

FURTHER LINYPHIID SPIDERS
(ARANEAE) FROM SOUTH AMERICA

A. F. MILLIDGE

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FURTHER LINYPHIID SPIDERS (ARANEAE) FROM SOUTH AMERICA

A. F. MILLIDGE

*Research Associate, Department of Entomology
American Museum of Natural History
Current address: Treasbeare, Higher Broad Oak Road
West Hill, Ottery St. Mary
Devon EX11 1XJ, England*

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CONTENTS

Abstract	5
Introduction	5
Acknowledgments	5
Descriptions of Genera and Species	5
<i>Dubiaranea</i> Mello-Leitão	5
<i>Notiohyphantes</i> Millidge	53
<i>Totua</i> Keyserling	55
<i>Vesicapalpus</i> , New Genus	55
<i>Exechopsis</i> , New Genus	56
<i>Exocora</i> , New Genus	58
<i>Stictonanus</i> , New Genus	59
<i>Caleurema</i> , New Genus	60
<i>Asemonetes</i> , New Genus	62
<i>Cryptolinyphia</i> , New Genus	63
<i>Novafrentina</i> , New Genus	63
<i>Diplothyron</i> , New Genus	66
<i>Schistogyna</i> , New Genus	68
<i>Jalapyphantes</i> Gertsch and Davis	70
<i>Eurycolon</i> , New Genus	70
<i>Laminacauda</i> Millidge	72
<i>Neomaso</i> Forster	87
<i>Meioneta</i> Hull	94
<i>Lygarina</i> Simon	106
<i>Antronetes</i> , New Genus	110
<i>Hypselocara</i> , New Genus	111
<i>Diechomma</i> , New Genus	112
<i>Epiwubana</i> , New Genus	114
<i>Habreuresis</i> , New Genus	115
<i>Adelonetria</i> , New Genus	117
<i>Microsphalma</i> , New Genus	117
<i>Scolecurea</i> , New Genus	119
<i>Barycara</i> , New Genus	121
<i>Chaetophyma</i> , New Genus	123
<i>Anodoration</i> , New Genus	124
<i>Notiothauma</i> , New Genus	125
<i>Onychembolus</i> Millidge	127
<i>Neocautinella</i> Baert	127
<i>Triplogyna</i> , New Genus	129
<i>Malkinia</i> , New Genus	131
<i>Gilvonanus</i> , New Genus	131
<i>Malkinella</i> , New Genus	132
<i>Microctema</i> , New Genus	132
<i>Bactrogyna</i> , New Genus	134
<i>Turbinella</i> , New Genus	134
<i>Erigone</i> Audouin	135
<i>Eperigone</i> Crosby and Bishop	137
<i>Paraletes</i> , New Genus	142
<i>Microplanus</i> , New Genus	143
<i>Spanioplanus</i> , New Genus	143
<i>Fissiscapus</i> , New Genus	144
<i>Labicymbium</i> , New Genus	145

<i>Gravipalpus</i> , New Genus	156
<i>Smermisia</i> Simon	158
<i>Myrmecoxenus</i> , New Genus	159
<i>Tutaibo</i> R. Chamberlin	160
<i>Sphecozone</i> O.P.-Cambridge	165
<i>Brattia</i> Simon	179
<i>Psilocymbium</i> , New Genus	181
<i>Gymnocymbium</i> , New Genus	184
<i>Gonatoraphis</i> , New Genus	186
<i>Dolabritor</i> , New Genus	188
<i>Walckenaeria</i> Blackwall	191
<i>Ochronetria</i> , New Genus	192
Introduced Species	192
Discussion	192
References	194
Index of Genera and Species	196

ABSTRACT

Descriptions are given of numerous new linyphiid genera and species from South America; these are listed alphabetically in the index. Of the known South American linyphiid genera, *Dubiaranea* (formerly *Hormembolus*) now has the greatest number of species, and considerable increases have also been made to the genera *Laminacauda*, *Neomaso*, *Meioneta*, and *Sphecozone*. In addition to a variety of small erigonine-like species, characterized by a simple tracheal system, a number of true erigonine species (with the complex tracheal system) are now found in South America. These

erigonines fall into two groups which appear to be related to the *Erigone* and *Ceratinopsis* groups of genera. Most are endemic to South America, and none of the common, widespread linyphiid genera of the Northern Hemisphere seem to be present, except probably as recent arrivals. No representatives of the subfamily Mynogleninae have been discovered, and it is concluded that this subfamily is not present in South America. There is no obvious congruence between the linyphiid fauna of South America and that of New Zealand.

INTRODUCTION

In a previous paper (Millidge, 1985), several new linyphiid genera and species were described from South America. A wealth of South American material from a number of sources has since been examined, and the results of this work are presented here. Most descriptions are of new taxa, but revised presentations of several older species are included; a few synonymies have been established. Additional records of the species described in 1985 are not included.

Descriptions are given of approximately 270 species, in 59 genera; most of the species, and 42 of the genera, are new. All the genera and species dealt with are listed alphabetically in the index.

All measurements are in millimeters. Right-hand palps are figured unless stated to the contrary.

ACKNOWLEDGMENTS

I am grateful to G. H. Locket for the loan of literature, and for the specimens of *Meioneta adami*; to H. W. Levi for information on the synonymy of the genera *Dubiaranea*, *Paranesticus*, and *Hormembolus*; to J. Wunderlich for drawing my attention to the genus *Totua*; to L. Baert for information on his Galapagos linyphiids; and to N. I. Platnick

for helpful suggestions made during the preparation of the manuscript. G. H. Locket and P. Merrett reviewed the manuscript, and made useful comments.

