relations to other *Aelurillus* species remain uncertain.

Roewer (1955b) described *Hemsenattus iranus* from NE Iran (Sabzawaran); this species is now considered a junior synonym of *Aelurillus concolor* Kulczyński, 1901 (see Prószyński, 1966, 1990). *Aelurillus concolor* and related species are not considered in the present paper. It is to be stressed only that both new species from Iran described herein are not related either to *A. concolor* or to the members of its species group.

The aim of the present work is to redescribe *Aelurillus leipoldae* (Metzner, 1999), comb. n. and *A. m-nigrum* Kulczyński in Chyzer & Kulczyński, 1891, and to describe seven new species of *Aelurillus* from the Mediterranean, Asia Minor and Central Asia.

Material and methods

This work is based on both museum collections and material newly collected in Greece, Russia, Kazakhstan, Iran, India and Syria. A total of 261 specimens has been examined. Specimens for this study were borrowed from or distributed among the following museums and personal collections: HMNH = Hungarian Natural History Museum, Budapest, Hungary (S. Mahunka and T. Szuts); IBPN = Institute for Biological Problems of the North, Magadan, Russia (later probably in Senckenberg Museum, Frankfurt am Main, Germany); ISEA = Siberian Zoological Museum, Institute for Systematics and Ecology of Animals, Novosibirsk, Russia (Dr D. V. Logunov and Ms G. N. Azarkina); IZA = Institute of Zoology, Academy of Sciences of Azerbaijan, Baky, Azerbaijan (Dr E. F. Guseinov); MMUM = Manchester Museum, University of Manchester, Manchester, UK (Dr D. V. Logunov); NHMB = Naturhistorisches Museum, Basel, Switzerland (Dr I. Al Hussein); NHMC = Natural History Museum, University of Crete, Crete, Greece (Dr M. Chatzaki); PCHM = personal collection of Dr H. Metzner, Burghaslach, Germany; PCRB = personal collection of Dr R. Bosmans, Gent, Belgium; PPDRI = Department of Agricultural Zoology, Plant Pests and Diseases Research Institute, Tehran, Iran (Mrs F. Mozaffarian); SMNK = Staatliches Museum für Naturkunde, Karlsruhe, Germany (Dr H. Höfer); ZISP = Zoological Institute, Russian Academy of Science, St. Petersburg,



Figs. 1–7: *Aelurillus blandus* (Simon, 1871). **1** Male, body pattern; **2** Male palp, ventral view; **3** Ditto, lateral view; **4** Embolus, ventral view; **5** Ditto, dorso-lateral view; **6** Ditto, dorsal view; **7** Ditto, mesal view. Scale lines = 1 mm (1), 0.1 mm (2–7).

Russia (Dr V. A. Krivokhatskii); ZMMU = Zoological Museum, Moscow State University, Moscow, Russia (Dr K. G. Mikhailov); ZMTU = Zoological Museum, University of Turku, Finland (Drs M. Saaristo and S. Koponen).

In most cases the names of collectors are abbreviated as follows: MC = Dr M. Chatzaki, PD = Dr P. M. Dunin, AF = Mr A. A. Fedorov, OL = Mr O. V. Lyakhov, PL = Mr P. Lymperakis, YM = Dr Y. M. Marusik, SO = Mr S. V. Ovchinnikov, AZ = Dr A. A. Zyuzin.

Abbreviations used in the text: M = male, F = female, AME = anterior median eyes, ALE = anterior lateral eyes, PLE = posterior lateral eyes, Fm = femur, Pt = patella, Tb = tibia, Mt = metatarsus. The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are in mm. For the leg spination the system adopted is that used by Ono (1988).

Aelurillus blandus (Simon, 1871) (Figs. 1–8)

Attus blandus Simon, 1871: 155 (♂).

Aelurillus blandus: Simon, 1884: 314; Bonnet, 1955: 165; Roewer, 1955a: 1113; Metzner, 1999: 73–74, 193, 197, figs. 39a–h, 43k, map 41 (♂♀).

Diagnosis: Males of *A. blandus* can be easily separated from those of other *Aelurillus* species by the presence of a white central patch on the carapace (Fig. 1). The embolic division is rather complex, with embolic membrane (possessing sharp teeth) joined to the terminal apophysis and embolus, and its apex strongly bent (Figs. 4–7).

Distribution: Greek islands (Metzner, 1999; see Fig. 8).

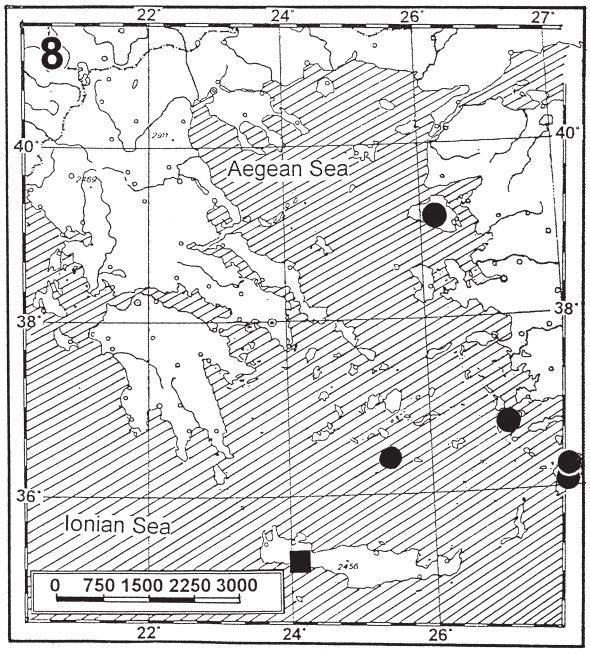


Fig. 8: Distribution of *A. blandus* (Simon, 1871) (circles) and *A. cretensis* sp. n. (square).

Description: *Male*: Carapace 3.2 long, 2.4 wide, 1.35 high at PLE. Ocular area 1.35 long, 1.6 wide anteriorly, 1.5 wide posteriorly. Diameter of AME 0.45. Abdomen 2.5 long, 2.3 wide. Cheliceral length 0.8. Clypeal height 0.3. Length of leg segments: I 1.4+0.95+1.0+0.7+0.6; II 1.5+1.0+0.9+0.75+0.65; III 2.1+1.1+1.15+1.4+0.9; IV 1.9+0.95+1.25+1.5+0.95. Leg spination: I: Fm d 0-1-1-5; Pt pr 1; Tb d 1-0-0, pr 1-1-1, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-1-0-0, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-0-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. IV: Fm d 1-0-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with median patch of whitish hairs (Fig. 1). Clypeus dark brown, covered with long and short black hairs; clypeal sides (''cheeks'') orange, covered with whitish hairs. Chelicerae orange-brown. Sternum brown. Labium and maxillae yellow-brown. Abdomen grey-brown, dorsum without colour markings. Book-lungs yellow. Spinnerets yellowish grey. Legs brownish yellow. All femora covered with long greyish-white hairs. Palps yellow, covered with white hairs. Palpal femur without ventral knob. Palpal structure as in Figs. 2–7.

Female: see Metzner (1999).

Material examined: 1♂ (ZMTU), Greece, Rhodos city, in dry field along seashore, 28 May 1973 (P. T. Lehtinen).

***Aelurillus cretensis* sp. n.** (Figs. 8–18)

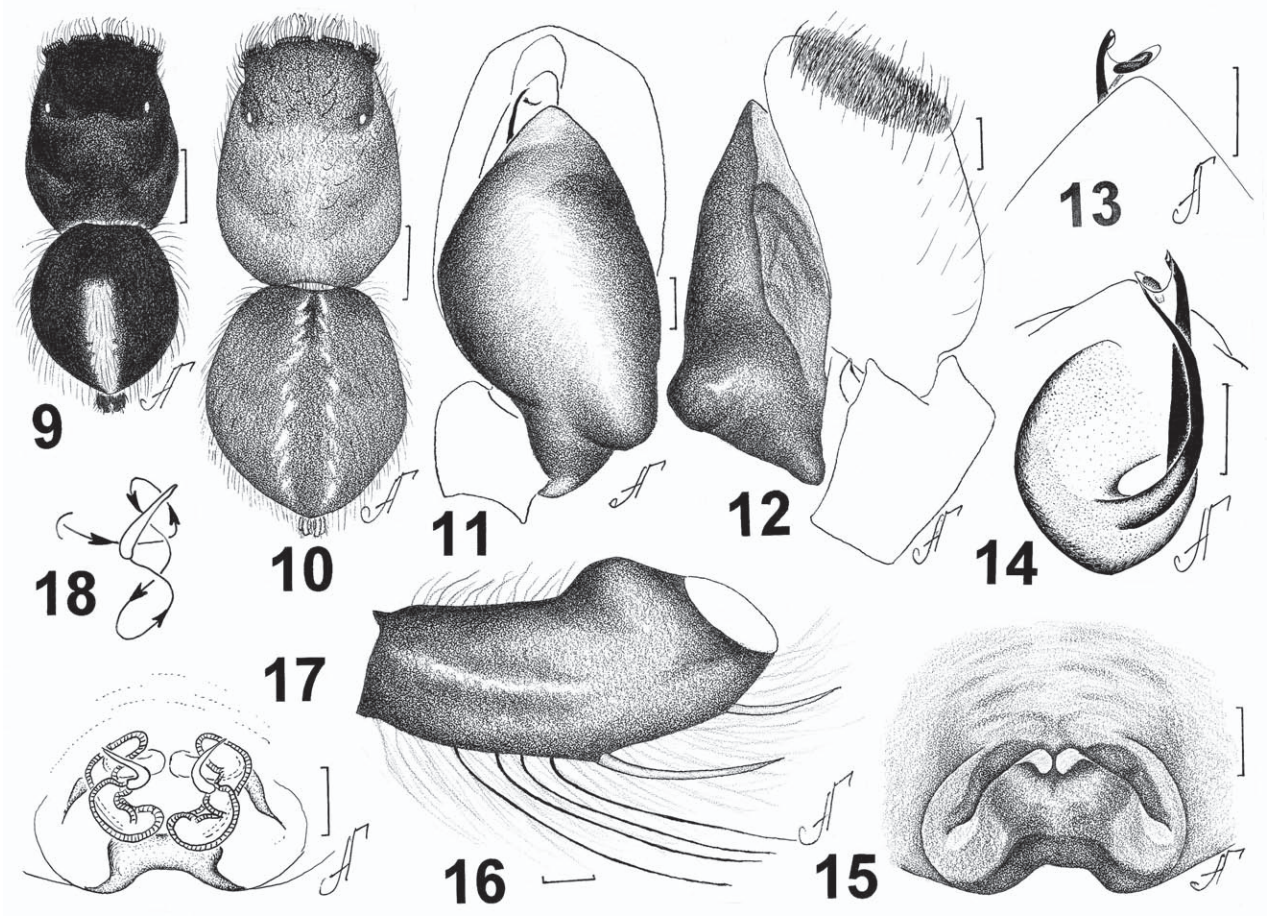
Type: Holotype ♂ (NHMC), Greece, Crete, Lefka Ori Mts., *c.* 1650 m a.s.l., 8 June 1991 (PL).

Etymology: The species is named after the terra typica, the island of Crete.

