

Taxonomic and faunistic notes on *Chinoscopus* Simon, 1900 and *Lyssomanes* Hentz, 1845 from the Neotropical Region (Araneae: Salticidae)

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Summary

Five new species of *Lyssomanes* are diagnosed, figured and described: *L. ecuadoricus* sp. n. (♀; Ecuador), *L. janauari* sp. n. (♀; Brazil), *L. onkonensis* sp. n. (♂♀; Ecuador), *L. trinidadus* sp. n. (♀; West Indies) and *L. waorani* sp. n. (♀; Ecuador). Females are described for the first time for *Lyssomanes mandibulatus* F. O. Pickard-Cambridge, *L. romani* Logunov and *L. velox* Peckham, Peckham & Wheeler. *Lyssomanes pseudobenderi* Logunov, 2002 is synonymised with *L. benderi* Logunov, 2002, whereas the females of the latter species are shown to belong to a new species, *L. janauari* sp. n. New faunistic records for 13 species are also provided.

Introduction

Lyssomanes Hentz, 1845 and *Chinoscopus* Simon, 1900 are the only lyssomanid genera from the Neotropical Region. The former is known to comprise 77 described species (see Galiano, 1962, 1980, 1984, 1996; Brignoli, 1984; Prószyński, 2000; Jiménez & Tejas, 1993; Logunov, 2000a,b, 2002), two of which are fossil species (Wunderlich, 1986, 1988). Compared with *Lyssomanes*, the genus *Chinoscopus* is less diverse and includes only four species (see Galiano, 1998).

The aims of the present paper are (1) to describe five new *Lyssomanes* species from Ecuador, Costa Rica and Brazil, (2) to describe previously unknown sexes for three other species, and (3) to give new faunistic records for 13 others. A total of 181 newly collected specimens belonging to 18 species has been studied; the examined/described material is deposited in the following institutions and personal collections: AMNH=American Museum of Natural History, New York, USA (Dr N. Platnick); JMPC=personal collection of Mr John Murphy (Hampton, UK); LAIB=Laboratório de Artrópodos Peçonhentos, Instituto Butantan, São Paulo, Brazil (Dr A. D. Brescovit); NMNH=National Museum of Natural History, Smithsonian Institution, Washington, USA (Dr J. Coddington); and MMUM=Manchester Museum, University of Manchester, Manchester, UK (Dr D. V. Logunov).

Abbreviations used in the text and figures: AME=anterior median eye, ALE=anterior lateral eye, PME=posterior median eye, PLE=posterior lateral eye; Fm=femur, Pt=patella, Tb=tibia, Mt=metatarsus; d=dorsal, pr=prolateral, rt=retrolateral, v=ventral. For the leg spination the system adopted is that used by

Ono (1988). The sequence of leg segments in measurement data is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are in mm.

Chinoscopus maculipes Crane, 1943 (Figs. 1–10)

Type: Holotype ♂ (AMNH, 42.161), Venezuela, Monagas, Caripito. Paratype ♀ (AMNH, 241.010; Figs. 9–10), Guyana, Bartica, Kartabo.

Comments: Hitherto this species has been recorded from Venezuela (the terra typica), Brazil, West Indies and Guyana (Crane, 1943; Galiano, 1998). Thus, this is the first record of *C. maculipes* from Ecuador.

The studied males from Ecuador are identical with the ♂ holotype of *C. maculipes* (Figs. 1–3; cf. Galiano, 1998: figs. 10, 15). However, there are small differences in the proportions of the receptacles and insemination ducts of the studied females from Ecuador and those of the ♀ paratype of *C. maculipes* (cf. Figs. 7–8 and 9–10); the latter has slightly shorter insemination ducts and ovoid rather than round receptacles. Owing to the scarcity of material, we cannot evaluate the variation of these characters and therefore the taxonomic significance of the observed differences remains unclear. If these differences are shown to be stable, the ♀ paratype of *C. maculipes* should be assigned to another species.

Material examined: ECUADOR: 1♂ 1♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

Lyssomanes amazonicus Peckham, Peckham & Wheeler, 1889

Comments: This is the first record of this rather well known species from Ecuador (cf. Galiano, 1962, 1980).

Material examined: ECUADOR: 22♂ 34♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

Lyssomanes benderi Logunov, 2002

Lyssomanes benderi Logunov, 2002: 232, figs. 8–11, 16–18 (♂ only, not ♀=*L. janauari* sp.n.; ♂ holotype, LAIB, examined).

Lyssomanes pseudobenderi Logunov, 2002: 234–237, figs. 14–15 (♀ holotype, LAIB, examined). *Syn. n.*

Comments: This is the first record of this species outside the type locality, Manaus in Brazil (see Logunov, 2002).

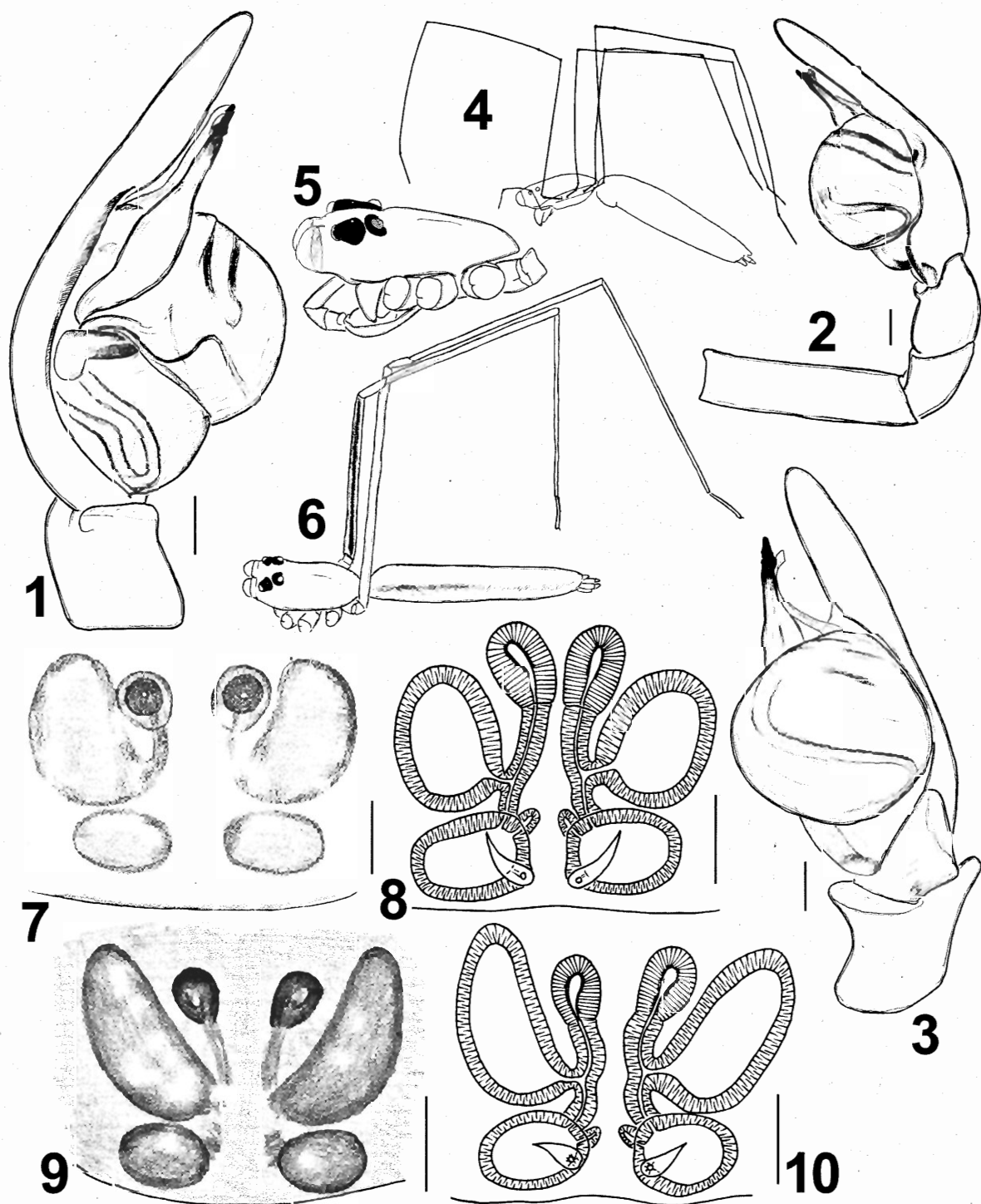
This species was described by one of us (Logunov, 2002) from 2♂ (holotype and paratype) and 2♀ (paratypes), of which one ♂ and two ♀ were collected together and were kept in the same tube; this was the reason for matching them to each other. In the same paper (Logunov, 2002), another species, *L. pseudobenderi*, which was very similar to the females of *L. benderi*, was described from a single female. After examining a relatively large series of both males and females of *L. benderi*