I am indebted to the following institutions and curators for the loan of material:

AMNH	American Museum of Natural History, New York (N. I. Platnick)
BMNH	British Museum (Natural History), London (P. Hillyard)
CNC	Canadian National Collection, Ottawa (C. D. Dondale)
HEC	Hope Entomological Collections, Oxford (I. Lansbury)
IRSNB	Institut Royal des Sciences Naturelles de Belgique (L. Baert)
MACN	Museo Argentino de Ciencias Naturales "Bernadino Rivadavia" (E. Maury)
MCZ	Museum of Comparative Zoology, Cambridge, U.S.A. (H. W. Levi)
MHNSM	Museum National d'Histoire Naturelle, Paris (J. Heurtault, C. Roliard)
MHNSM	Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Peru (D. Silva)
NHRM	Naturhistoriska Riksmuseet, Stockholm (T. Kronstedt)
USNM	National Museum of Natural History, Smithsonian Institution, Washington, D.C. (J. Coddington)

DESCRIPTIONS OF GENERA AND SPECIES

DUBIARANEA MELLO-LEITÃO

Dubiaranea Mello-Leitão, 1943: 166 (type species by original designation *Dubiaranea argenteovittata* Mello-Leitão). Levi, 1967: 37. Brignoli, 1983: 294. Platnick, 1989: 232.

Paranesticus Mello-Leitão, 1944: 333 (type species by original designation *Paranesticus difficilis* Mello-Leitão). Brignoli, 1983: 223. Platnick, 1989: 299. NEW SYNONYMY.
Hormembolus Millidge, 1985: 2. Platnick, 1989: 243. NEW SYNONYMY.

Dubiaranea was originally placed in the Theridiidae. The type species was examined and figured by Levi (1967), who transferred the genus to the Linyphiidae. Levi suggested to me that *Hormembolus* was a junior synonym of *Dubiaranea*, and his view is supported by the published figures of the epigynum of the type species. I have been unable to examine the type species personally, since the Museu Nacional, Rio de Janeiro, will not send the type by post, but I fully accept Levi's opinion on the synonymy. Levi also pointed out to me that *Paranesticus* was probably a synonym of *Dubiaranea*, and in this case I have seen *P. difficilis*, the type species, and can confirm Levi's opinion.

The examination of additional specimens has indicated three synonyms among the species already described under *Hormembolus* (Millidge, 1985). The present paper contains descriptions of 80 new species, and the total number now known is 98. Some descriptions, however, are based on a single sex, and the true number of known species will probably be somewhat less. Several of the species described are based on single specimens, and hence the variability (e.g., of the epigynum) is not known. In addition, some of these single specimens are quite old and in rather poor condition.

The genus is already by far the largest linyphiid genus in South America, and there can be little doubt that the number of species will rise eventually toward 200. To date, no members of the genus have been taken in Central America.

Because of the large number of species involved, the first character to be taken into consideration in diagnosis must be the geographical location of capture. Based on present knowledge, most species appear to be fairly limited in their range, and a species taken in Peru, for example, is unlikely to be present in the fauna of Venezuela, Chile, or Argentina, though it might be found in Colombia, Ecuador, or Bolivia.

The somatic characters of the species are all very similar, and usually of little or no diagnostic value. The position of the metatarsal trichobothria is relatively constant, and is omitted from the species descriptions. The color and abdominal patterns are usually variable within a species; for information, the

species descriptions include brief data on the color patterns, but these are rarely useful for identification. Consequently, the diagnoses must be based almost entirely on the genitalia in both sexes.

The shape and color of the epigynum vary slightly within each species, and appear different viewed from different angles, but the epigynum of each species is usually sufficiently distinct from those of other species in the same geographical area to make diagnosis possible. Other characters, such as eye size, may occasionally be useful confirmatory characters. In several species, the atria of the epigynum (on either side of the median septum) are wholly or partially filled with a translucent deposit, which can obscure the detail of the structure.

Males are diagnosed by the forms of the suprategular apophysis and the embolic division. There are always small variations in the shapes of these two palpal components, and with such complex structures the appearance can vary considerably with the angle of viewing; when comparing an unknown with the figures given, the palp should be examined from more than one angle. As a general rule, these features of the palpal organ appear to be reliable for diagnosis.

The species—which are listed alphabetically in the index—are presented in the order of country of origin, running approximately from north to south; the countries concerned in the present paper are: Venezuela, Colombia, Ecuador, Peru, Bolivia, Brazil, Chile, and Argentina.

The synonymies established are as follows:

Hormembolus chacamus Millidge = *Dubiaranea caledonica* (Millidge), new combination: NEW SYNONYMY. Examination of a larger number of specimens showed that the two species were identical.

Hormembolus nitidus Millidge = *Dubiaranea fulgens* (Millidge), new combination: NEW SYNONYMY. Both sexes of *D. fulgens* were taken together; the female was identical with that of *H. nitidus*.

Hormembolus silvestris Millidge = *Dubiaranea longiscapa* (Millidge), new combination: NEW SYNONYMY. Both sexes of *H. silvestris* were taken together; the female was identical with that of *D. longiscapa*.

Dubiaranea margaritata, new species

Figures 1-4

TYPES: Male holotype, with female paratype, from High Camp 2, Neblina Massif, Rio Negro, Amazonas, Venezuela, 2100 m, Feb. 16-25, 1984 (R. G. Zweifel); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning decked with pearls.

DIAGNOSIS: The female epigynum (figs. 3, 4) has a short, narrow scape projecting posteriorly; the lateral atria are sometimes obscured by plugging (fig. 4). The scape is somewhat similar to, though shorter than, that of *D. manufera* (Millidge) (1985), but the atrial region of *D. margaritata* is quite different in shape. The male is diagnosed by the palp (figs. 1, 2); the embolic division, with the short embolus, the translucent, truncated tail, and the prominent and complex supratragular apophysis, distinguish it from males of other species. *D. teres* (fig. 60) (Ecuador) has a somewhat similar tail to the embolic division, but in that species the embolic division is much more rounded, and the anterior (lower) projection is much shorter.

