

A new *Lachesana* species from Greece and additional records from the Near East (Arachnida, Araneae, Zodariidae)

Konrad Thaler and Barbara Knoflach

Institute of Zoology and Limnology, University of Innsbruck, Technikerstrasse 25, A-6020 Innsbruck, Austria

Summary

Lachesana graeca sp. n. (♂) is described from Greece, from Peloponnese and central Greece, Delphi. The new species is distinguished from the species of the Near East by, for example, the distinct shape of its gnathocoxae and tibial apophysis. For comparison, diagnostic drawings and photos are provided for *L. blackwalli* (O. P.-Cambridge) (♂) and *L. rufiventris* (Simon) (♂). For these species, additional records are given from Crete, Gavdos I., and Cyprus (*L. b.*) and from Syria, Golan (*L. r.*).

Introduction

Owing to their hidden subterranean way of life, specimens of *Lachesana* turn up rarely and accidentally by hand collecting. Males are most remarkable for their recurved cheliceral fangs (Figs. 17–18), as noted by Simon (1873: 67), their function being unknown. In the recent revision of zodariid genera (Jocqué, 1991), the range of this genus was given as from Tunisia to Turkey and Crete. Furthermore there is an early record from Attica (Hadjissarantos, 1940). Here we describe a new species from Peloponnese and central Greece, and present further records from Crete, Cyprus and Syria.

Specimens have been deposited in: NMW=Natural History Museum, Vienna; CTh=Thaler collection. Specimens collected by the authors, unless indicated otherwise. All measurements in mm. Position of leg spines: a=apical, d=dorsal, pl=prolateral, rl=retrolateral, rv=retroventral, v=ventral, *=spines arranged in a row (see Jocqué, 1991).

Lachesana blackwalli (O. P.-Cambridge, 1872) (Figs. 4, 12, 14, 17, 19, 22, 25)

Material examined: GREECE: Crete, Gavdos I., sand dunes near Lavrakas, in pitfall, 1♂, NMW, March/June 1997, leg. Chatzaki. CYPRUS: Paphos, lowland near coast, 1♂, CTh, 18 February 1994; Ag. Georgios, 1 juv., CTh, 18 April 1995, pasture near coast, taken from burrow without apparent silken lining, found by turning covering stone. ISRAEL: Jerusalem, 1♂, NMW, 15 October 1938, leg. Shulov, det. Reimoser. *Also:* Crete, Katharo plain above Kritsa, 900–1100 m, fragmented ♂ exuviae, CTh, 1 October 1998 (carapace length 5.0), taken from ground surface.

Remarks (♂): The three adult males reported above clearly fall within the size range of *L. blackwalli* as given by Levy (1990): total length (in order of records above) 12.2, 11.3, 14.3; carapace length 6.8, 6.7, 8.3; cymbium length 2.3, 2.0, 2.6. Chelicerae covered with hairs (Fig. 4), fangs recurved, not twisted (Fig. 17); gnathocoxae conical, without lateral boss (Fig. 12); opisthosomal cuticle soft, hair brushes behind book lung stigmata

absent. Male palp: Figs. 14, 19, 22, 25; dorsal edge of tibial apophysis triangular, conductor hardly extending beyond alveolus border (see O. P.-Cambridge, 1872; Levy, 1990; Jocqué, 1991). Of course the true identity of the exuviae from Katharo plain is uncertain and will be confirmed only by the capture of adult specimens.

Distribution: Near East, from Turkey to Israel (Levy, 1990; Jocqué, 1991); also on islands in the eastern Mediterranean, Cyprus and Crete. Unfortunately, no exact locality was given for the male described thoroughly by Kulczyński (1908). For the record of Hadjissarantos (1940) from Greece see *L. graeca* sp. n.

Lachesana graeca sp. n. (Figs. 1–3, 6, 9–11, 15, 20, 23, 26)

Laches blackwalli: Hadjissarantos, 1940: 33 (? , misidentification).

Lachesana n. sp.: Thaler, 2000: 191, fig. 13.

Type material: Holotype ♂, Greece, Peloponnese, pass of Feneos, eastern slope, 1000 m, in pine forest under a stone, NMW, 27 September 1995.

Other material examined: Central Greece, Delphi, in swimming pool of camp site, 1♂, CTh, 23 September 1997. Surroundings of the site are Mediterranean scrub on limestone bedrock. *Also:* Peloponnese, Parnon, Kalogerovouni, c. 1100 m, near Metamorfofi, 1 juv., CTh, 27 September 1992, goat pasture with low bushes on limestone bedrock.