from Ecuador, we have concluded that Logunov (2002) mismatched the sexes in the original description, so that the female of *L. pseudobenderi* should be treated as that of *L. benderi*. From our experience, we have found that males and females of different species of *Lyssomanes* are often collected and kept together. Therefore, *L. pseudobenderi* is here synonymised with *L. benderi*, and a new name, *Lyssomanes janauari* sp. n., is proposed for the ♀ paratypes of *L. benderi* (see below).

It is necessary to stress that the Ecuadorian males and females of *L. benderi* differ slightly from the type speci-

mens. The males have shorter chelicerae, with less pronounced brownish anterior stripes, and shorter cymbia and palpal tibiae; however, we have been unable to detect any differences in the bulb structures. The females differ in having slightly bigger spermathecae, as compared with the holotype of *L. pseudobenderi*. Thus, it is possible that there might be a number of closely related species similar to *L. benderi*; the material available to us does not allow us to resolve this problem at present.

Material examined: ECUADOR: 6♂ 9♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani,



Figs. 1–10: *Chinoscopus maculipes* Crane, 1943. 1 Male palp, mesal view; 2 Ditto, retrolateral view; 3 Ditto, ventro-lateral view; 4 Female general appearance, lateral view (legs shown diagrammatically to draw attention to proportions only); 5 Male carapace, lateral view; 6 Male body, lateral view; 7, 9 Epigyne; 8, 10 Spermathecae. Specimens: 1–8 Ecuador; 9–10 Paratype from Guyana. Scale lines=0.1 mm.

Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

***Lyssomanes bitaeniatus* Peckham, Peckham & Wheeler, 1889**

Comments: This is a relatively widespread Neotropical species, already reported from Costa Rica (see Galiano, 1980).

Material examined: COSTA RICA: 5♂ 2♀ (JMPC), 2♂ 1♀ (MMUM), La Pacifica-Rio, 8 September 1983, J. Murphy; 1♀ (MMUM), no exact locality, March 1979, C. E. Valerio.

***Lyssomanes convexus* Banks, 1909** (Figs. 13–14)

Comments: This species was described from Costa Rica (Navarro) (Banks, 1909) and since then has remained known from the ♀ holotype only (Galiano, 1980); thus, this is only the second record from Costa Rica. The studied ♀ (Figs. 13–14) is virtually identical to the holotype redescribed and illustrated by Galiano (1980: figs. 125–126).

Material examined: COSTA RICA: 1♀ (JMPC), Monteverde, 28–29 August 1983, Hollanders.

***Lyssomanes ecuadoricus* sp. n.** (Figs. 20–21)

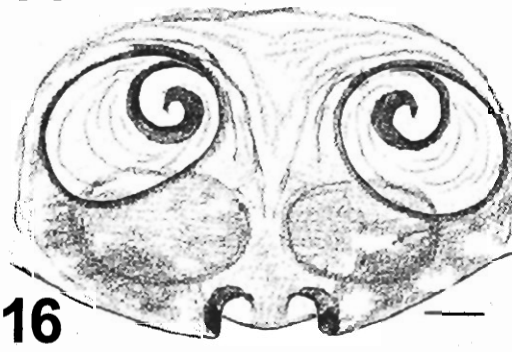
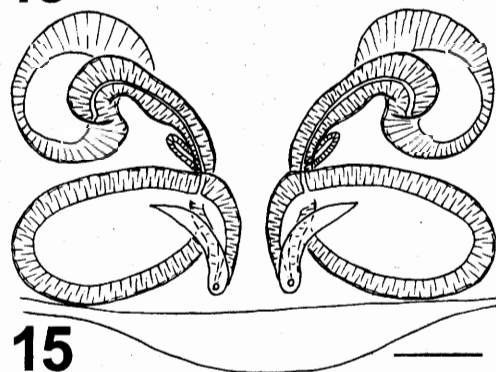
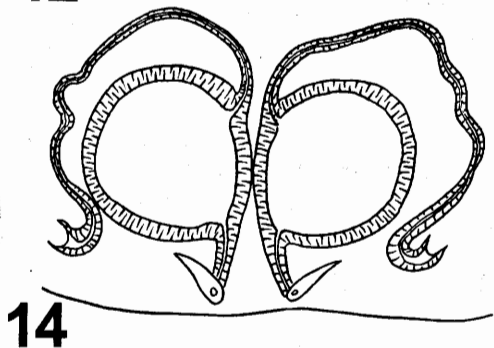
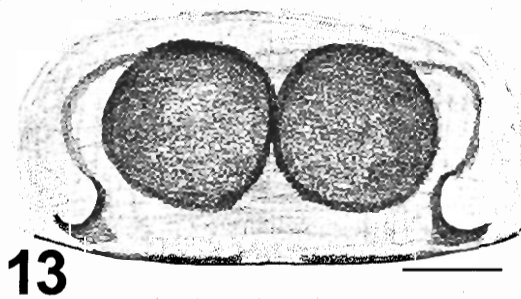
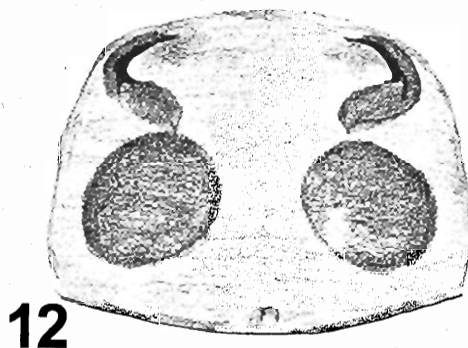
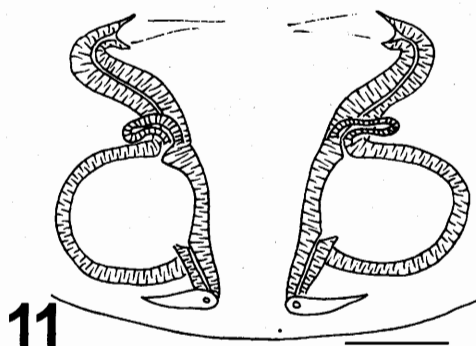
Type: Holotype ♀ (NMNH), Ecuador, Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

Etymology: The species is named after the terra typica, Ecuador.