Diagnosis: This species is close to *A. leipoldae* and *A. m-nigrum*, but differs in the structure of the embolus (more massive embolic base and clearly different shape of embolic tip) (cf. Figs. 13–14 and 35–36, 76–77), the epigyne (distance between copulatory openings comparatively less, cf. Figs. 15 and 39, 79), the spermathecae (arrangement of loops, cf. Figs. 17 and 40, 80), and the shape of the epigynal pocket (cf. Figs. 17 and 40, 80). Besides, both sexes of *A. cretensis* are darker (cf. Figs. 9–10 and 31–32, 72, 75) and the femur of the male palp lacks white hairs (cf. Figs. 16 and 41).

Distribution: Crete (Fig. 8).

Description: *Male* (paratype from type locality: Lefka Ori Mts.): Carapace 2.9 long, 2.15 wide, 1.8 high at PLE. Ocular area 1.15 long, 1.1 wide anteriorly, 1.1 wide posteriorly. Diameter of AME 0.45. Abdomen 2.3 long,

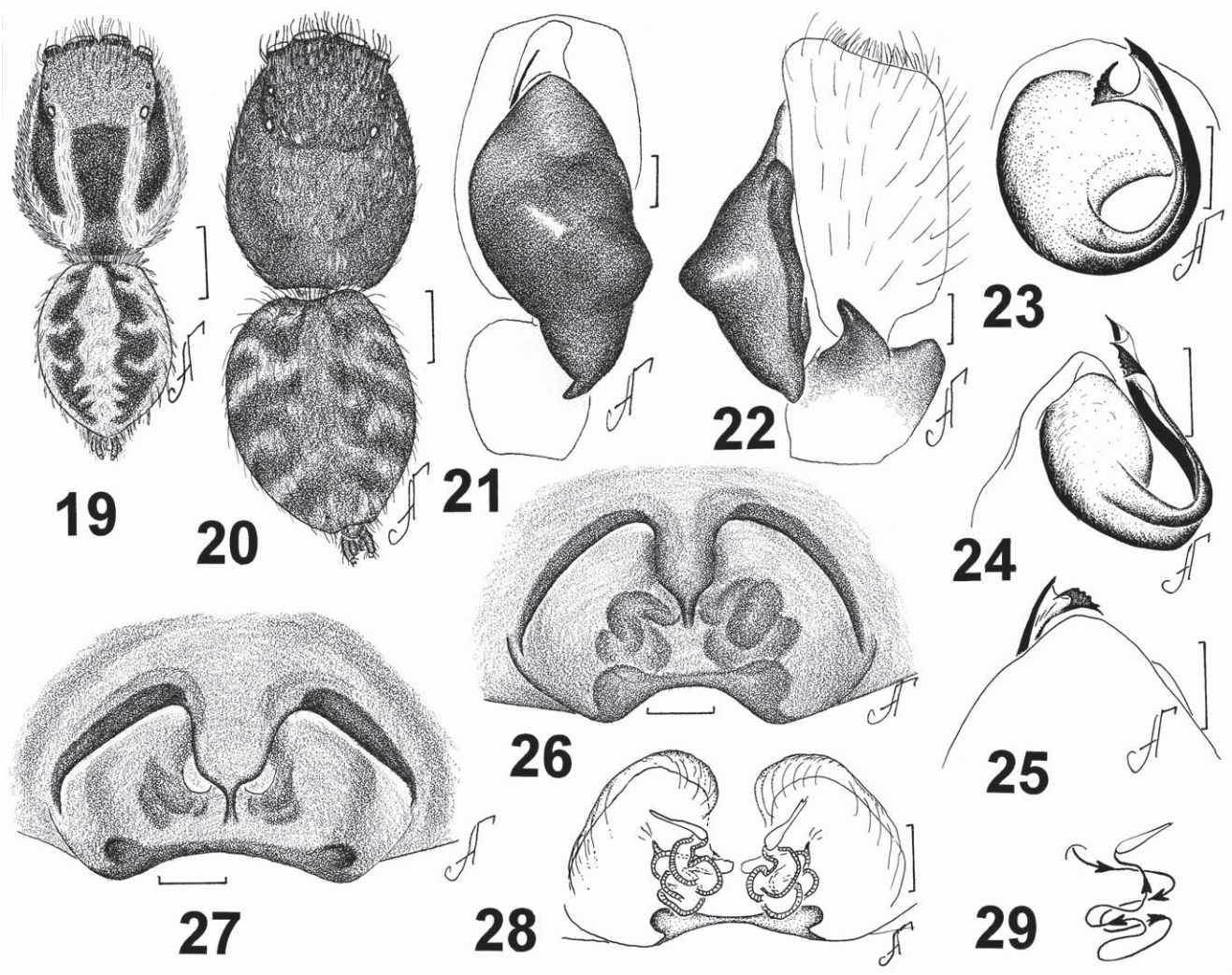


Figs. 9–18: *Aelurillus cretensis* sp. n. **9** Male, body pattern; **10** Female, body pattern; **11** Male palp, ventral view; **12** Ditto, dorsal view; **13** Embolus, ventral view; **14** Ditto, dorsal view; **15** Epigyne, ventral view; **16** Femur of male palp; **17** Spermathecae, dorsal view; **18** Schematic course of insemination ducts. Scale lines = 1 mm (9–10), 0.1 mm (11–17).

2.1 wide. Cheliceral length 0.9. Clypeal height 0.3. Length of leg segments: I 1.4+0.8+0.8+0.7+0.6; II 1.3+0.8+0.7+0.6+0.5; III 1.8+1.2+0.9+1.0+0.9; IV 1.5+0.8+0.9+1.65+0.95. Leg spination: I: Fm d 1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-3-0, rt 1-1-1, v 1-1-1ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-2-0, rt 1-1-1-0, v 1-1-2ap; Mt pr 1-1ap, rt 2-1ap, v 2-2ap. III: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-1, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-0-0, pr and rt 1-1-2, v 0-1-2ap. Carapace dark brown, with black eye field (Fig. 9). Clypeus dark brown, covered with black hairs. Chelicerae yellowish brown. Sternum, labium and maxillae brown. Abdomen dark brown, dorsum with longitudinal band of white hairs in posterior half (Fig. 9). Book-lungs yellow-brown. Spinnerets brown. All legs brown, covered with white hairs. Palp brown, lacking white hairs. Palpal femora dorsally covered with dark hairs, and with ventral rounded swelling (Fig. 16). Palpal structure as in Figs. 11–14.

Female (paratype from type locality: Lefka Ori Mts.): Carapace 3.2 long, 2.3 wide, 1.7 high at PLE. Ocular area 1.3 long, 1.7 wide anteriorly, 1.7 wide posteriorly. Diameter of AME 0.45. Abdomen 3.6 long, 3.1 wide. Cheliceral length 1.2. Clypeal height 0.35. Length of leg segments: I 1.3+0.8+0.9+0.5+0.5; II 1.4+0.9+0.8+0.6+0.55; III 2.0+1.0+1.0+1.2+0.7; IV 1.9+0.9+1.3+1.2+0.8. Leg spination: I: Fm d 1-1-5; Tb pr 1-2, v 1-2-2; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 1-2-5; Tb pr and rt 1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with black eye field, covered with white scale-like hairs, without marked colour pattern (Fig. 10). Clypeus dark brown, covered with long white hairs. Eyes surrounded by white hairs. Chelicerae, labium and maxillae red-brown. Sternum brown. Abdomen brownish grey, dorsum with poorly marked colour pattern. Book-lungs brownish grey. Spinnerets greyish brown. All legs dark brown. Structure of epigyne and spermathecae as in Figs. 15, 17–18.

Material examined: Paratypes: GREECE: 1♂ (NHMC), 1♂ (MMUM), Crete, Lefka Ori Mts., 1,650–2,100 m a.s.l., 16–17 October 1990 (PL); 7♂ 3♀ (ISEA), 2♂ 2♀ (NHMC), 1♀ (MMUM), same locality, *c.* 1,650 m a.s.l.,



Figs. 19–29: *Aelurillus improvisus* sp. n. **19** Male, body pattern; **20** Female, body pattern; **21** Male palp, ventral view; **22** Ditto, lateral view; **23** Embolus, dorsal view; **24** Ditto, lateral view; **25** Ditto, ventral view; **26** Epigyne, ventral view; **27** Ditto; **28** Spermathecae, dorsal view; **29** Schematic course of insemination ducts. Scale lines=1 mm (19–20), 0.1 mm (21–28).

8 June–6 October 1991 (PL); 1♀ (ISEA), same locality, *c*. 2,000 m a.s.l., 6 August 1992 (PL).

Aelurillus improvisus sp. n. (Figs. 19–30)

Type: Holotype ♂ (IBPN), India, Himachal Pradesh, Patlikuhl town, right pebbly-sandy bank of Beas River, 32°07′N, 77°08′E, 1,200 m a.s.l., 28–29 May 1999 (YM).

Etymology: The species name is derived from the Latin "*improvisus*" meaning "unexpected".

Diagnosis: This species is close to *A. minutus* sp. n., but differs in having a more massive base of the embolus and the embolic tip of clearly different structure (cf. Figs. 23, 25 and 68–69). The eye field of *A. improvisus* sp. n. males is covered with grey hairs, while the carapace sides are densely covered with long white hairs, which are absent in males of *A. minutus* sp. n. (cf. Figs. 19 and 64). The female of *A. minutus* sp. n. is unknown.

Distribution: Himachal Pradesh, India (Fig. 30).

Description: *Male* (paratype from type locality: Patlikuhl town): Carapace 3.1 long, 2.3 wide, 1.6 high at PLE. Ocular area 1.2 long, 1.7 wide anteriorly, 1.65 wide posteriorly. Diameter of AME 0.5. Abdomen 2.7 long, 2.15 wide. Cheliceral length 0.8. Clypeal height 0.3. Length of leg segments: I 1.4+1.0+1.1+0.75+0.6; II 1.5+1.0+0.9+0.75+0.65; III 2.2+1.1+1.2+1.35+0.75; IV 1.8+0.85+1.3+1.4+0.8. Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-0-0, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-0, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-2-5; Pt pr and rt 1: Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown (almost black), covered with short grey hairs; with two longitudinal and two lateral white bands formed by hairs (Fig. 19). Clypeus dark brown, covered with long white hairs. Sternum, labium and maxillae brown to dark brown. Abdomen grey-brown, dorsum with pattern formed by a pair of curved dark bands. Book-lungs yellow-grey. Spinnerets grey. All legs yellow-brown, femora yellow, covered with whitish hairs. Palp yellow, covered with long white hairs, cymbium brownish yellow. Palpal femur without ventral swelling. Palpal tibia with single apophysis (Fig. 22). Palpal structure as in Figs. 21–25.

Female (paratype from type locality: Patlikuhl town): Carapace 3.6 long, 2.7 wide, 1.5 high at PLE. Ocular area 1.5 long, 1.8 wide anteriorly, 1.8 wide posteriorly. Diameter of AME 0.6. Abdomen 4.2 long, 3.4 wide. Cheliceral length 1.1. Clypeal height 0.4. Length of leg segments: I 1.8+1.1+1.1+0.65+0.7; II 1.6+1.1+1.0+0.7+0.65; III 2.4+1.4+1.35+1.4+0.8; IV 2.1+1.0+1.55+1.75+0.95. Leg spination: I: Fm d 0-1-1-4; Tb v 2-2-2ap; Mt v 2-2ap. II: Fm d 0-1-2-5; Tb pr 1, v 1-1-2ap; Mt v 2-2ap. III: Fm d 1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-2ap. IV: Fm d 1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with black eye field, covered with short white hairs (Fig. 20). Clypeus brown, with white hairs. Eyes surrounded by white scale-like hairs. Chelicerae dark brown. Labium and maxillae brown. Sternum brownish yellow. Abdomen grey-yellow, dorsum with pattern as in Fig. 20. Book-lungs yellow. Spinnerets grey-yellow. All legs brownish yellow, with dark brown rings. Palp brown-yellow. Epigyne and spermathecae as in Figs. 26–29.