FEMALE: Total length 3.3-3.6. Carapace length 1.4-1.55. Carapace yellow-brown, with sometimes darker markings and margins. Abdomen gray to black, with glistening white spots dorsally and on sides. Sternum brown to almost black. Legs pale yellow to yellow-brown, with weak brown annulations. Epigynal atria (figs. 3, 4) may be filled with a translucent mass which obscures the detail.

MALE: Total length 3.1. Carapace length 1.55. Color, etc. as female, except: abdomen long and cylindrical, gray dorsally, black ventrally, with some white spots on sides. Palp (figs. 1, 2).

MATERIAL EXAMINED: VENEZUELA: Amazonas: the types above. Cerro de la Neblina, Camp 7, 1850 m, on water in *Brocchinia*, Jan. 30-Feb. 10, 1985 (P. J. Spangler et al.), 1 female paratype (USNM); Camp 11, 2100 m, on *Bonnetia* and low shrubs around bog, Jan. 29-31, 1985 (W. E. Steiner), 4 female paratypes (USNM). COLOMBIA: César: Finca San Jose, 8 km southeast Socorpa Mission, Sierra de Perija, 1450-1500 m, July 27-31, 1968 (B. Malkin), 1 female paratype (AMNH). Valle: 6 km southwest Cali, forest,

1300 m, Mar. 5, 1971 (W. Eberhard and H. Levi), 1 female paratype (MCZ).

DISTRIBUTION: Venezuela and Colombia.

Dubiaranea caeca, new species

Figures 5, 6

TYPE: Female holotype from Camp 2, Cerro de la Neblina, Amazonas, Venezuela, on *Bonnetia* and other low shrubs around bog, 2100 m, Jan. 30, 1985 (W. E. Steiner); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning obscure.

DIAGNOSIS: The female epigynum (figs. 5, 6) has a broad socket, no clearly defined scape, and an ill-defined atrial region. The epigyna of *D. atripalpis* (figs. 7, 8) (Venezuela), *D. variegata* (figs. 40, 41) (Colombia), *D. varia* (figs. 137, 138) (Peru), and *D. insulanus* (fig. 165) (Chile) are generally similar; the three former species have a posterior projection from the epigynum, and differently shaped atrial regions, while *D. insulanus* has a much narrower ventral plate. The male is not known.

FEMALE: Total length 2.55. Carapace length 1.2. Carapace pale orange-brown, with dusky margins. Abdomen brown, with dorsally a pale gray folium margined with white blotches; spinners black. Sternum orange, suffused with brown. Legs pale brown, suffused distally with darker brown. Epigynum (figs. 5, 6).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

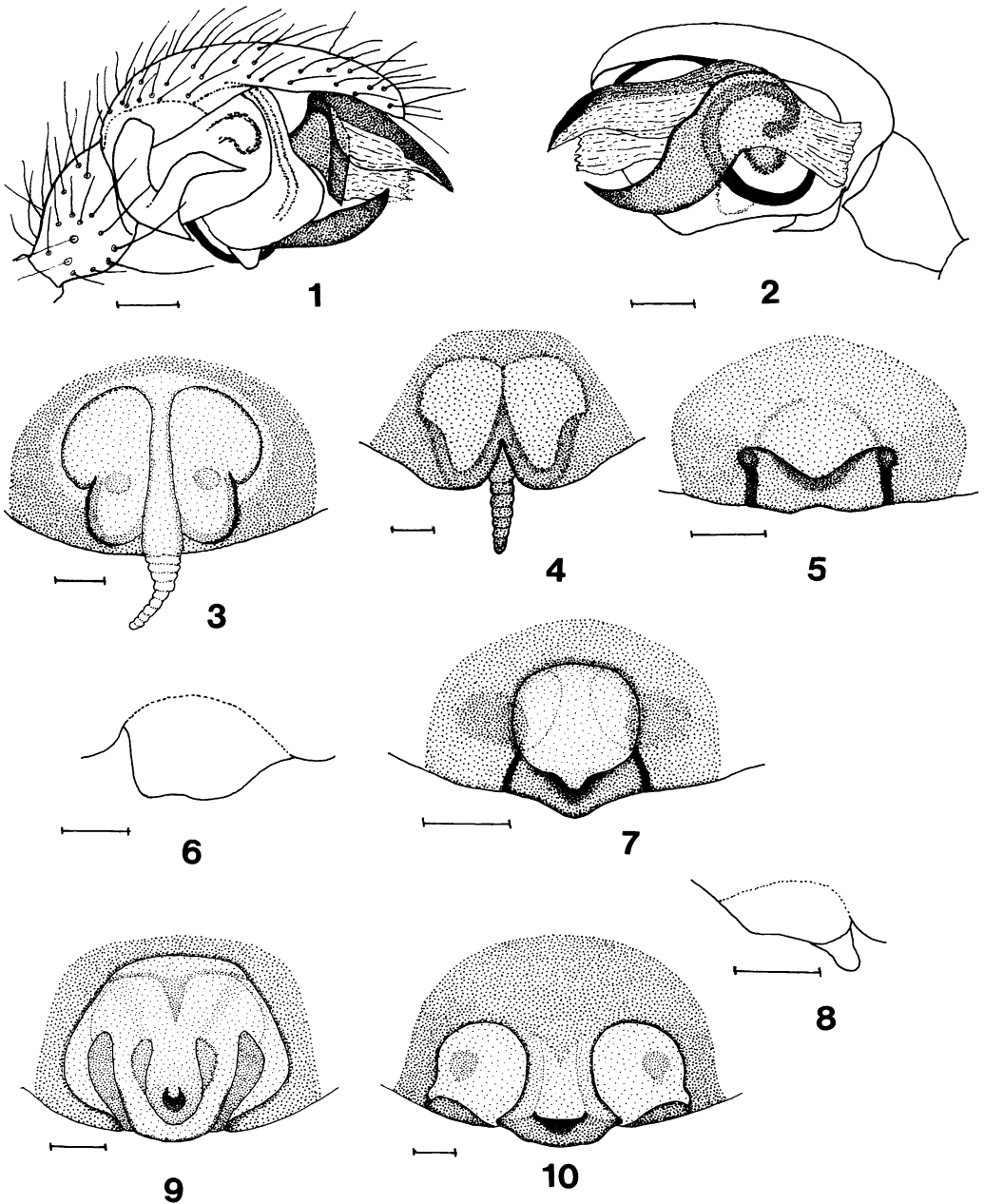
Dubiaranea atripalpis, new species

Figures 7, 8

TYPES: Female holotype, with one female paratype, from Camp 10, Cerro de la Neblina, Amazonas, Venezuela, 1690 m, Feb. 12, 1985 (W. E. Steiner); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning with black palps.