Diagnosis: This new species is most similar to *L. portoricensis* Petrunkevitch, 1933 known from Puerto Rico (see Galiano, 1980: figs. 25–26), but differs in the ovoid rather than rounded receptacles and the longer and more winding insemination ducts (Figs. 20–21).

Distribution: The type locality only.

Description: *Female* (holotype): Carapace 2.80 long, 2.20 wide, 1.55 high at PLE. Ocular area 1.18 long. Eye interdistances: AME-AME 1.13, ALE-ALE 1.35, PME-PME 1.03, PLE-PLE 1.11. Diameter of AME 0.55. Abdomen 3.63 long, 1.68 wide. Cheliceral length 1.38. Clypeal height 0.28. Length of leg segments: I 3.08+1.23+2.65+2.48+0.63; II 2.70+1.03+2.15+2.13+0.55; III 2.40+0.89+1.90+1.95+0.70; IV 2.30+0.80+1.98+2.50+0.60. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt rt 1-0-0, v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 1-1, v 3 pairs; Mt pr and rt 1-0-0, v 3 pairs. III: Fm d 1-1-1,



Figs. 11–16: 11–12 *Lyssomanes trinidadus* sp. n., holotype; 13–14 *L. convexus* Banks, 1909; 15–16 *L. waorani* sp. n., holotype. 11, 14, 15 Spermathecae, dorsal view; 12, 13, 16 Epigyne. Scale lines=0.1 mm.

pr 0-1-1, Pt d 1ap, Tb d 1-0, pr and rt 1-1, v 0-1, Mt pr 1-1, rt 1-0, v 2-1. IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d 1 ap; Tb pr and rt 0-0-1, Mt 0. Coloration (in alcohol): entire body, palps and all legs light yellow; eye field covered with white appressed scales, but a transverse band of orange scales above AME. Epigyne and spermathecae as in Figs. 20–21.

Male: Unknown.

***Lyssomanes janauari* sp. n.**

Lyssomanes benderi Logunov, 2002 (in part, ♀ only): 232, figs. 12–13 (♀ paratypes, LAIB, examined); mismatched with ♂ holotype of *L. benderi*.

Types: Holotype ♀ (LAIB; IB-7277), Brazil, Lago Janauari, Manaus, AM, 29 July 1996, E. Vinticinque. Paratype ♀ (LAIB; IB-7277), together with holotype.

Etymology: The species is named after the type locality, Lago Janauari near Manaus, Brazil.

Diagnosis: This species is known from females only and is closest to *L. benderi*, but can be easily distinguished from it by the arrangement of the insemination ducts and the shape (larger and more

diagonal) of the receptacles (cf. Logunov, 2002: figs. 13 and 15).

Comments: This is a new name for the two females described earlier as the paratypes of *L. benderi* from Manaus in Brazil (see Logunov, 2002). Because these females were mismatched with the holotype of *L. benderi* and clearly differ from the true females of that species (see above), we think it is reasonable to give them a new name. The holotype and paratype of *L. janauari* sp. n. have been designated and are deposited in LAIB.

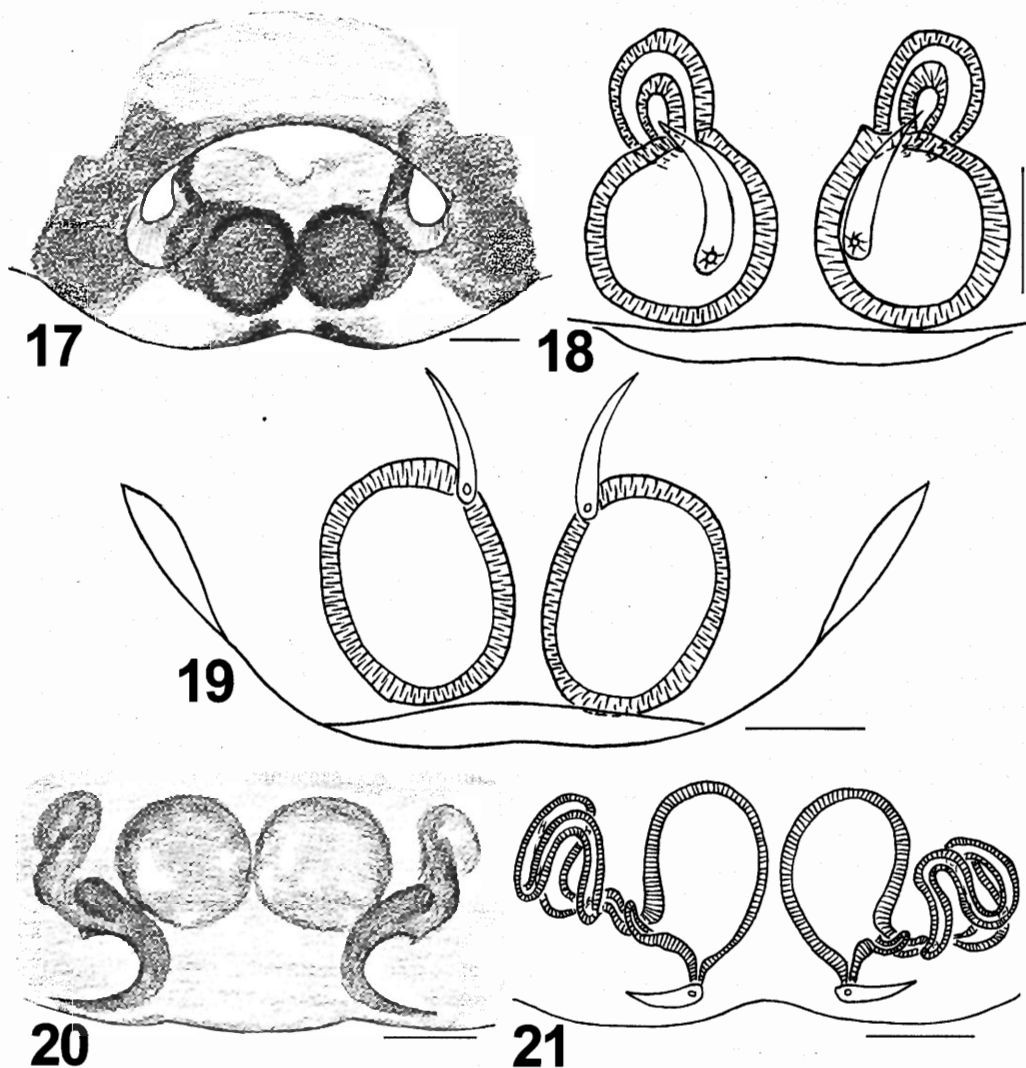
Description: *Female*: See Logunov (2002: sub ♀ of *L. benderi*).

