REVISTA IBÉRICA de Aracnología

ARTÍCULO:

On a new genus of Trechaleidae (Araneae, Lycosoidea) from Peru

Estevam Luís Cruz da Silva & Arno Antonio Lise
Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS),
Laboratório de Aracnologia,
prédio 12C, sala 244,
Avenida Ipiranga 6681,
Partenon, 90619-900, Porto Alegre, RS, Brasil,
e-mail:estevamsilva@gmail.com;
lisearno@pucrs.br

Revista Ibérica de Aracnología
ISSN: 1576 - 9518.
Dep. Legal: Z-2656-2000.
Vol. **14**, 31-XII-2006
Sección: Artículos y Notas.
Pp: 25−29
Fecha publicación: 25 Octubre 2007

Edita:
Grupo Ibérico de Aracnología (GIA)
Grupo de trabajo en Aracnología
de la Sociedad Entomológica Aragonesa (SEA)
Avda. Radio Juventud, 37
50012 Zaragoza (ESPAÑA)
Tef. 976 324415
Fax. 976 535697
C-elect.: amelic@telefonica.net

Director: Carles Ribera
C-elect.: cribera@ub.edu

Indice, resúmenes, abstracts vols. publicados:
http://entomologia.rediris.es/sea/publicaciones/ria/index.htm

Página web GIA:
http://entomologia.rediris.es/gia

Página web SEA:
http://entomologia.rediris.es/sea

On a new genus of Trechaleidae (Araneae, Lycosoidea) from Peru

Estevam Luís Cruz da Silva & Arno Antonio Lise

Abstract:
Caricelea, a new genus of Trechaleidae from Cusco, Peru is described and illustrated; *C. wayrapata* sp. n. is designated as type species. This genus differs from all other trechaleids in the large tegular lobated projection and a median apophysis with a dorsal division having a short lamina and an acute guide.
Key words: spiders, taxonomy, Neotropical region.
Taxonomy: *Caricelea* gen. n. *C. wayrapata* sp. n.

Un nuevo género de Trechaleidae (Araneae, Lycosoidea) del Perú.

Resumen:
Se describe e ilustra *Caricelea*, un nuevo género de Trechaleidae del Cusco, Perú, y se designa como especie tipo *C. wayrapata* sp. n. Este nuevo género se diferencia de otros trechaleidos por la proyección del tegulum en un lóbulo grande y la apófisis media con una división dorsal que tiene una lámina corta y una guía muy aguda.
Palabras clave: arañas, taxonomía, Perú.
Taxonomía: *Caricelea* gen. n. *C. wayrapata* sp. n.

Introduction

Trechaleidae comprises 17 genera found mostly in North, Central and South America and includes 85 known species (Platnick, 2007; Silva & Lise, 2006; Silva *et al*. 2006). A recent addition of some new genera, including *Amapalea* and *Magnichela* from Northern Brazil (Silva & Lise, 2006), and *Trechaleoides* and *Paratrechalea* from South America (Carico, 2005b), greatly increases the diversity of this group in South America.

By examining material of various South American collections, we found that some trechaleid spiders have short and straight tarsi, e.g., *Enna* O. Pickard-Cambridge, 1897 and *Dossenus* Simon, 1898, while a great majority have long and flexible tarsi, e.g. *Trechalea* Thorell, 1869, *Syntrechalea* F. O. P.-Cambridge, 1902, *Paratrechalea* Carico, 2005 and *Trechaleoides* Carico, 2005. This new genus is closely related to *Trechalea*, *Trechaleoides* and *Paratrechalea* because this group of genera presents only the tarsi flexible. *Syntrechalea* and *Hesydrus* Simon, 1898, in contrast, present both metatarsus and tarsus flexible.

The male palp morphology of these five genera previously mentioned is characterized by a conspicuous guide, but none of them present the anterior margin of the ventral division of the median apophysis with a laminar shape and a laterally pointed guide (Fig. 10), and a tegulum with a large lobated projection (Fig. 9). The female genitalia of this new genus is arrangement of the spermathecae similar to that of *Paratrechalea* by the shape of the projection of the median field (MF, Fig. 8), but differs from the other genera by the shape. *Caricelea* appears to be restricted to the mountains of south central Peru.

Materials and methods

The material examined is deposited in the collection of the Museo de Historia Natural of Universidad Nacional Mayor de San Marcos, Lima, Perú (MUSM, D. Silva Dávila) and Museu de Ciências e Tecnologia of Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Brazil (MCTP, A. A. Lise).