DIAGNOSIS: The female epigynum (fig. 7) has no clearly defined scape, but the region which holds the socket projects posteriorly (fig. 8). The atrial region is almost circular. *D. variegata* (figs. 40, 41) (Colombia) and *D. varia* (figs. 137, 138) (Peru) have epigyna of a generally similar form, but the atria in those



Figs. 1-10. 1-4 *Dubiaranea margaritata*. 5, 6. *D. caeca*. 7, 8. *D. atripalpis*. 9. *D. pulchra*. 10. *D. media*. 1. Male palp, ectal. 2. Male palp, mesal. 3, 4, 5, 7, 9, 10. Epigynum, ventral. 6, 8. Epigynum, lateral. Scale lines 0.1 mm.

species are not rounded, and the species are significantly larger. The male is not known.

FEMALE: Total length 2.9. Carapace length 1.15; orange, suffused with brown on sides and sometimes posteriorly; ocular area black.

Abdomen long, ovate, somewhat projecting over spinners; gray to black, with dorsally two white blotches on either side, and black around spinnerets. Sternum orange, suffused to variable extent with brown. Legs pale yellow.

low basally, shading to brown on metatarsi and tarsi. Palp with tibia and tarsus black. Epigynum (figs. 7, 8); atria filled with translucent mass, obscuring the median septum.

MATERIAL EXAMINED: Only the types.

DISTRIBUTION: Known only from Venezuela.

***Dubiaranea pulchra*, new species**

Figure 9

TYPE: Female holotype from Andres Bello, Quebrada Ensebio, Mérida, Venezuela, 2200 m, Jan. 26, 1984 (J. Coddington); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning beautiful.

DIAGNOSIS: The female epigynum (fig. 9) is of a form generally similar to those of *D. concors* (fig. 30) (Colombia), *D. amoena* (fig. 132) (Peru), and *D. fusca* (fig. 135) (Peru); the epigynum of *D. pulchra* lacks the broad, rounded scape of *D. concors*, and it is distinguished from those of *D. amoena* and *D. fusca* by the shape and much smaller socket. The male is not known.

FEMALE: Total length 4.1. Carapace length 1.5; yellow, with weak median brown stripe and brown margins; ocular area brown. Abdomen dorsally black, with bright white stripe on either side; gray ventrally. Sternum pale orange, suffused with brown. Legs pale yellow-brown, with weak brown annulations. Epigynum (fig. 9).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

***Dubiaranea media*, new species**

Figure 10

TYPE: Female holotype from Rancho Grande Biol. Station, Aragua, Venezuela (no date) (C. T. Collins); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning ordinary.

DIAGNOSIS: The female epigynum (fig. 10) has a broad scape, slightly widened posteriorly, and wide lateral atria. Epigyna of generally similar form are present in *D. versicolor* (figs. 49, 50) (Colombia, Ecuador), *D. insulsa* (fig. 72) (Ecuador), *D. abundans* (fig. 103) (Peru), and *D. argentata* (fig. 148) (Bolivia),

but in those species the scape is relatively longer and the atria relatively narrower; those species are also smaller. The male is not known.

FEMALE: Total length 5.8. Carapace length 1.9. Carapace orange-yellow, with weak brown median stripe and brown margins. Abdomen gray dorsally and on sides, with weak blackish markings dorsally; ventrally gray-brown. Sternum orange, suffused with brown. Legs orange-yellow, with faint brown annulations. Epigynum (fig. 10).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

