

ADALBERTO J. SANTOS & ANTONIO D. BRESCOVIT

A revision of the South American spider genus *Aglaoctenus* TULLGREN, 1905 (Araneae, Lycosidae, Sosippinae)

Abstract

The wolf spider genus *Aglaoctenus* is revised, and of the 12 original species only two are considered valid: *A. castaneus* (MELLO-LEITÃO) and *A. lagotis* (HOLMBERG). Eight specific names are considered junior synonyms of *A. lagotis*: *Porrimoso granadensis* (KEYSERLING), *P. freiburguensis* (KEYSERLING), *P. diversa* (O.P.-CAMBRIDGE), *P. obscura* (KEYSERLING), *P. glieschi* (MELLO-LEITÃO), *P. callipoda* (MELLO-LEITÃO), *Aglaoctenus bifasciatus* TULLGREN and *A. harknessi* (CHAMBERLIN). *Aglaoctenus guianensis* CAPORACCO, described based on an immature specimen from French Guyana is considered species inquirenda and *Porrimoso securifera* TULLGREN, based on a female specimen from Argentina is transferred to *Orinocosa* CHAMBERLIN. The *Aglaoctenus* species are distributed exclusively in South America, except Chile.

Resumo

O gênero *Aglaoctenus* é revisado e de suas 12 espécies originais, apenas duas são consideradas válidas, *A. castaneus* (MELLO-LEITÃO) e *A. lagotis* (HOLMBERG). Oito nomes específicos são aqui sinonimizados com *A. lagotis*: *Porrimoso granadensis* (KEYSERLING), *P. freiburguensis* (KEYSERLING), *P. diversa* (O.P.-CAMBRIDGE), *P. obscura* (KEYSERLING), *P. glieschi* (MELLO-LEITÃO), *P. callipoda* (MELLO-LEITÃO), *Aglaoctenus bifasciatus* TULLGREN e *A. harknessi* (CHAMBERLIN). *Aglaoctenus guianensis* CAPORACCO, descrito com base em um imaturo da Guiana é considerada espécie inquirenda e *Porrimoso securifera* TULLGREN, descrita com base em uma fêmea da Argentina é transferida para *Orinocosa* CHAMBERLIN. As espécies de *Aglaoctenus* estão distribuídas exclusivamente na América do Sul, com exceção do Chile.

Authors

M. Sc. ADALBERTO J. SANTOS & Dr. ANTONIO D. BRESCOVIT, Laboratório de Artrópodes, Instituto Butantan, Av. Vital Brasil 1500, CEP 05503-900, São Paulo, SP, Brazil; e-mail: oxyopes@yahoo.com

Key words

Araneae, Lycosidae, Sosippinae, *Aglaoctenus*, *Porrimoso*, South America, taxonomy

1. Introduction

This study revises a group with a long and confusing taxonomic history, that began with the proposition of the genus *Porrima* by SIMON (1898). This genus was based on *Podophthalma diversa* CAMBRIDGE, 1877, and diagnosed by the procurved anterior eye row and the presence of 4 teeth on the posterior margin of the cheliceral fang furrow. During the next 50 years, the

genus increased in number of species with the description of *P. harknessi* CHAMBERLIN, 1916, *P. glieschi* MELLO-LEITÃO, 1926, *P. callipoda* MELLO-LEITÃO, 1934, and *P. castanea* MELLO-LEITÃO, 1942, and with the transference of *Ocyale lagotis* HOLMBERG, 1876. Moreover, MELLO-LEITÃO (1947) informally transferred all South American species assigned to the pisaurid genus *Tetragonophthalma* KARSCH, 1878 to *Porrima*, with no justifications or even a list of these species. Currently, four South American species have been assigned to *Tetragonophthalma*: *T. spinipes* TACZANOWSKI, 1873, *T. granadensis* KEYSERLING, 1876, *T. freiburguensis* KEYSERLING, 1877, and *T. obscura* KEYSERLING, 1891. Since MELLO-LEITÃO presents no evidence that the type specimens of these species were examined, we suppose the transference was based on their original descriptions. Obviously, MELLO-LEITÃO's concept of *Porrima* was too ample, since one of those species, *T. spinipes*, was posteriorly transferred to *Staberius* SIMON, 1898, a pisaurid genus, by CARICO (1981).

Although *Porrima* was originally placed in Lycosidae by SIMON, it's taxonomic position was confusing. Many species posteriorly transferred to this genus came from Pisauridae, and *Porrima* itself was considered a pisaurid by LEHTINEN (1967). Part of this confusion can be attributed to the genus's pisaurid eye pattern, together with a lycosid genitalia. Another confusing character of this group and probably the reason why MELLO-LEITÃO (1941a) considered *Porrima* as an "intermediate" genus between the Lycosidae and Age-lenidae, is the funnel-web constructed by the spiders. The generic classification of this group of species changed considerably during the 50's, when ROEWER published important papers on lycosid classification. In 1954b, he proposed a new genus, *Porrimula*, for *P. callipoda*, based on the fact that the distance between the posterior median eyes is equal to the eye diameter, while in other species of the group this distance is smaller than the eye diameter. In ROEWER's classification, *Porrimula* and *Porrima* are united by the presence of four teeth in the cheliceral fang furrow's posterior margin. In 1959 he transferred the species with 3 teeth to a new genus, *Porrimoso*, including *P. harknessi*, *P. castanea*, *P. glieschi* and *P. lagotis*. The genus *Porrima* was maintained, including only *P. diversa* and *P. granadensis*.

ROEWER's partition of the genus *Porrima* was discussed by CAPOCASALE (1982), in the most recent revision of this group. CAPOCASALE shows that the character "four teeth in cheliceral fang furrow" was an early perpetuated error, since the syntypes of *P. diversa*, the specimens used by SIMON to describe *Porrima*, and 97.6% of the material examined by him possess only three teeth. Based on these observations, the two genera described by ROEWER are considered subjective junior synonyms of *Porrima*. Nevertheless, this name, the earliest one available for the group, could not be used because it was preoccupied by a Lepidoptera species 21 years before SIMON's description (NEAVE 1940). To solve this homonymy, CAPOCASALE preferred to use the name *Porrmosa* ROEWER, 1959, since he considered the earlier *Porrimula* ROEWER, 1954 a nomen dubium. That was because, at the time, the holotype of *P. callipoda*, was erroneously considered lost.

CAPOCASALE (1982; 1991) considered only three valid species in the genus: *P. lagotis*, *P. castanea* and *P. harknessi*. All other species described in the group were considered as species inquirendae since their immature or lost type specimens do not permit their proper recognition. The same happened to *Isohogna securifer* (TULLGREN, 1905), transferred erroneously to *Porrmosa* and considered species inquirenda by CAPOCASALE (1982).

Two new species were included in this genus when CARICO (1993) transferred *Aglaoctenus* TULLGREN, 1905 from Pisauridae to Lycosidae and considered it a junior synonym of *Porrmosa*. This transfer was based on the examination of the holotype of *A. bifasciatus* TULLGREN, 1905, the type species of the genus, and also included *A. guianensis* CAPORACCIO, 1954. As stated by PLATNICK (1997), the name *Aglaoctenus* has priority over *Porrmosa*, and consequently, in contrast to the statement of CARICO (1993), must be considered the senior synonym.

In this paper, we present a new revision of this genus, which so far included 11 nominal species. After examining more than 300 specimens from several South American locations and the majority of the type species, we came to the conclusion that all these specimens are best placed in two species, which are described herein.

2. Material and Methods

In this study, we examined specimens deposited in the following collections: AMNH, American Museum of Natural History, New York (N. I. PLATNICK); BMNH, Natural History Museum, London (J. BECCALONI); FSCA, Florida State Collection of Arthropods, Gainesville (G. B. EDWARDS); IBSP, Instituto Butantan, São Paulo (A.D. BRESOVIT); MACN, Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Buenos Aires (C. SCIOSCIA); MUSM, Museo de Historia Natural, Universidad Mayor de San Marcos, Lima (D. SILVA-

DÁVILA, G. LAMAS); MHNM, Museo de Historia Natural de Montevideo, Montevideo (R. M. CAPOCASALE); MLP, Museo de La Plata, Facultad de Ciencias Naturales, La Plata (C. SUTTON DE LICITRA); MCN, Museu de Ciências Naturais, Fundação Zoológica do Rio Grande do Sul, Porto Alegre (E.H. BUCKUP); MCP, Museu de Ciências da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (A.A. LISE); MHCI, Museu de História Natural "Capão do Imbuia", Curitiba (J.C. MOURA-LEITE); MNRJ, Museu Nacional, Rio de Janeiro (A.B. KURY); MZSP, Museu de Zoologia da Universidade de São Paulo, São Paulo, (E. CANCELLO); MCZ, Museum of Comparative Zoology, Harvard University, CAMBRIDGE (L. LEIBENSPERGER); MNHN, Muséum National de Histoire Naturelle, Paris (C. ROLLARD); USNM, National Museum of Natural History, Smithsonian Institution, Washington (J.A. CODDINGTON); NHRM, Naturhistoriska Riksmuseet, Stockholm (T. KRONESTEDT); SMNK, Staatliches Museum für Naturkunde Karlsruhe (H. HÖFER); UEFS, Universidade Estadual de Feira de Santana, Feira de Santana (E. XAVIER); UNESP, Universidade Estadual Paulista, Campus de Botucatu, Botucatu (I. M. P. RINALDI).

Male palpi were expanded by immersion in 10% KOH solution followed by immersion in water. To describe the internal structure of the female genitalia, epigynes were removed and placed in a 10% KOH solution for ~ 10 min. and examined in clove oil (LEVI, 1965). All measurements, except eye sizes and interdistances, were taken with a dial caliper, and are in mm. Descriptions and abbreviations follow BRESOVIT & HÖFER (1994). The terminology of genitalic structures follows BRADY (1962) and SIERWALD (2000).

3. Systematics

Aglaoctenus TULLGREN, 1905

- 1898 *Porrima* SIMON: Hist. Nat. Araignées, 2: 327 (type species by original designation *Podophtalma diversa* O. P.-CAMBRIDGE, 1877); name preoccupied (NEAVE 1940)
- 1905 *Aglaoctenus* TULLGREN: Ark. Zool., 2: 52 (type species by monotypy *A. bifasciatus* TULLGREN, 1905)
- 1954 *Porrimula* ROEWER: Katalog der Araneae, 2: 313 (type species by monotypy *Porrima callipoda* MELLO-LEITÃO 1934)
- 1959 *Porrmosa* ROEWER: Exploration du Parc National de L'Upemba, 30: 1001-1002
- 1967 *Porrima* - LEHTINEN: Ann. Zool. Fenn., 4: 260 (transferred to Pisauridae)
- 1982 *Porrimula* - CAPOCASALE: J. Arachnol., 10: 146 (nomen dubium, considered junior synonym of *Porrmosa*)
- 1982 *Porrmosa* - CAPOCASALE: J. Arachnol., 10: 148 (new name for *Porrima*)
- 1989 *Porrmosa* - PLATNICK: Adv. Spider Taxonomy 1981-1987: 386-387
- 1990 *Porrmosa* - CAPOCASALE: J. Arachnol., 18: 139
- 1991 *Porrmosa* - CAPOCASALE: J. Arachnol., 19: 93
- 1993 *Aglaoctenus* - CARICO: J. Arachnol., 21: 231 (transferred from Pisauridae to Lycosidae)
- 1993 *Porrmosa* - PLATNICK: Adv. Spider Taxonomy 1988-1991: 506
- 1997 *Aglaoctenus* - PLATNICK: Adv. Spider Taxonomy 1992-1995: 539

Diagnosis

Aglaoctenus is very close to *Sosippus* SIMON, 1888 by the presence of a curved lateral apophysis in the conductor (fig. 4: LAC, apophysis b of *Sosippus* in SIERWALD 2000) of the male palpus and the spermathecae divided in two branches in the female genitalia. Males of *Aglaoctenus* can be differentiated from *Sosippus* males by the anterior eye row, which is much more curved in *Aglaoctenus* and by the lateral eyes positioned on tubercles (see BRADY 1962: figs 10-11); the absence of a projection on the ventral section of the tegulum (apophysis c in SIERWALD 2000: fig. 9) and the smaller and less sclerotized median apophysis in male palps (figs 3b,f; 4a). Females of *Aglaoctenus* differ from *Sosippus* by the inverted T-shaped median septum of the epigynum (median field of *Sosippus* in SIERWALD 2000) covered by plumose hairs (figs 3c,d).