Male: Unknown.

***Lyssomanes jemineus* Peckham, Peckham & Wheeler, 1889**

Comments: This is a further record from Costa Rica of this relatively widespread Neotropical species (cf. Galiano, 1980).

Material examined: COSTA RICA: 1♀ (JMPC), 1♀ (MMUM), La Pacifica-Rio, 8 September 1983, J. Murphy.



Figs. 17–21: 17–19 *Lyssomanes romani* Logunov, 2000 (from Ecuador); 20–21 *L. ecuadoricus* sp. n., holotype. 17, 20 Epigyne; 18, 21 Spermathecae, dorsal view; 19 Ditto, rear view. Scale lines=0.1 mm.

Lyssomanes mandibulatus F. O. Pickard-Cambridge, 1900 (Figs. 22–28)

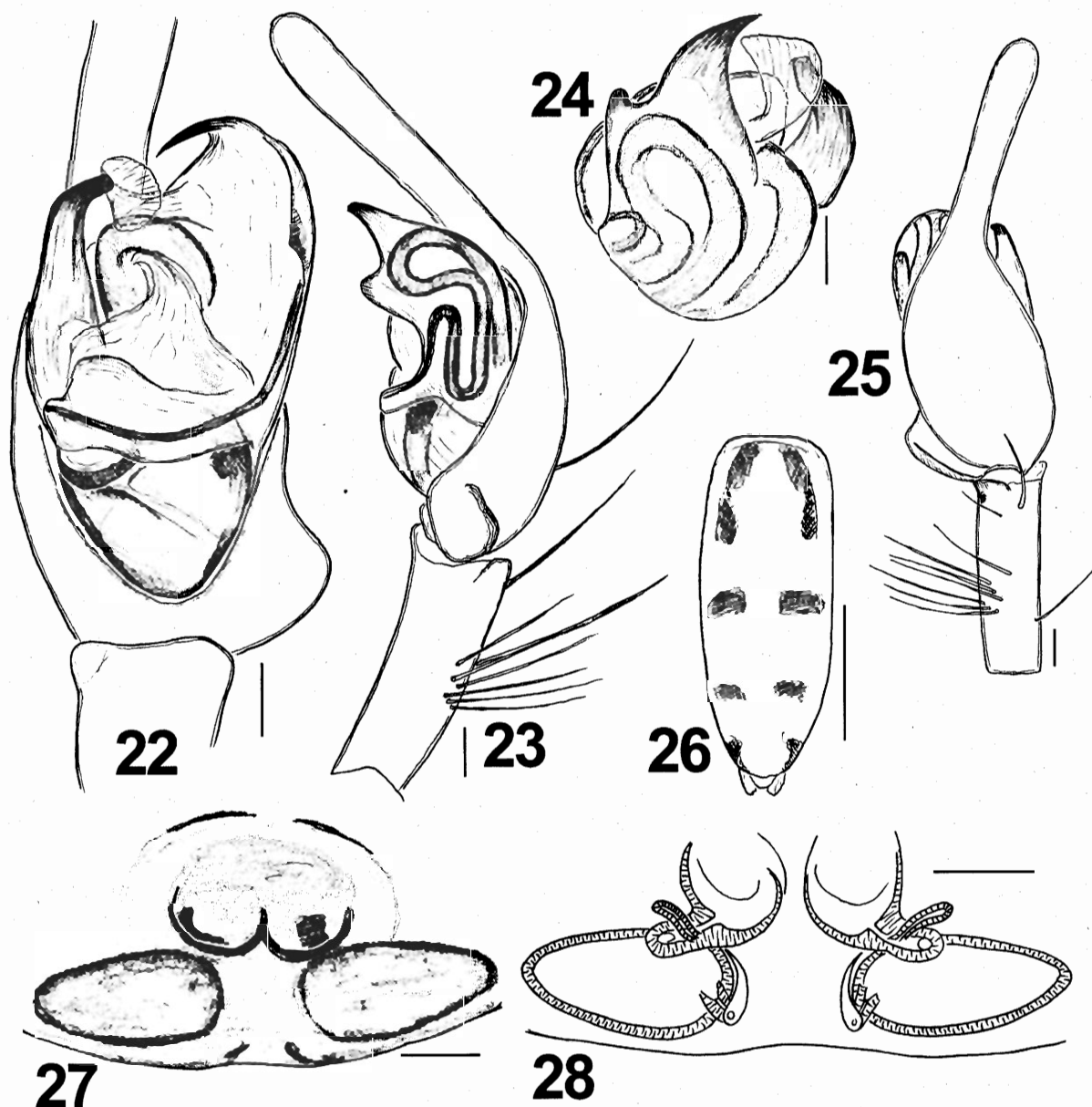
Comments: *Lyssomanes mandibulatus* has hitherto been known from males only (Galiano, 1980; Prószyński, 2000), but we have strong evidence to match the reported males and female together. The type locality for *L. mandibulatus* is Mexico (Teapa) (Galiano, 1980: 59). Recently, Jiménez & Tejas (1993) described a new species, *L. pescadero*, from Mexico (Pescadero) on the basis of 11 specimens of both sexes collected together. The latter species (at least its males) is virtually indistinguishable from *L. mandibulatus* and seems likely to be a junior synonym thereof. As we have not re-examined the type series of *L. pescadero*, we cannot discuss this problem further; at this point it is important only to notice that both sexes of *L. pescadero* are reliably matched. As the males of *L. pescadero* are virtually indistinguishable from those of *L. mandibulatus* and the

females have similar characteristic transverse receptacles (cf. Fig. 28 and Jiménez Tejas, 1993: fig. 14), it is safe to conclude that we have the female of *L. mandibulatus*, which is described below for the first time.

Distribution: This is the first record of this relatively widespread Neotropical species from Costa Rica (cf. Galiano, 1980).

Description: *Male:* See Galiano (1980); Figs. 22–26.