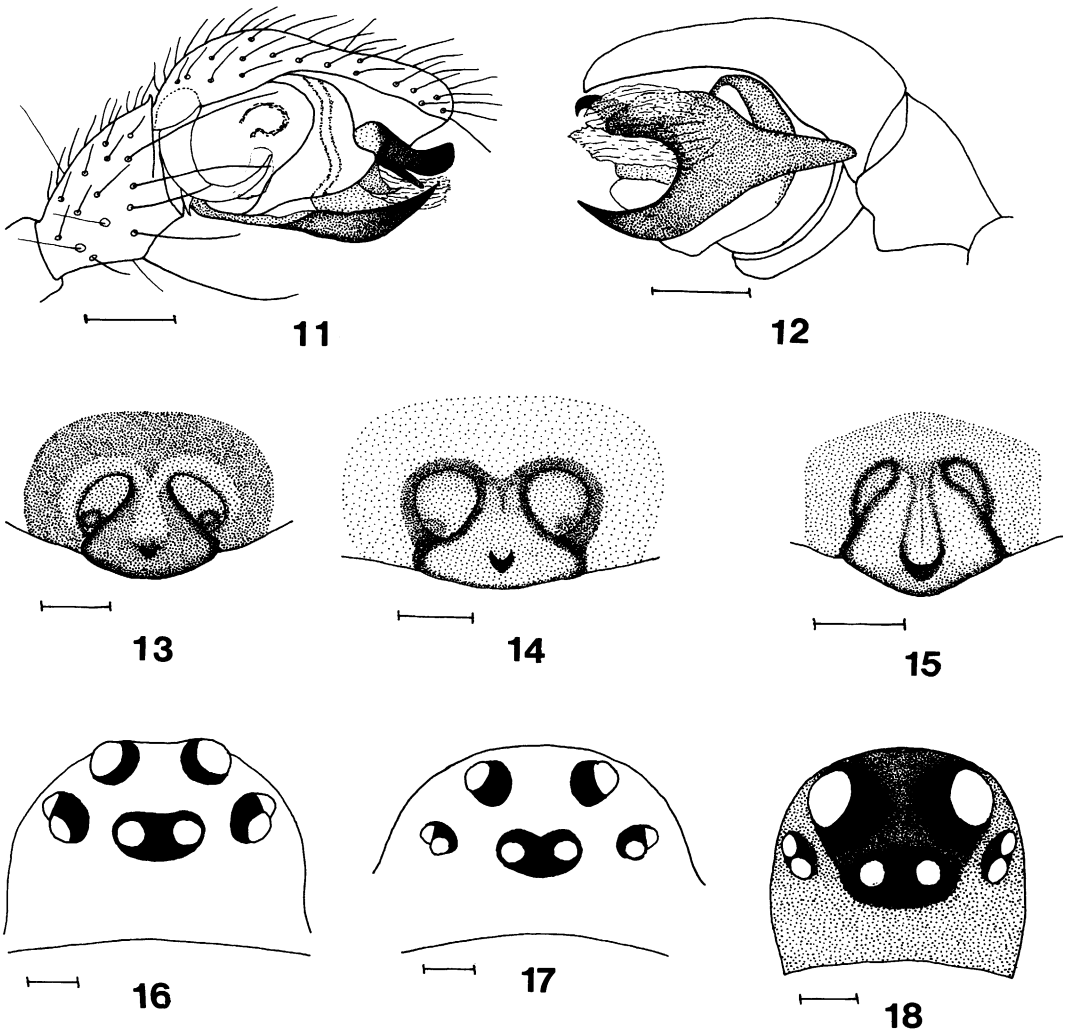
***Dubiaranea crebra*, new species**

Figures 11–14, 16, 17

TYPES: Male holotype, with 21 female and 13 male paratypes, from Paramo Alto Belen, Boyacá, Colombia, wooded area, 3600 m, Sept. 22, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning numerous, frequent.

DIAGNOSIS: The female epigynum (figs. 13, 14) has a scape with a relatively narrow neck anteriorly, but considerably widened posteriorly, roughly triangular in shape, with a clear atrium on either side anteriorly. The epigynum is somewhat variable. The following species have epigyna of the same general form as in *D. crebra*: *D. ornata* (fig. 22) (Colombia) has a wider neck to the scape and a wider socket; *D. proxima* (fig. 65) (Ecuador) has the atria extended posteriorly to the end of the scape; *D. affinis* (fig. 66) (Ecuador) has a somewhat wider socket, and is a significantly larger species; *D. modica* (fig. 71) (Ecuador) has the scape projecting more posteriorly, and a larger socket; *D. similis* (fig. 171) (Chile) has the scape with a much broader neck and socket, and projecting more posteriorly. The male palp (figs. 11, 12) has a short embolus (fig. 12), and a fairly long, pointed tail, and the ventral apophysis is moderately long and curved upward; the suprategular apophysis is well sclerotized, and distally curved upward. The palps of *D. grandicula* (figs. 95, 97) (Peru) and *D. insulanus* (figs. 163, 164) (Chile) are very similar, but *grandicula* is a much larger species and has a longer palpal tibia; *insulanus* has the embolic division slightly dif-



Figs. 11–18. 11–14, 16, 17. *Dubiaranea crebra*. 15, 18. *D. albodorsata*. 11. Male palp, ectal. 12. Male palp, mesal. 13, 15. Epigynum, ventral. 14. Epigynum, ventral, La Rusia specimen. 16, 18. Eyes, anterior. 17. Eyes, anterior, La Rusia specimen. Scale lines 0.1 mm.

ferently shaped and is probably endemic to the Juan Fernandez Islands.

FEMALE: Total length 2.5–3.75. Carapace length 1.1–1.35. Coloration very variable in both sexes. Carapace pale yellow, orange-brown, brown or deep brown, sometimes with blackish margins. Eyes rather variable in size (figs. 16, 17). Abdomen ventrally gray to blackish; dorsally sometimes black, sometimes brilliant white, sometimes gray with white blotches, sometimes with white stripe on either side. Sternum yellow to pale orange, suffused with brown or black, to almost black.

Legs pale yellow to pale brown. Epigynum (figs. 13, 14).

MALE: Total length 2.65–3.8. Carapace length 1.2–1.4. Color and trichobothria as female. Abdomen long and cylindrical. Femora 1 and 2 with dorsal row of ca. 4–5 short, stout spines. Palp (figs. 11, 12).

MATERIAL EXAMINED: COLOMBIA: *Boyacá*: Paramo Alto Belen, the types above. Same locality, Sept. 24, 1985 and Sept. 1, 1986 (H. Sturm), 2 female, 2 male paratypes (MCZ). Paramo de La Rusia, Sept. 24, 1985 (H. Sturm), 26 female, 13 male paratypes (MCZ).

Cauca: Paramo Purace, beating foliage, 3000 m, Oct. 20, 1968 (B. Malkin), 2 female paratypes (AMNH). *Cundinamarca*: Paramo de Chingaza, 3550 m, Sept. 13, 1985 (H. Sturm), 6 female, 2 male paratypes (MCZ). Paramo de Chisaca, 3720 m, Sept. 7 and 11, 1985 and Sept. 17, 1986 (H. Sturm), 12 female, 6 male paratypes (MCZ). Paramo de Monserate, Sept. 13, 1986 (H. Sturm), 3 female paratypes (MCZ). *Espéc*: Paramo de Sumapaz, 3600–4000 m, Oct. 4, 1978 (H. Sturm), 2 female paratypes (MCZ). ECUADOR: Sebundoi, 2600 m, Sept. 11–15, 1977 (L. E. Pêna), 3 male paratypes (AMNH). PERU: *Pasco*: Oxapampa, 3000 m, June 25, 1986 (D. Silva), 1 female, 1 male paratype (MHNSM). VENEZUELA: *Portuguesa*: Bococono-Biscucuy Road, 5 km north Biscucuy, 600 m, Sept. 15, 1957 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Colombia, Ecuador, Peru, and Venezuela.