Description

Total length 10.1 – 20.1 (males) and 10.3 – 24.0 (females). Carapace oval, narrowest anteriorly, widest between coxae II and III, cephalic region as high as thoracic, sulcated posteriorly. Coloration variably dark, with a clear v-shaped band between the posterior part of the carapace and the PLE, covered with scattered dark hairs and with marginal white to yellowish bands (Plate 1, figs a and b) and white hairs. Thoracic groove longitudinal, with conspicuous dorsal grooves. From above, anterior eyes in procurved row and posterior ones recurved. All eyes dark, surrounded by black rings. Lateral eyes on tubercles, anterior laterals ventrally directed. AME separated by 0.7 their diameter and by 1.5 their diameter from the ALE; PME almost one diameter apart and 1.3 their diameter from the PLE. Clypeus height between 1.5 and 2 times the AME diameter. Chilum present, subtriangular, with a central notch and covered by short hairs. Chelicerae robust, usually darker than the carapace, covered by short white and long black hairs (also present, but more scattered, in the clypeus and ocular area), and with three promarginal and three retromarginal teeth (fig. 1a). Cheliceral boss present, glabrous, clearer than the chelicerae and carapace. Fangs dark, half the length of the chelicerae. Endites rectangular, not notched, distally rounded and with anteromedian scopula. Labium longer than wide, truncated anteriorly, with lateral notches on the proximal half. Sternum as long as wide, posteriorly triangular, with its tip reaching between the coxae IV. Sternum, labium, coxae and trochanters with long black hairs. Female palpus with cylindrical tarsus, a pectinate claw with at least three teeth (fig. 1c), scopulae on the distal half, and with the following spination: femur d1-1-1 r0-0-1 p0-0-1, patella p1, tibia d1, p1, tarsus d1, r0-1 p1-1. Leg formula 4123.

Leg spination pattern (only surfaces with spines): femur I d1-1-1 r1-1-1 p0-1-1, II d1-1-1 p1-1-1 r1-1-1-1,

III d1-1-1 p1-1-0 r1-1-1-1; IV d1-1-1, p1 1-1-1 r0-0-1; patella II p1, III d0-1 p1 r1, IV d0-1 r1; tibia I d1-1-0 p1-1-0 r1-1-0 v2-2-2, II p1-1-0 r1-1-0 v2-2-2, III p1-1-0 r1-1-0 v 2-2-2, IV d0-1-0 p1-1-0 r1-1-0 v2-2-2; metatarsus I p0-1-1 r0-1-1 v2-2-2, II, III and IV p1-1-1 r1-1-1 v2-2-2. Scopulae of tarsi with long lateral and short ventral hairs. Trichobothria with long trichoma, bothrium with semicircular ring presenting thin grooves (fig. 1b), in one dorsal row on metatarsi and tarsi. Tarsi with three claws, superior claws pectinate, unpaired claw with three teeth (fig. 1d). Abdomen oval, longer than wide, pilose, dark, dorsally with 2 marginal and 7 transversal white bands, which are sometimes interrupted (Plate 1, figs a and b). Anterior dorsal red spot present, pronounced in some specimens. Venter of abdomen creamy, with two marginal rows of dark spots. Colulus present, pilose. Six spinnerets, PLS longer than anterior laterals. Anterior lateral spinnerets conical, contiguous at base, two-segmented, distal segment short, truncate, with two large (in females, fig. 2d, AGS) and one large and tartiporous (in males, fig. 2a, TA) major ampullate gland spigots on mesal margin and 70-80 small piriform gland spigots (PGS). Posterior median spinnerets contiguous, one-segmented; males with 30-40 aciniform gland spigots (ACS) and two minor ampullate gland spigots (not visible in fig. 2b); females with two large cylindrical gland spigots (CGS) with conical base and enlarged shafts and 30-40 aciniform gland spigots (fig. 2e, ACS). Posterior lateral spinnerets long, tubular, two-segmented; distal segment short, with about 30 aciniform gland spigots (figs 2c,f). Anal tubercle triangular and prominent.

Male palpus with retrolaterally curved tibia. Cymbium oval, elongated and distally narrowed, densely pilose. Subtegulum rounded, positioned in the mesal-proximal portion of the tegulum (fig. 4a). Conductor (C) flattened, concave, with a hyaline projection and a curved and strongly sclerotized lateral apophysis (LAC, tegular apophysis a and b of *Sosippus* in SIERWALD 2000). Median apophysis (MA) reduced, forming a triangular lamina close to the apex of LAC. Embolus (E) long, with wide base (EB, palea region in SIERWALD 2000), running counter-clockwise in the left palpus. Epigynum (figs 3c,d) pilose, with a strongly sclerotized inverted T-shaped median septum (median field of *Sosippus* in SIERWALD 2000) covered with plumose white hairs. Internal genitalia (figs 6e; 7e) with spermathecae divided in a lobulate copulatory bursa (B, vulval chamber in SIERWALD 2000), and a curved seminal receptacle (SR, head of spermathecae in SIERWALD 2000). Fertilization ducts short and narrow.

Composition

Two species occurring in all South America, except Chile (fig. 8).

Natural History

Aglaoctenus species are semelparous spiders with an annual life cycle. The reproductive season varies regionally. In *A. lagotis* it begins in May in southeastern Brazil (SORDI 1996) and in October in the Argentinean chaco (BUCHER 1974). In *A. castaneus*, mating pairs have been seen on the webs in July in the State of Espírito Santo (southeastern Brazil) and Rio Mapiá, Amazonas (western Brazilian Amazon, ADB, pers. obs.), but only tiny juveniles were present in the same period in central Amazonia (AJS, pers. observ.).

At the beginning of the reproductive season the adult males abandon their webs and move on the ground or through the understorey vegetation searching for female webs (BUCHER 1974). The males, sometimes more than one, live in the female's web during an

unknown period of time, during which copulation occurs (AJS & ADB, pers. observ. for both species). The males generally abandon the female's web, or die, before the egg sac is deposited. Females of *A. lagotis*, carrying the spherical egg sacs attached to the spinnerets (a typical behavior of lycosids), were observed by SORDI (1996) from August onwards in southeastern Brazil and from February onwards by BUCHER (1974) in Argentina. After having emerged from the egg sacs, the spiderlings are carried on the female's dorsum for approximately 5 days (SORDI 1996). After this short period of maternal care, the juveniles disperse, building their webs close to the natal web.

The webs of *Aglaoctenus* are composed of a funnel-shaped silk tube that connects a retreat to a horizontal non-adhesive sheet with width and length between 4.5 and 90 cm. This sheet is attached to the vegeta-

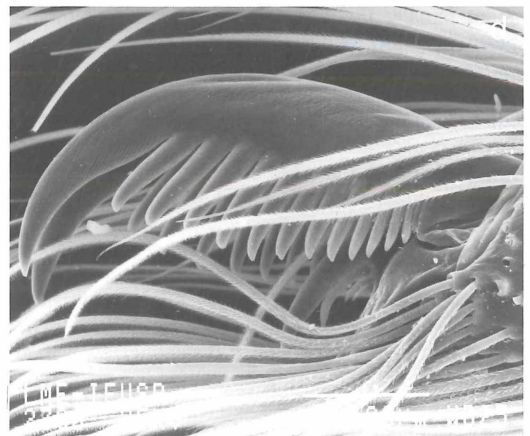
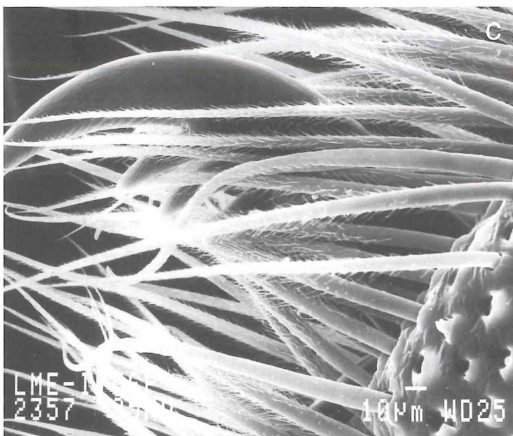
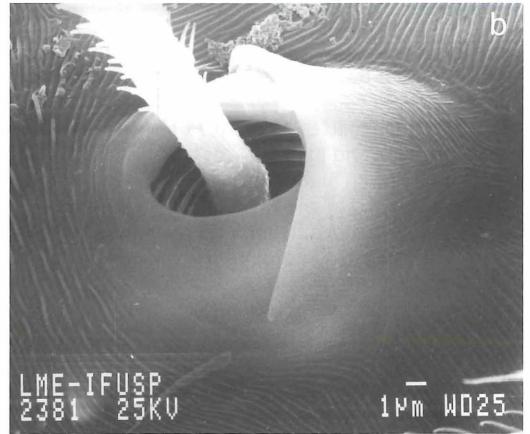
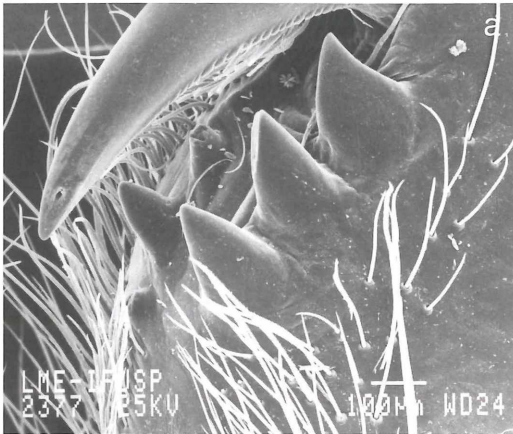


Figure 1. *Aglaoctenus* spp.: a) male cheliceral teeth; b) trichobothria, leg I of female; c) pedipal claw of female; d) tarsal claws of female leg I.

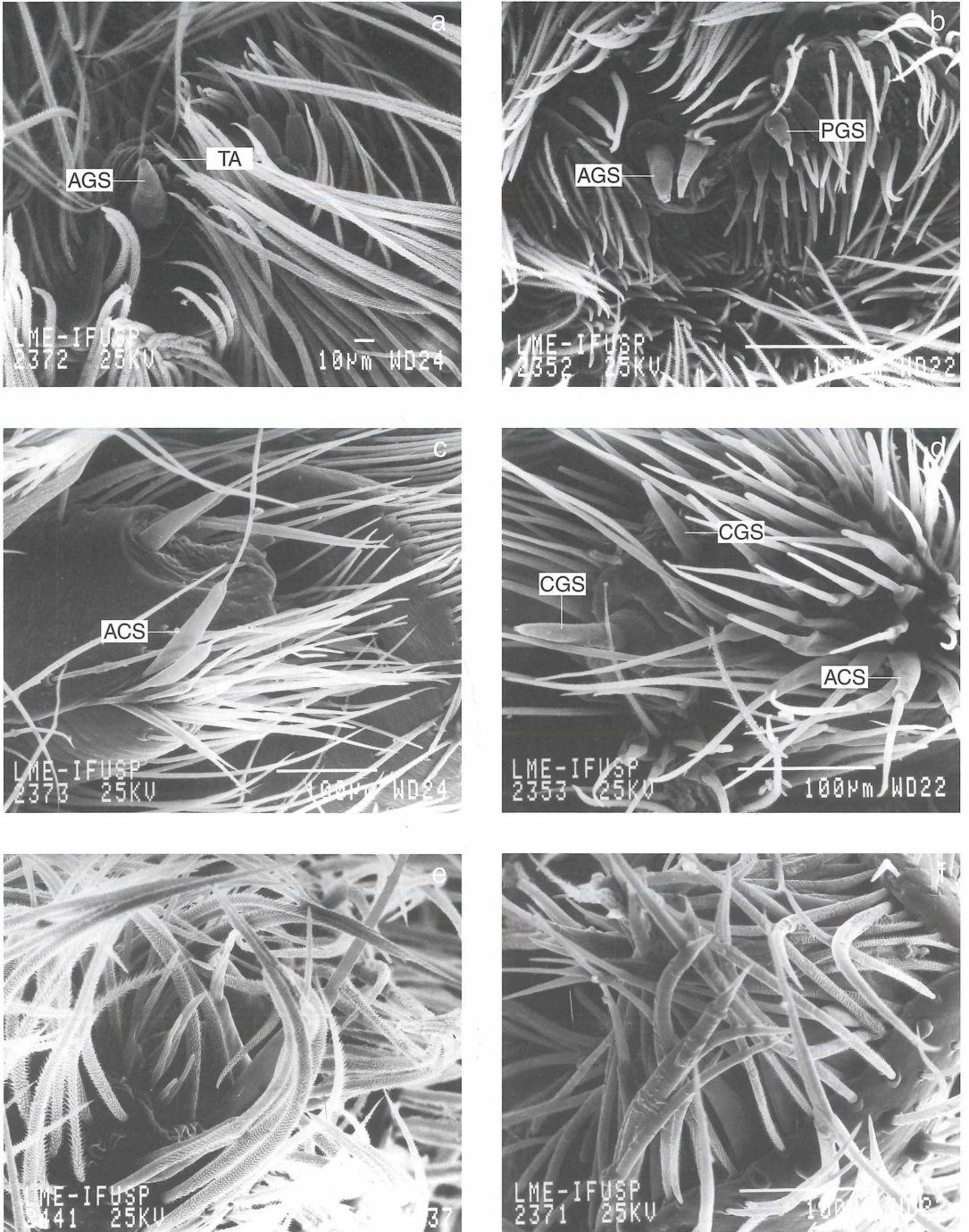


Figure 2. *Aglaoctenus* spp., male: a) anterior lateral spinnerets; b) posterior median spinnerets; c) posterior lateral spinnerets; female: d) anterior lateral spinnerets; e) posterior median spinnerets; f) posterior lateral spinnerets. (ACS, aciniform gland spigot; AGS, ampulate gland spigot; CGS, cylindrical gland spigots; PGS, piriform gland spigot; TA, tartipore).