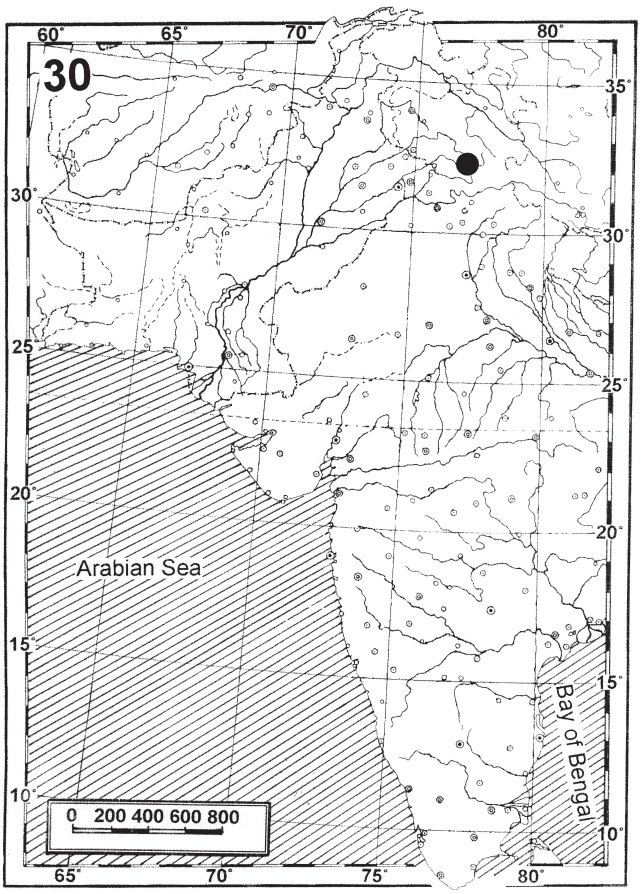


Fig. 30: Distribution of *A. improvisus* sp. n.

Material examined: Paratypes: INDIA: 48♂ 18♀ (ISEA, MMUM, ZMMU, IBPN), Himachal Pradesh, Patlikuhl town, right pebbly-sandy bank of Beas River, 32°07′N, 77°08′E, 1,200 m a.s.l., 28–29 May 1999, 17–23 June 1999 (YM).

Aelurillus leipoldae (Metzner, 1999), comb. n. (Figs. 31–43)

Asianellus leipoldae Metzner, 1999: 72, 191, figs. 37a–i, map 39 (♂ holotype from SMNK, examined).

Types: Holotype ♂ (SMNK 2177; holotype of *Asianellus leipoldae*), "Greece, Kreta, Paleohóra, Küstengebirge", 9 January 1993, coll. D. Leipold. Paratypes: 2♂ (PCHM, paratypes of *Asianellus leipoldae*), "Kreta, Chania (35°18′N, 23°48′E)", 4 September 1974, coll. Senglet.

Diagnosis: This species is very close to *A. m-nigrum*, but differs in the smaller size and body coloration of males (cf. Figs. 31 and 72), and by the general appearance of females (cf. Figs. 32 and 75). In addition, the

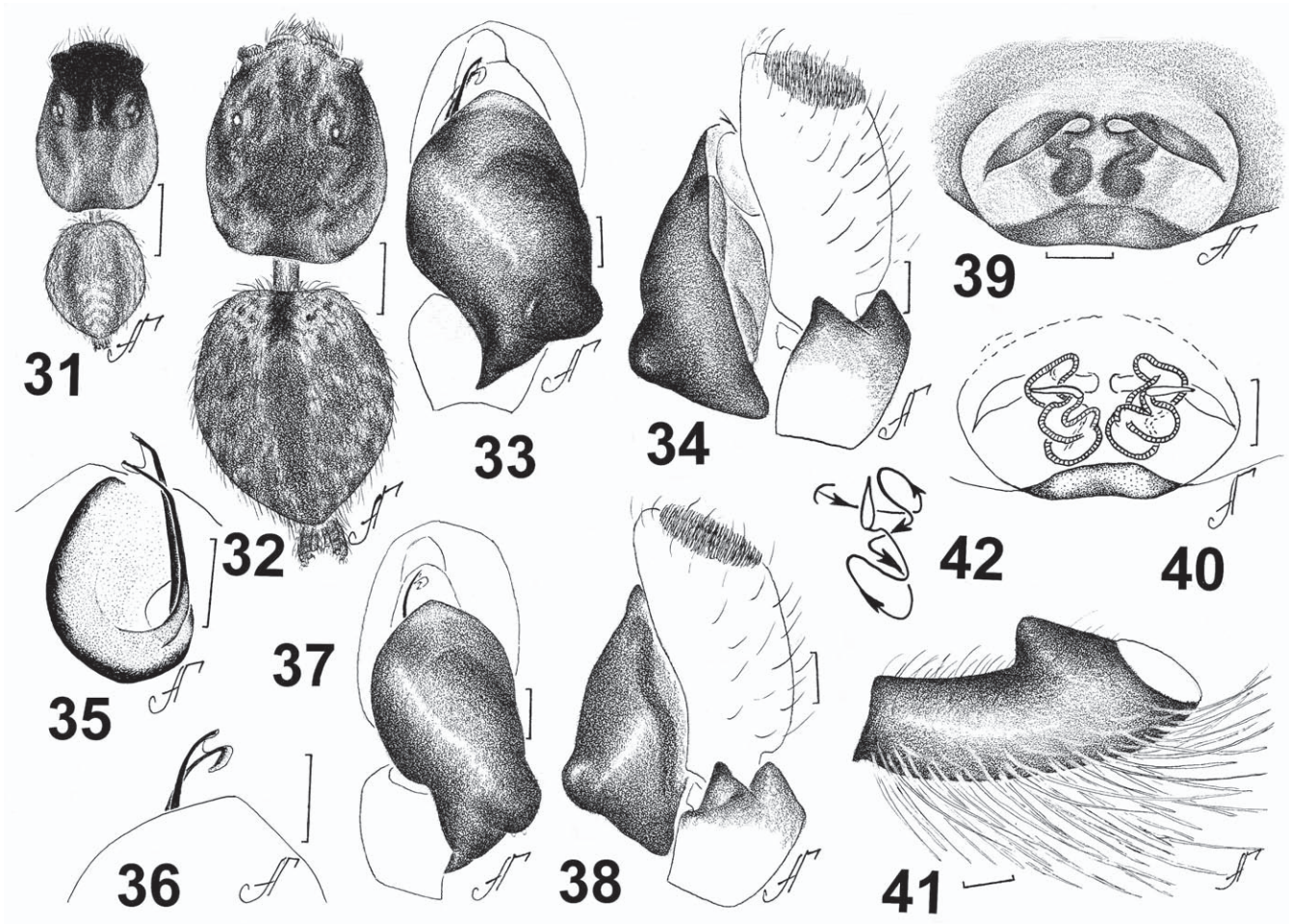
tegulum of *A. leipoldae* possesses a tegular knob (Figs. 33–34; not marked in *A. m-nigrum*) and the tibial apophysis has a blunt tip (pointed in *A. m-nigrum*; (cf. Figs. 38 and 74). Females of *A. leipoldae* differ in the position and shape of the epigynal flaps (cf. Figs. 39 and 79) and the arrangement of the spermathecal loops (cf. Figs. 40 and 80). See also comments above under "Diagnosis" of *A. cretensis*.

Comments: *Aelurillus leipoldae* was described by Metzner (1999) in the genus *Asianellus* (type material re-examined). On the basis of the conformation of the copulatory organs (viz. spermathecae of the compact type and massive embolus with embolic membrane; see Figs. 33–40), I have concluded this species in undoubtedly a member of *Aelurillus*. The genus *Asianellus* is characterised by a spiral embolus, the absence of fossae, and the spermathecae forming curved tubes (see Logunov & Heçiak, 1996); all these characters are either absent or different (fossae present) in *leipoldae*. It therefore seems better to transfer this species to *Aelurillus*.

Distribution: Greece: Crete and Gavdos (Fig. 43).

Description: *Male* (paratype): Carapace 2.7 long, 1.7 wide, 1.4 high at PLE. Ocular area 1.05 long, 1.35 wide anteriorly, 1.4 wide posteriorly. Diameter of AME 0.4. Abdomen 2.3 long, 1.65 wide. Cheliceral length 0.65. Clypeal height 0.2. Length of leg segments: I 1.4+0.8+0.8+0.6+0.5; II 1.2+0.7+0.7+0.5+0.5; III 1.7+0.8+0.9+1.1+0.7; IV 1.5+0.7+0.9+1.2+0.7. Leg spination: I: Fm d 1-1-5; Pt pr and rt 1; Tb d 0-1-0, pr 1-2-0, v 1-1-2ap; Mt pr and rt 1-1ap, v 2–2ap. II: Fm d 1-2-5; Pt pr and rt 1; Tb d 0-1-0, pr and rt 1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-1-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt pr 1-1-2, rt 2-1-2, v 1-1-2ap. Carapace yellow-brown, with dark brown eye field covered with short white hairs, and with a pair of longitudinal white bands (Fig. 31). Clypeus yellow-brown, covered with long white hairs. Chelicerae yellow-brown. Sternum, labium and maxillae brown. Abdomen grey-brown, dorsum with pair of longitudinal brown stripes; scutum about 1/3 length of dorsum. Book-lungs yellowish grey. Spinnerets brown. All legs yellow-brown. Palp yellow-brown to brown, covered with white hairs, palpal femur with ventral swelling (Fig. 41). Palpal structure as in Figs. 33–38.

Female (from Crete: Lefka Ori Mts.): Carapace 3.0 long, 2.2 wide, 1.55 high at PLE. Ocular area 1.2 long, 1.6 wide anteriorly, 1.65 wide posteriorly. Diameter of



Figs. 31–42: *Aelurillus leipoldae* (Metzner, 1999). **31** Male, body pattern; **32** Female, body pattern; **33** Male palp, ventral view; **34** Ditto, lateral view; **35** Embolus, dorsal view; **36** Ditto, ventral view; **37** Male palp, ventral view; **38** Ditto, lateral view; **39** Epigyne, ventral view; **40** Spermathecae, dorsal view; **41** Femur of male palp; **42** Schematic course of insemination ducts. Scale lines = 1 mm (31–32), 0.1 mm (33–41).

AME 0.45. Abdomen 3.2 long, 2.8 wide. Cheliceral length 1.1. Clypeal height 0.35. Length of leg segments: I 1.2+0.8+0.9+0.6+0.5; II 1.1+1.0+0.8+0.5+0.5; III 2.1+1.1+1.0+1.1+0.75; IV 1.9+0.9+1.2+1.3+0.8. Leg spination: I: Fm d 1-1-5; Tb pr 1-2, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 1-2-5; Tb pr 1-1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-2ap. IV: Fm d 1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap or 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with indistinct pattern of yellow-brown hairs (Fig. 32). Clypeus orange-yellow. Eyes surrounded by orange hairs. Chelicerae orange-brown. Sternum brownish yellow. Labium and maxillae brownish orange. Abdomen orange-yellow-brown. Dorsum variegated, with indistinct colour pattern. Book-lungs and spinnerets yellow-grey. All legs yellowish brown. Epigyne and spermathecae as in Figs. 39–40, 42.