The nomenclature of the male palpus and female epigynum structures follows Carico (1993, 2005a, 2005b), Silva & Lise (2006) and Silva *et al.* (2006). To study the epigyna, the soft tissue was removed by a combination of dissection with a small surgical blade and immersion in 10% KOH for 12 hours at 25°C. The scanning electron micrographs (SEM) were made with a Philips XL 20 of Centro de Microscopia e Microanálises (CEMM) of Pontifícia Universidade Católica do Rio Grande do Sul. All measurements are in millimeters.

Taxonomy

Caricelea gen. n.

TYPE SPECIES. *Caricelea wayrapata* sp. n.

ETYMOLOGY. The generic name is a patronym, in honor of the arachnologist James E. Carico, added by the termination "lea". The grammatical gender is feminine.

GENUS DIAGNOSIS. This genus resembles *Enna* O. Pickard-Cambridge, 1897 by the presence of a small lateral projection (LP) on the ectal division (ECD) of the retrolateral tibial apophysis (RTA, Fig. 11), and *Amapalea* Silva & Lise, 2006 by the presence of a median subtriangular projection on the tegulum, but can be distinguished by the shape of the ventral division of the median apophysis which presents a short lamina on the anterior surface (Figs. 6, 9, 10), and the tegulum with a short projection extending prolateraly (Fig. 9). Females have a median epigynal field projecting posteriorly in a T-shaped lobe, large copulatory openings (Fig. 8), short spermathecae and conspicuous copulatory ducts (Fig. 7).

GENUS DESCRIPTION. - Carapace, moderately elevated (Fig. 2). Anterior eye row straight, posterior recurved (Figs. 1, 3). Chelicerae, base not enlarged in male, with conspicuous lateral carina (Fig. 2). Female with bristly chelicerae. Promargin and retromargin of fang furrow with three teeth, equal in size, equidistant. Leg lengths variable, leg III smallest; slightly long and flexible tarsi, all tarsal claws pectinated (Fig. 16), eleven teeth on upper claws and one short tooth on inferior claw (Fig. 16). Tarsal organ conspicuous (Figs. 13, 14). Ventral pairs of macrosetae on tibiae: I-4; II-4; III-3; IV-3. Trichobothria arranged in one row, with smooth hood (Fig. 15).

Male palpus (Figs. 4-6, 9-12) presenting an elongated base on the ventral division of the median apophysis, anterior surface laminar with an irregular border (Figs. 6, 10); dorsal division of median apophysis elongated, narrow, ending in a slender and acute guide (Figs. 6, 9, 10). Retrolateral tibial apophysis prominent, ectal division large, with a bifurcated apex, ventrally curved (Figs. 5, 11); ental division short, triangular (Figs. 5, 11). Female epigynum short, with a projected median field (MF, Fig. 8); spermathecae short, head of spermathecae elliptical (Fig. 7).

Caricelea wayrapata sp. n

Figs. 1-16

TYPE MATERIAL. Male Holotype, 29.VIII.1998, (MUSM). Paratypes: one female, same locality, date and collector (MUSM) and one male, same locality, date and collector (MCTP 18322).

TYPE LOCALITY. Cusco, Wayrapata, Apurimac river, Peru, (12º51'S, 73º30'W, 2320 m elevation), J. Duarez & S. Cordova leg.

ETYMOLOGY. specific name is a noun in apposition taken from the type locality.

DIAGNOSIS. This species can be distinguished from all other members of the family Trechaleidae by the distally elongated median apophysis (Figs. 6, 9), with a dorsal division short and a conspicuous guide (Figs. 6, 9, 10). Female epigynum with a short T-shaped median field (Fig. 8).