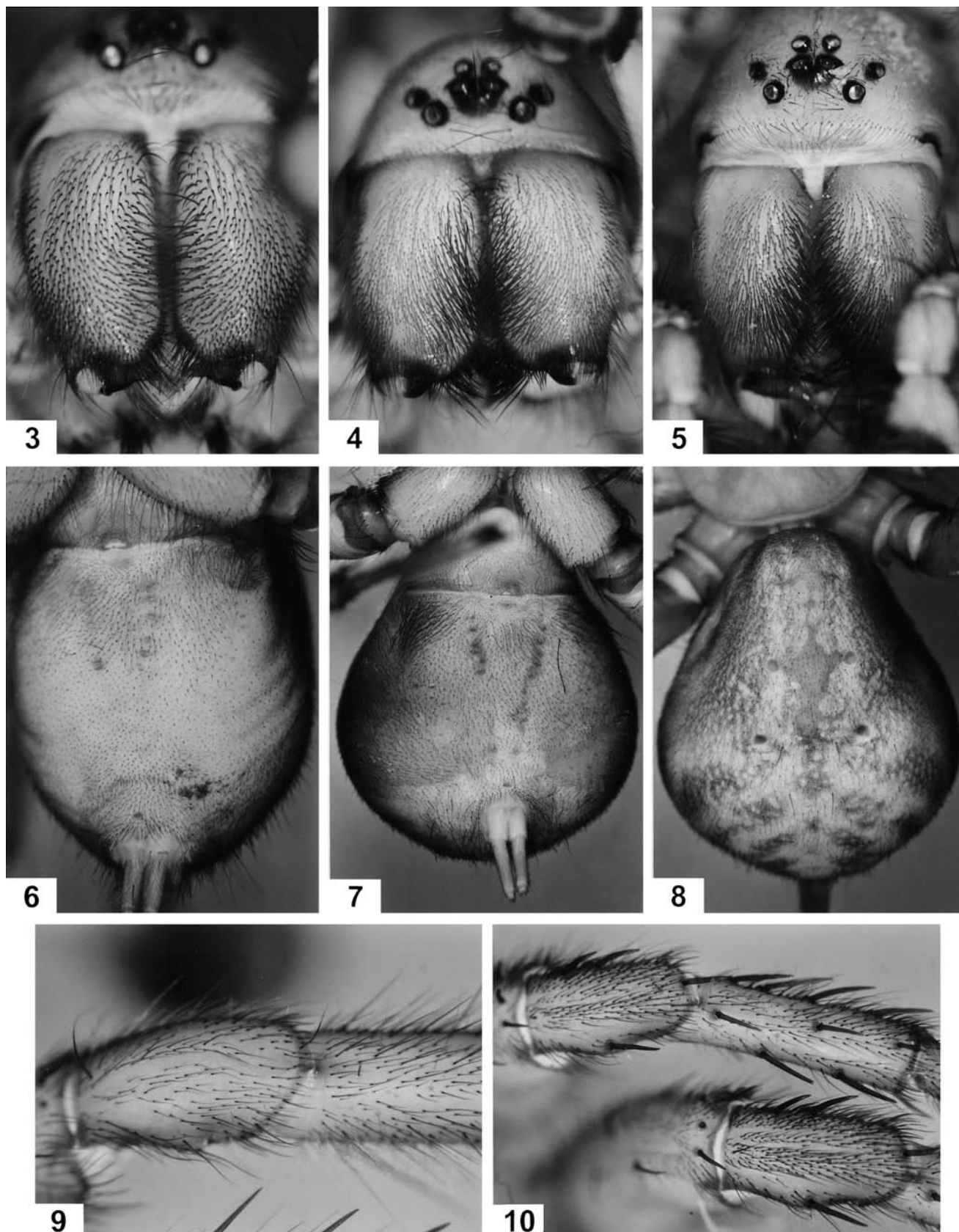
Figs. 1–2: *Lachesana graeca* sp. n.: 1 Adult male (Feneos pass); 2 Juvenile (Parnon).

Etymology: Latin adjective *graecus*, referring to Graecia=Greece. Ending agrees with gender of genus name.

Diagnosis: The new species can be distinguished by its small size, <10 mm. It is close to *L. blackwalli*, but

differs in the shape of the tibial apophysis (Figs. 15 vs. 14) and gnathocoxae (Figs. 11 vs. 12), and by the chelicerae being densely covered with short stout setae, thinner in *L. blackwalli* (Figs. 3 vs. 4).