Other material examined: GREECE: *Crete*: 56♂ (NHMC), 1♂ (ISEA), Chania, Lefka Ori Mts., 1,650 m a.s.l., 30 August–23 November 1990 (PL); 34♂ 1♀ (NHMC), 9♂ 4♀ (ISEA), same locality, 800 and 1,650 m a.s.l., 6 July–6 November 1991 (PL); 1♂ (NHMC), same locality, 1,200 m a.s.l., *Cupressus* forest, 5 October 1991 (PL); 1♂ (PCRB), Chania, Kandanos-Floria, 13 September 1998 (G. Delmastro); 1♂ (PCRB), Rethymnon, Rethymnon W., 21 September 1998 (G. Delmastro); 2♀ (NHMC), 3♂ 2♀ (MMUM), SE of Irakleion city, Yachtas Mt., phrygano, 30 March–11 November 1996 (MC); 2♂ (PCRB), Lassithion, Elouna, Spinalonga island, saltmarsh, 18 October 1998 (R. Bosmans). *Gavdos*: 1♀ (NHMC), Ag. Georgios, wetland with no permanent water, 24 July–8 November 1997 (Pavagamian); 1♂ 1♀ (NHMC), same locality, 8 November 1996–13 March 1997 (Pavagamian); 4♀ 1 juv. (NHMC), Fanari, phrygano, 8 November 1996–13 March 1997 (Pavagamian); 8♂ 7♀ (NHMC), Lavrakas sand-dunes, 8 November 1996–13 March 1997 (Pavagamian); 5♀ (NHMC), same locality, 13 March–11 June 1997 (Pavagamian); 2♀ (ISEA), same locality, *Juniperus* forest, 24 July–8 November 1997 (Pavagamian); 4♂ (NHMC), Metochi, 24 July–8 November 1997 (Pavagamian); 1♀ (NHMC), Korfos, 13 March–11 June 1997 (Pavagamian); 1♀ (NHMC), Gavdopoula island, 8 November–13 March 1997 (Pavagamian); 4♀ (NHMC), same locality, 13 March–11 June 1997 (Pavagamian).

Aelurillus marusiki sp. n. (Figs. 44–53)

Type: Holotype ♂ (IBPN), Iran, Fars Prov., *c*. 40 km ESE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 29°29′N, 52°42′E, semi-desert around salt lake, 23–28 May 2000 (YM).

Etymology: This species is named in honour of the collector, the well-known Russian arachnologist, Dr Yuri M. Marusik.

Diagnosis: This species is close to *A. unitibialis* sp. n., but both sexes differ in body coloration (cf. Figs. 44, 47 and 86, 89). The embolic division of *A. marusiki* sp. n. has a curved terminal apophysis and more massive embolic base (cf. Figs. 49 and 92). The tibial apophysis protrudes more strongly ventrally in *A. marusiki* sp. n.; also the dorsal tibial apophysis is more pointed in *A. marusiki* sp. n. and rounded in *A. unitibialis* sp. n. (cf. Figs. 46 and 88). The shape of the epigynal flaps and arrangement of the spermathecal loops are clearly different in both species (cf. Figs. 50–51 and 93–94).

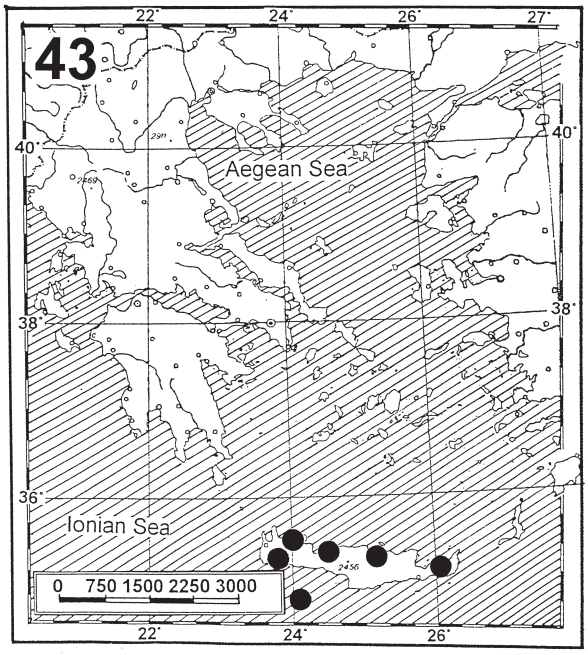
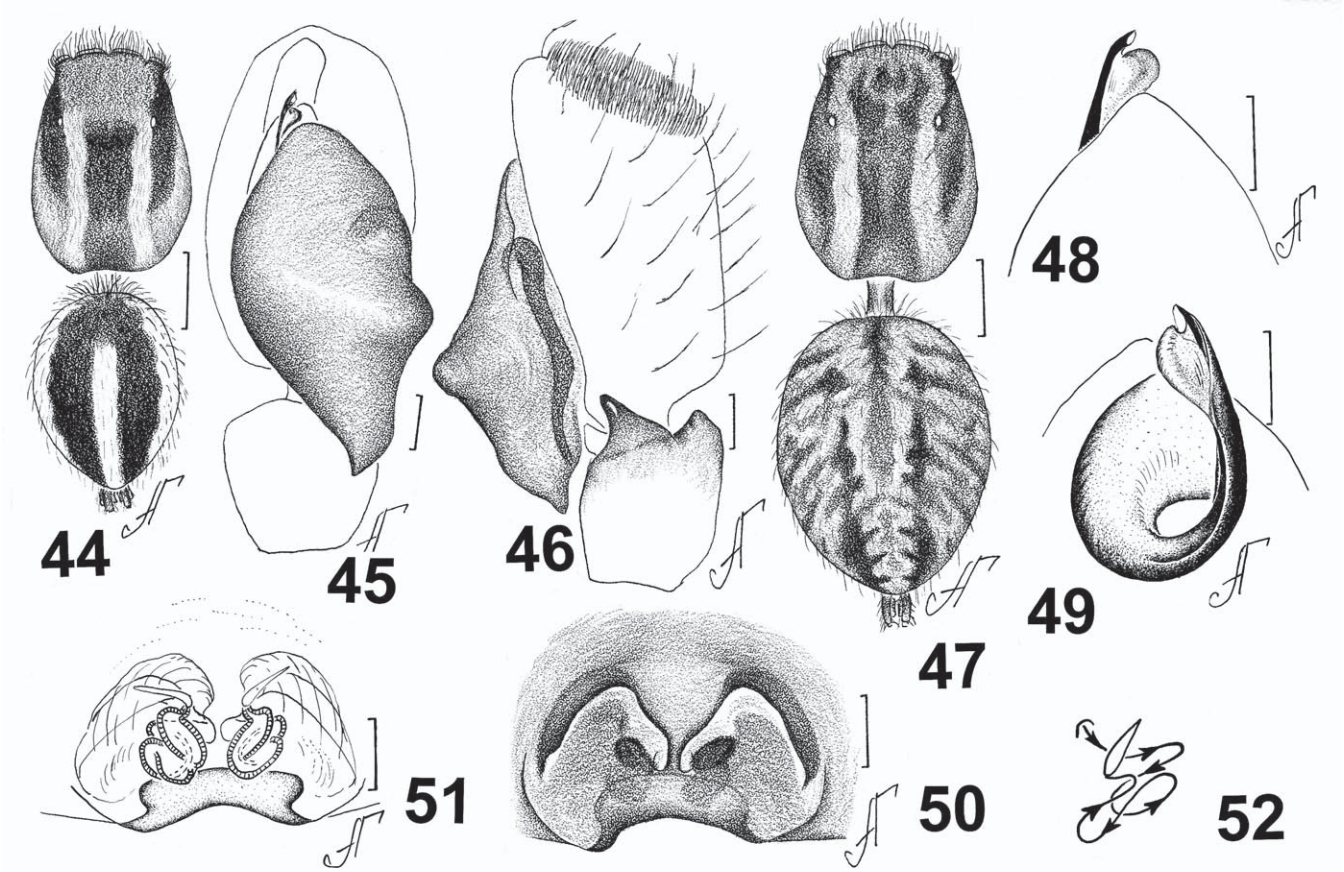


Fig. 43: Distribution of *A. leipoldae* (Metzner, 1999).

Distribution: Iran (Fig. 53).

Description: *Male* (paratype from type locality: Barm-e-shoor Ck): Carapace 3.0 long, 2.0 wide, 1.5 high at PLE. Ocular area 1.2 long, 1.45 wide anteriorly, 1.45 wide posteriorly. Diameter of AME 0.4. Abdomen 2.5 long, 1.9 wide. Cheliceral length 1.1. Clypeal height 0.25. Length of leg segments: I 1.4+0.75+0.9+0.65+0.75; II 1.45+0.8+1.0+0.7+0.6; III 1.9+0.9+1.1+1.2+0.9; IV 1.9+0.9+1.3+1.5+0.9. Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb pr 1-1-1, rt 1-1, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 1-1-2ap. IV: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-1, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with pair of longitudinal white bands. Ocular area covered with grey hairs (Fig. 44). Clypeus brown, covered with yellow-white hairs. Chelicerae yellow-brown. Sternum, labium and maxillae brown-yellow. Abdomen brown-yellow, dorsum with two longitudinal brown bands fused anteriorly, and pale central stripe (Fig. 44). Book-lungs yellow. Spinnerets grey-yellow. All legs yellow to yellow-brown. Femora I–II covered with white-yellow hairs. Palp yellow, covered with long yellow-white hairs. Palpal femur without ventral swelling. Palpal structure as in Figs. 45–46, 48–49.

Female (paratype from type locality: Barm-e-shoor Ck): Carapace 3.2 long, 2.5 wide, 1.6 high at PLE.



Figs. 44–52: *Aelurillus marusiki* sp. n. **44** Male, body pattern; **45** Male palp, ventral view; **46** Ditto, lateral view; **47** Female, body pattern; **48** Embolus, ventral view; **49** Ditto, dorsal view; **50** Epigyne, ventral view; **51** Spermathecae, dorsal view; **52** Schematic course of insemination ducts. Scale lines = 1 mm (44, 47), 0.1 mm (45–46, 48–51).

Ocular area 1.3 long, 1.65 wide anteriorly, 1.65 wide posteriorly. Diameter of AME 0.45. Abdomen 3.7 long, 3.0 wide. Cheliceral length 1.1. Clypeal height 0.45. Length of leg segments: I 1.4+1.1+0.9+0.65+0.6; II 1.5+0.9+0.9+0.65+0.6; III 2.1+1.1+1.2+1.4+0.85; IV 2.15+1.0+1.5+1.6+1.0. Leg spination: I: Fm d 0-1-1-4; Tb pr 1-1, v 1-1-2ap; Mt v 2-2ap. II: Fm d 0-1-2-4; Tb pr 1-1, v 1-1-2ap; Mt pr 1-1ap, v 2-2ap. III: Fm d 1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-1, rt 1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with two longitudinal pale bands (Fig. 47). Clypeus yellow-brown, covered with yellow-white hairs. Eyes surrounded by white-yellow hairs. Chelicerae yellow-brown, anterior parts brown. Sternum, labium and maxillae yellow to yellow-brown. Abdomen yellow-grey, dorsum with pattern as in Fig. 47. Book-lungs yellow. Spinnerets yellow-grey. All legs yellow, spotted with brown. Structure of epigyne and spermathecae as in Figs. 50–52.