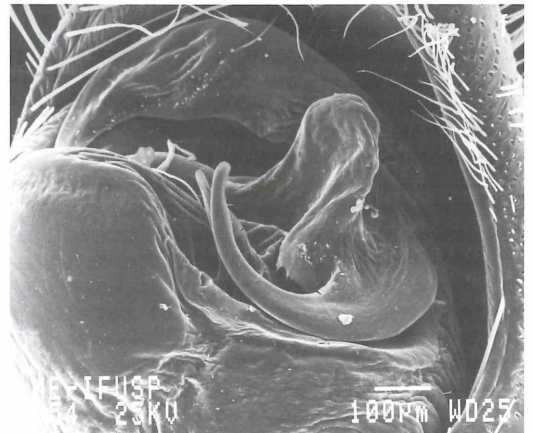
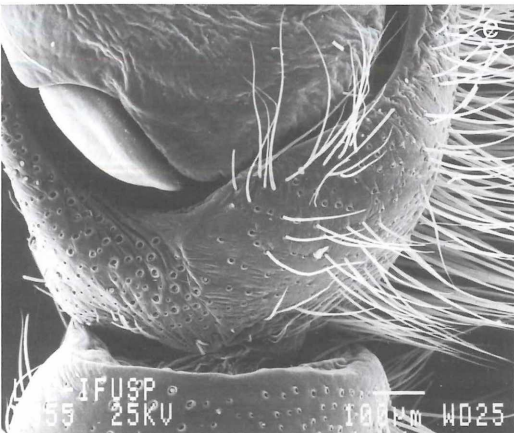
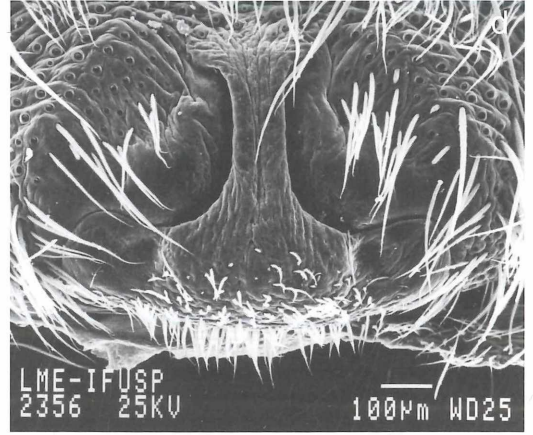
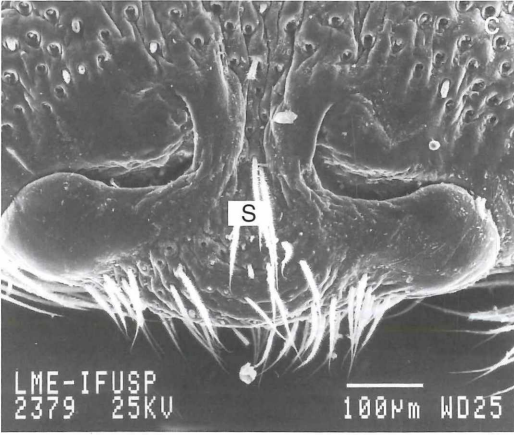
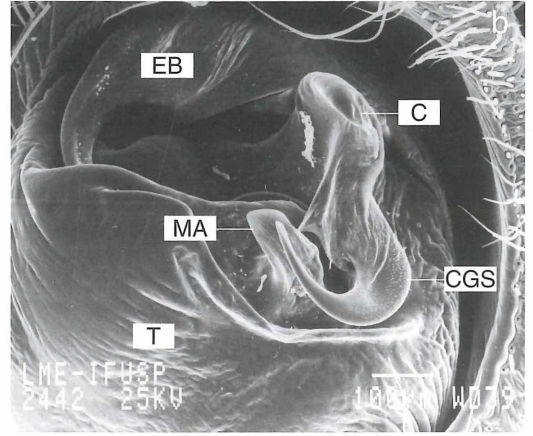
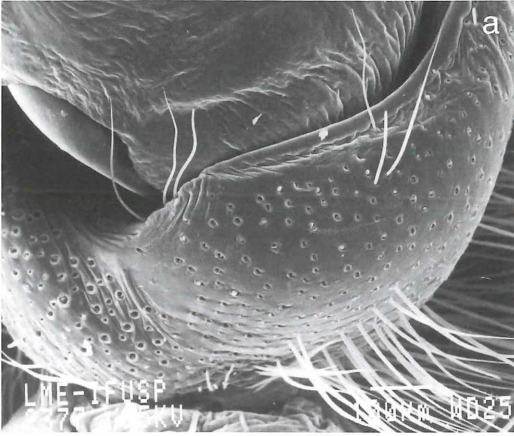


Figure 3. *Aglaoctenus castaneus* (MELLO-LEITÃO), male palp: a) base of cymbium, ventral; b) apex of bulb, ventral; female: c) epigynum, ventral; *A. lagotis* (HOLMBERG), female: d) epigynum, ventral; male palp: e) base of cymbium, ventral; f) apex of bulb, ventral, (C, conductor; EB, embolus base; LAC, lateral apophysis of conductor; MA, median apophysis, S, septum; T, tegulum).

Plate 1. *Aglaoctenus castaneus* (MELLO-LEITÃO): a) male, dorsal view; b) female, dorsal view; c) web in a bromeliad; d) *A. lagotis* (HOLMBERG): web in trunks.



tion with a series of vertical barrier threads. The spiders wait for prey at the funnel entrance, looking towards the sheet, during the day and at night (AJS, pers. obs.). In this position, the spiders can attack insects that fall on the sheet and flee to the retreat if they feel disturbed. Captured prey is consumed at the funnel entrance, inside the silk tube or in the retreat. This web type can capture a great variety of prey, mostly insects. SORDI (1996) recorded insect prey of 10 orders for *A. lagotis*, being Hymenoptera, Heteroptera and Diptera the most common items. The size of the captured prey varied up to 2.8 cm in length. A female *A. castaneus* was observed eating a tiny litter frog in southeastern Brazil (G. MACHADO, pers. comm.). For records of structures used to build the webs, see natural history notes under each species description.

Species recognition

The species of *Aglaoctenus* can be distinguished mainly by genitalic characters. Using these characters (see details below) we recognize two species. Differences in coloration or size can be observed between specimens collected from different localities but high variation within a population is also commonly observed in both species. The extreme variation in non-genitalic characters posed a problem to find the early names available for each species and their junior synonyms, since most species were described based on juvenile specimens. It was solved mapping the species distribution and type localities of the nominal species (fig. 8). This procedure was facilitated by the virtual absence of sympatry between the two species observed.

The *Aglaoctenus* species differ in the relative size of the male legs. After measuring the length of patella plus tibia of leg I and the carapace width of all specimens examined and calculating the ratio between those two measurements (leg-carapace ratio in species diagnosis; fig. 5), the difference between *A. castaneus* and *A. lagotis* was significant in males (fig. 5a). Although the same relationship was observed in females, the ratios overlapped and the difference was not significant (fig. 6b).

Another important diagnostic character is the shape of the male median apophysis. Although the differences in this structure may be considered too tenuous to distinguish the species, it is considered important for three reasons. First, the character is not so variable as others (including female genitalia, see below). Second, the shape of the male median apophysis is commonly used for the identification of lycosid species (see examples in DONDALE & REDNER 1990), and in this genus, this character may appear too tenuous only because the median apophysis is small. Third, the courtship behavior and cross-breeding studies in other groups of wolf spiders have shown that small variations in the male genitalia can indicate reproductively

isolated species (e.g. KRONESTEDT 1990, TÖPFER-HOFMANN et al. 2000).

The female epigynum presents some variation in its structure (even within the same population; figs 5c,d; 7c,d), but is still useful for species recognition. CAPOCASALE (1982, 1991) used characters of the internal genitalia to separate the species. The main distinctive characters used by him were the number and shape of copulatory bursa (CAPOCASALE 1982: figs 1, 3; 1991: fig. 7). However, after examining a great number of specimens we concluded that the later character is very variable. Copulatory bursae occur in at least two shapes in both species, rounded (fig. 5e) or triangular (fig. 7e). We suppose that the shape depends upon the variable volume of sperm in the bursa after copulation, as it was demonstrated for *Nephila clavipes* LINNAEUS by HIGGINS (1989). The triangular form probably represents the empty the round form the filled condition.

Unrecognizable species

Aglaoctenus guianensis CAPORIACCO, 1954: 58 (immature holotype from Charvein, French Guyana, BENOIST col., 1914, in MNHN, examined). It was impossible to determine the identity of this species due to the scarcity of material from northern South America. No other specimens from French Guyana could be obtained for comparison.

Misplaced species

Lycosa securifera TULLGREN, 1905: 66, pl. 8 fig. 32 (immature holotype from Moreno, Jujuy, Argentina, NHRM, examined), placed in *Isohogna* by ROEWER (1954b) and transferred to *Porrimosa* by CAPOCASALE (1982). This species is herein transferred to *Orinocosa*, based on characters cited in CHAMBERLIN (1916), such as tarsi ventrally setose, without scopulae; tibia I with three pairs of ventral spines, the distal one reduced; tibiae III and IV with a dorsal stout median apical and a median basal spine; and similar epigynum shape (see CHAMBERLIN 1916: plate 24, fig. 8).

New combination.

Aglaoctenus castaneus (MELLO-LEITÃO, 1942)

Plate 1a-c; figures 3a-c; 4a; 5a-e; 6a-b; 8

- 1942 *Porrima castanea* MELLO-LEITÃO: Rev. Bras. Biol., **2**: 432-433, fig. 6 (female holotype from La Merced, San Martin, Peru, P. J. SOUKUPI col., deposited in MNRJ 13514, examined)
- 1959 *Porrimosa castanea* – ROEWER: Exploration du Parc National de L'Upemba, **30**: 1002, 1005
- 1961 *Porrimosa castanea* – ROEWER: BULL. INST. SCI. NAT. BELGIQUE, **37**: 16
- 1982 *Porrimosa castanea* – CAPOCASALE: J. Arachnol., **10**: 148-149, figs 1-2, 12, 14
- 1990 *Porrimosa castanea* – CAPOCASALE: J. Arachnol., **18**: 139
- 1991 *Porrimosa castanea* – CAPOCASALE: J. Arachnol., **19**: 94, 96, figs 4-5, 8 (description of the male)
- 1993 *Porrimosa castanea* – PLATNICK: Adv. Spider Taxonomy 1992-1995: 506

Diagnosis

The males of this species can be distinguished from *A. lagotis* by the wider median apophysis (figs 3b; 5a,b) and more conspicuous base of cymbium of the male palp (figs 3a; 5a) and by the leg-carapace ratio lying between 2.2 and 2.9. The female epigynes differ by the T-shaped septum, which is shorter longitudinally and wider transversally, with a more pronounced convex projection in the center (figs 3c; 5c,d).

Description

Male (Linhares, Espírito Santo, Brazil). Carapace orange, cephalic region red, with a clear orange median y-shaped band. Chelicerae dark brown, endites orange, labium dark brown. Sternum and legs orange, legs clearer on the ventral side, metatarsus and tarsus red. Abdomen dark gray, including the folium, with a red anterior dorsal spot. Venter of abdomen with lateral longitudinal rows of spots. Spinnerets red. Total length 18.0, carapace 7.7 long, 5.7 wide. Clypeus 0.7 high, almost twice the AME diameter. Eye sizes and interdistances: AME 0.33, ALE 0.52, PME 0.44, PLE 0.47, AME-AME 0.19, AME-ALE 0.5, PME-PME 0.47, PME-PLE 0.58. MOQ length 0.88, front width 0.86, back width 1.41. Chelicerae 2.63 long with 4 promarginal and 3 retromarginal teeth. Abdomen 9.0 long, 3.6 wide.