Female: Carapace 1.88 long, 1.38 wide, 1.28 high at PLE. Ocular area 1.03 long. Eye interdistances: AME-AME 0.88, ALE-ALE 0.91, PME-PME 0.58, PLE-PLE 0.70. Diameter of AME 0.45. Abdomen 2.63 long, 1.28 wide. Cheliceral length 0.88. Clypeal height 0.45. Length of leg segments: I 1.98+0.79+1.75+1.60+0.50; II 1.84+0.73+1.40+1.38+0.35; III 1.75+0.65+1.31+1.50+0.50; IV 1.75+0.60+1.43+1.78+0.53. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1; Tb pr and rt 0-1, v 4 pairs; Mt v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1; Pt d 1ap; Tb pr and rt 0-1, v 4 pairs; Mt v 3 pairs. III Fm



Figs. 22–28: *Lyssomanes mandibulatus* F. O. Pickard-Cambridge, 1900 (from Ecuador). 22 Male palp, ventral view; 23 Ditto, retrolateral view; 24 Bulbus, apical view; 25 Male palp, dorsal view; 26 Male abdomen, dorsal view; 27 Epigyne; 28 Spermathecae, dorsal view. Scale lines=0.1 mm (22–25, 27–28), 1.0 mm (26).

d 1-1-1, pr 0-1-1; Pt d 1 ap; Tb d 1-0, pr and rt 1-1, v 0-2-0; Mt pr 1-1-1, rt 1-1-0, v 2-0-0. IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d lap; Tb d and rt 1-1, pr 0-1; Mt pr 0-1-lap, rt 1-1-0, v 1-0. Coloration (in alcohol): entire body, chelicerae and all legs light yellow; eye field covered with white appressed scales. Epigyne and spermathecae as in Figs. 27–28.

Material examined: COSTA RICA: 2♂ 1♀ (JMPC), 2♂ (MMUM), La Pacifica-Rio, 8 September 1983, J. Murphy.

***Lyssomanes nigropictus* Peckham, Peckham & Wheeler, 1889**

Comments: This is the first record of this species outside Brazil and Guyana (see Galiano, 1962, 1980).

Material examined: ECUADOR: 4♂ 3♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

***Lyssomanes onkonensis* sp. n. (Figs. 29–40)**

Types: Holotype ♂ (NMNH), Ecuador, Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.* Paratypes: 3♀ (NMNH), 1♂ 1♀ (MMUM), same data as holotype.

Etymology: The specific epithet is derived from the type locality, Onkone Gare camp in Ecuador.

Diagnosis: The females of *L. onkonensis* sp. n. are very similar to those of *L. malinche* Galiano, 1980 from Mexico and *L. bryantae* Chickering, 1946 from Panama (see Galiano, 1980: figs. 30–32, 119–120; the last two species are known from ♀♀ only), from which they can be easily distinguished by the longer insemination ducts making a visible loop (Figs. 38–40) (absent in both related species). Although the males of *L. onkonensis* sp. n. cannot be compared with the unknown males of *L. malinche* and *L. bryantae*, they have the unique (as compared with other described *Lyssomanes* species) structures of a thin twisted embolus and a thin long conductor (Figs. 29–34).

Comments: Males and females are matched provisionally, because of their small size and similar colour pattern (Figs. 35–36), as well as the rather peculiar structure of the copulatory organs in both sexes (males are unique, see above; Figs. 29–34).

Distribution: The type locality only.

Description: *Male* (holotype): Carapace 2.03 long, 1.35 wide, 0.91 high at PLE. Ocular area 1.05 long. Eye interdistances: AME-AME 0.86, ALE-ALE 0.85, PME-PME 0.40, PLE-PLE 0.73. Diameter of AME 0.45. Abdomen 2.40 long, 0.90 wide. Cheliceral length 0.78. Clypeal height 0.11. Length of leg segments: I 2.45+0.78+2.28+2.13+0.53; II 1.85+0.63+1.80+1.75+0.50; III 1.70+0.44+1.33+1.45+0.55; IV 1.95+0.48+1.83+2.38+0.55. Leg spination: I and II: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt

v 3 pairs. III: Fm d 1-1-1, pr 0-1-1, Pt d lap, Tb d 0-1, pr and rt 1-1, Mt pr and rt 1-1. IV: Fm d 1-1-1, pr 0-0-1; Pt d lap; Tb d 0-0-1, pr 1-1, rt 1-1-1, Mt 0. Coloration (in alcohol): carapace brown, with white eye field. Sternum, maxillae, labium and chelicerae brownish yellow. Abdomen brown (in paratype yellow, with brown pattern as in Fig. 35). Book-lung covers yellow. Spinnerets brownish. All legs light yellow. Palpal structure as in Figs. 29–34.

Female (paratype): Carapace 1.90 long, 1.33 wide, 0.88 high at PLE. Ocular area 1.07 long. Eye interdistances: AME-AME 0.88, ALE-ALE 0.86, PME-PME 0.45, PLE-PLE 0.70. Diameter of AME 0.44. Abdomen 2.23 long, 1.08 wide. Cheliceral length 0.70. Clypeal height 0.09. Length of leg segments: I 2.23+0.73+2.10+2.00+0.53; II 1.95+0.63+1.70+1.65+0.50; III 1.80+0.53+1.51+1.75+0.51; IV 1.88+0.50+2.40+2.28+0.53. Leg spination: I: Fm d, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt pr and rt 1-0-0, v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt pr and rt 1-0-0, v 3 pairs. III: Fm d 1-1-1, pr 0-1-1, Pt d lap, Tb d and pr 1-1, rt 0-1, Mt pr and rt 1-1-1. IV: Fm d 1-1-1, rt 0-0-1; Pt d lap; Tb d, pr and rt 0-0-1, Mt 0. Coloration (in alcohol): carapace yellow, with wide median brown band and brown marginal lines (Fig. 36); clypeus brown. Abdomen yellow, with brown colour pattern as in Fig. 36. Chelicerae yellow, with longitudinal brown bands anteriorly. Palps yellow, with longitudinal brownish lines on anterior and posterior sides of segments. Spinnerets brown. Remaining parts of body, including all legs, light yellow, Epigyne and spermathecae as in Figs. 38–40.

***Lyssomanes romani* Logunov, 2000 (Figs. 17–19)**

Comments: This is the first record of this species after the original description (see Logunov, 2000b), and its first record from Ecuador.