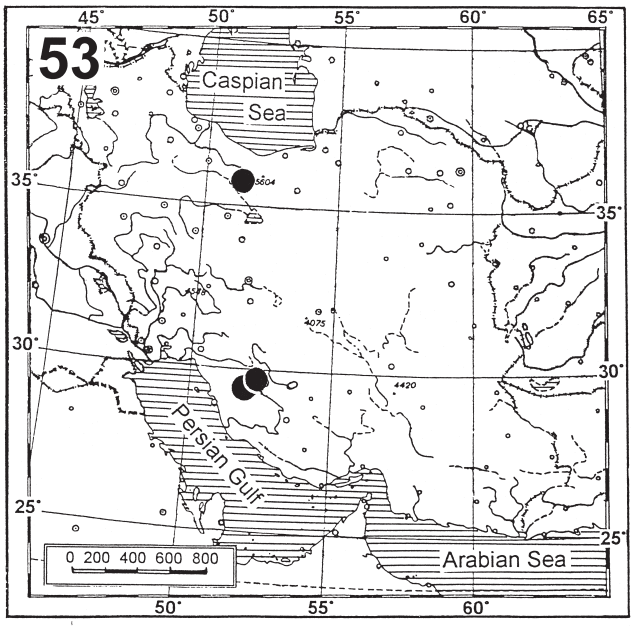


Fig. 53: Distribution of *A. marisiki* sp. n.

Material examined: Paratypes: IRAN: *Tehran Province*: 2♂ (PPDRI), E of Tehran, Gag-rood, 35°43′N, 51°52′E, pebbly river bank, 2 June 2000 (YM). *Fars Province*: 5♂ 5♀ (ISEA, MMUM), *c.* 40 km ESE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 29°29′N, 52°42′E, 23–28 May 2000 (YM); 3♂ 1♀ (ZMMU, MMUM), *c.* 50 km NNE of Shiraz, Bamoo Res., 29°45′N, 52°45′E, semi-desert, 18–28 May 2000 (YM); 1♂ (ISEA), Haftbarm, 29°45′N, 52°15′E, along small creek, 24 May 2000 (YM); 1♂ (ISEA), near Shiraz, Pol-e-Berengi, under stones in mountain semi-desert, 29 May 2000 (YM & K. Elmi); 1♂ 7♀ (ISEA, ZMMU); 2♀ (PPDRI), bridge on Ghara

Aghach River, 29°41′N, 52°13′E, gravelly river bank, 24 May 2000 (YM). 1♀ (ISEA), Iran (no exact locality), 251.

***Aelurillus minimontanus* sp. n.** (Figs. 54–63)

Type: Holotype ♂ (IBPN), India, Himachal Pradesh, Sissu village, 32°28.1′N, 77°07.9′E, 3,150–3,500 m a.s.l., dry meadows with *Artemisia*, 8–10 June 1999 (YM).

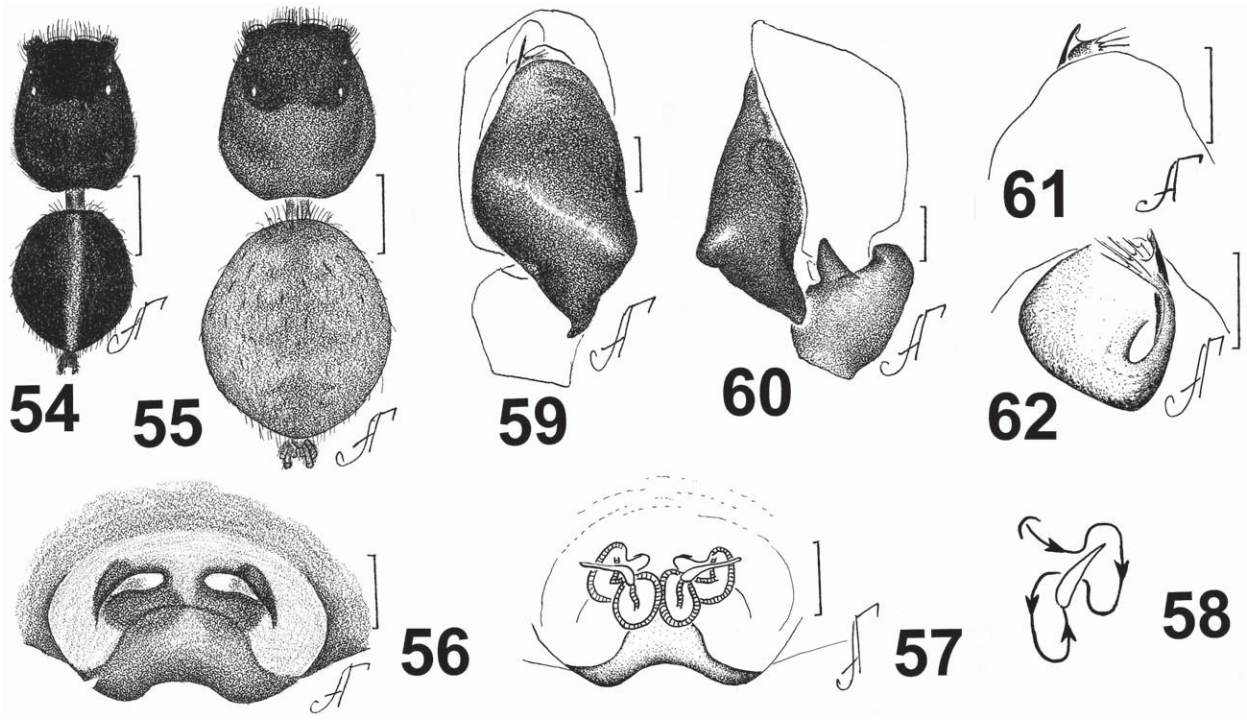
Etymology: The species name is derived from two Latin words: "*mini*" meaning "small" and "*montanus*" meaning "dwelling in mountains". Both sexes are rather small; the species was collected on mountains at high altitudes.

Diagnosis: Both sexes are dark coloured, the male with a faint longitudinal white stripe on the abdominal dorsum (Figs. 54-55). The males have an uncommon structure on the embolic tip, which possesses numerous long thin spines (Figs. 61–62); such a structure has not been recorded among all the other *Aelurillus* species known to me. The epigyne has a strong epigynal pocket (Fig. 56), rather unusual in *Aelurillus*.

Distribution: Himachal Pradesh, India (Fig. 63).

Description: *Male* (paratype from type locality: Sissu village): Carapace 2.0 long, 1.55 wide, 1.0 high at PLE. Ocular area 0.9 long, 1.2 wide anteriorly, 1.1 wide posteriorly. Diameter of AME 0.4. Abdomen 1.8 long, 1.55 wide. Cheliceral length 0.6. Clypeal height 0.2. Length of leg segments: I 1.0+0.6+0.7+0.4+0.5; II 0.9+0.65+0.6+0.45+0.5; III 1.3+0.7+0.7+0.8+0.55; IV 1.4+0.55+0.6+0.9+0.6. Leg spination: I: Fm d 1-1-4; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-1, rt 1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-1-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 1-1-2ap or 2-0-2ap. IV: Fm d 1-1-4; Pt pr and rt 1; Tb d 1-1-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with black eye field (Fig. 54). Clypeus dark brown, covered with long dark setae and short light hairs. Chelicerae brownish yellow. Labium and maxillae brownish grey. Sternum dark brown. Abdomen grey-brown, dorsum with indistinct median stripe formed by whitish hairs. Book-lungs and spinnerets brownish grey. All legs dark brown. Palp dark brown, covered with dark and white hairs. Palpal femur with ventral knob. Palpal structure as in Figs. 59–62.

Female (paratype from type locality: Sissu village): Carapace 2.3 long, 1.8 wide, 1.3 high at PLE. Ocular area 1.1 long, 1.25 wide anteriorly, 1.2 wide posteriorly. Diameter of AME 0.35. Abdomen 3.7 long, 3.2 wide. Cheliceral length 0.7. Clypeal height 0.3. Length of leg segments: I 1.1+0.7+0.6+0.4+0.45; II 0.9+0.6+0.7+0.5+0.4; III 1.5+0.8+0.9+0.9+0.7; IV 1.9+0.9+0.7+1.1+0.65. Leg spination: I: Fm d 1-1-3; Tb pr 2-2, v 1-0-2ap or 1-1-2ap; Mt pr 1-1, rt 0-1, v 2-2ap. II: Fm d 1-1-3; Tb pr 1-1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1, v 2ap; Mt d 1-0-0, pr and rt 1-0-2, v 1-1-2ap. IV: Fm d 1-1-2; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 0-1-2ap. Carapace brown, with dark brown eye field, lacking colour pattern (Fig. 55). Clypeus brown, covered with white hairs and dark setae. White hairs around eyes. Chelicerae yellow reddish brown. Labium and



Figs. 54–62: *Aelurillus minimontanus* sp. n. **54** Male, body pattern; **55** Female, body pattern; **56** Epigyne, ventral view; **57** Spermathecae, dorsal view; **58** Schematic course of insemination ducts; **59** Male palp, ventral view; **60** Ditto, lateral view; **61** Embolus, ventral view; **62** Ditto, dorsal view. Scale lines=1 mm (54–55), 0.1 mm (56–57, 59–62).

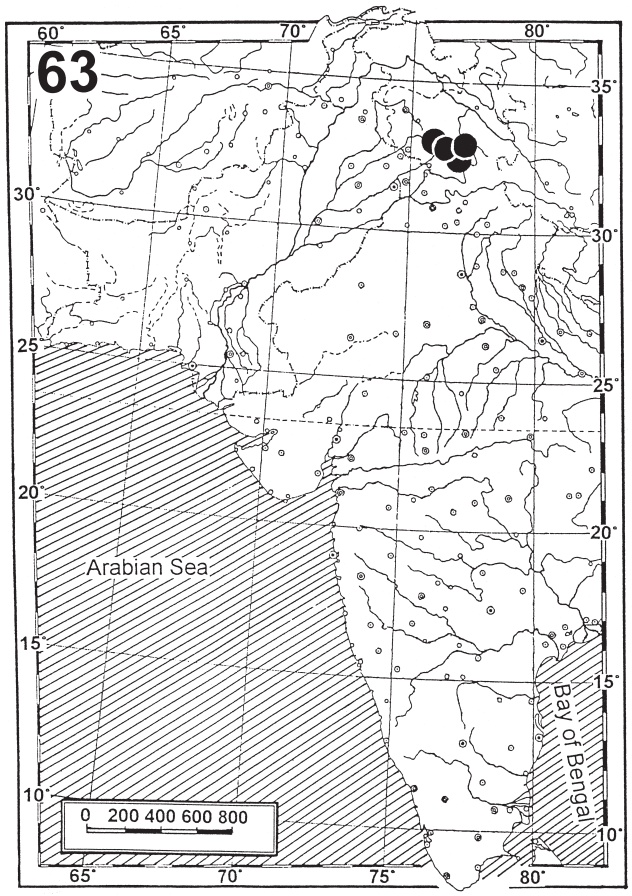


Fig. 63: Distribution of *A. minimontanus* sp. n.

maxillae brown-yellow. Sternum brown. Abdomen grey-brown, dorsum without colour pattern. Book-lungs and spinnerets grey. All legs brown. Palps yellow. Epigyne and spermathecae as in Figs. 56–58.