Male: Measurements (Feneos [Delphi]): Total



Figs. 3-10: **3, 6, 9-10** *Lachesana graeca* sp. n. (Feneos pass); **4** *L. blackwalli* (O. P.-Cambridge) (Paphos); **5, 7-8** *L. rufiventris* (Simon) (Golan). **3-5** Chelicerae; **6-7** Male venter; **8** Male abdomen, dorsal; **9** Male patella and tibia, left leg II, dorsal; **10** Ditto, legs III-IV.

length 9.8 [8.3], carapace length 5.3 [5.0], width 3.6 [3.1], femur I length 3.9 [3.5], cymbium length 1.4 [1.4]. Prosoma and legs uniformly brown, opisthosoma dorsally with pattern of black spots (Figs. 1–2). Front of chelicerae covered with stout setae (Fig. 3), fangs recurved. Gnathocoxae with lateral boss and median process (Fig. 11), both with distinct hair brush. Legs 4/1/2/3. Arrangement of spines rather variable; leg I: patella 0 [d 1, pl 1]; tibia pl 1 (2*), v 2-2-2-2 [pl 2*, v 2-2-2-2]; metatarsus pl 1a, rl 1a, v 2-2-1, rv 2-2a [pl 1a, rl 1a, v 2-2-2-1, rv 2-2a]; tarsus with *c.* 10 irregular pairs of short stout bristles. Opisthosoma of holotype with narrow ill-defined scutum along heart region, epigaster and anterior venter coriaceous (Fig. 6), hair brushes

behind stigmata indistinct. In the Delphi specimen, which is newly moulted, such sclerotisation is not present. Palpal organ (Figs. 15, 20, 23, 26): Retrolateral tibial apophysis as in its congeners with slender stalk, distally oblique, with dorsal edge forming projecting blade. Cymbium dorsally with dense cover of chemosensitive hairs. Palpal organ deeply embedded in cymbium, ventrally largely membranous, without apophysis, with narrow prolateral sclerotised band covering sperm duct, and central brownish area, roughly divided into proximal part, from where filiform embolus originates on prolateral side, and distal part, which extends to fleshy triangular conductor.

Female: Unknown.

Affinities: As the palpal organ and tibial apophysis are rather similar in the better-known species (Levy, 1990; Jocqué, 1991; Zonstein & Ovtchinnikov, 1999), suggestions concerning affinities are almost impossible. The new species stands close to *L. blackwalli* and *L. tarabaevi* Zonstein & Ovtchinnikov, 1999, which apparently show rather plesiomorphic characters. *Lachesana rufiventris* (Simon) is probably a specialised offshoot, see its autapomorphic fang and tibial apophysis; *L. insensibilis* Jocqué, 1991 is unusual for its leg formula 4321 and its pale dorsum, probably an adaptation to desert conditions in Saudi Arabia.

Distribution: Greece, Peloponnese and central Greece. Most probably the female recorded by Hadjissarantos (1940) from Attica as “*Laches blackwalli*” also belongs to this species.

Lachesana rufiventris (Simon, 1873) (Figs. 5, 7–8, 13, 16, 18, 21, 24, 27)