Length of leg segments: I - femur 2.27/ patella 0.77/ tibia 2.22/ metatarsus 2.25/ tarsus 0.94/ total 8.45/ II - 2.13/ 0.69/ 2.08/ 2.11/ 0.8/ 7.83/ III 1.94/ 0.58/ 1.72/ 1.91/ 0.72/ 6.88/ IV - 2.52/ 0.61/ 2.27/ 2.33/ 1.14/ 8.88. Leg spination following the typical pattern. Palpus with the typical structure of the genus, with a triangular median apophysis, widest at base (figs 3b; 5a).

Female (same locality as male). Carapace brown, cephalic area dark brown, laterally red, lateral and median band orange, area around thoracic groove black. Chelicerae dark brown, endites red, labium brown. Sternum and legs red, metatarsi and tarsi darker than the other segments. Abdomen grayish, with a dark folium delimited by creamy lateral bands. Spinnerets dark brown. Total length 23.0, carapace 9.0 long, 6.5 wide. Clypeus 0.94, equal to 1.3 AME diameter. Eye sizes and interdistances: AME 0.72, ALE 0.94, PME 0.94, PLE 0.94, AME-AME 0.5, AME-ALE 1.0, PME-PME 0.94, PME-PLE 1.1. MOQ length 2.2, front width 1.8, back width 2.9. Chelicerae 2.8 long with 4 promarginal and 3 retromarginal teeth. Abdomen 12.5 long, 6.3 wide.

Length of leg segments: I - femur 3.94/ patella 1.55/ tibia 3.77/ metatarsus 3.5/ tarsus 1.05/ total 13.81/ II - 3.94/ 1.44/ 3.5/ 2.94/ 1.38/ 13.21/ III - 3.55/ 1.22/ 2.83/ 3.05/ 1.22/ 11.88/ IV - 4.66/ 1.16/ 4.05/ 5.0/ 1.83/ 16.72. Leg spination following the typical pattern. Epigynum typical for the genus (figs 3c; 5c-e).

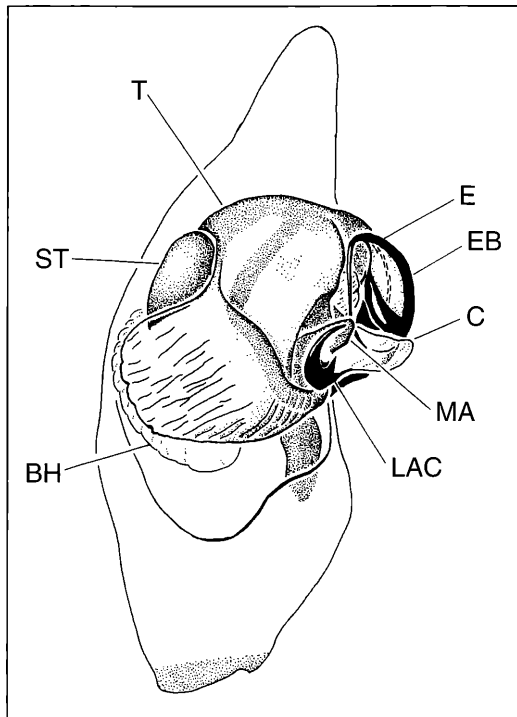


Figure 4. *Aglaoctenus castaneus* (MELLO-LEITÃO): a) expanded male palp (BH, basal haematodocha; C, conductor; E, embolus; EB, embolus base; LAC, lateral apophysis of conductor; MA, median apophysis, ST, subtegulum; T, tegulum). Scale line: 0.5 mm.

Variation

Coloration varies from red to dark, almost black. Amazonian specimens are usually darker and males show a more conspicuous red spot on the abdomen than the specimens from other localities. Some specimens present a longitudinal black y-shaped band on the venter of the abdomen, from the epigastric furrow to the anterior margin of the spinnerets (see CAPOCASALE 1982: fig. 12). Immatures from Amazonian forests have red carapaces and black abdomens (see HÖFER & BECK 1996: fig. 21). Variation in total length: females 14.2 - 24.0 (N=55), males 11.9 - 20.1 (N=43).

Natural History

This species is recorded mainly from humid forests. Webs were observed on two species of palms (*Attalea* sp. and *Astrocaryum aculeatissimum*) in Reserva Florestal de Linhares and Estação Biológica de Poço das Antas, southeastern Brazil (AJS, pers. obs. and F.N. RAMOS, pers. comm.). On the Ilha do Cardoso, also in southeastern Brazil, webs were observed on bromeliads (*Vriesea* sp.) in a restinga vegetation area (Plate 1 c) (G. MACHADO, pers. comm.). Juveniles were observed

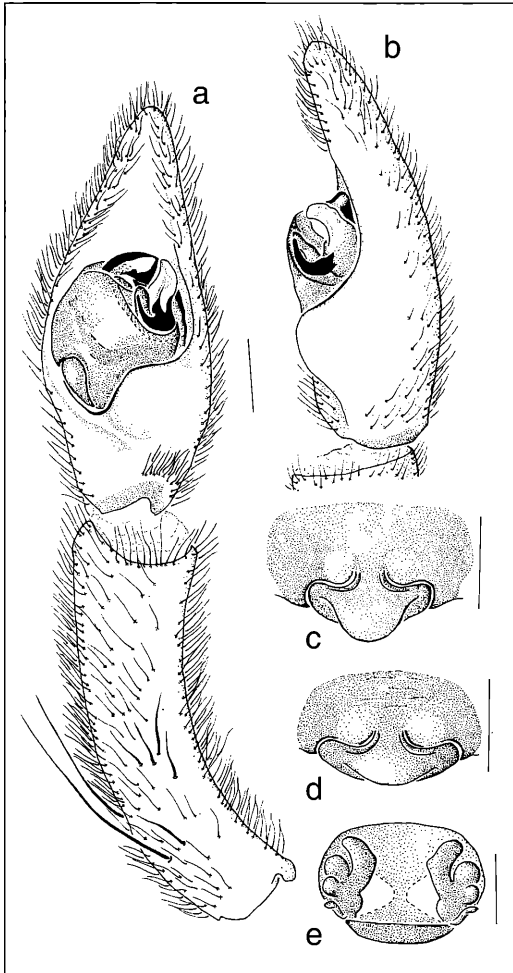


Figure 5. *Aglaoctenus castaneus* (MELLO-LEITÃO), male: a) palp, ventral view; b) retrolateral view; female epigyna: c) ventral view, specimen from Linhares, Espírito Santo, Brazil; d) ventral view, specimen from Manu, Madre de Diós, Peru; e) dorsal view, specimen from Linhares, Espírito Santo, Brazil. Scale lines: 0.5 mm.

with webs in the litter in the Smithsonian Reserve at km 41 in central Amazonia (G. F. DUTRA, pers. comm.).

Distribution

Ecuador and northern Peru, northern, northeastern and southeastern Brazil (fig. 8).

Material examined

Ecuador. no locality, 1♀ 1juv (MCZ).
Peru. Loreto: 2♂ 3♀, 13.VIII.1998, D.S.DÁVILA col. (MUSM); Jenaro Herrera, 04° 55' S, 73° 45' W, 1♂, XII.1990, B. HAKQUIZIEV col. (MUSM); Cuzco: Machu Pichu (bamboo/cloud

forest, 2400 m), 1♀, 16.X.1987, J.A.CODDINGTON col. (USNM); Cashiriari, 1♂, 25.XI.1997, S.CORDOVA col. (MUSM); Madre de Dios: Zona Reservada de Manu, puesto de vigilancia Pakitzta, 11°58'S 71°18'W, 1♀, 28.IX.1987, D.SILVA & J.A.CODDINGTON col. (USNM); zone 2, inundated forest, 1♀, 30.IX.1987 (USNM); Rio Troche, 1♂1♀, 4.X.1987 (USNM); 2♀, 10.X.1987 (USNM); 1♂1♀, 6.X.1987 (USNM); 1♂, 1-9.X.1991, D.SILVA col. (USNM).

Brazil. Roraima: Ilha de Maracá, 1♀ 1juv., 31.I-14.II.1992, A.A.LISE col. (MCP 1813); Acre: Parque Nacional da Serra do Divisor, Várzea Gibraltar-Pedro, 1♂ 1♀ 1juv., 19.XI.1996, R.S.VIEIRA col. (IBSP 9343); 1♀ 1juv., 20.XI.1996, R.S.VIEIRA col. (IBSP 9359); Tipologia 7, Sítio 4, 1♀ 1juv., 16.III.1997, L.RESENDE & R.VIEIRA col. (IBSP 12225); Tipologia 8, Sítio 1, 1♂ 6♀ 1juv., 19.III.1997, L.RESENDE & R.VIEIRA col. (IBSP 12144); Tipologia 8, Sítio 4, 1♂ 1♀, 14.III.1997, L.RESENDE & R.VIEIRA col. (12323); Rio Branco, Reserva Extrativista Humaitá, 1♂ 3♀, 12.V.1996, Eq. IBSP/SMNK. (IBSP 8766); 1♀, 18.VIII.1995, R.S.VIEIRA col. (IBSP 7940); Xapuri, Pimenteira, 1♂ 3juv., 5-7.IV.1996, Eq. IBSP/SMNK col. (IBSP 8623); Amazonas: Borba, Rio Mapiá, 2♂ 2♀ 1juv., 22.IV.1996, Eq. IBSP/SMNK col. (IBSP 8815); Manaus (Reserva Dimona), 1♀, 15.V.1991, H.G.FOWLER, E.M.VENTICINQUE & R.S.VIEIRA col. (MCZ); (Reserva do Km 41, 80 Km from Manaus), 1♀, 24.V.1991, H.G.FOWLER, E.M.VENTICINQUE & R.S.VIEIRA col. (MCZ); (Reserva Florestal Adolfo Ducke), 1♀, 18.VII.1987, A.A.LISE col. (MCN 25682); 1♀, 4.VIII.1987, A.A.LISE col. (MCN 25683); 1♀, 5.VIII.1987, A.A.LISE col. (MCN 25681); 1♂, 18-28.II.1992, A.D.BRESCOVIT col. (MCN 22020); 1♀, 19-24.II.1992, A.A.LISE col. (MCP 1696); (Rio Tarumã-Mirim, várzea), 2♀ with egg sac, 19.III.1988, H.HÖFER col. (SMNK 386); (Distrito Agropecuário da Sufran), 1♀, 31.VI.1986, F.A. de NEO col. (IBSP 14280); Mato Grosso: Teles Pires, Alto Tapajós, 1♀, 29.VIII.1950, H. SICK col. (MNRJ 2690); Apicás, 1♂, 30.I.- 27.II.1997, M.E.V.CALLEFFO & G.SKUK col. (IBSP 8565); São José do Rio Claro, 1♂, 12-27.VI.1997, M.CALLEFFO col. (IBSP 11001); Bahia: Porto Seguro, 1♀, VIII.1989, R.M.da ROCHA col. (IBSP 4647); Ilhéus, São João da Água Preta, 1♂ 1♀, IX.-X.1927 (MNRJ 1284); Una, Reserva Biológica do Una, 1♀, 4-8.X.1987, J.BECKER col. (MNRJ) Espírito Santo: São Mateus, Reserva Florestal da Companhia Vale do Rio Doce, 1♂ 2♀, 19-25.VI.1997 (IBSP 12798); 1♂ 1♀, (IBSP 12723); 1♀ (IBSP 12666); 1♂ (IBSP 12732); 1♀ (IBSP 12836); 1♀, 5-12.I.1998, (IBSP 16910), all collected by A.D.BRESCOVIT et al. col.; 1♂ 1♀, 29.VII.1994, J.R. LIMA col. (IBSP 26136); 1♂ 1♀, VII.1994 (IBSP 26184); Rio de Janeiro: Silva Jardim, Reserva Biológica de Poço das Antas, 2♀, VI.1998, F.N.RAMOS col. (IBSP 26129); Itatiaia, Parque Nacional do Itatiaia, E, M. ZIKÁN col. (MNRJ 14112); São Paulo: Cananéia, 1♀ (MZSP 3148); Ilha do Cardoso, 1♀, 14-18.IX.1999 (IBSP 26130); 1♂, V.2000 (IBSP 26133); 0♂, VI.2000, all collected by G. MACHADO (IBSP 26135); Paraná: Paranaguá, Ilha do Mel, Caminho da Figueira, 2♂ 1juv, 25.V.1989, C.A.FAUCZ col. (MZSP 13892); 26.V.1989, C.A.FAUCZ col., 1♀ 1juv, MZSP 13891).

Aglaoctenus lagotis (HOLMBERG)

Plate 1d; figures 3d-f; 6a-b; 7a-e; 8

1876 *Ocyale lagotis* HOLMBERG: An. Agr. Argentina, 4: 26 (two females and male syntypes, from Argentina, lost).