Material examined: Paratypes: INDIA: *Himachal Pradesh*: 53♂ 13♀ (ISEA, ZMMU), Sissu village, 32°28.1′N, 77°07.9′E, 3,150–3,500 m a.s.l., S exposed stony slope and first river terrace, dry meadows with *Artemisia* (hand collecting), 8–10 June 1999 (YM); 1♂ (ISEA), Sissu village, 32°28′N, 77°07′E, 3,150 m a.s.l., dry meadows with *Artemisia* (pitfall traps), 9–17 June 1999 (YM); 3♂ 2♀ (MMUM), Darcha village, 32°40.6′N, 77°11.9′E, 3,300–3,400 m a.s.l., xerophilous stony slope, 15 June 1999 (YM); 1♂ 1♀ (ISEA), Tandi village, 5 km S of Keylong, *c*. 2,700 m a.s.l., SW facing dry slope with sparse vegetation, 11 June 1999 (YM); 2♂ 2♀ (IBPN), Jahalman village, 32°38.44′N, 76°51.8′E, 3,000–3,100 m a.s.l., S exposed dry stony slope with *Artemisia*, spiny Fabaceae, sparse junipers (1.5–3 m high) and *Rosa* spp., 13 June 1999 (YM); 2♂ (ISEA), Keylong city, 32°35′N, 77°01′E, 3,100–3,400 m a.s.l., left river bank (200–400 m above river) with overgrazed pasture and semi-dry meadow, 12–17 June 1999 (YM).

Aelurillus minutus sp. n. (Figs. 64–71)

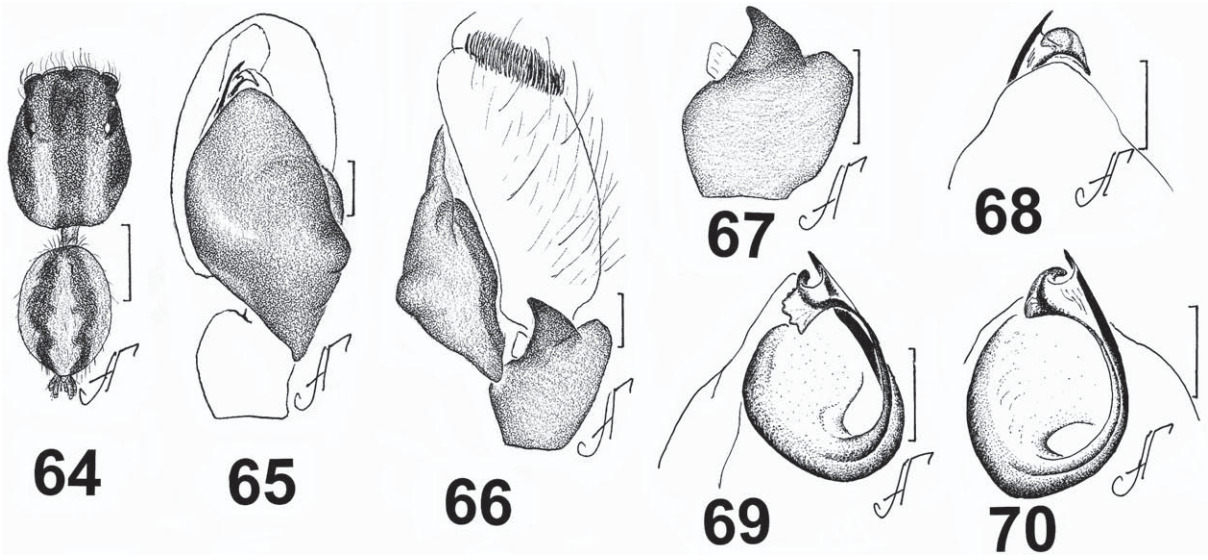
Type: Holotype ♂ (NHMB), Syria, 3 August 1989 (T. Blick).

Etymology: This is a very small species, hence it is called "*minutus*", the Latin for "small".

Diagnosis: This species is close to *A. improvisus* sp. n., but differs in having a less massive base of the embolus and the embolic tip of clearly different structure (cf. Figs. 68–70 and 23, 25). The carapace of *A. minutus* sp. n. males lacks the lateral coverage of long white hairs, which are present in males of *A. improvisus* sp. n. (cf. Figs. 64 and 19). The female is unknown.

Distribution: Syria (Fig. 71).

Description: *Male* (holotype): Carapace 2.3 long, 1.55 wide, 1.2 high at PLE. Ocular area 1.0 long, 1.2 wide anteriorly, 1.15 wide posteriorly. Diameter of AME 0.35. Abdomen 1.7 long, 1.3 wide. Cheliceral length 0.6. Clypeal height 0.2. Length of leg segments: I 1.2+0.7+0.7+0.4+0.5; II 1.1+0.55+0.7+0.4+0.6; III 1.3+0.7+0.8+0.8+0.65; IV 1.4+0.5+0.95+0.95+0.75. Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb pr 1-1-1, rt 1, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d



Figs. 64–70: *Aelurillus minutus* sp. n. **64** Male, body pattern; **65** Male palp, ventral view; **66** Ditto, lateral view; **67** Tibial apophysis of male palp, lateral view; **68** Embolus, ventral view; **69** Ditto, dorso-lateral view; **70** Ditto, dorsal view. Scale lines=1 mm (64), 0.1 mm (65–70).

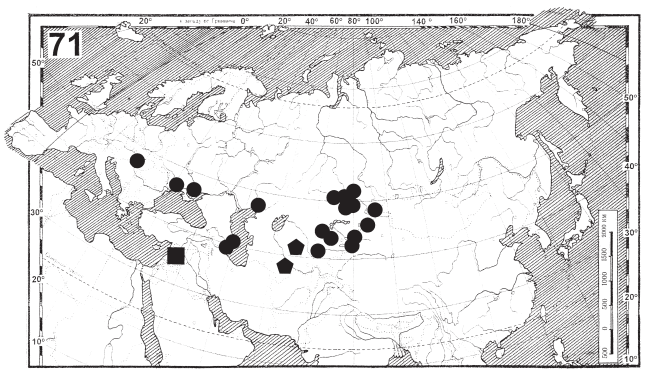


Fig. 71: Distribution of *A. minutus* sp. n. (square), *A. m-nigrum* Kulczyński in Chyzer & Kulczyński, 1891 (circles) and *A. nenilini* sp. n. (pentagons).

0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-0-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with dark eye field and two longitudinal white stripes (Fig. 64). Clypeus yellow-brown, covered with long white hairs. Chelicerae and sternum brownish yellow. Labium and maxillae greyish yellow. Abdomen brownish yellow, dorsum with colour pattern formed by two longitudinal dark bands. Book-lungs yellow. Spinnerets greyish yellow. All legs yellow. Palp yellow, covered with long white hairs. Palpal femur without ventral swelling. Palpal tibia with single apophysis (Fig. 67). Palpal structure as in Figs. 65–66, 68–70.

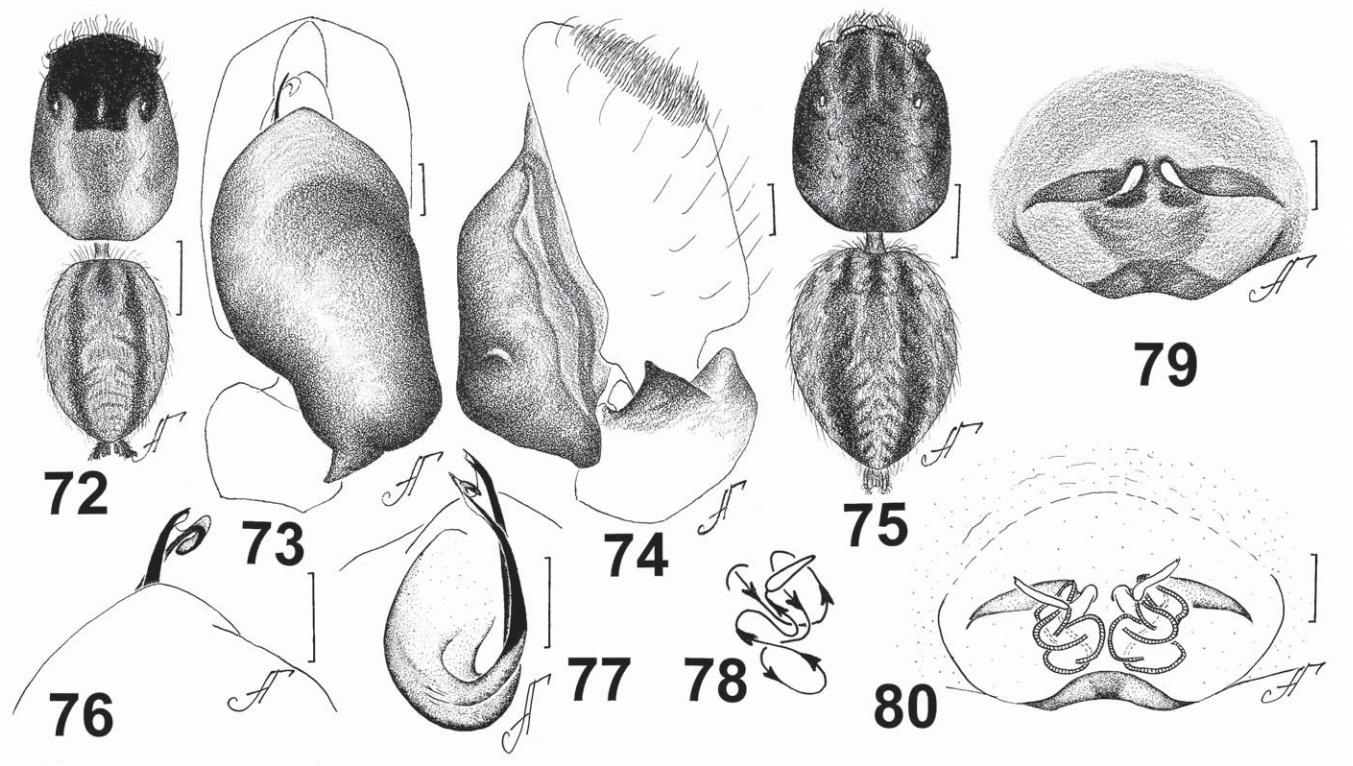
Female: Unknown.
Material examined: Only the holotype.

Aelurillus m-nigrum Kulczyński in Chyzer & Kulczyński, 1891 (Figs. 71–80)

Aelurillus m-nigrum Kulczyński in Chyzer & Kulczyński, 1891: 31–32, pl. I, fig. 5 (♀ lectotype from HMNH, here designated).
Aelurillus m-nigrum: Prószyński, 1979: 303, figs. 2–7; 1990: 42; Nenilin, 1984: 8; 1985: 130; Zhou & Song, 1988: 1, figs. 1 a–e; Hu & Wu, 1989: 357, figs. 281 (1–4), 287; Peng *et al*., 1993: 21, figs. 18–21; Fuhn & Gherasim, 1995: 46, figs. 13A–B, 14A–D, 17C; Logunov, 1996: 172, figs. 17–18; Mikhailov, 1997: 206; Rakov, 1999: 306; Song *et al*., 1999: 505, figs. 288H–J, 289A; Logunov & Marusik, 2000: 30–31, map 3.

Type: Lectotype ♀ (here designated) and juvenile ♀ (HMNH), ''Sashegy, VII. Coll. Chyzer. 1187''; this is Sashegy Mt. near Budapest, Hungary [according to the original description (Chyzer & Kulczyński, 1891) these specimens were collected in May 1889].