***Dubiaranea albodorsata*, new species**

Figures 15, 18

TYPE: Female holotype from Paramo Purace, Cauca, Colombia, beating foliage, 3000 m, Oct. 20, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective referring to the white dorsum of the abdomen.

DIAGNOSIS: The scape of the female epigynum (fig. 15) is narrow anteriorly, broad posteriorly, roughly trapezoidal in shape, with only small areas of the atria visible anteriorly. The following species have epigyna of generally similar form to that of *D. albodorsata*: *D. setigera* (fig. 26) (Colombia) has a much wider neck to the scape, and the atria are only marginally visible, and there are curved bristles on the carapace; *D. propria* (fig. 29) (Colombia) has a wider scape, which projects posteriorly, and the atria are only marginally visible; *D. procera* (fig. 87) (Peru) has a rather narrow scape, with the small socket set anteriorly, and small atria; *D. grandicula* (fig. 99) (Peru) has the scape scarcely projecting posteriorly, and is a much larger species. The male is not known.

FEMALE: Total length 2.45. Carapace length 1.1; deep chestnut-brown. Lateral eyes small,

and posterior medians large and widely separated (fig. 18). Abdomen bright white dorsally and on sides, gray markings posteriorly; gray-black ventrally. Sternum orange, suffused with black on margins. Legs orange-yellow. Epigynum (fig. 15).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea discolor*, new species**

Figures 19–21

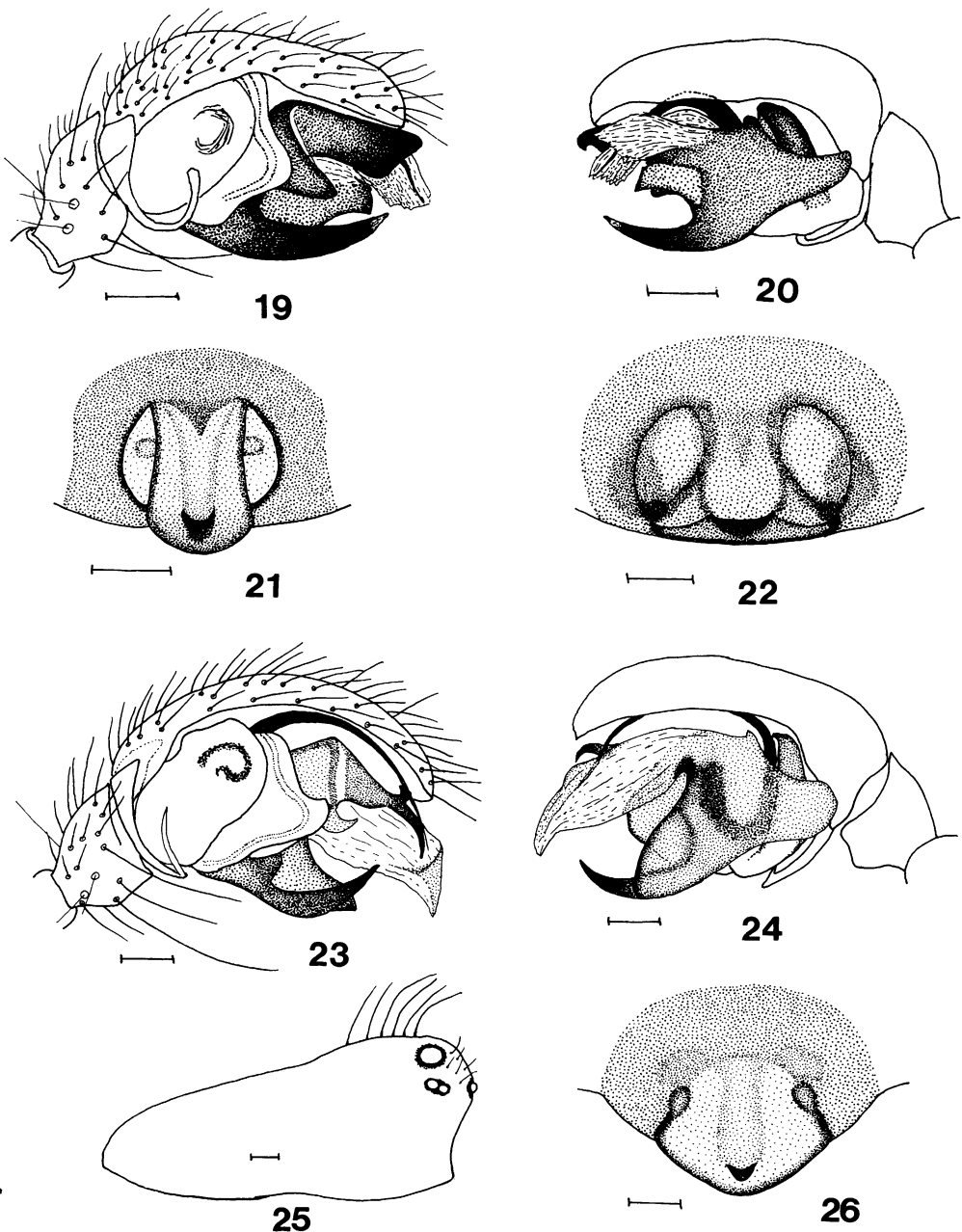
TYPES: Male holotype, with one male and seven female paratypes, from Paramo de La Rusia, Boyacá, Colombia, wooded area, 3600 m, Sept. 24, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning black and white.