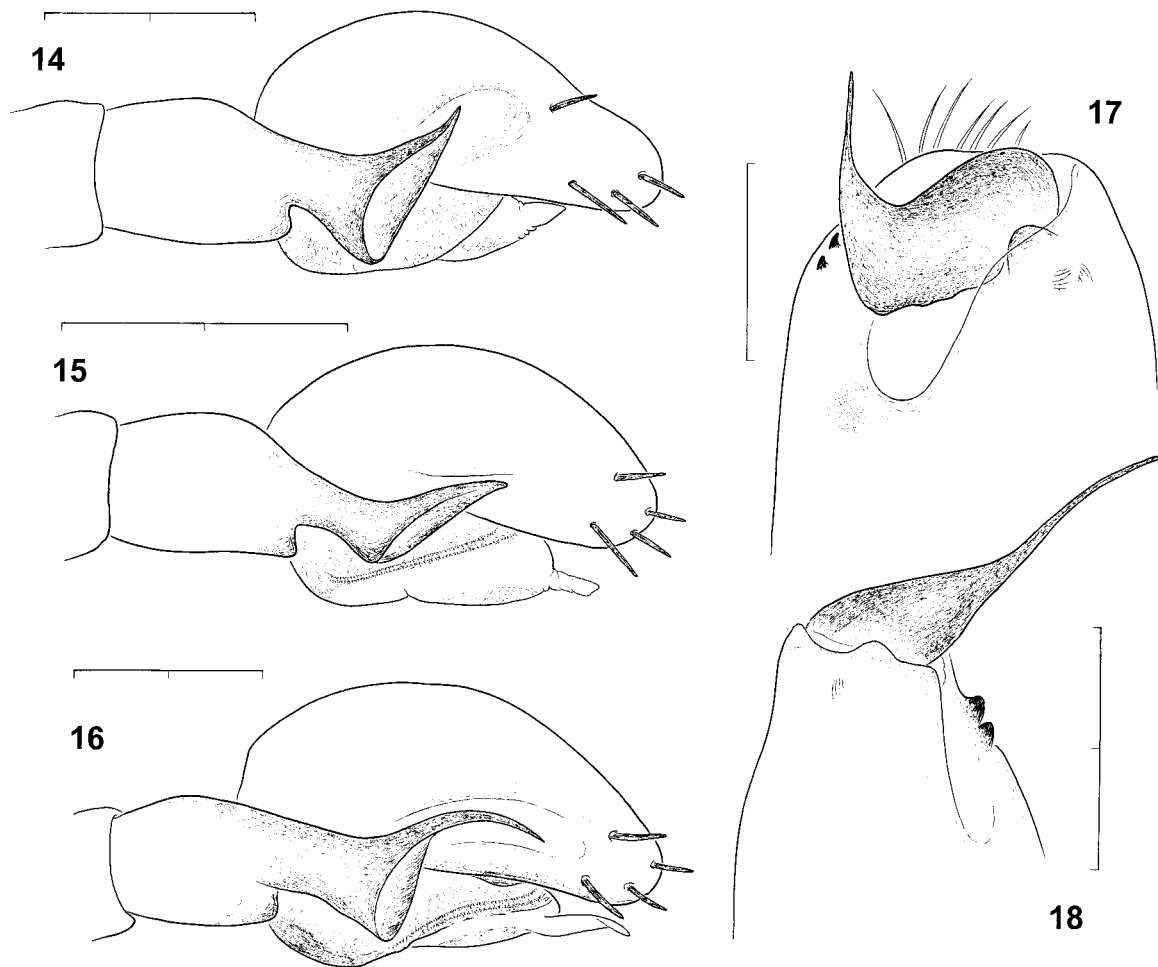
Material examined: SYRIA: Golan, Camp Fauar near El Qunaitra [33°09'35"N, 35°50'30"E], 2♂, NMW, 1–31 October 1979, 2♂, NMW, 1979/80, leg. P. H. Schneider and K. Kollnberger.

Remarks (♂): The males reported above (*n*=4) stand within the size range given by Levy (1990) for this species: total length 11.6–12.6; carapace length 6.4–6.9, width 4.2–4.7; cymbium length 2.3–2.5. Chelicerae covered with hairs (Fig. 5), fangs recurved, distally twisted (Fig. 18); gnathocoxae with lateral boss and median process (Fig. 13); opisthosoma with narrow anterior scutum above heart (Fig. 8), venter broadly sclerotised, ventral scutum nearly reaching spinnerets, its posterior border truncate, hair brushes behind book lung stigmata present (Fig. 7). Male palp (Figs. 16, 21, 24, 27): dorsal edge of tibial apophysis forming a digitiform process, conductor extending well beyond alveolus border (Levy, 1990). As the abdominal sclerotisation and hair brushes had already been mentioned in the original description (Simon, 1873: 69), the name *scutiventris* adopted by Simon (1893: 427) is obviously a *lapsus* (as indicated by Roewer, 1942; Levy, 1990; Jocqué, 1991).