Diagnosis: This species is very close to *A. leipoldae*, but differs in the larger size and body coloration of males (cf. Figs. 72 and 31), and by the general appearance of females (cf. Figs. 75 and 32). In addition, the tegulum of *A. m-nigrum* lacks a tegular knob (well marked in *A. leipoldae*) and the tibial apophysis has a pointed tip (blunt in *A. leipoldae*; cf. Figs. 74 and 38). Females of *A. m-nigrum* differ in the position and shape of the epigynal flaps (cf. Figs. 79 and 39) and the arrangement of the spermathecal loops (cf. Figs. 80 and 40). See also comments below under ''Diagnosis'' of *A. nenilini* sp. n.



Figs. 72–80: *Aelurillus m-nigrum* Kulczyński in Chyzer & Kulczyński, 1891. **72** Male, body pattern; **73** Male palp, ventral view; **74** Ditto, lateral view; **75** Female, body pattern; **76** Embolus, ventral view; **77** Ditto, dorsal view; **78** Schematic course of insemination ducts; **79** Epigyne, ventral view; **80** Spermathecae, dorsal view. Scale lines=1 mm (72, 75), 0.1 mm (73–74, 76–77, 79–80).

Comments: According to the original description (Chyzer & Kulczyński, 1891), two females were used for the description of this species. I re-examined both deposited in the HMNH and found one of them to be immature. To stabilise the taxonomic status and name of this species I have designated the adult female as lectotype.

Distribution: Euro-Central Asian sub-boreal range (Fig. 71).

Description: *Male* (from Pavlodar Area, Maiskiy Distr., Kazakhstan): Carapace 3.0 long, 2.1 wide, 1.5 high at PLE. Ocular area 1.1 long, 1.6 wide anteriorly, 1.6 wide posteriorly. Diameter of AME 0.45. Abdomen 2.6 long, 1.85 wide. Cheliceral length 0.8. Clypeal height 0.4. Length of leg segments: I 1.4+0.9+0.95+0.6+0.7; II 1.5+0.9+0.95+0.6+0.7; III 1.9+1.0+1.3+1.25+0.8; IV 2.0+1.0+1.3+1.6+0.85. Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb pr 1-2, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1-1, rt 1-1-1, v1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-0-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 1-1-2ap. IV: Fm d 1-0-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with dark brown eye field and pair of pale longitudinal stripes (Fig. 72). Clypeus brown, covered with long white hairs. Chelicerae brown. Sternum, labium and maxillae yellow-brown. Abdomen grey-brown, dorsum with two elongate stripes. Scutum about 1/3 length of dorsum. Book-lungs yellow. Spinnerets yellow-grey. All legs yellow-brown. Palp yellow, covered with white hairs. Palpal femur with ventral swelling. Palpal structure as in Figs. 73–74, 76–77.

Female (lectotype): Carapace 3.2 long, 2.1 wide, 1.5 high at PLE. Ocular area 1.1 long, 1.5 wide anteriorly, 1.5 wide posteriorly. Diameter of AME 0.45. Abdomen 3.8 long, 2.8 wide. Cheliceral length 0.9. Clypeal height 0.35. Length of leg segments: I 1.5+1.0+0.8+0.5+0.6; II 1.4+0.6+0.8+0.5+0.5; III 2.3+1.0+1.2+1.3+0.7; IV 2.0+1.0+1.1+1.3+0.9. Leg spination: I: Fm d 1-1-4; Tb pr 1-2, v 1-1-2; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 1-2-5; Tb pr and rt 1-1, v1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-2-4; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with dark brown eye field. Ocular area with colour pattern of two white bands and anterior elongate white stroke (Fig. 75). Clypeus brown, with short white and long dark hairs. Chelicerae red-brown. Sternum brown. Labium and maxillae yellow-brown. Abdomen yellow-grey-brown, dorsum with pair of elongate dark stripes. Book-lungs brownish grey. Spinnerets yellow. All legs yellow-brown. Structure of epigyne and spermathecae as in Figs. 78–80.

Material examined: KAZAKHSTAN: *Gur'evsk Area*: 1♂ (ZMMU), 55 km SSW of Inderborskii (left bank of Ural River), sandy bank with sparse grasses, 15 September 1986 (A. V. Ponomaryev); 1♀ (ZMMU), 30 km NE of Ganyushkino (Zhuzguntyube stand), sand dunes, 15 April 1977 (A. V. Ponomaryev). *Zhezkazgan Area*: 1♀ (ISEA), Balkhash Distr., Khaskhab'e, June 1988 (O. Il'ichenko). *Zhambyl Area*: 1♀ (ISEA), Moiynkum Distr., 6 km NE of Khantau, foothills, 23 May 1991 (AZ); 1♂ (ISEA), near Furmanovka, *Haloxylon* desert woodland, 16 September 1983 (YM). *South-Kazakhstan* [=*Chimkent*] *Area*: 1♀ (MMUM), Karatau Mt. Range, upper reaches of Kok-Bulak River, slope, 22 April 1988 (C. K. Tarabaev). *Almaty Area*: 1♂ (MMUM), Taldy-Korgan Distr., Andreevka, 3 October 1990 (T. V. Iskakova, AF); 1♀ (ISEA), Taldy-Korgan Distr., Aidarly, 20 October 1983 (V. G. Linskii); 1♂ (ISEA), Syugatinskaya hollow, *c*. 5 km from Charynskiy canyon, desert, 2 October 1989 (AZ). *Pavlodar Area*: 1♀ (MMUM), 20 km S of Pavlodar, 15–17 June 1992 (OL); 2♂ 2♀ (ISEA), Maiskiy Distr., lower reaches of Tundyk River, stony steppe, 31 July 1990 (OL); 2♂ (ISEA), same locality and habitat, 26 August 1990 (OL); 2♂ (ISEA), Maiskiy Distr., near Koktas Lake, 23 August 1990 (OL); 2 ♂ (ISEA), Maiskiy Distr., *c*. 40 km W of Elubai, Kokuirym Lake, 19 July 1990 (OL); 2♀ (ISEA), Ermakovskoe Distr., Malyi Kalkaman Lake, *c*. 40 km W of Pavlodar, xerophytic steppe and sandy bank, 11 April 1990 (OL); 2♀ (ISEA), same locality, between Sol'vetka village and Pogranichnik railway station, 10 April 1991 (OL); 1♂ (MMUM), Bayanaul Distr., Babaly Mts., scree, 27 August 1990 (OL). *East-Kazakhstan Area*: 1♀ (ISEA), Kuludzhukh Reserve, sands, 15 September 1990 (V. K. Zinchenko). KYRGHYZSTAN: 2♀ (ISEA), foothills of Kirghizskiy Mt. Range, near Chon-Aryk, May (S. V. Ovchinnikov). UKRAINE: 1♀ (ZISP), Berdyansk, 15 April 1939 (coll. ?); 2♀ (ISEA), Kherson Area, Chernomorskii Reserve, meadow steppe, 10 July 1996 (K. V. Evtushenko). AZERBAIJAN: *Apsheron Peninsula*: 2♀ (ISEA), Baky (=Baku), 3 April 1977 (PD); 1♀ (ISEA), Baky (=Baku), Yasamal'skaya Dolina, 10 April 1985 (PD); 3♀ (ISEA), Zykh, 8 April 1979 (PD); 1♀ (ISEA), Dyubeku, 21 May 1977 (PD); 3♂ 2♀ (IZA), Eni-Surakhany, 15 April–24 September 1997 (E. F. Guseinov); 1♂ 8♀ (IZA), Dyubendy, 23 March, 7 May 1998–25 September 1999 (E. F. Guseinov). *Lerik Distr*: 1♀ (ISEA), Orakt, 2,100 m a.s.l., 16 May 1985 (PD); 1♀ (ISEA), Gosmalyan, 1,400 m a.s.l., 14 May 1985 (PD).

Aelurillus nenilini sp. n. (Figs. 71, 81–85)

Aelurillus m-nigrum (in part): Nenilin, 1984: 10–11.

Type: Holotype ♂ (ISEA), Turkmenistan, Amudar'ya National Reservation, Kabakly, 28 March 1982 (collector unknown).

Etymology: This species is named in honour of the well-known Russian arachnologist, who tragically perished in 1986, Mr Andrei B. Nenilin.

Diagnosis: This species is close to *A. m-nigrum*, but differs in the colour pattern of the carapace (cf. Figs. 81 and 72), the shape of the tegulum (cf. Figs. 82 and 73) and the tibial apophysis (cf. Figs. 83 and 74), and in small details of the embolic tip (cf. Figs. 84–85 and 76–77). By the colour markings of the eye field, *A. nenilini* sp. n. is very similar to *A. steinmetzi* Metzner,

1999, described recently from the Greek islands (see Metzner, 1999: figs. 41, 43), but differs in the absence of colour markings on the dorsum, the thicker tibial apophysis and the shape of the terminal apophysis.

Distribution: Turkmenistan and Uzbekistan (Fig. 71).

Description: *Male* (paratype from type locality: Kabakly): Carapace 2.7 long, 1.8 wide, 1.4 high at PLE. Ocular area 1.05 long, 1.4 wide anteriorly, 1.45 wide posteriorly. Diameter of AME 0.4. Abdomen 2.2 long, 1.7 wide. Cheliceral length 0.8. Clypeal height 0.25. Length of leg segments: I 1.6+0.9+1.0+0.6+0.7; II 1.5+0.8+0.85+0.65+0.55; III 1.9+1.0+0.9+1.0+0.8; IV 1.7+0.8+1.1+1.2+1.0. Leg spination: I: Fm d 0-1-1-5; Pt pr 1; Tb pr 1-1-2, v 1-0-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-1-2ap. IV: Fm d 1-0-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown, with dark brown eye field, and characteristic pattern of white stripes (Fig. 81). Clypeus dark brown, covered with long white hairs. Chelicerae yellow-brown. Sternum, labium and maxillae brown. Abdomen grey-brown, dorsum without colour markings. Scutum about 1/3 length of dorsum. Book-lungs yellow-grey. Spinnerets grey. All legs yellow-brown. Palp yellow, covered with white hairs. Palpal femur with ventral swelling. Palpal structure as in Figs. 82–85.

Female: Unknown.

Material examined: Paratypes: TURKMENISTAN: 1♂ (ISEA), Amudar'ya National Reservation, Kabakly, 28 March 1982. UZBEKISTAN: 1♂ (ISEA), Bakantau Mts., Irlir, Karakuduk well, 9 May 1976 (A. P. Kononenko).

Aelurillus unitibialis sp. n. (Figs. 86–96)

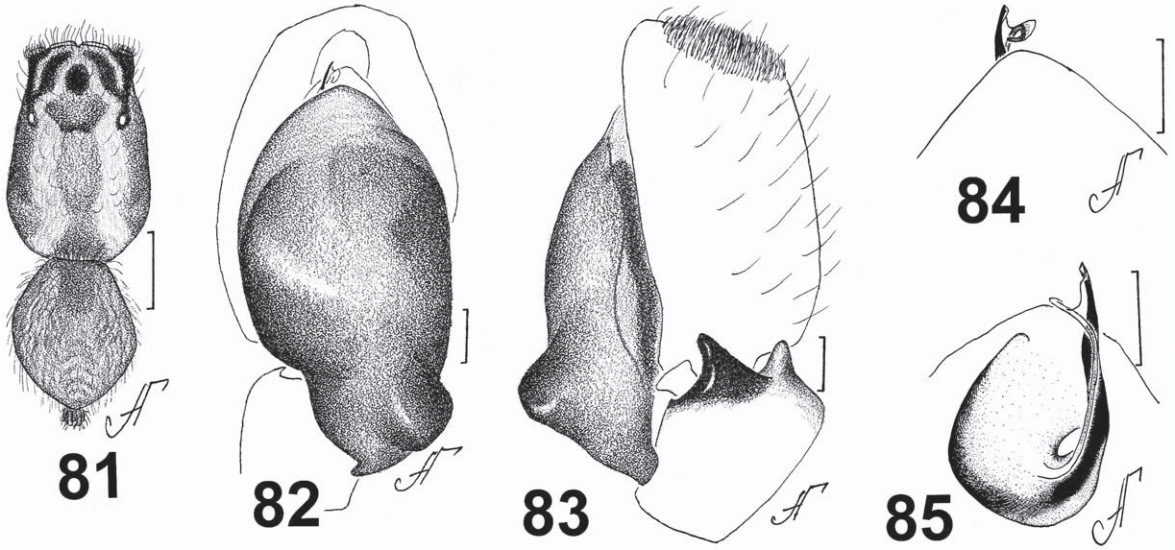
Type: Holotype ♂ (IBPN), Iran, Fars Prov., *c*. 40 km ESE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 29°29′N, 52°42′E, semi-desert around salt lake, 23–28 May 2000 (YM).