DESCRIPTION. - MALE - holotype - Total length: 12.90. Carapace: 6.22 long, 5.31 wide, pale brown, darker at the margins (Fig. 1). Chelicerae: reddish brown with small brown bristles, lateral carina prominent (Fig. 2). Labium 1.05 long, 1.08 wide, dark brown, darker at the anterior margin. Clypeus: 0.62 high, light brown, darker laterally. Eye diameters, interdistances and ocular quadrangle: anterior eye row 1.36 wide; posterior recurved, 2.63 wide. AME 0.21, ALE 0.15, PME 0.31, PLE 0.20; AME-AME 0.24, AME-ALE 0.15, PME-PME 0.68, PME-PLE 0.71, MOQ, dorsal view 0.65, frontal view 0.71, anterior width 0.68, posterior width 1.27. Sternum: yellowish with dark brown bristles, 2.69 long, 2.32 wide. Legs: light brown, femora with indistinct brownish pattern, relative length: I-II-IV-III, I – femur 6.39/ tibia-patella 8.38/ metatarsus 8.54/ tarsus 2.73/ total 26.04; II – 5.97/ 8.71/ 7.55/ 2.65/ 24.88; III – 4.64/ 6.47/ 5.81/ 2.15/ 19.07; IV – 5.81/ 8.13/ 7.96/ 2.82/ 24.72. Abdomen: 5.97 long, bristly, dorsum light brown, lighter at posteriorly. Palpus: ventral division of median apophysis greatly enlarged, dorsal division with a short lamina and a lateral pointed guide (Figs. 9, 10, 12). Ectal division of retrolateral tibial apophysis prominent, with one small triangular lateral projection (Figs. 5, 11). Ental division of retrolateral tibial apophysis small, triangular (Fig. 5).