DIAGNOSIS: The scape of the female epigynum (fig. 21) is fairly broad, with more or less parallel (but slightly concave) sides, and the lateral atria are fairly narrow. *D. amoena* (fig. 132) (Peru) and *D. fusca* (fig. 135) (Peru) have somewhat similar epigyna, but in these species the scape has slightly convex sides and a broader socket. The embolic division (fig. 20) of the male palp has a moderately blunt tail, and anteriorly carries a short, pointed intermediate apophysis between the upper membranous apophysis and the lower pointed apophysis. The suprategular apophysis (fig. 19) is stout, strongly sclerotized, and somewhat truncated distally, and the embolus is rather short. *D. silvae* (figs. 82, 83) (Peru), *D. elegans* (figs. 88, 89) (Peru), *D. truncata* (figs. 90, 91) (Peru), *D. luctuosa* (figs. 107, 108) (Peru), and *D. nivea* (figs. 153, 154) (Bolivia) have palps of a similar general form, but in each of these species there are clear differences in the form of the suprategular apophysis, and of the apophyses and tail of the embolic division.

FEMALE: Total length 3.55–3.75. Carapace length 1.3–1.35. Carapace deep chestnut-brown, slightly paler in foveal area. Chelicerae deep brown. Abdomen long ovate, black, with white stripe (sometimes broken) on each side. Sternum deep brown, slightly rugose. Legs pale brown, very long, with tibia 1 1/d ca. 18. Palp black. Epigynum (fig. 21).

MALE: Total length 3.2. Carapace length



Figs. 19–26. 19–21. *Dubiaranea discolor*. 22. *D. ornata*. 23–26. *D. setigera*. 19, 23. Male palp, ectal. 20, 24. Male palp, mesal. 21, 22, 26. Epigynum, ventral. 25. Male carapace, lateral. Scale lines 0.1 mm.

1.3. Color, etc. as female, except: abdomen long and cylindrical, black with two white blotches dorsally, and row of white blotches on sides. Palp (figs. 19, 20).

MATERIAL EXAMINED: COLOMBIA: *Boyacá*: the types above. Same locality, Sept. 22 and 24, 1985 (H. Sturm), 3 female paratypes (MCZ). Paramo Alto Belén, 3600 m, Sept.

22, 1985 (H. Sturm), 1 female paratype (MCZ). *Cundinamarca*: Cundinamarca Road, between Facatativa and Anolaima, 2800 m, Sept. 2, 1969 (P. and B. Wygodzinsky), 1 male paratype (AMNH). Paramo de Chingaza, border of forest, 3550 m, Sept. 13, 1985 (H. Sturm), 1 female, 1 male paratype (MCZ). Paramo de Chisaca, wooded area, 3720 m, Sept. 17, 1985 (H. Sturm), 1 female paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

Dubiaranea ornata, new species

Figure 22

TYPE: Female holotype from San Sebastian de Rabago, Sierra Nevada de Santa Maria, Magdalena, Colombia, beaten from dry leaves, 2000 m, April 1–10, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning adorned.

DIAGNOSIS: The female epigynum (fig. 22) has a broad neck, very broad posterior, and a wide socket. The following species have epigyna of somewhat similar form: *D. crebra* (figs. 13, 14) (Colombia, Ecuador, Peru and Venezuela) has the scape with a narrower neck and socket, and is a somewhat smaller species; *D. affinis* (fig. 66) (Ecuador) has the scape relatively narrower, with a narrower neck; *D. modica* (fig. 71) (Ecuador) has the scape with a narrower neck and socket, and projects more posteriorly; *D. morata* (fig. 73) (Ecuador) has the scape with a narrower neck and socket, and projects much more posteriorly; *D. similis* (fig. 171) (Chile) has the scape much more projecting posteriorly, and is a somewhat smaller species. The male is not known.

FEMALE: Total length 3.65. Carapace length 1.6–1.7; orange to orange-brown, with median dark stripe and dark margins. Abdomen dorsally gray, with variable pattern of blackish chevrons and lines, and numerous white spots; sides gray with white spots, ventrally gray-black. Sternum orange, suffused with brown or dark brown. Legs orange to orange-brown, with distal ends of tibiae, metatarsi and tarsi brown. Epigynum (fig. 22).

MATERIAL EXAMINED: COLOMBIA: *Magdalena*: the holotype. Same locality, under

stones, Apr. 3–10, 1968 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Colombia.

Dubiaranea setigera, new species

Figures 23–26

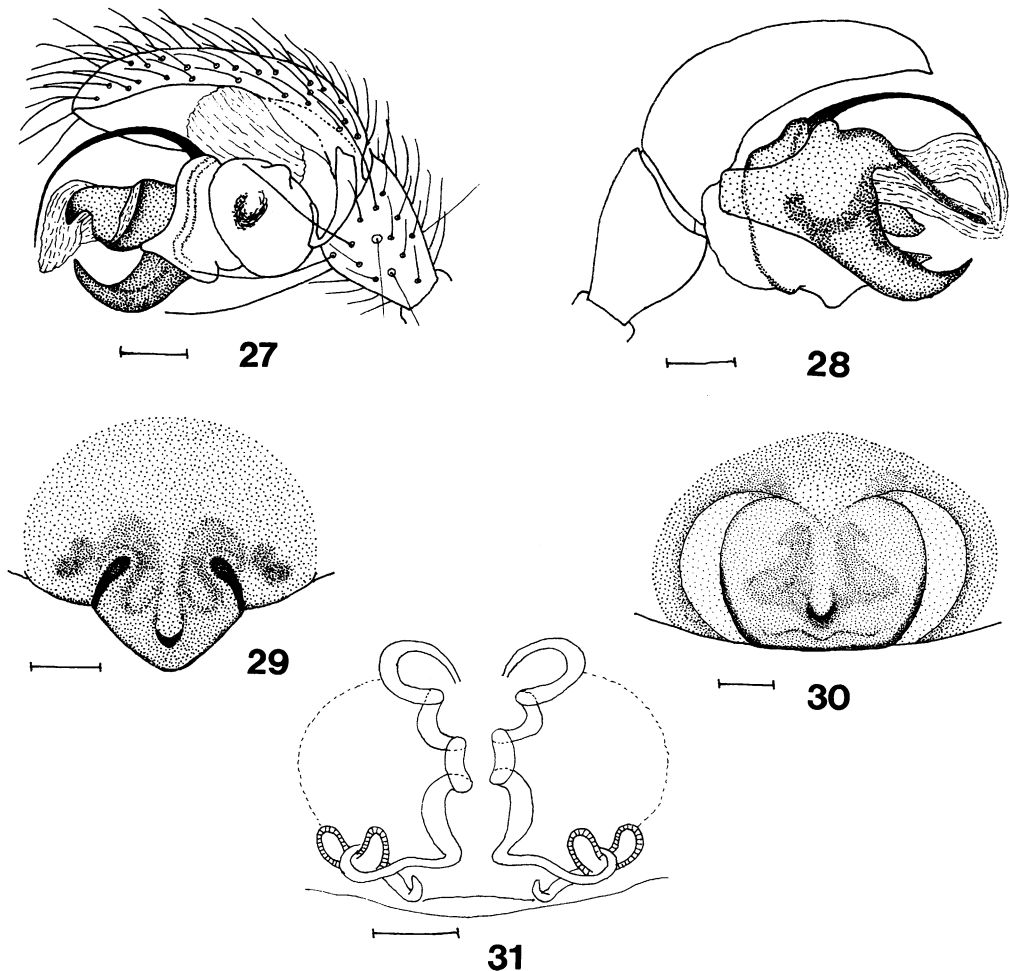
TYPES: Male holotype, with six female and two male paratypes, from Paramo de La Rusia, Boyacá, Colombia, wooded area, 3600 m, Sept. 24, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning bristly.