1876 *Diapontia freiburgensis* KEYSERLING: Verh. zool.-bot. Ges Wien, 26: 671, pl. 8. fig. 45 (male holotype from Nova Friburgo, Rio de Janeiro, Brazil, should be in BMNH, not found, probably lost). New synonymy

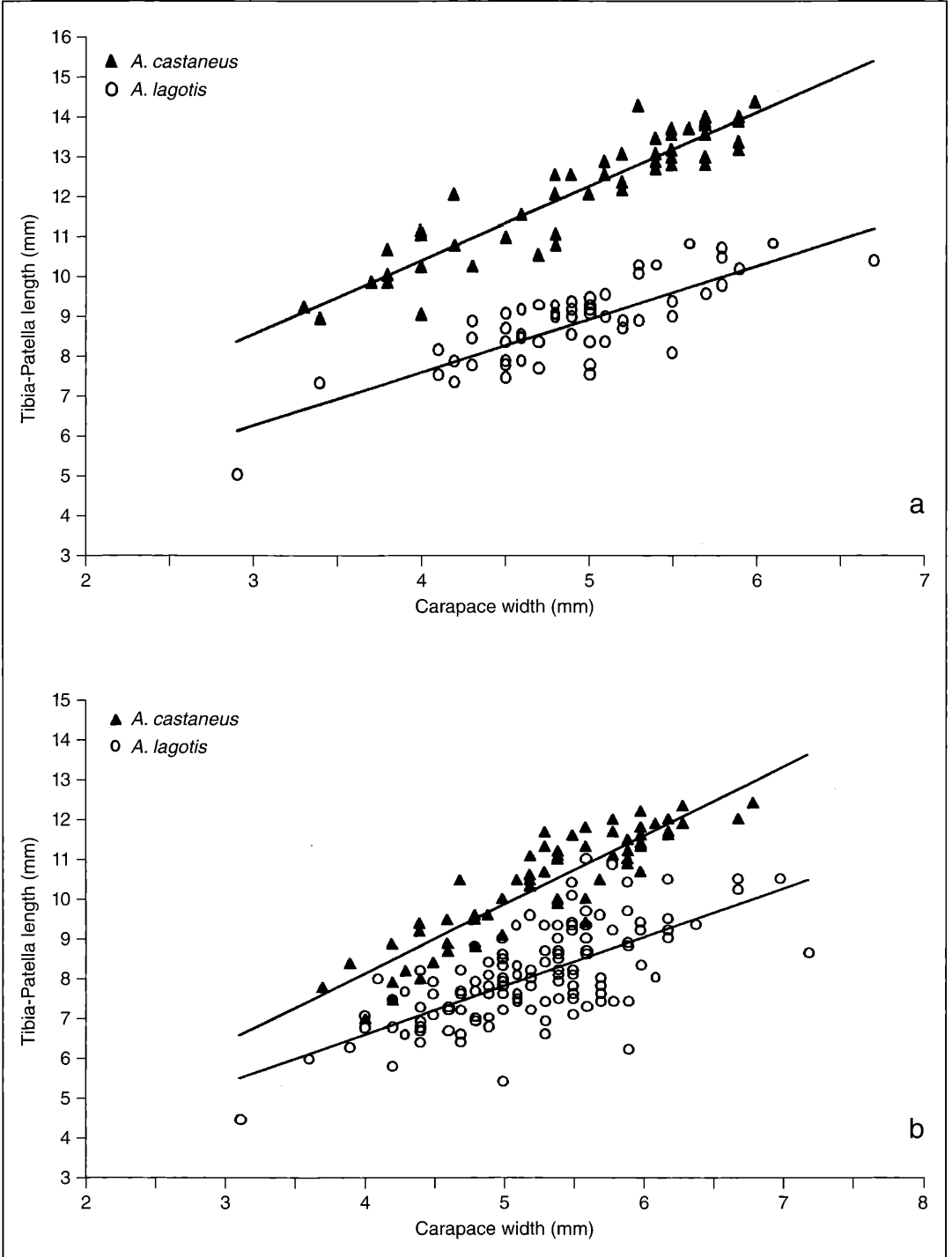


Figure 6. Variation of carapace width and relation to tibia-patella I length in *Aglaoctenus* species: a) males; b) females.

- 1876 *Diapontia granadensis* KEYSERLING: Verh. zool.-bot. Ges Wien, **26**: 673, pl. 8, fig. 47 (female holotype from "Neu Granada" (actually Bogotá), Colombia, should be in BMNH, not found, probably lost). New synonymy
- 1877 *Podophthalma diversa* PICKARD-CAMBRIDGE: Proc. zool. Soc. London, 1877: 572, pl. 57 figs 9a-b (5 immature syntypes from Minas Gerais, Brazil, in the Hope Department Entomology Collection, Oxford University, not examined). New synonymy
- 1891 *Tetragonophthalma diversa* – KEYSERLING: Die Spinnen Amerikas, **3**: 255
- 1891 *Tetragonophthalma freiburgensis* – KEYSERLING: Die Spinnen Amerikas, **3**: 255
- 1891 *Tetragonophthalma granadensis* – KEYSERLING: Die Spinnen Amerikas, **3**: 255
- 1891 *Tetragonophthalma obscura* KEYSERLING: Die Spinnen Amerikas, **3**: 256, pl. 10 fig. 192 (female holotype from Taquara, Rio Grande do Sul, Brazil, in BMNH 1890.7.1.2822, examined). New synonymy
- 1898 *Porrina diversa* – SIMON: Hist. Nat. Ar., **2**: 327, figs 332-333
- 1905 *Aglaoctenus bifasciatus* TULLGREN: Ark. Zool., **2**: 53, pl. 7, fig. 25 (female and 15 juveniles syntypes from Tatarenda, Chaco, Bolivia, in NHRM, examined). New synonymy
- 1916 *Porrina harknessi* CHAMBERLIN: Bull. Mus. Comp. Zool. Harvard, **60**: 280, pl. 23 figs 2-6 (male holotype and male and immature paratypes from Huadquiña, Peru, in MCZ, examined). New synonymy
- 1926 *Porrina glieschi* MELLO-LEITÃO: Bol. Mus. Nac. Rio de Janeiro, **2**: 2 (immature holotype from Rio Grande do Sul, Brazil, R. B. Lange col., in MNRJ 966, examined). New synonymy
- 1934 *Porrina callipoda* MELLO-LEITÃO: Mem. Inst. But., **8**: 405, figs 5, 6 (immature holotype from Ribeirão Claro, Mato Grosso do Sul, Brazil, in IBSP 1003, examined). New synonymy
- 1941 *Porrina diversa* – MELLO-LEITÃO: Rev. Mus. La Plata, **2**: 201
- 1941 *Porrina granadensis* – MELLO-LEITÃO: Ann. Acad. Bras. Cienc., **13**: 278
- 1941 *Porrina lagotis* – MELLO-LEITÃO: Rev. Mus. La Plata, **2**: 138-139, pl. 6, figs 28, 35
- 1941 *Porrina lagotis* – MELLO-LEITÃO: Rev. Mus. La Plata, **2**: 201
- 1942 *Porrina diversa* – MELLO-LEITÃO: Rev. Mus. La Plata, **2**: 383
- 1942 *Porrina lagotis* – MELLO-LEITÃO: Rev. Bras. Biol., **2**: 383
- 1943 *Porrina freiburgensis* – MELLO-LEITÃO: Arq. Mus. Nat. Rio de Janeiro, **37**: 164
- 1943 *Porrina diversa* – MELLO-LEITÃO: Arq. Mus. Nac. Rio de Janeiro, **37**: 164
- 1944 *Porrina lagotis* – MELLO-LEITÃO: Rev. Mus. La Plata, **3**: 316, 321
- 1945 *Porrina diversa* – MELLO-LEITÃO: Rev. Mus. La Plata, **4**: 221
- 1945 *Porrina lagotis* – MELLO-LEITÃO: Rev. Mus. La Plata, **4**: 221
- 1947 *Porrina diversa* – MELLO-LEITÃO: Arq. Mus. Paraense, **6**: 266
- 1947 *Porrina freiburgensis* MELLO-LEITÃO: Arq. Mus. Paraense, **6**: 265
- 1947 *Porrina lagotis* – MELLO-LEITÃO: Arq. Mus. Paraense, **6**: 266
- 1947 *Porrina obscura* – MELLO-LEITÃO: Arq. Mus. Paraense, **6**: 265.
- 1948 *Porrina diversa* – MELLO-LEITÃO: An. Acad. Bras. Sci., **20**: 153
- 1949 *Porrina diversa* – MELLO-LEITÃO: Bol. Mus. Nac. Rio de Janeiro, **92**: 4
- 1954 *Aglaoctenus bifasciatus* – ROEWER: Expl. Parc Nat. De L'Upemba, **30**: 126
- 1954 *Porrina diversa* – ROEWER: Katalog der Araneae von 1758 bis 1940, **2**: 313
- 1954 *Porrina glieschi* – ROEWER: Katalog der Araneae von 1758 bis 1940, **2**: 313
- 1954 *Porrina harknessi* – ROEWER: Katalog der Araneae von 1758 bis 1940, **2**: 313
- 1954 *Porrina lagotis* – ROEWER: Katalog der Araneae von 1758 bis 1940, **2**: 313
- 1954 *Porrinula callipoda* – ROEWER: Expl. Parc Nat. De L'Upemba, **30**: 313
- 1958 *Porrina callipoda* – BONNET: Bibl. Aran., **2**: 3765
- 1958 *Porrina glieschi* – BONNET: Bibl. Aran., **2**: 3765.
- 1958 *Porrina harknessi* – BONNET: Bibl. Aran., **2**: 3765
- 1959 *Porrina granadensis* – ROEWER: Expl. Parc Nat. De L'Upemba, **55**: 1005
- 1959 *Porrinosa glieschi* – ROEWER: Expl. Parc Nat. De L'Upemba, **55**: 1005
- 1959 *Porrinosa harknessi* – ROEWER: Expl. Parc Nat. De L'Upemba, **55**: 1001, 1005
- 1959 *Porrinula callipoda* – ROEWER: Expl. Parc Nat. De L'Upemba, **55**: 1005
- 1961 *Porrinosa glieschi* – ROEWER: Bull. Inst. Sci. Nat. Belg., **37**: 16
- 1961 *Porrinosa harknessi* – ROEWER: Bull. Inst. Sci. Nat. Belg., **37**: 16
- 1961 *Porrinula callipoda* – ROEWER: Bull. Inst. Sci. Nat. Belg., **37**: 16
- 1962 *Porrina diversa* – BRADY: Psyche, **69**: 11, fig. 11
- 1962 *Porrina harknessi* – BRADY: Psyche, **69**: 129, fig. 12, 33.
- 1972 *Tetragonophthalma callipoda* – BÜCHERL & LUCAS: Mem. Inst. But., **36**: 267
- 1982 *Porrinosa callipoda* – CAPOCASALE: J. Arachnol., **10**: 148-149 (species inquirenda)
- 1982 *Porrinosa diversa* – CAPOCASALE: J. Arachnol., **10**: 149-150 (species inquirenda)
- 1982 *Porrinosa glieschi* – CAPOCASALE: J. Arachnol., **10**: 150 (species inquirendae)
- 1982 *Porrinosa granadensis* 0– CAPOCASALE: J. Arachnol., **10**: 147
- 1982 *Porrinosa harknessi* – CAPOCASALE: J. Arachnol., **10**: 151, figs 9-10
- 1982 *Porrinosa lagotis* – CAPOCASALE: J. Arachnol., **10**: 151-154, figs 3-5, 6-8, 11, 13 (non *P. lagotis* (MELLO-LEITÃO, 1941c) and lectotype MLP 14945 erroneously designated)
- 1990 *Porrinosa callipoda* – CAPOCASALE: J. Arachnol., **18**: 139
- 1990 *Porrinosa diversa* – CAPOCASALE: J. Arachnol., **18**: 139
- 1990 *Porrinosa glieschi* – CAPOCASALE: J. Arachnol., **18**: 139
- 1990 *Porrinosa harknessi* – CAPOCASALE: J. Arachnol., **18**: 139
- 1990 *Porrinosa lagotis* – CAPOCASALE: Aracnologia, **11/12**: 12
- 1990 *Porrinosa lagotis* – CAPOCASALE: J. Arachnol., **18**: 139
- 1991 *Porrinosa harknessi* – CAPOCASALE: J. Arachnol., **19**: 96, figs 6-7, 9 (description of the female)
- 1991 *Porrinosa lagotis* – CAPOCASALE: J. Arachnol., **19**: 96, figs 1, 10
- 1993 *Aglaoctenus bifasciatus* – CARIC: Bull. Amer. Mus. Nat. Hist., **170**: 231.
- 1993 *Porrinosa freiburgensis* – PLATNICK: Adv. Spider Taxonomy 1988-1991: 506
- 1993 *Porrinosa harknessi* – PLATNICK, 1993: Adv. Spider Taxonomy 1988-1991: 506
- 1993 *Porrinosa lagotis* – PLATNICK: Adv. Spider Taxonomy 1988-1991: 506
- 1993 *Porrinosa obscura* – PLATNICK: Adv. Spider Taxonomy 1988-1991: 506

1997 *Aglaoctenus harknessi* – PLATNICK: Adv. Spider Taxonomy 1992-1995: 539

1997 *Porrima freiburgensis* – PLATNICK: Adv. Spider Taxonomy 1992-1995: 539

1997 *Porrimosa glieschi* – PLATNICK: Adv. Spider Taxonomy 1992-1995: 539

Diagnosis

Aglaoctenus lagotis males differ from *A. castaneus* by the narrower median apophysis (figs 3e; 7a,b), by the inconspicuous base of the cymbium, and by a leg-carapace ratio of 1.45 to 2.15. Female epigynes with the T-shaped septum longer longitudinally and narrower transversely (figs 3d; 7c,d).