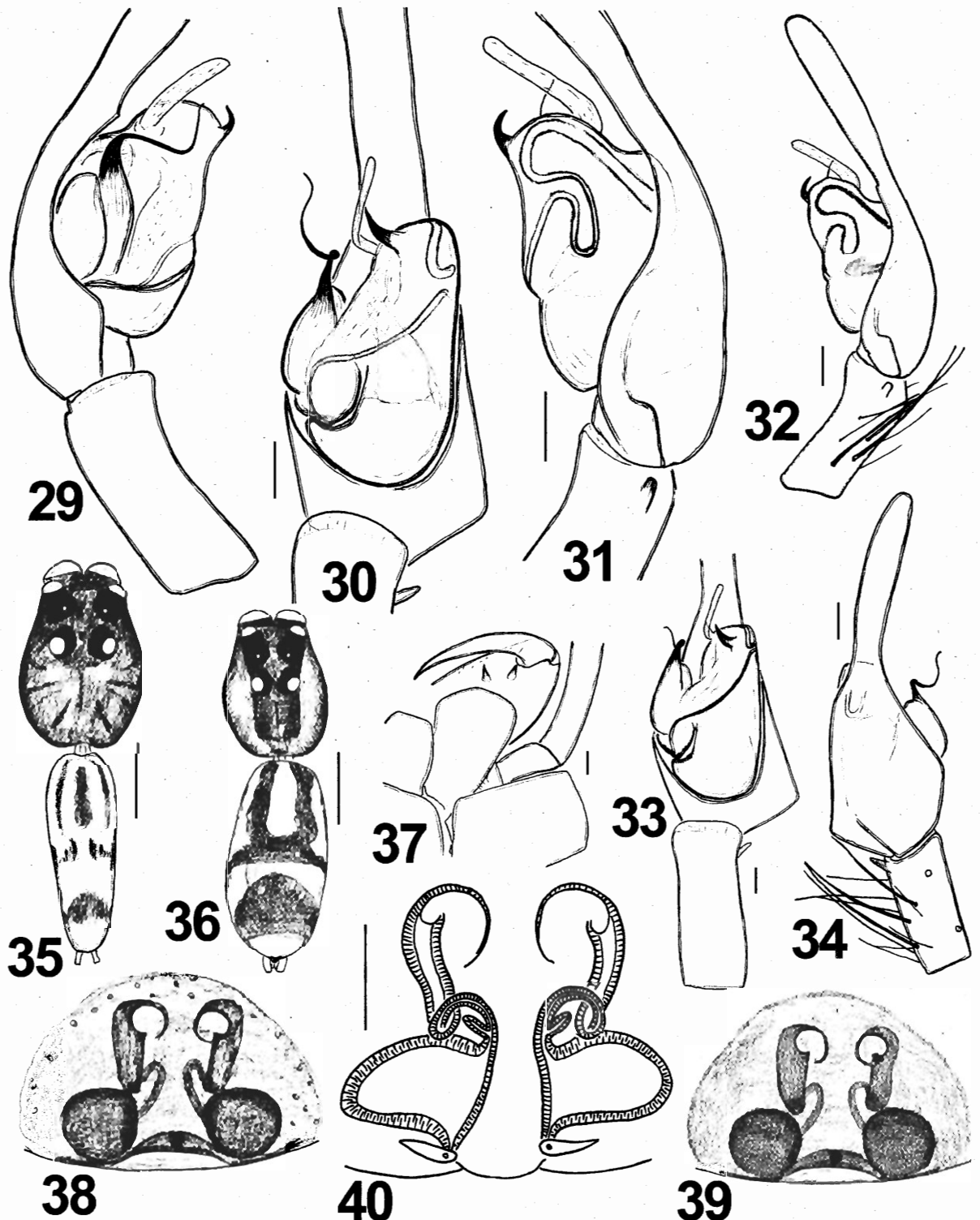
The male and female of the new material were matched provisionally reasoning from the fact that the male and one of the females were collected together, kept in the same sample and look similar. Unfortunately, sex matching remains a problem for many *Lyssomanes* species, as it is known that males and females of many similar species can be collected together from the same habitats. Breeding experiments are required to solve the problem of sex matching in some cases like those of *L. taczanowskiiromani* or *L. taczanowskii santarem* (see below).

The spermathecae of the female described here as *L. romani* (Fig. 18) are rather similar to those of *L. taczanowskii* as described by Galiano (1980: figs. 44–45). This might mean that the sexes of one of these species have been mismatched, as the males of the two species have nothing in common and definitely belong to different species groups. In our opinion, the matching of the ♂ and ♀ in the original description of *L. taczanowskii* (Galiano, 1980: 27–28) should also be considered provisional. The latter author was able to examine only four specimens, of which only one sample contained both a single ♂ and a single ♀ apparently collected together, this

sample by Taczanowski was taken in the mid-19th century and can hardly serve as a reliable argument for matching the sexes. The other two specimens studied by Galiano (1980) were a single ♂ and ♀ collected from different and distant localities. Thus, having studied a male and three females collected from the same locality and habitat, we probably have a stronger argument for considering our matching of the sexes in *L. romani* to be correct. See also below under "Comments" for *L. taczanowskii*.

Description: Male: See Logunov (2000b).

Female: Carapace 2.53 long, 1.88 wide, 1.45 high at PLE. Ocular area 1.55 long. Eye interdistances: AME-AME 1.25, ALE-ALE 1.33, PME-PME 0.66, PLE-PLE 1.00. Diameter of AME 0.61. Abdomen 3.58 long, 1.63 wide. Cheliceral length 1.08. Clypeal height 0.18. Length of leg segments: I 3.03+1.13+2.78+2.70+0.79; II 2.68+1.00+2.18+2.43+0.74; III 2.63+0.90+2.25+2.60+0.78; IV 2.55+0.78+2.33+3.05+0.75. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1; Tb pr and rt 0-1,



Figs. 29–40: *Lyssomanes onkonensis* sp. n., paratypes. 29 Male palp, mesal view; 30 Ditto, ventro-lateral view; 31–32 Ditto, retrolateral view; 33 Ditto, ventral view; 34 Ditto, dorsal view; 35 Male general appearance; 36 Female general appearance; 37 Male chelicera and maxilla; 38–39 Epigyne; 40 Spermathecae, dorsal view. Scale lines=0.1 mm (29–34, 37–40), 1.0 mm (35–36).

v 4 pairs; Mt v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1; Pt d 1ap; Tb d 1-1, pr and rt 0-1, v 4 pairs; Mt pr and rt 1-0-0, v 3 pairs. III: Fm d 1-1-1, pr and rt 0-1-1; Pt d 1 ap; Tb d 1-1, pr and rt 0-1, v 2-2; Mt pr, rt and v 1-lap. IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d 1ap; Tb d 1-1, rt and pr 1-1, v 0-1; Mt pr 1-1, rt and v 0-1. Coloration (in alcohol): entire body, chelicerae and all legs light yellow; eye field sparsely covered with white appressed scales. Epigyne and spermathecae as in Figs. 17-19.

Material examined: ECUADOR: 1♂ 2♀ (NMNH), 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

***Lyssomanes taczanowskii* Galiano, 1980 (Figs. 41-45)**

Comments: This is only the second record of the species after its original description (Galiano, 1980), and its first record from Ecuador.

The studied female differs slightly from that described by Galiano (1980: fig. 44) in having longer insemination ducts (cf. Fig. 45) and this difference makes the studied female virtually indistinguishable from that of *L. santarem* Galiano, 1984 described from Brazil from a single female (Galiano, 1984: figs. 27-28). Therefore, if our identification of the female of *L. taczanowskii* is correct, *L. santarem* may be a junior synonym of *L. taczanowskii*. Alternatively, *L. santarem* could also

belong to *L. romani* (originally described from a single ♂; see above) and, if this were correct, be its senior synonym. None of these assumptions can be proven or rejected at the present time; more material and breeding experiments seem to be required to resolve them. See also above under "Comments" for *L. romani*.