Etymology: The species name is derived from two Latin words: "*uni*" meaning "one" and "*tibia*"; this species possesses only a single tibial apophysis.

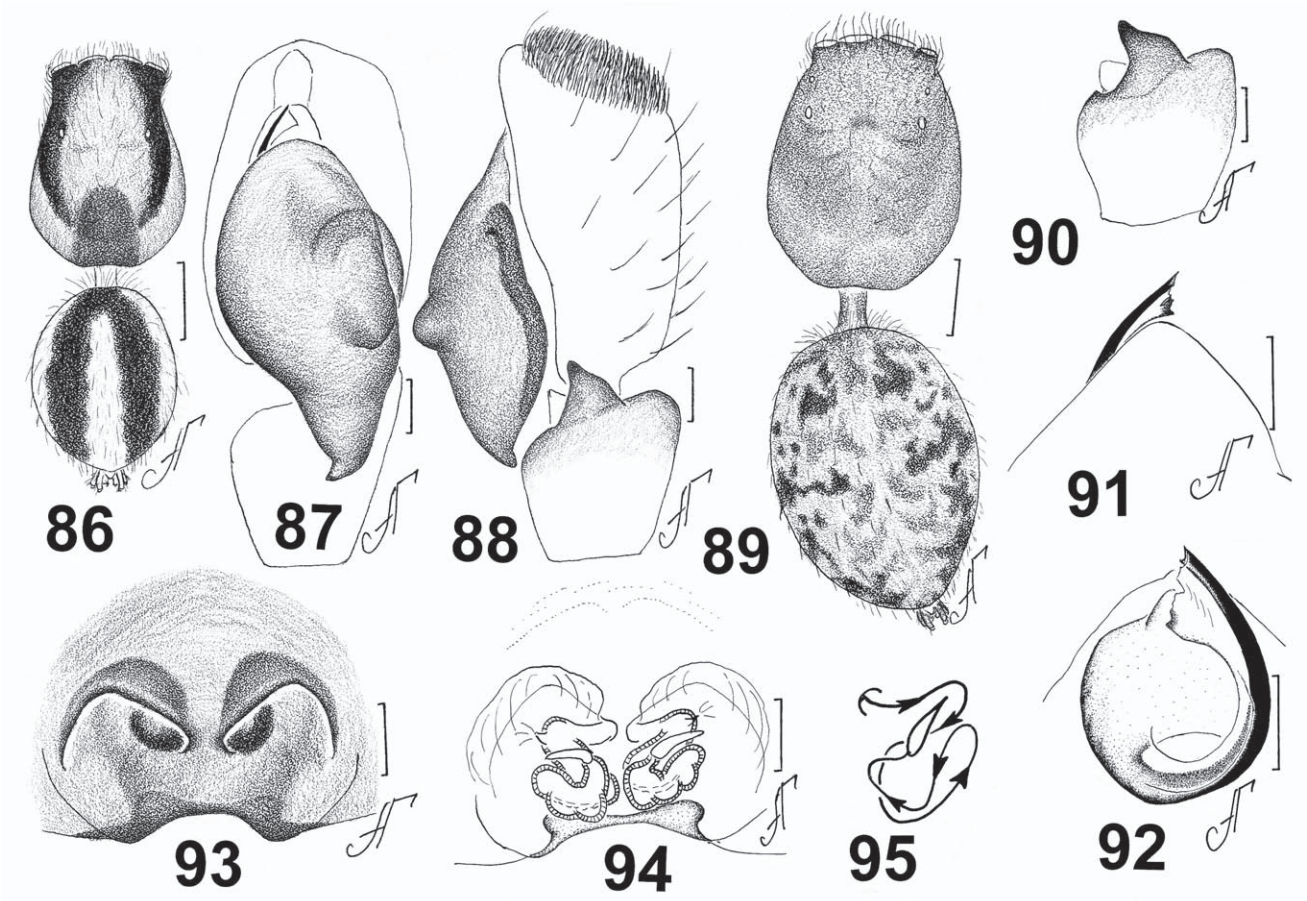
Diagnosis: This species is close to *A. marusiki* sp. n., but both sexes differ in body coloration (cf. Figs. 86, 89 and 44, 47): viz. males with a wide median white band and two lateral orange stripes on carapace (Fig. 86); females without marked colour markings (Fig. 89). The embolic division of *A. unitibialis* sp. n. has a triangular (not rounded) terminal apophysis and less massive embolic base (cf. Figs. 92 and 51). The tibial apophysis protrudes more strongly anteriorly (more ventrally in *A. marusiki* sp. n.; cf. Figs. 88 and 46). The shape of the epigynal flaps and arrangement of the spermathecal loops are clearly different in both species (cf. Figs. 93–94 and 49, 52).

Distribution: South Iran (Fig. 96).

Description: *Male* (paratype from type locality: Maharloo Lake): Carapace 3.2 long, 2.2 wide, 1.4 high at PLE. Ocular area 1.3 long, 1.6 wide anteriorly, 1.5 wide posteriorly. Diameter of AME 0.45. Abdomen 2.5 long, 2.1 wide. Cheliceral length 0.9. Clypeal height 0.35. Length of leg segments: I 1.5+1.1+1.0+0.8+0.7; II 1.5+1.0+1.0+0.9+0.6; III 2.0+1.1+1.3+1.3+0.8; IV 2.0+1.0+1.5+1.5+1.0. Leg spination: I: Fm d 0-1-1-5; Pt pr and rt 1; Tb pr 1-1-1, rt 1-1, v 2-2-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 0-1-3-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 2-0-2ap. IV: Fm d 1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1-1, v 2-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace dark brown, with wide median white band (Fig. 86) and with orange lateral stripes from posterior end to anterior eyes. Clypeus and chelicerae dark brown, densely covered with white hairs. Sternum, labium and maxillae brown. Abdomen grey-brown, dorsum with pair of longitudinal brownish stripes.



Figs. 81–85: *Aelurillus nenilini* sp. n. **81** Male, body pattern; **82** Male palp, ventral view; **83** Ditto, lateral view; **84** Embolus, ventral view; **85** Ditto, dorsal view. Scale lines=1 mm (81), 0.1 mm (82–85).



Figs. 86–95: *Aelurillus unitibialis* sp. n. **86** Male, body pattern; **87** Male palp, ventral view; **88** Ditto, lateral view; **89** Female, body pattern; **90** Tibial apophysis of male palp, lateral view; **91** Embolus, ventral view; **92** Ditto, dorsal view; **93** Epigyne, ventral view; **94** Spermathecae, dorsal view; **95** Schematic course of insemination ducts. Scale lines = 1 mm (86, 89), 0.1 mm (87–88, 90–94).

Book-lungs greyish yellow. Spinnerets yellow-brown. All legs yellow, but tibiae, patellae, metatarsi and tarsi dark brown ventrally. Palp yellow, covered with long white hairs. Palpal femur without ventral swelling. Palpal tibia with single apophysis (Fig. 90). Palpal structure as in Figs. 87–88, 91–92.

Female (paratype from type locality: Maharloo Lake): Carapace 3.9 long, 3.0 wide, 2.2 high at PLE. Ocular area 1.5 long, 1.8 wide anteriorly, 1.85 wide posteriorly. Diameter of AME 0.5. Abdomen 4.2 long, 3.3 wide. Cheliceral length 1.2. Clypeal height 0.7. Length of leg segments: I 1.9+1.1+1.2+0.9+0.8; II 1.9+1.2+1.0+0.9+0.9; III 2.5+1.4+1.5+1.6+0.8; IV 2.7+1.4+1.7+1.9+1.1. Leg spination: I: Fm d 0-1-2-4; Tb pr 1-1, v 1-2-2; Mt v 2-2ap. II: Fm d 0-1-2-4; Tb pr 1-1, v 1-1-2ap; Mt pr 1-0ap, v 2-2ap. III: Fm d 0-1-2-5; Pt pr and rt 1; Tb d 1-0-0, pr and rt 1-1-1, v 1-0-2ap; Mt d 1-1-0, pr and rt 1-0-2, v 1-1-2ap. IV: Fm d 1-1-3; Pt pr and rt 1; Tb d 1-0-0, pr 1-1-1, rt 1-1-1-1, v 1-0-2ap; Mt d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2ap. Carapace brown to dark brown, covered with white scale-like hairs, lacking colour pattern (Fig. 89). Clypeus orange-brown, covered with white hairs. White hairs around eyes. Chelicerae dark brown. Labium and maxillae brown. Sternum yellow. Abdomen yellowish grey, dorsum with variegated pattern of brownish patches. Book-lungs yellow. Spinnerets brown. All legs yellow-brown. Epigyne and spermathecae as in Figs. 93–95.

Material examined: Paratypes: IRAN: 5♂ 4♀ (ISEA, MMUM), 1♂ 1♀ (PPDRI), Fars Prov., *c.* 40 km ESE of Shiraz, Barm-e-shoor Ck on Maharloo Lake, 29°29′N, 52°42′E, semi-desert around salt lake, 23–28 May 2000 (YM).

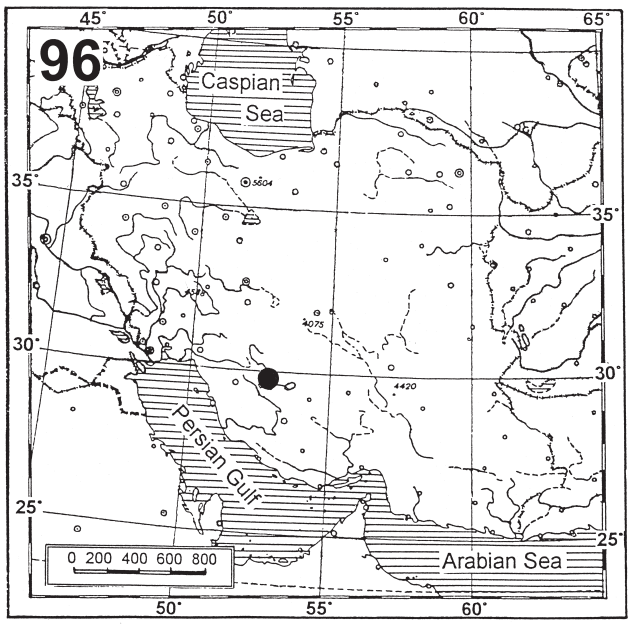


Fig. 96: Distribution of *A. unitibialis* sp. n.

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