Description

Male (Indianópolis, Minas Gerais, Brazil): Carapace orange, thoracic groove red, ocular area black. Chelicerae brown, endites and labium orange. Sternum and legs orange, legs clearer in the ventral side, metatarsi and tarsi red. Abdomen gray, with dark brown folium. Spinnerets orange. Total length 14.9, carapace 7.6 long, 5.4 wide. Clypeus 0.38 high, equals to 1.46 the AME diameter. Eye sizes and interdistances: AME 0.26, ALE 0.26, PME 0.36, PLE 0.28, AME-AME 0.16, AME-ALE 0.36, PME-PME 0.28, PME-PLE 0.45. MOQ length 0.76, front width 0.69, back width 1.02. Chelicerae 2.35 long, with 4 promarginal and 3 retromarginal teeth. Abdomen 7.6 long, 3.2 wide.

Leg segments length: I - femur 7.22/ patella 2.66/ tibia 6.0/ metatarsus 5.44/ tarsus 3.11/ total 24.44/ II 5.88/ 2.0/ 4.88/ 5.33/ 2.66/ 20.77/ III 6.22/ 2.11/ 4.88/ 5.44/ 2.44/ 21.11/ IV 8.22/ 2.22/ 6.88/ 9.0/ 3.44/ 29.77. Palpus as typical for the genus (figs 3e-7; 7a,b).

Female (same locality as male). Carapace orange, with clearer borders, cephalic region and thoracic groove red, median y-shaped band as clear as the borders of the carapace, ocular area black. Chelicerae dark brown, endites and labium red. Sternum and legs orange, metatarsi and tarsi red. Abdomen dark gray, with dark brown folium delimited by light lateral bands. Spinnerets dark gray. Total length 22.6, carapace 8.0 long, 6.2 wide. Clypeus 1.11 high, 1.8 times the AME diameter. Eye sizes and interdistances: AME 0.61, ALE 0.66, PME 0.94, PLE 0.77, AME-AME 0.44, AME-ALE 0.94, PME-PME 0.83, PME-PLE 0.77. MOQ length 1.77, front width 1.72, back width 2.72. Chelicerae 3.6 long, with 4 promarginal and 3 retromarginal teeth. Abdomen 11.1 long, 6.3 wide.

Length of leg segments: I - femur 7.11/ patella 2.88/ tibia 6.55/ metatarsus 5.77/ tarsus 3.11/ total 25.44/ II - 6.88/ 2.88/ 6.0/ 5.44/ 3.0/ 24.22/ III - 6.0/ 2.44/ 5.0/ 5.44/ 2.44/ 21.33/ IV 8.33/ 2.66/ 7.11/ 9.0/ 3.33/ 23.33. Epigynum with the typical shape of the genus (figs 3c; 7c-e).

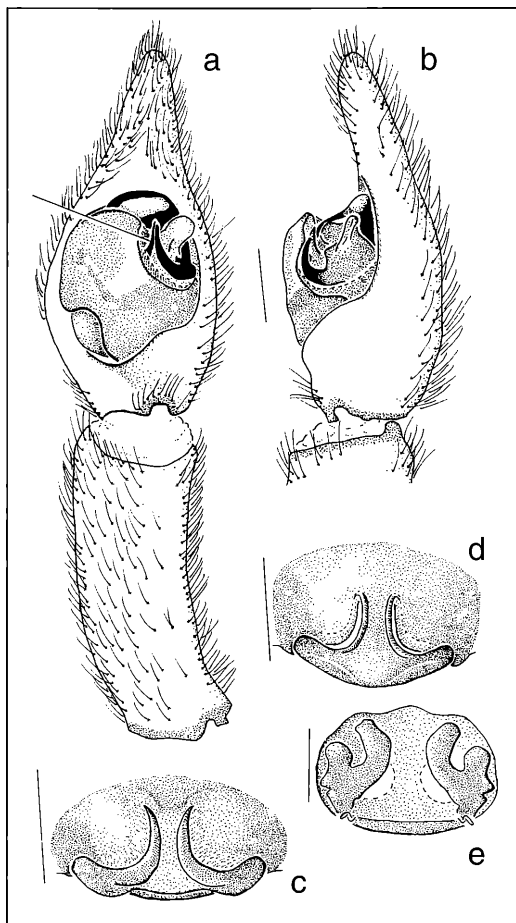


Figure 7 *Aglaoctenus lagotis* (HOLMBERG), male: a) palp, ventral view; b) retrolateral view; female epigyna: c) ventral view, specimen from Parnaíba, Piauí, Brazil; d) ventral view, specimen from Atibaia, São Paulo, Brazil; e) dorsal view, specimen from Indianópolis, Minas Gerais, Brazil, (MA, median apophysis). Scale lines: 0.5 mm.

Variation

Coloration varies from orange to dark brown, rarely black. Males rarely present tufts of long hairs on metatarsi. Juveniles are uniformly dark-gray. Variation in total length: females 10.3-23.0 (N=140), males 10.1-19.0 (N=57).

Note

Although the holotypes of *Tetragonophthalma freiburgensis* and *T. granadensis* were not located, we are sure of their generic placement based on KEYSERLING's original illustrations. Judging by the localities, *Aglaoctenus lagotis* and *A. granadensis* are the earlier names available for these species, both with lost

types. The former name was preferred because more material is available from Argentina than from Colombia. The synonymies of *Porrimosa diversa*, *P. glieschi*, and *P. callipoda*, all described on immature specimens, and *P. freiburguensis*, whose type is probably lost, are established based on the type localities, which are all within the distribution range of *A. lagotis* (fig. 8). The syntypes of *P. diversa* were not examined for two reasons: we are sure that these specimens are correctly placed in *Aglaoctenus* because they were examined by CAPOCASALE (1982) and since all specimens are immature, examining them would not reveal new informations for the correct placement.

Natural History

A. lagotis was recorded from primary and disturbed humid forests, Brazilian Caatinga, savannas (Argentinean Chaco, Brazilian Cerrado and Pantanal) and montane fields (Brazilian "campos rupestres"). Regarding the preferred sites for web building, SORDI (1996) observed several microhabitats, including holes in trunks, stocks of leaves and branches on and above the ground, and hollows in litter and bromeliads. It was also recorded from bromeliads (*Bromelia balansae*) in central and southeastern Brazil (L. B. Albuquerque and G. Q. ROMERO pers. comm.), from soil termite mounds and cliffs in cerrado areas of central and southeastern Brazil (AJS, pers. observ.) and within rock outcrops and dry trunks (Plate 1d) in Caatingas of northeastern Brazil (ADB, pers. observ.). One specimen was observed (AJS) in a garbage can in an urban park in Campinas, São Paulo, Brazil. A complete description of the life-cycle and several natural history observations for this species can be found in SORDI (1996) and a description of the courtship and copulation behavior in CAPOCASALE (1982: 153-154).

Distribution

Colombia, Venezuela, southern Peru, Bolivia, Paraguay, central, southeastern and southern Brazil, Uruguay, Argentina (fig. 8).

Material examined

Colombia. Boyacá: La Uvita, 1♂1♀ (MNRJ 13520).
 Venezuela. Bolívar: Parupa, Gran Sabana, 1500m., 1♂, 27.VI.-10.VII.1987, S. & J. PECK col. (AMNH).
 Peru. Cuzco: Wiñayhuaina, 13° 07' S, 72° 34' W, 2700-3100m, 1♂ 2juv., 9.II.1990, D.SILVA DÁVILA (MUSM); Loreto: no locality, 1♀, VIII.1973, J.C.OLIN (MCZ).
 Bolivia. La Paz, Valle del Zongo, Laguna Viscachani, 1♀, 5.VIII.1993, H.HÖFER col. (SMNK); Rio Huarinilla, near Coroico, 1♀, VIII.1993, A.D.BRESCOVIT (SMNK); Sara: San Ignacio, 2♀, 9.III.1961, L.HAMMERSCHMID col. (IBSP 3364); Estación Biológica del Beni, 1♀, 24- jul- 1993, A.D. BRESCOVIT & H.HÖFER col. (MCN 24118); 1♀1juv., 27.VII.1993, H.HÖFER col. (SMNK 1233); 2♂ 1♀1juv., A.D. BRESCOVIT col. (SMNK 1213).
 Brazil. Piauí: Parnaíba, 1♀, 6-20.XI.1994, R.BERTANI & PINZ col. (IBSP 5722); Paraíba: Serra do Teixeira, 1♀ with egg sac, 21.II.1978, P.F.L.DUARTE col. (IBSP 8579); Mato Grosso:

Agachi, 1♂, 10.XI.1952, C.F.MORAES col. (IBSP 784); 1♂, 19.IX.1952, C.F.MORAES col. (IBSP 3495); Chapada dos Guimarães, 2♀, 15-26.VII.1992, A.A.LISE & A.BRAUL Jr. col. (MCP 2154); 1♀ (A.A.LISE & A.BRAUL Jr. col. (MCP 2155); Poconé, 1♀, 3.VIII.1992, A.A.LISE & A.BRAUL Jr. col. (MCP 2424); near Poconé, Pantanal area, 3♂ 2juv., 4-12.VIII.1992, A.A.LISE & A.BRAUL Jr. col. (MCP 2322); Cáceres, 1♀, 27.VII.1962, V.VEIT col. (IBSP 4094); Burity, 1♀1juv., 3.VI.1972, W.G.WHITCOMB col. (FSCA); Mato Grosso do Sul: Campo Grande, 1♀, I.1950, P.BRUNO col. (IBSP 1115); 1♀, IX.1982, R.RODRIGUES col. (IBSP 3498); Campo Grande, Reserva da UCDB, 7.I.1997, A.M.CAÇÃO col. (IBSP 26137); 2♀, 1.VIII.1997, A.M.CAÇÃO col. (IBSP 26131; 26132); Bela Vista, Fazenda Luis Felipe, 1♂, 28.VIII.1998 (IBSP 26125); 1♀, 10.XI.1998, all collected by A.M.CAÇÃO (IBSP 26128); Camapuã, 3♀ 3juv., I.1968, F.SIBERBAUER col. (IBSP 8156); Brasília: Brasília, Fazenda Cisalpina, 5♀, VII.2000, Eq. IBSP col. (IBSP 26195); Tocantins: Porto Nacional, Fazenda Sandoval, 1♀, 9.VIII.2000 (IBSP 26182) 1♂, 10.VIII.2000 (IBSP 26183) Usina Hidrelétrica Luiz Eduardo Magalhães, 1♀, 7-11.VIII.2000, I. KNYSAK & R.MARTINS col. (IBSP 26198); Goiás: Distrito Federal, Brasília, 1♀ 1juv., 1971, W. R. LOURENÇO col. (IBSP 4240); 1♀, 30.X.1990, C. D. HOLVORCEN col. (IBSP 15899); Caldas Novas, Usina Hidrelétrica de Corumbá, 17°42' 50" S, 48°32'12" W, 8♂, 12-23.VIII.1996, M.T.I. RODRIGUES col. (MZSP 15658); Cabeceiras, 1♀, 1964 (MZSP 4201); Urutáguia, 1♂ 1juv., 10.VII.1952, A.NOUEIRA col. (IBSP 3477); 1♀, X.1952, A.NOUEIRA col. (IBSP 822); Mineiros, Parque Nacional de Emas, 1♂, 28.VII.1997, P.VALDUJO & C.NOUEIRA col. (IBSP 11714); 1♀, C.ADES col. (IBSP 14379); near Niquelândia, Usina Hidrelétrica de Serra da Mesa, 14°01' S, 48°18' W, 1♂, 24-30.XI.1995, G.SKUK col. (IBSP 6278); Minaçu, Usina Hidrelétrica de Serra da Mesa, 1♀, 18-30.X.1996, A.B.BONALDO & L.MOURA col. (MCN 27975); Bahia: Barreiras, área militar, 2♀2juv., 3.VIII.2000, E. F.RAMOS col. (IBSP 26196; 26197); Central, around the city, 3♀ 3juv., 10.VII.2000, A.D.BRESCOVIT & E.F.RAMOS col. (IBSP 26147; 26148; 26152); Itapicuru, 1♀, O.LEONARDO col. (MNRJ 42305); Ibiraba, dunas do rio São Francisco, 1♂, 5.III.1997, E.XAVIER col. (IBSP 15247); Jussiapê (13°34'S 41°36'W), 1♀1juv., 21.XII.1998, L.S. ROCHA col. (IBSP 20782); Lençóis, 1♀, X.1999, (UEFS); Minas Gerais: Morro da Garça, 1♀, 1964 (MZSP 4215); Prata, 1♀, X.1979, T.ALMEDA col. (IBSP 4977); Serra do Caraça, 1♂, VII.1991, R.BERTANI col. (IBSP 7420); Barão de Cocais, 3♀, 15.XII.1969, J.P.COUTO col. (IBSP 2439); Itabirito, 1♂1♀, 15.IX.1999, C.SCHETINI & E.ALVAREZ col. (IBSP 26126); Belo Horizonte, Estação Ecológica da Universidade Federal de Minas Gerais, 1♂ 2♀, 11.VIII.1997, A.J.SANTOS & M.O.GONZAGA col. (IBSP 26127); Confins, Ribeirão Confins, 1♀, 1964 (MZSP 4164); Sete Lagoas, CNPMS-Embrapa, 1♀, 5.IX.1996, R. de OLIVEIRA col. (IBSP 7751); 1♂, R. de OLIVEIRA col. (IBSP 7744); Indianópolis, Usina Hidrelétrica de Miranda, 1♂ 1♀, 23.VIII.1995, A.L.T. SOUZA col. (IBSP 26122); Poços de Caldas, 1♂, P.F.L. DUARTE col. (MCN 24984); Rio de Janeiro: Barra do Pirai, 1♂ 2♀, IV.1950, J. UBELE col. (IBSP 1149); São Paulo: Divisa Rio de Janeiro/São Paulo, 1♀, 20.X.1989, ALTAMIRO & BEATRIZ col. (MNRJ); Atibaia, Parque Municipal da Serra da Itapetininga, 1♂ 3♀, 6.IX.1997, A.J.SANTOS et al. col. (IBSP 26123); Jundiá, Serra do Japi, 1♀, I.1999, A.J.SANTOS col. (IBSP 26124); São José do Rio Preto, Instituto Penal Agrícola, 1♂ 1♀, 29.VIII.1997, G.Q.ROMERO col. (IBSP 26134; Presidente Epitácio, Usina Hidrelétrica Sérgio Motta, 1♂ 1♀, 16.I-13.II.1999, Eq. IBSP col. (IBSP 23269; 23133); Penápolis, 1♀, I.1955, E.FIGUEIREDO col. (IBSP 1667); Usina Hidrelétrica de Três

Irmãos, 3♀, IX.X.1990, R.BERTANI, M.COSTA & C.R.BERTINI col. (IBSP 4861); Sorocaba, Fazenda Serrinha, 3♂ 21♀, X.1981, J.NAVAS col. (IBSP 1964; 2963); Itapira, 1♀, IX.1975, S.NOUGUÉS col. (IBSP 1075); Campo Alegre, 7♀, 2.VI.1969, W.RODRIGUES col. (IBSP 2254); Porto Feliz, 1♂, 29.V.1981, O. de ALMEIDA FILHO col. (IBSP 14271); Andradina, 1♂ 3♀, 12.VIII.1973, M.P.BUENO col. (IBSP 2686); Presidente Prudente, 1♀, XII.1959, G.RODRIGUES col. (IBSP 1473); Mogi-Guaçu, 1♀, 26.VIII.1977, M.B. de LIMA col. (IBSP 8373); Serra da Cantareira, 1♀, XII.1982, M.L.O.MARTINS col. (IBSP 3590) Itú, 1♀, 3.VII.1995, A.G.CADOSO col. (IBSP 685); Serra Negra, 1♀, VII.1983, M. Maluf col. (IBSP 3786); Alto da Serra, 1♀, XI.1941, J.DAMIGO col. (MZSP 6309); Amparo, Monte Alegre, Fazenda Santa Maria, 1♀, 27.XI.1942, F.LANE col. (MZSP 10345); Francisco Morato, 2♀, 19.XI.1952, D. dos SANTOS col. (IBSP 833); Rinópolis, 1♀, VII.1960, M.NAKASHIM col. (IBSP 5081); Piracicaba, 1♂, 18.X.1996 (IBSP 7754); Jundiá, 1♀, 30.X-2.XI.1998, C.A.RHEIMS col. (IBSP 20180); Barueri, 1♂, 6.VIII.1954, K.LENKO col. (MZSP 5528); 1♀ 1juv., 19.VIII.1954, K.LENKO col. (MZSP 5835); Boa Esperança do Sul, Fazenda Itaquerê, 1♂, VI.1965, K.LENKO col. (MZSP 4585); São Paulo, 1♀, 21.V.1937, M.M.LEAL col. (IBSP 1002); 1♂, 31.VIII.1947, H.URBAN col. (SMNK 426); no date or collector (SMNK 325); 1♀, 22.X.1973, B.F.F.VAGELAR col. (IBSP 8372); (Perus), 1♀ (MZSP 9241); Franca, 1♀ 1juv., 1902, O.DREHER col. (MZSP 6482); Embú-Guaçu, 1♂, 14.X.1997, J.B. de SÁ (IBSP 13916); São Roque, Fazenda São Joaquim, 1♂, 22.VIII.1961, Eq. IBSP col. (IBSP 48); Martinópolis, 1♀, VIII.1982, H.C.A.PIRES col. (IBSP 3549); Taiúva, 1♂ 5♀, 20.XI.1954, B.J.LOURENÇO col. (IBSP 955); 5♀ (IBSP 957); 4♀ (IBSP 959); Tietê, 1♂, 3.IV.1995 (IBSP 6157); 1♀, 1.VIII.1995, A.GUIMARÃES col. (IBSP 6454); Vista Alegre do Alto, 1♂, 31.VIII.1951, P.SIQUEIRA col. (IBSP 569); Bragança Paulista, 3♀, VIII.1989, V.P.LUIZ col. (IBSP 4293); Quatá, 2♀, III.1957, J.CERCKASIM col. (IBSP 1407); Bauru, 1♀, A.M.MARQUES col. (IBSP 1222); Botucatu, (Jardim Botânico) 1♂, 1995, L. de OLIVEIRA col. (UNESP); 1♂, 27.XI.1995, A.B.LIMA col. (UNESP); Botucatu (Fazenda Edgardia) 1♀, 25.XI.1994, I.M.P.RINALDI col. (UNESP); 1♀, 6.VI.1989, I.M.P.RINALDI col. (UNESP); Botucatu (Fazenda Lageado) 1♀, 11.XII.1988, I.M.P.RINALDI & L.C.FORTI col. (UNESP); Vale do Ribeira, 1♀ (MHCI 1571); Paraná: Rio Iguazu, Usina Hidrelétrica Foz do Areia, 1♀, 23.IV.1980, Eq. IBSP (IBSP 14604); Guaaraqueçaba, 1♂, R.LANGE col. (MHCI 1525); Candió/Mangueirinha, Usina Hidrelétrica de Segredo, 1♀ 1juv., 1996, R.BERTANI col. (IBSP 7955); Usina Hidrelétrica de Segredo, Reservatório do Rio Jordão, 1♀, 29.IV.1996, A.CHAGAS JR. & M. DI BERNARDO col. (IBSP 8032); 1♀, 30.IV.1996, J.C.MOURA LEITE (IBSP 8038); Curitiba, 2♀, B.ROHR col. (MNRJ 41412); Pinhão, 1♀, 25.X.1991, R.PINTO-D-ROCHA col. (MCN 22214); Rio Grande do Sul: no locality, 1♀ 2juv., P.B.RAMBO col. (MNRJ 41669); Pelotas, 1♂, 4-6.X.1996, L.MOURA col. (MCN 27760); Caxias do Sul, Fazenda Souza, 2♀ 1juv., 18-21.XI.1993, A.A.LISE col. (MCP 4168); São Simão, 2♀, X.1934, M.IRON col. (IBSP 1000); Novo Hamburgo, 1♀, 17.I.1988, C.J.BECKER col. (MCP 231); Mariana Pimentel, 1♂, 23.IV.1993, M.SILVEIRA col. (MCP 3124); Tenente Portela, 1♂, 29.XI.1978, H.BISCHOF col. (MCN 8379); Passo Fundo, Floresta Nacional de Passo Fundo, 1♂ 4♀ 1juv., 12.X.1985, A.A.LISE col. (MCN 13632); Garruchos, 1♀, 8.XII.1975, A.A.LISE col. (MCN 3179); Guaíba, 2♀, 17.III.1995, A.A.LISE et al. col. (MCP 8041); 1♂ 1♀, 9.I.1996, A.A.LISE et al. col. (MCP 9555); Guaíba, Guaíba Country Club, 3♀, 01.I.1993, A.B.BONALDO col. (MCN 22682); Flores da Cunha, 1♂, 1.V.1993, A.A.LISE col. (MCP 3191); Vião, 1♂, 17.XI.1991, C.FREITAS col. (MCP 1429); Quaraí, 1♂, 9.IV.1977, J.W.THOMÉ col. (MCN 5266);

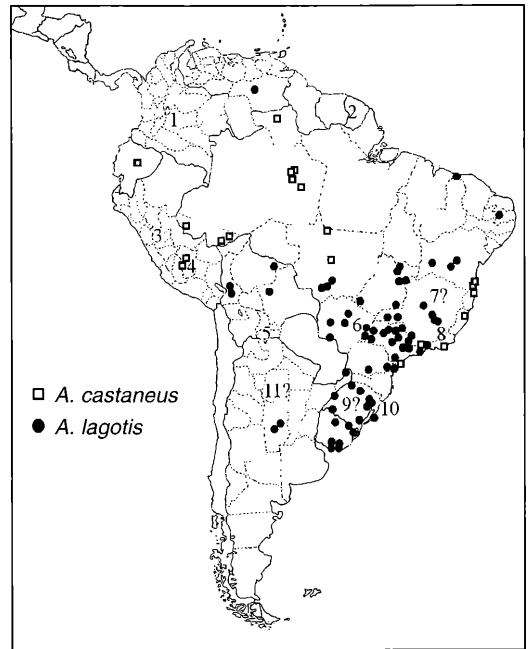


Figure 8. Distribution of *Aglaoctenus* species. The numbers indicate the type localities of the following synonymised species: 1, *granadensis*; 2, *guianensis*; 3, *castaneus*; 4, *harknessi*; 5, *bifasciatus*; 6, *callipoda*; 7, *diversa*; 8, *freiburguensis*; 9, *glieschi*; 10, *obscura*; 11, *lagotis*. ? = species whose type locality are not expressed clearly, with only data about province, state or country.