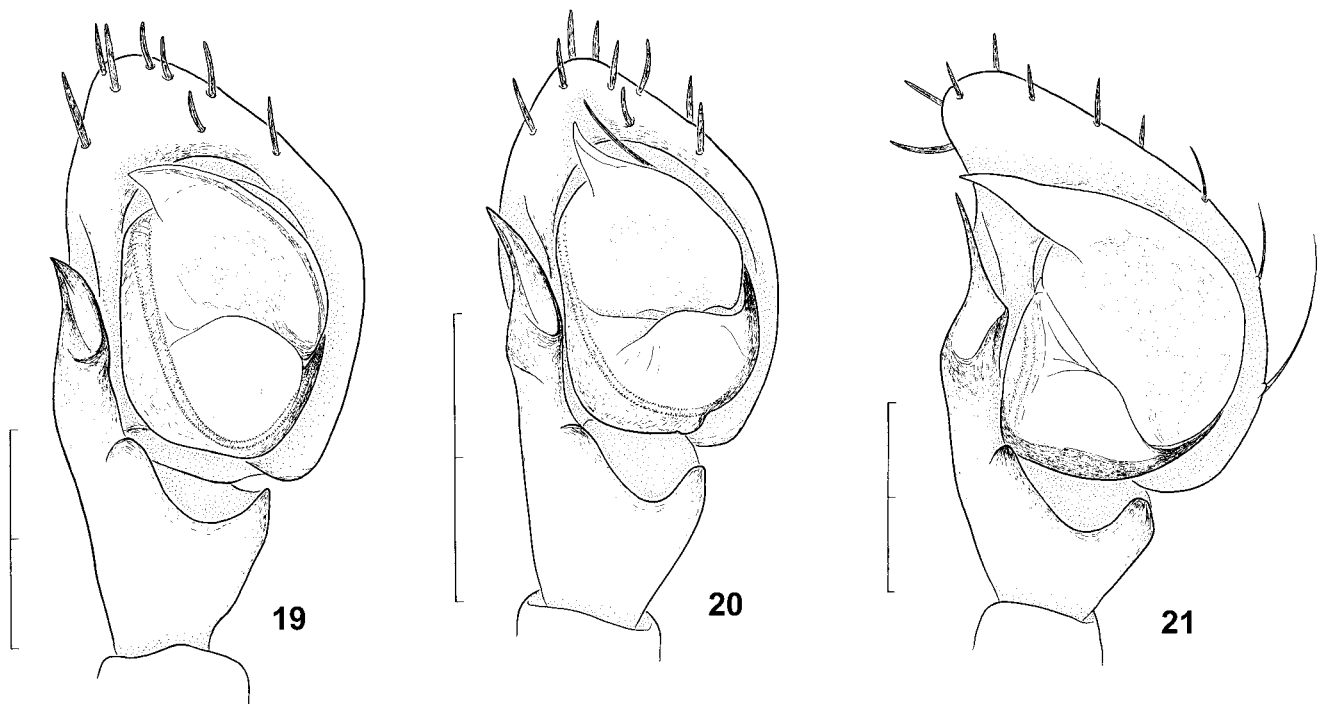
Distribution: Israel, Syria (Levy, 1990), Locus typ. “vallée du Jourdain, leg. Ch. de la Brulerie”, where it was probably discovered in 1869 (see Simon, 1877).