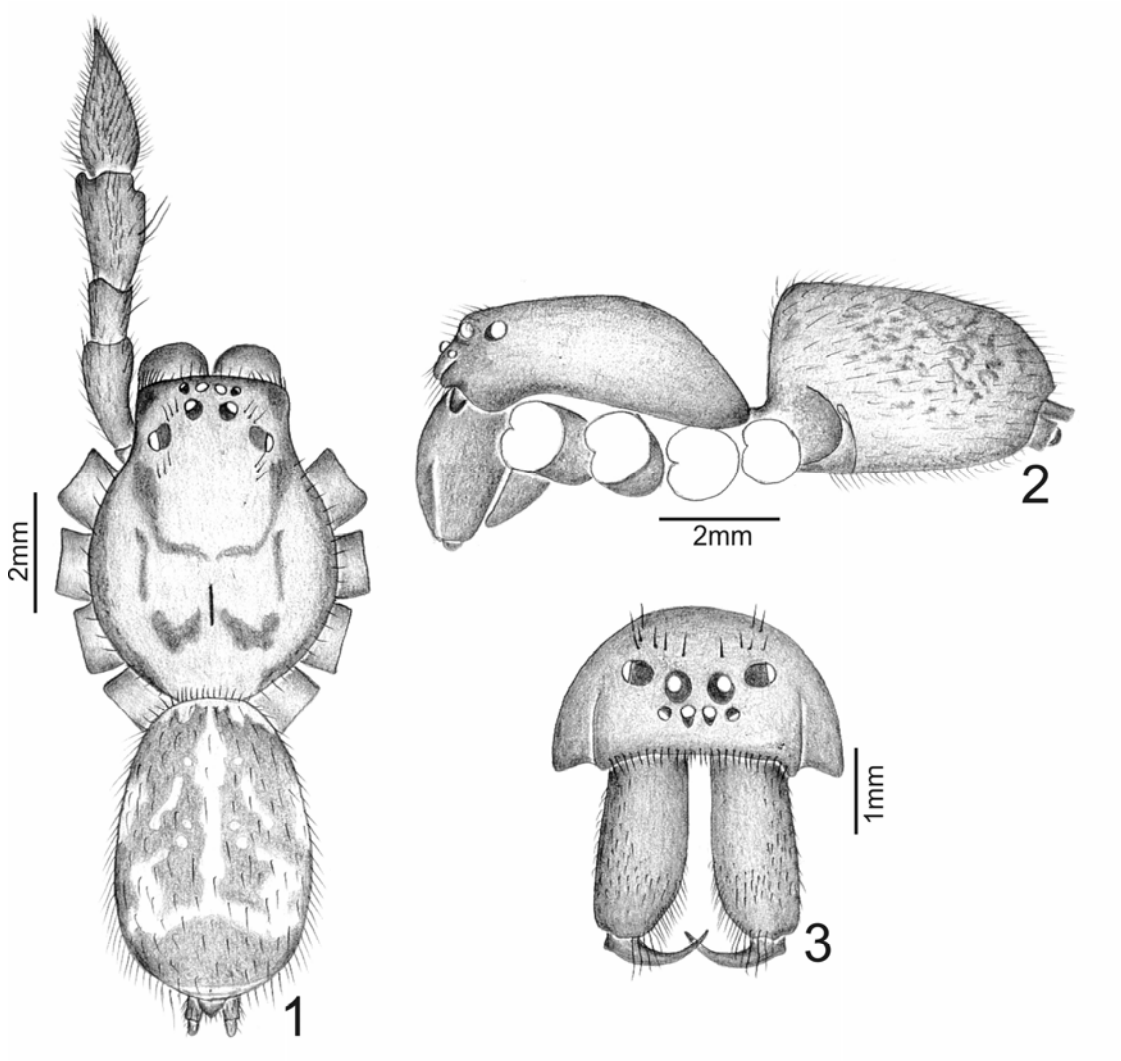


Fig. 1-3. *Caricelea wayrapata* **gen. n. sp. n.,** male holotype. 1. Habitus, dorsal view. **2.** Lateral view. **3.** Frontal view.

FEMALE – paratype - Total length: 10.03. Carapace: 5.14 long, 4.48 wide. Chelicerae: reddish brown, with numerous light setae; promargin and retromargin, as in male. Labium, 0.77 long, 0.89 wide, coloration as in male. Clypeus: 0.40 high. Eye diameters, interdistances and median ocular quadrangle: anterior eye row 1.20 wide; posterior 2.23 wide. AME 0.21, ALE 0.18, PME 0.31, PLE 0.15; AME-AME 0.18, AME-ALE 0.13, PME-PME 0.55, PME-PLE 0.52, MOQ, dorsal view 0.55, frontal view 0.58, anterior width 0.62, posterior width 1.11. Sternum: yellowish with sparse light bristles, 2.29 long, 2.35 wide. Legs: light brown, relative length: IV-I-II-III, I – femur 5.06/ tibia-patella 7.71/ metatarsus 5.31/ tarsus 2.07/ total 20.15; II – 5.39/ 7.47/ 5.39/ 1.82/ 20.07; III – 4.81/ 5.47/ 4.56/ 1.57/ 16.41; IV – 5.31/ 6.64/ 6.22/ 2.24/ 20.41. Abdomen: 4.89 long, rounded, bristly, dorsum grayish, light brown ventrally. Epigynum: Anterior field nearly rounded, median field projecting into a T-shaped lobe (Fig. 8). Spermathecae conspicuous, short, head of the spermathecae elliptical (Fig. 7).

EXAMINED MATERIAL: Only the type series.

GEOGRAPHIC DISTRIBUTION: Known only from the type locality.

Acknowledgments

We wish to thank Diana Silva Dávila (MUSM) for the loan of the material. James E. Carico (Lynchburg College) for the help and suggestions. Maurício Paz França of CEMM for the help in obtaining the SEM images. This study was supported by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq Nº131713/2005-1 for ELCS).