1♀ 1juv., 24-28.V.1991, A.A.LISE col. (MCP 445); Canela, 1♀, 7.X.1967, A.A.LISE col. (MCN 442); Carazinho, 1♀, 10.XI.1979, A.A.LISE col. (MCN 8691); Porto Alegre, 1♀ 1juv., 19.VI.1963, O.HARTLIEB & PACINI col. (MCN 1189).
Uruguay. Lavalleja: Marmarajá, 1♀, 12.V.1962, E.S.CARBONALL & M.A.MONNÉ col. (MNHN 805); Minas, 1♂, 3.III.1981, R.M.CAPOCASALE & L.BRUNO col. (MNHN 940); Arequita, Cerro Arequita, 1♀, 5.XII.1997, A.D.BRESCOVIT col. (IBSP 14458); Maldonado: Cerro Pan de Azúcar, 1♀, 3.IX.1978, F.PÉREZ & J.BASSO col. (MNHN 856); Sierra de la Ballena, 1♀, 29.VIII.1976, F.LOPEZ & R. DE SAA col. (MNHN 706); Taquarém: Tambores, Pozo Hondo, 1♀, 4.IX.1971, F.ACHAVAL col. (MNHN 708); Cerro Largo: Río Taquarí, Ruta 8, 1♀, 26.XI.1983, R.M.CAPOCASALE & F.PÉREZ col. (MNHN 928); Quebracho, 1♀, 16.V.1983, C.MORENO col. (MNHN 963); Canelones: Piedras de Afilar, 3♀, 3.V.1989, F.COSTA et al. col. (MNHN 860); Marindia, 1♀, 16.III.1978, F.COSTA & M.URRUTY col. (MNHN 810); Treinta y Tres: Quebrada de los Cuervos, 1♀, 10-11.X.1988, F. PÉREZ-MILES col. (MNHN 576).
Argentina. Rio Negro: 1♀ (MNRJ 13518); Córdoba: Talumba, 1♀, M.BIRABÉN col. (MNRJ 58036); Arguillo, 2♀ 2juv., X.1943, J. De CARLO col. (MACN 1354); Tanti, 1♀, I.1950, J.M.VIANA col. (MACN 2855); Misiones: Tobuna, 2♀ 2juv., II.1952, W.PARTRIDGE col. (MACN 4054); Yacupoi, Puerto Bemberg, 1♀, 11.II.1980, J.CRANWELL col. (MACN 3023); Santa Maria, 1♂, X.1953, J. De CARLO, R.D.SCHIAPELLI, J.M.VIANA & M.E.GALIANO col. (MACN 3844); Río Iguazú, 60 km from Puerto Iguazú, 1♀, III.1951, W.PARTRIDGE col. (MACN 3458).

Acknowledgements

We are grateful to Dr. HUBERT HÖFER for inviting us to publish in this special volume, and especially to Prof. Dr. LUDWIG BECK, for supporting the second author during projects in Brazilian Amazonia, Bolivia and scientific visits at the State Museum of Natural History in Karlsruhe. We thank all the curators of the consulted collections for the loan of the material examined, including G.B. EDWARDS, who lent specimens of *Sosippus* for comparison. We also thank A.L.T.SOUZA, A.M.CAÇÃO, C.SCHETINI, E.ALVAREZ, F.N.RAMOS, G.F.DUTRA, G.MACHADO, G.Q.ROMERO, J.VASCONCELLOS NETO, L.B.ALBUQUERQUE, M.O.GONZAGA, and R.L.G.RAIMUNDO for collecting specimens for this study and for natural history observations and A.M.F.PACHECO for suggestions on the drawings. We thank Prof. PEDRO KIYOHARA and Miss SIMONE PERCHE DE TOLEDO (USP) for making the scanning electron micrographs. The following people gently provided colored pictures of spiders and webs: M.S.ARAUJO (plate 1), B.D.BUYS (plate 1b), and G.MACHADO (plate 1c). The authors also acknowledge C.A.RHEIMS, M.O.GONZAGA, P.SIERWALD and R.CAPOCASALE, who read the first drafts of this manuscript and made important suggestions. The first author received logistical support from J. VASCONCELLOS NETO, from Departamento de Zoologia, Universidade Estadual de Campinas. This study was financed by Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP No. 99/05695-8 to A.J.SANTOS and CNPq and FAPESP No. 1999/05446-8 to A.D.BRESCOVIT. This work is part of BIOTA/FAPESP - The Biodiversity Virtual Institute Program (www.biotasp.org.br).

4. Literature

- BONNET, P. (1958): Bibliographia Araneorum, **2** (4) 3027-4230; Toulouse (Douladore).
- BRADY, A. R. (1962): The spider genus *Sosippus* in North America, Mexico, and Central America (Araneae, Lycosidae). – *Psyche*, **69**: 129-164.
- BRESCOVIT, A. D. & HÖFER, H. (1994): *Heidrunea*, a new genus of the spider subfamily Rhoicininae (Araneae, Trechaleidae) from Central Amazonia, Brazil. – *Andrias*, **13**: 71-80.
- BÜCHERL, W. & LUCAS, S. (1972): Sobre a posição sistemática de *Porrima callipoda* MELLO-LEITÃO, 1934 (Araneae: Lycosidae). – *Mem. Inst. Butantan*, **36**: 267.
- BUCHER, E. (1974): Observaciones ecológicas sobre artrópodos del bosque chaqueño de Tucumán. – *Rev. Fac. Ci. Ex. Fis. Nat. Córdoba (NS) Biología*, **1**: 35-122.
- CAPOCASALE, R.M. (1982): Las especies del genero *Porrimosa* ROEWER, 1959 (Araneae, Hippasinae). – *J. Arachnol.*, **10**: 145-156.
- CAPOCASALE, R.M. (1990a): Las especies de la subfamilia Hippasinae de America del Sur (Araneae, Lycosidae). – *J. Arachnol.*, **18**: 131-141.
- CAPOCASALE, R.M. (1990b): An annotated checklist of uruguyan spiders. – *Aracnologia*, **11/12**: 1-23.
- CAPOCASALE, R.M. (1991): Nuevos aportes al genero *Porrimosa* ROEWER (Araneae, Lycosidae). – *J. Arachnol.*, **19**: 93-96.
- CAPORIACCO, L. DI. (1954): Araignées de la Guyane Francaise du Muséum d'Histoire Naturelle de Paris. – *Comm. Pontif.*, **16**: 45-193.
- CARICO, J. E. (1981): The Neotropical spider genera *Architis* and *Staberius* (Pisauridae). – *Bull. Amer. Mus. Nat. Hist.*, **170**: 140-153.
- 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.
- CHAMBERLIN, R.V. (1916): Results of the Yale Peruvian Expedition of 1911: the Arachnida. – *Bull. Mus. Comp. Zool. Harvard*, **60**: 177-299.
- DONDALE, C. D. & REDNER J. H. (1990): The Insects and Arachnids of Canada, Part 17 The wolf spiders, Nurseryweb spiders, and the Lynx spiders of Canada and Alaska, Araneae: Lycosidae, Pisauridae, and Oxyopidae. – *Research Branch, Agriculture Canada Publ.*, **1859**: 1-383.
- HIGGINS, L. E. (1989): The effect of insemination on the morphology of the internal genitalia of the spider *Nephila clavipes* (Araneae: Araneidae). – *Ann. Ent. Soc. America*, **82**: 748-753.
- HOLMBERG, E.L. (1876): Arácnidos argentinos. – *An. Agr. Argentina*, **4**: 1-30.
- HÖFER, H. & BECK, L. (1996): Die Spinnentierfauna des Regenwaldreservats "Reserva Ducke" in Zentralamazonien II. – *Natur und Museum*, **126**: 69-85.
- KEYSERLING, E. (1876): Über amerikanische Spinnenarten der Unterordnung Citigrade. – *Verh. zool-bot. Ges. Wien*, **26**: 609-708.
- KEYSERLING, E. (1891): Die Spinnen Amerikas (Brasilianische Spinnen). – *Vol. 3*: 1-278; Nürnberg.
- KRONSTEDT, T. (1990): Separation of two species standing as *Alopecosa aculeata* (CLERCK) by morphological, behavioural, and ecological characters, with remarks on related species in the *pulverulenta* group (Araneae, Lycosidae). – *Zool. Scripta*, **19**: 203-225.
- LEHTINEN, P. (1967): Classification of the cribellate spiders and some allied families, with notes on the evolution of the suborder Araneomorphae. – *Ann. Zool. Fenn.*, **4**: 199-468.
- LEVI, H.W. (1965): Techniques for the study of spider genitalia. – *Psyche*, **72**: 152-158.
- MELLO-LEITÃO, C.F. (1926): Algumas aranhas novas do Brasil meridional. – *Bol. Mus. Nac. Rio de Janeiro*, **2**: 1-18.
- MELLO-LEITÃO, C.F. (1934): Três aranhas novas nas coleções do Instituto Butantan. – *Mem. Inst. Butantan*, **8**: 3-9.
- MELLO-LEITÃO, C. F. (1941a): Notas sobre a sistemática das aranhas, com descrição de algumas novas espécies. *Ann. Acad. Bras. Ciencias*, **13**: 103-127
- MELLO-LEITÃO, C. F. (1941b): Catálogo das aranhas da Colômbia. – *Ann. Acad. Bras. Ciencias*, **13**: 233-300.
- MELLO-LEITÃO, C.F. (1941c): Las arañas de Córdoba, La Rioja, Catamarca, Tucumán, Salta y Jujuy. – *Rev. Mus. La Plata (N.S. zool.)*, **2**: 99-198.
- MELLO-LEITÃO, C.F. (1941d): Arañas de la provincia de Santa Fe colectadas por el Prof. Birabén. – *Rev. Mus. La Plata (N.S. zool.)*, **2**: 199-225.
- MELLO-LEITÃO, C.F. (1942a): Arañas del Chaco y Santiago del Estero. – *Rev. Mus. La Plata (N.S. zool.)*, **2**: 381-426.
- MELLO-LEITÃO, C.F. (1942b): Cinco aranhas novas do Peru. – *Rev. Bras. Biol.*, **2**: 429-434.
- MELLO-LEITÃO, C.F. (1943a): Catálogo das aranhas do Rio Grande do Sul. – *Arq. Mus. Nac. Rio de Janeiro*, **37**: 147-245.
- MELLO-LEITÃO, C.F. (1943b): Arañas nuevas de Mendoza, La Rioja y Córdoba colectadas por el Prof. M. BIRABÉN. – *Rev. Mus. La Plata (N.S. zool.)*, **3**: 101-121.
- MELLO-LEITÃO, C.F. (1944): Arañas de la Provincia de Buenos Aires. – *Rev. Mus. La Plata (N.S. zool.)*, **3**: 311-393.
- MELLO-LEITÃO, C.F. (1945): Arañas de Misiones, Corrientes y Entre Ríos. – *Rev. Mus. La Plata (N.S. zool.)*, **4**: 213-302.
- MELLO-LEITÃO, C.F. (1947): Aranhas do Paraná e Santa Catarina, das coleções do Museu Paranaense. – *Arquivos do Museu Paranaense*, **6**: 231-304.

- MELLO-LEITÃO, C.F. (1948): Contribuição ao conhecimento da fauna araneológica das Guianas. – An. Acad. Bras. Sci., **20**: 151-196.
- MELLO-LEITÃO, C.F. (1949): Aranhas da foz do Koluene. – Bol. Mus. Nac. Rio de Janeiro (N.S. zool.), **92**: 1-19.
- NEAVE, S. A. (1940): Nomenclator Zoologicus. – Vol. III; London.
- PICKARD-CAMBRIDGE, O. (1877): On some new species of Araneida, with characters of two new genera and some remarks on the families Podophtalmides and Dinopides. Proc. zool. Soc. London., 1877: 557-578.
- PLATNICK, N.I. (1989): Advances in Spider Taxonomy 1981-1987. – Manchester (Manchester University Press).
- PLATNICK, N.I. (1993): Advances in Spider Taxonomy 1988-1991 - with synonymies and transfers 1940-1980. – New York (New York Entomological Society).
- PLATNICK, N.I. (1997): Advances in Spider Taxonomy 1992-1995 - with redescrptions 1940-1980. – New York (New York Entomological Society).
- ROEWER, C.F. (1954a): Katalog der Araneae von 1758 bis 1940 – Vol. 2: 1-923; Bruxelles.
- ROEWER, C.F. (1954b): Exploration du Parc National de l'Upemba, Araneae, Lycosaeformia I. – Institut des Parcs Nationaux du Congo Belge, Bruxelles, **30**: 1-420.
- ROEWER, C.F. (1959): Exploration du Parc National de l'Upemba, Araneae, Lycosaeformia II. – Institut des Parcs Nationaux du Congo Belge, Bruxelles, **55**: 519-1040.
- ROEWER, C.F. (1961): Über Namen der Gattungen und Arten der Lycosidae (Araneae). – Bull. Inst. Sci. Nat. Belgique, **37**: 1-19.
- SIERWALD, P. (2000): Description of the male of *Sosippus placidus*, with notes on the subfamily Sosippinae (Araneae, Lycosidae). – J. Arachnol., **28**: 133-140.
- SIMON, E. (1898): Histoire Naturelle des Araignées 2: 193-380. Roret, Paris.
- SORDI, S.J. (1996): Ecologia de Populações da aranha *Porri-mosa lagotis* (Lycosidae) nas Reservas Mata de Santa Genebra, Campinas (SP) e Serra do Japi, Jundiá (SP). – Master Thesis, Universidade Estadual de Campinas, Brazil.
- TÖPFER-HOFMANN, G., CORDES D. & VON-HELVERSEN, O. (2000): Cryptic species and behavioural isolation in the *Pardosa lugubris* group (Araneae, Lycosidae), with description of two new species. – Bull. Brit. Arachnol. Soc., **11**: 257-274.
- TULLGREN, A. (1905): Araneida from the Swedish Expedition through the Gran Chaco and the Cordilleras. – Ark. Zool., **2**: 1-81.