Material examined: ECUADOR: 6♂ 1♀ (NMNH), 1♂ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

***Lyssomanes tenuis* Peckham, Peckham & Wheeler, 1889**

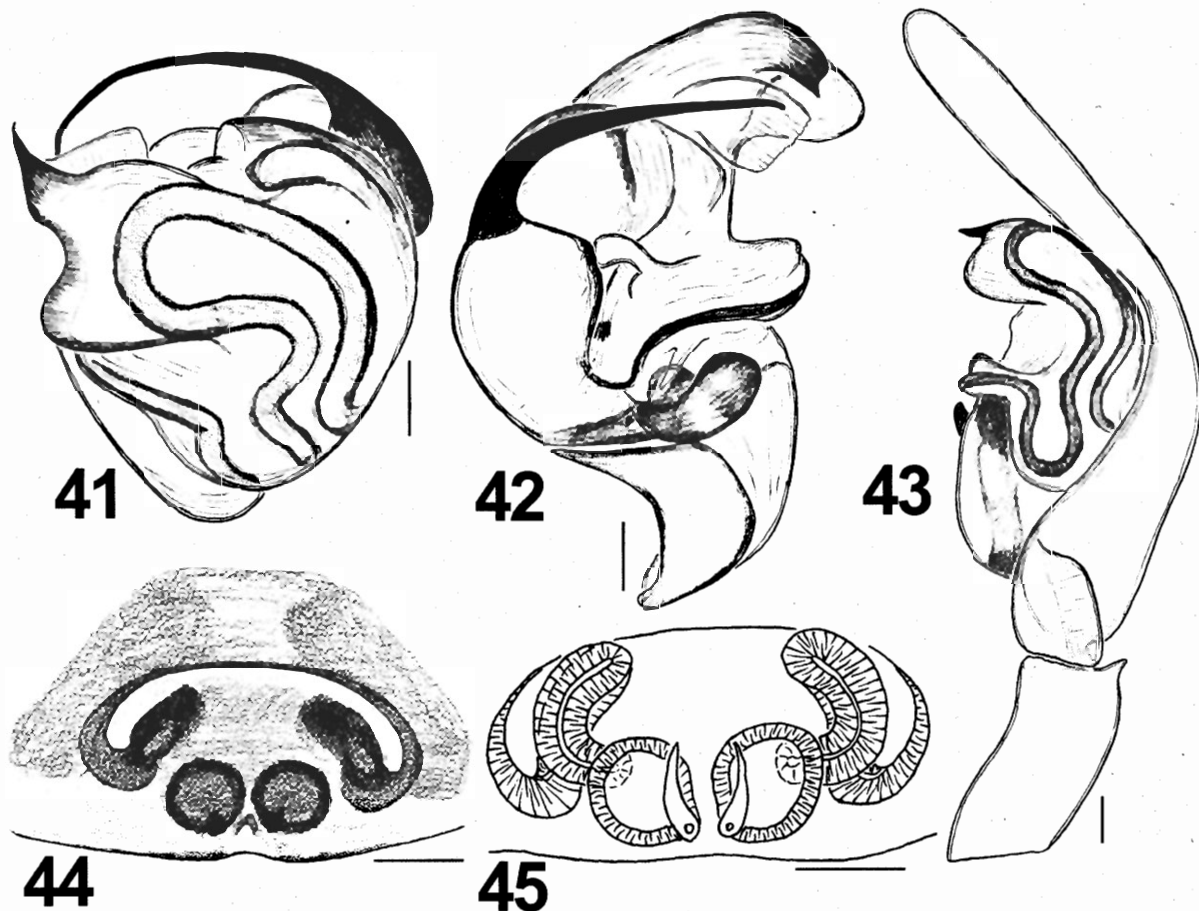
Comments: Common species; this is the first record of this species outside Brazil (Galiano, 1980; Logunov, 2002) and Guyana (Galiano, 1962).

Material examined: ECUADOR: 13♂ 14♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

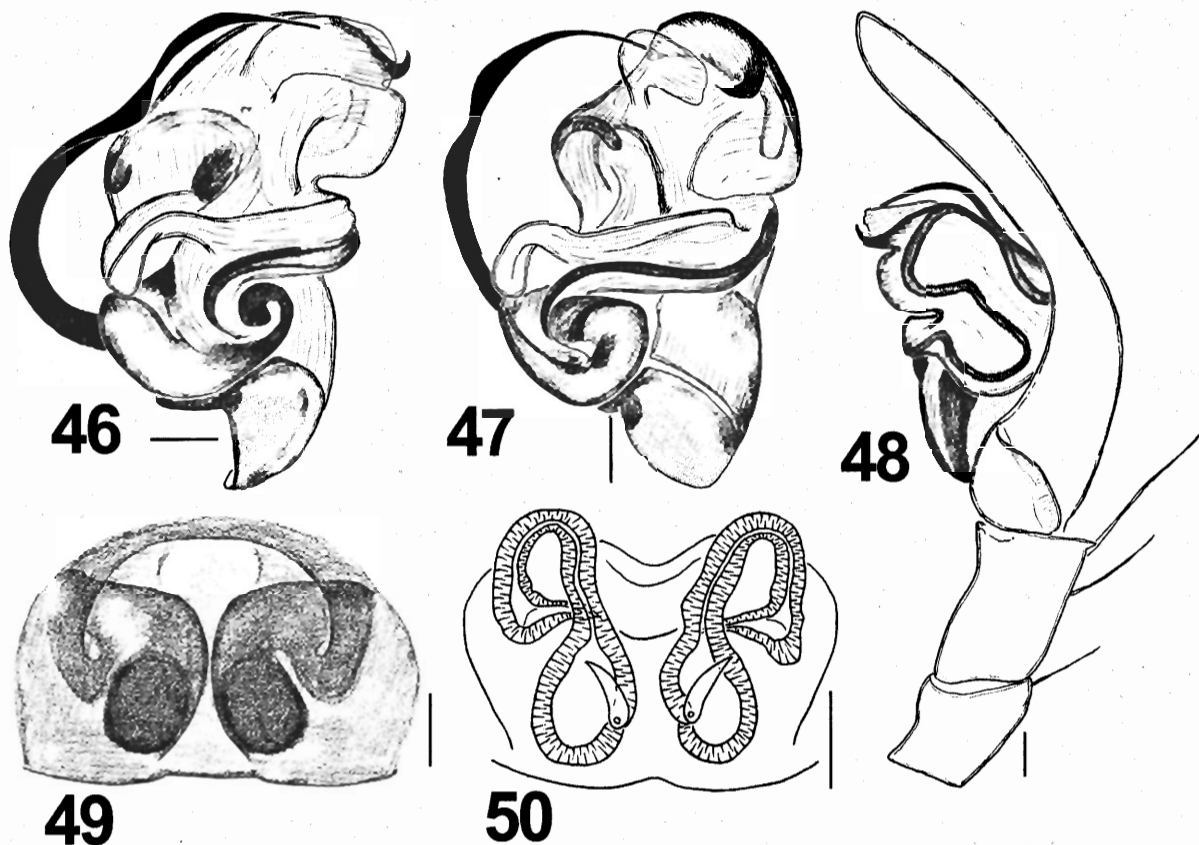
***Lyssomanes trinidadus* sp. n. (Figs. 11-12)**

Type: Holotype ♀ (AMNH), West Indies, Trinidad, N.W. (no exact locality), November 1972, E. W. S.

Etymology: The specific epithet is taken from the type locality, Trinidad, West Indies.



Figs. 41-45: *Lyssomanes taczanowskii* Galiano, 1980 (from Ecuador). 41 Male bulb, apical view; 42 Ditto, mesal view; 43 Male palp, retrolateral view; 44 Epigyne; 45 Spermathecae, dorsal view. Scale lines=0.1 mm.