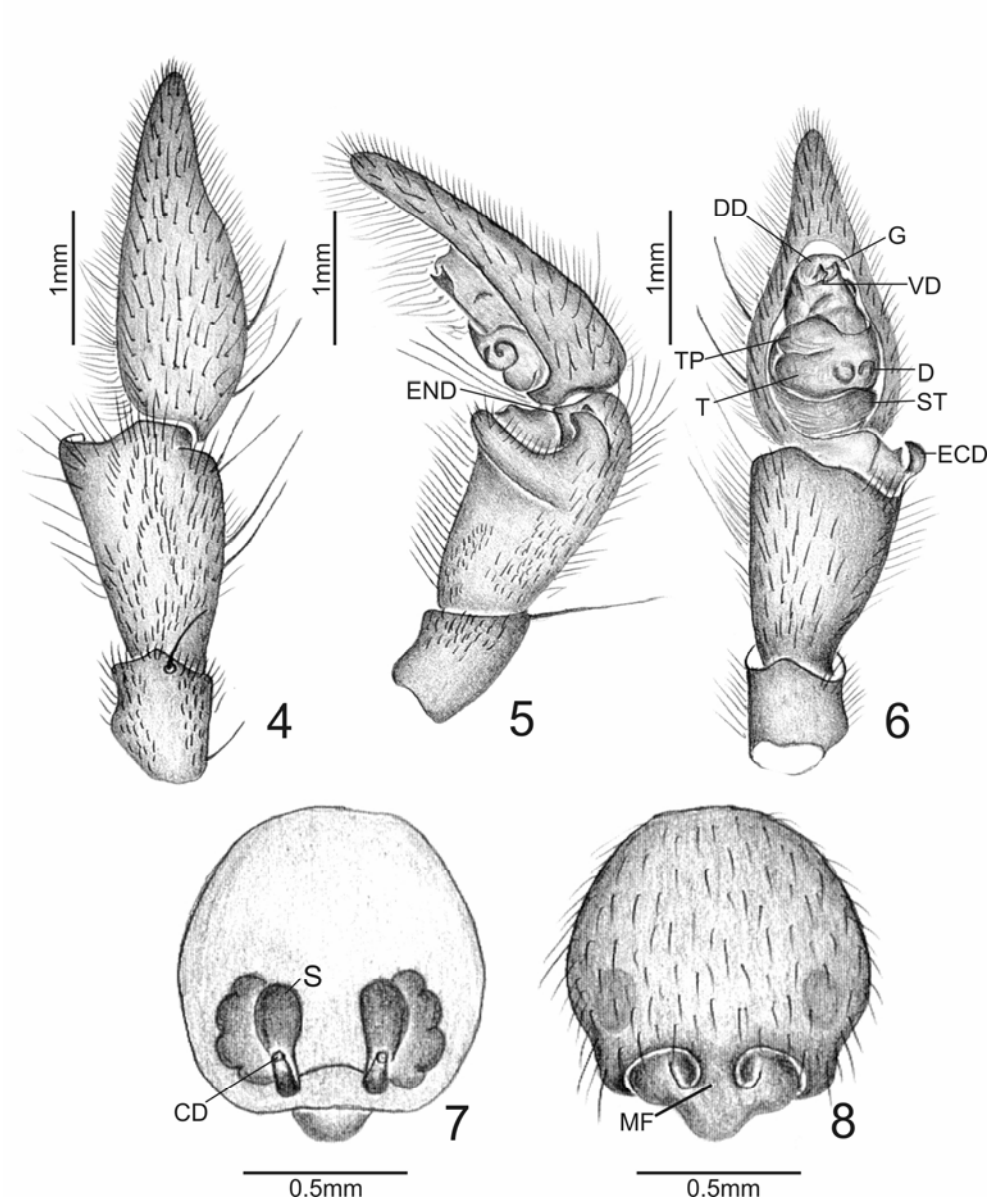


Fig. 4-8. *Caricelea wayrapata* **gen. n. sp. n**. **4-6,** male holotype. **4.** Palpus, dorsal view. **5.** Retrolateral view. **6.** Ventral view. **7**, **8,** female paratype. **7.** Epigynum, dorsal view. **8.** Ventral view. **Abbreviations**: CD, copulatory duct; DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; END, ental division of median apophysis; G, guide; HS, head of spermathecae; MF, median field of epigynum; SD, sperm duct; ST, subtegulum; T, tegulum; TP, tegular projection; VD, ventral division of median apophysis.

References

CARICO, J.E. 1993. Revision of the genus *Trechalea* Thorell (Araneae, Trechaleidae) with a review of the taxonomy of the Trechaleidae and Pisauridae of the Western Hemisphere. *J. Arachnol.* **21**: 226–257.

CARICO, J.E. 2005A. Revision of the spider genus *Hesydrus* (Araneae, Lycosoidea, Trechaleidae). *J. Arachnol.* **33**: 785–796.

CARICO, J.E. 2005B. Description of two new spider genera of Trechaleidae (Araneae, Lycosoidea) from South America. *J. Arachnol.* **33**: 797–812.

PLATNICK, N.I. 2007. The World Spider Catalog. Version 7.5. New York: American Museum of Natural History, online at http://research.amnh.org/entomology/spiders/catalog/index.html.

SILVA, E.L.C. & LISE, A.A. 2006. Description of two new spider genera of Trechaleidae (Araneae: Lycosoidea) from Northern Brazil. *Zootaxa*, **1275**: 61–68.

SILVA, E.L.C.; LISE, A.A.; BUCKUP, E.H. & A.D. BRESCOVIT. 2006. Taxonomy and new records in the Neotropical spider genus *Paratrechalea* (Araneae, Lycosoidea, Trechaleidae). *Biociências*, **14**:71–82.