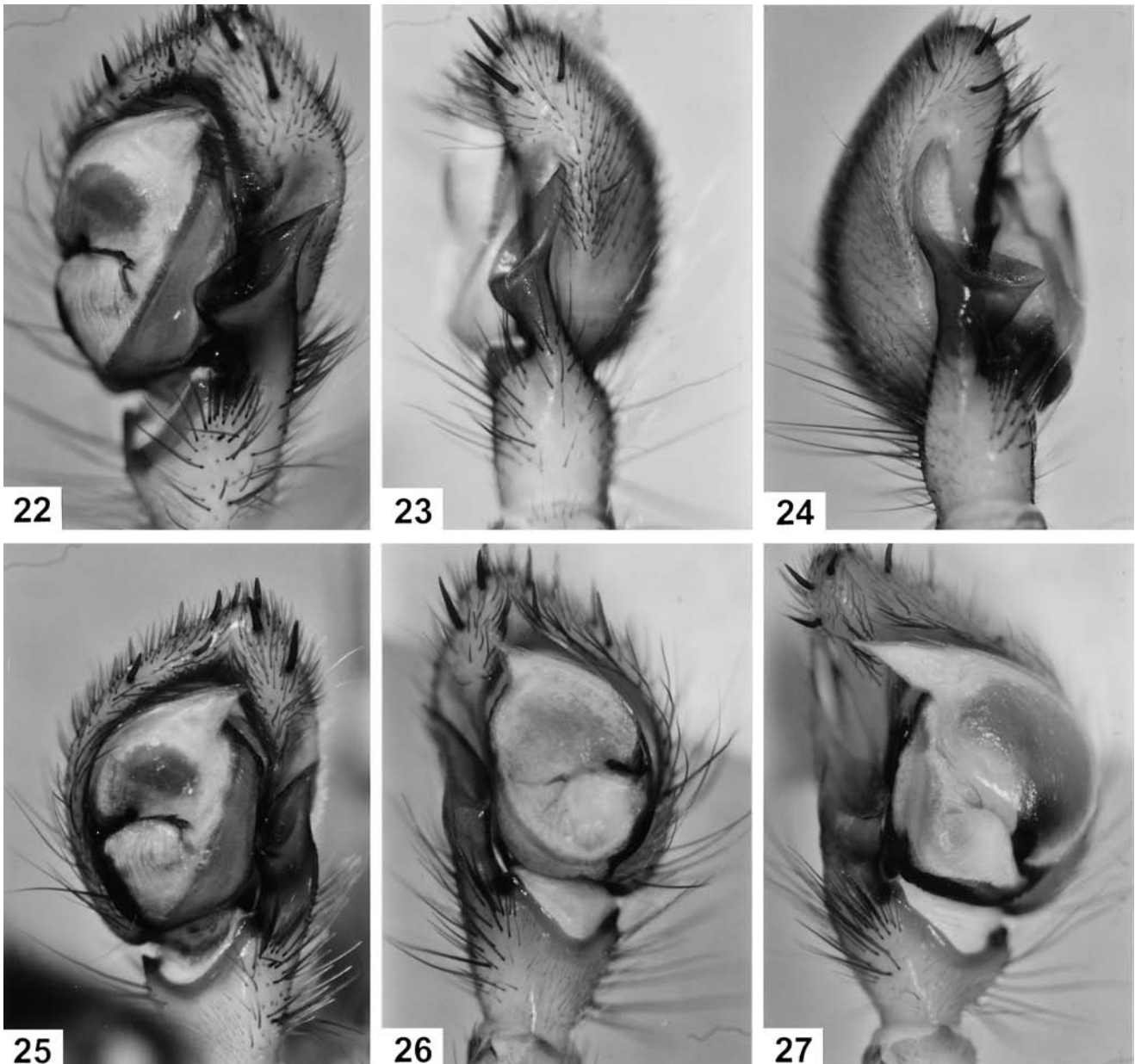
Figs. 11–13: Gnathocoxae, ventral. **11** *Lachesana graeca* sp. n. (Feneos pass); **12** *L. blackwalli* (O. P.-Cambridge) (Paphos); **13** *L. rufiventris* (Simon) (Golan).



Figs. 14–18: **14, 17** *Lachesana blackwalli* (O. P.-Cambridge); **15** *L. graeca* sp. n.; **16, 18** *L. rufiventris* (Simon). **14–16** Male palp, retrolateral (same specimens as Figs. 11–13); **17** Fang of left chelicera, posterior view (Kritsa); **18** Fang of right chelicera, posterior view (Golan). Scale lines=1.0 mm (14–16, 18), 0.5 mm (17).



Figs. 19–21: Male palp, ventral. **19** *Lachesana blackwalli* (O. P.-Cambridge) (Paphos); **20** *L. graeca* sp. n. (Feneos pass); **21** *L. rufiventris* (Simon) (Golan). Scale lines=1.0 mm.



Figs. 22–27: **22, 25** *Lachesana blackwalli* (O. P.-Cambridge) (Paphos); **23, 26** *L. graeca* sp. n. (Feneos pass); **24, 27** *L. rufiventris* (Simon) (Golan). **22–24** Male palp, tibial apophysis, retrolateral; **25–27** Palpal organ, ventral.

Discussion

Among zodariids, the chelicerae show a “most spectacular modification” in *Lachesana* because of their recurved fangs (Jocqué, 1991). If our interpretation of the cast skin found at Katharo plain is correct, this sexual dimorphism is already present in the subadult stage. Moreover, another enigmatic structure exists at the tip of the labrum, far in front of the labium, where there opens a slit, leading into a deep cleft. In each species, we found a group of about five trichobothria on the retrolateral side of the cymbium, around the tip of the tibial apophysis. Members of *Lachesana* are burrowing spiders, only adult males search on the ground surface for mates. As in nemesiids, patellae III–IV have a dense cover of microsetae as compared with patellae I–II, see Figs. 10 vs. 9. Since the fundamental monograph of Jocqué (1991), new information has been obtained about the biology of *L. rufiventris* (see

Henschel, 1998) and *L. tarabaevi* (see Zonstein & Ovtchinnikov, 1999). Burrows are closed by a collar, which is camouflaged and constricted during the day-time. At least two members of this most remarkable genus are present in Europe, in the extreme south-east in Greece.

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