Figs. 46–50: *Lyssomanes velox* Peckham, Peckham & Wheeler, 1888 (from Ecuador). 46 Male bulb, mesal view; 47 Ditto, ventral view; 48 Male palp, retrolateral view; 49 Epigyne; 50 Spermathecae, dorsal view. Scale lines=0.1 mm.

Diagnosis: By the structure of the epigyne and spermathecae, this species is closest to *L. bryantae* Chickering, 1946 from Panama (see Galiano, 1980: figs. 119–120), but can be distinguished from it by the shorter glandular ducts and larger receptacles, as well as in the different arrangements of the insemination ducts and receptacles (cf. Figs. 11–12). Another related species, *L. belgranoi* Galiano, 1984 from Argentina (Galiano, 1984: figs. 31–32), differs from *L. trinidadus* sp. n. in having smaller and more heavily sclerotised spermathecae.

Distribution: The type locality only.

Description: *Female* (holotype): Carapace 2.25 long, 1.89 wide, 1.15 high at PLE. Ocular area 1.08 long. Eye interdistances: AME-AME 1.00, ALE-ALE 1.10, PME-PME 0.76, PLE-PLE 0.83. Diameter of AME 0.49. Abdomen 3.88 long, 1.63 wide. Cheliceral length 1.13. Clypeal height 0.15. Length of leg segments: I 2.68+1.05+2.38+2.28+0.48; II 2.30+0.85+1.93+1.89+0.45; III 2.23+0.75+1.75+1.93+0.65; IV 2.15+0.64+1.85+2.25+0.63. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt v 3 pairs. III: Fm d 1-1-1, pr 0-1-1, Pt d lap, Tb d, pr and rt 1-1, v 0-2-0, Mt v 3 pairs; IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d lap; Tb d, pr and rt 1-1, Mt pr lap, rt 0-1-0. Coloration (in alcohol): entire body, legs and chelicerae light yellow, but carapace slightly darker (sandy). Epigyne and spermathecae as in Figs. 11–12.

Male: Unknown.

Lyssomanes unicolor (Taczanowski, 1872)

Comments: This is the first record of this rather widespread species from Ecuador (cf. Galiano, 1980; Logunov, 2000a, 2002).

Material examined: ECUADOR: 9♂ 6♀ (NMNH), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

Lyssomanes velox Peckham, Peckham & Wheeler, 1888 (Figs. 46–50)

Diagnosis: The female of *L. velox* is described and diagnosed for the first time. By the structure of the epigyne and spermathecae (Figs. 49–50), this species superficially resembles the female of *L. vinocurae* Galiano, 1996 (Galiano, 1996: figs. 5–6), but can be easily distinguished by the ovoid rather than curved receptacles and by the copulatory openings being separated by the insemination ducts (joining in *L. vinocurae*). The male of *L. velox* was described and diagnosed by Galiano (1980), but see also Figs. 46–48.

Distribution: This is the first record of this species outside Brazil and Peru (cf. Galiano, 1980).

Description: *Male:* See Galiano (1980); Figs. 46–48.

Female: Carapace 2.63 long, 1.80 wide, 1.30 high at PLE. Ocular area 1.48 long. Eye interdistances. AME-AME 1.18, ALE-ALE 1.23, PME-PME 0.60, PLE-PLE

0.93. Diameter of AME 0.60. Abdomen 3.65 long, 1.20 wide. Cheliceral length 0.88. Clypeal height 0.18. Length of leg segments: I 3.09+1.08+3.03+2.78+0.70; II 2.70+0.90+2.40+2.40+0.70; III 2.68+0.78+2.18+2.63+0.70; IV 2.63+0.75+2.35+3.08+0.65. Leg spination: I and II: Fm d 1-1-1, pr and rt 0-1-1, Pt d 1ap; Tb d 1-0, pr 0-1, v 4 pairs; Mt v 3 pairs. III: Fm d 1-1-1, pr 0-1-1, Pt d 1ap, Tb d, pr and rt 1-1, v 0-2, Mt pr and rt 1-0-0, v 3 pairs. IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d 1ap; Tb d and v 0-1, pr and rt 1-1, Mt pr, rt and v 1-1-0. Coloration (in alcohol): entire body, legs and chelicerae light yellow, with eye field covered with white appressed scales. Epigyne and spermathecae as in Figs. 49–50.

Material examined: ECUADOR: 4♂ 5♀ (NMNH), 1♂ 1♀ (MMUM), Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.*

Lyssomanes waorani sp. n. (Figs. 15–16)

Types: Holotype ♀ (NMNH), Ecuador, Orellana, Reserva Etnica Waorani, Transect Ent., c. 1 km S of Onkone Gare camp (00°39'25.7"S, 76°27'10.8"W), 216.3 m a.s.l., 2 November 1991, T. L. Erwin *et al.* Paratypes: 1♀ (NMNH), 1♀ (MMUM), together with holotype.

Etymology: The specific epithet is derived from the type locality, the reserve Etnica Waorani in Ecuador.

Diagnosis: This new species is most similar to *L. ceplaci* Galiano, 1980 from Brazil (Galiano, 1980: figs. 173–174), from which it can be distinguished by the relative proportions and mutual arrangement of the spermathecal parts, viz. the relatively stronger and longer insemination ducts and the narrower and more ovoid receptacles (see Fig. 15). By the ovoid receptacles, *L. waorani* sp. n. is also similar to *L. pauper* Mello-Leitão, 1945 from Brazil and Argentina and *L. remotus* Peckham & Peckham, 1896 from Panama to Brazil (see Galiano, 1980: figs. 100, 104), but can be easily distinguished by the two times longer (and much stronger) insemination ducts.

Distribution: The type locality only.

Description: *Female* (paratype): Carapace 3.30 long, 2.38 wide, 1.80 high at PLE. Ocular area 1.35 long. Eye interdistances: AME-AME 1.28, ALE-ALE 1.43, PME-PME 0.93, PLE-PLE 1.10. Diameter of AME 0.63. Abdomen 5.33 long, 1.23 wide. Cheliceral length 1.68. Clypeal height 0.30. Length of leg segments: I 3.52+1.38+3.15+3.08+0.70; II 3.03+1.10+2.68+2.68+0.70; III 2.78+1.08+2.33+3.25+0.65; IV 2.77+0.88+2.48+2.83+0.70. Leg spination: I: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs; Mt v 3 pairs. II: Fm d 1-1-1, pr and rt 0-1-1, Tb pr and rt 0-0-1, v 4 pairs, Mt pr and rt 1-0-0, v 3 pairs. III: Fm d 1-1-1, pr 0-1-1, Pt d

1ap, Tb d 1-0, pr and rt 1-1, v 0-2-0, Mt pr and rt 1-0-0, v 2-2-0. IV: Fm d 1-1-1, pr and rt 0-0-1; Pt d 1ap; Tb d 1-0-1, pr and rt 0-0-1, Mt pr and rt 1-1-0. Coloration (in alcohol): entire body, legs and chelicerae light yellow, with eye field covered with white and yellow appressed scales. Epigyne and spermathecae as in Figs. 15–16.

Male: Unknown.

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