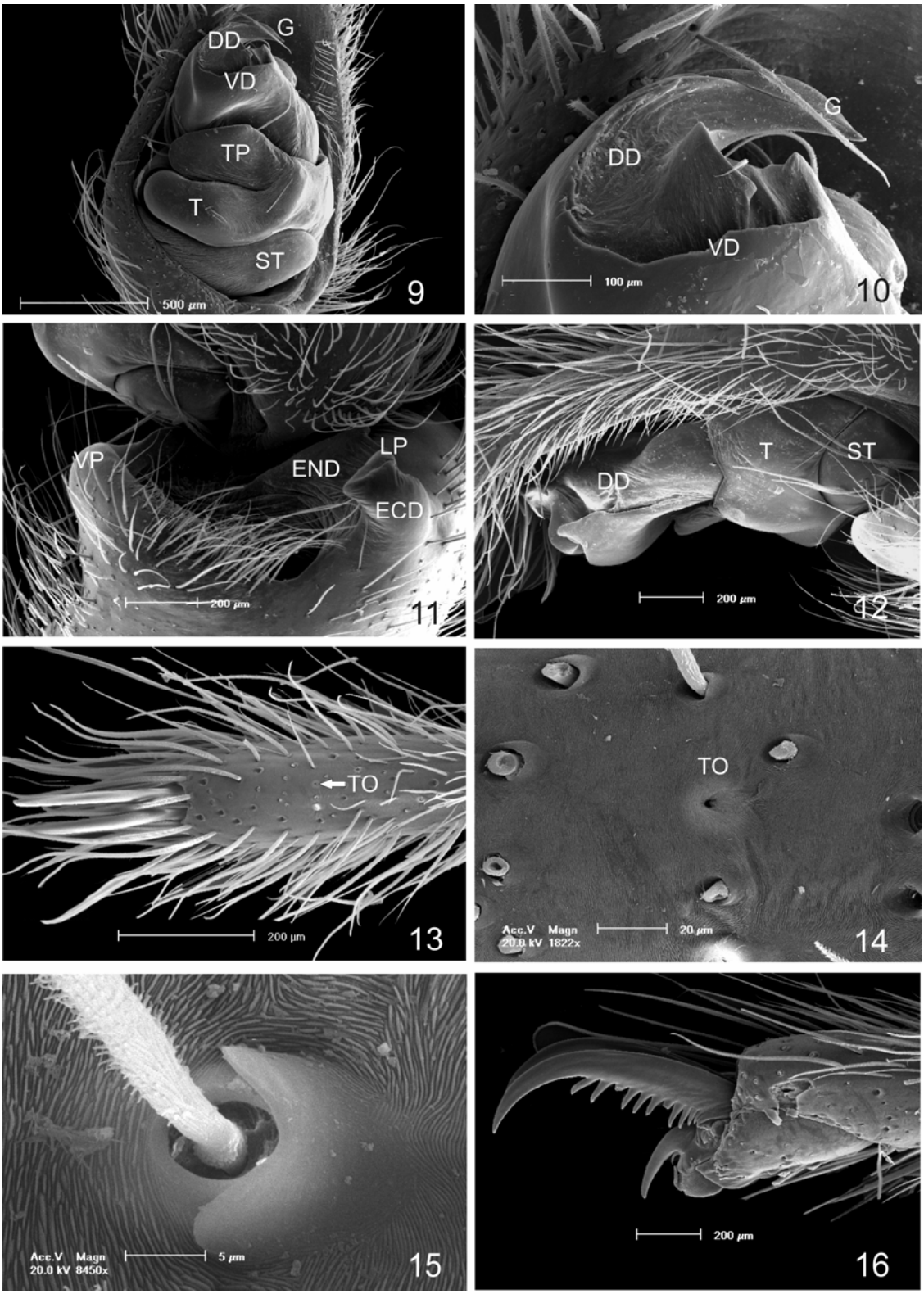


Fig. 9-16. Morphological details of *Caricelea wayrapata* **gen. n. sp. n**. **9-12,** palpus of male paratype. **9.** Ventral view. **10.** Detail of median apophysis. **11.** Retrolateral tibial apophysis. **12.** Copulatory bulb, retrolateral view. **13.** Position of tarsal organ (arrow). **14.** Detail of tarsal organ. **15.** Trichobothria. **16.** Tarsal claws of right leg I. **Abbreviations**: DD, dorsal division of median apophysis; ECD, ectal division of retrolateral tibial apophysis; END, ental division of median apophysis; G, guide; LP, lateral projection of ectal division of retrolateral tibial apophysis; ST, subtegulum; T, tegulum; TO, tarsal organ; TP, tegular projection; VD, ventral division of median apophysis.