DIAGNOSIS: The scape of the female epigynum (fig. 26) is broad, with a broad neck; the atria are only marginally visible. The female has several curved bristles behind the eyes. The following species have epigyna of a generally similar form: *D. albidorsata* (fig. 15) (Colombia) has the scape narrower anteriorly, and lacks the carapace bristles; *D. propria* (fig. 29) (Colombia) has the scape relatively narrower, and lacks the carapace bristles; *D. procera* (fig. 87) (Peru) has a rather narrow scape, with the small socket set anteriorly; *D. grandicula* (fig. 99) (Peru) has the scape scarcely projecting posteriorly, and is a much larger species. The male palp has a fairly short embolus. The suprategular apophysis (fig. 23) is narrowed distally, terminating in a long and a short point; the embolic division has the tail short and rounded (fig. 24), and the lower anterior apophysis curves upward to a sclerotized point. The male has numerous long, curved bristles behind the eyes (fig. 25).

FEMALE: Total length 3.45–3.55. Carapace length 1.4–1.55; pale yellow to pale orange, with broad median and marginal blackish stripes; there are several fairly long curved bristles behind eyes. Abdomen grayish or brownish black, with variable pattern of black spots and broken white stripes. Sternum orange suffused with black, to almost black. Legs pale yellow, yellow-brown or orange. Epigynum (fig. 26).

MALE: Total length 3.2. Carapace length 1.55. Color as female. Bristles on carapace more highly developed (fig. 25). Palp (figs. 23, 24).



Figs. 27–31. 27–29. *Dubiaranea propria*. 30, 31. *D. concors*. 27. Male palp, left, ectal. 28. Male palp, left, mesal. 29, 30. Epigynum, ventral. 31. Epigynum, internal. Scale lines 0.1 mm.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea propria*, new species**
 Figures 27–29

TYPES: Male holotype, with three female paratypes, from Paramo Purace, Cauca, Colombia, beating foliage, 3000 m, Oct. 20, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning characteristic of.

DIAGNOSIS: The scape of the female epigynum (fig. 29) has a wide neck, and projects well posteriorly. The following species have

epigyna of generally similar form: *D. alborosata* (fig. 15) (Colombia) has the scape narrower anteriorly, and less projecting posteriorly; *D. setigera* (fig. 26) (Colombia) has the atrium broader, and there are curved bristles on the carapace; *D. procera* (fig. 87) (Peru) has a rather narrow scape, with the small socket set anteriorly; *D. grandicula* (fig. 99) (Peru) has the scape scarcely projecting posteriorly, and is a much larger species. The embolus of the male palp is moderately short, and the embolic division has a short, rather truncated tail (fig. 28). The paracymbium is slender, and the supratergular apophysis is broad anteriorly, terminating in a blunt, downward-pointing hook (fig. 27). This hook is stouter than in *D. columbiana* (fig. 34), less

sharply pointed than in *D. atrolineata* (fig. 36) (Colombia), and shorter and differently shaped than in *D. fagicola* (fig. 167) (Chile).

FEMALE: Total length 3.0–3.75. Carapace length 1.25–1.45; yellow-brown to orange, with blackish median stripe and margins. Abdomen black dorsally, with gray chevrons, sides black with white blotches; gray ventrally. Sternum orange, suffused with gray. Legs yellow to orange, with weak brown annulations. Epigynum (fig. 29).

MALE: Total length 3.1. Carapace length 1.55. Color as female. Carapace with bristles like *D. setigera*, but less developed. Palp (figs. 27, 28).

MATERIAL EXAMINED: Only the types.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea concors*, new species**

Figures 30, 31

TYPES: Female holotype, with one female paratype, from Monte Redondo, Parque Nacional Chingaza, Cundinamarca, Colombia, on trees, 3200 m, July 28, 1986 (C. Valderrama and C. Sampes); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning harmonious.

DIAGNOSIS: The scape of the female epigynum (fig. 30) is broad and rounded. The epigyna of *D. amoena* (fig. 132) (Peru) and *D. fusca* (fig. 135) (Peru) are of a generally similar form, but with much narrower scapes. The male is not known.

FEMALE: Total length 4.6–5.2. Carapace length 1.9; pale yellow to yellow, with median and lateral dark brown stripes, sometimes weak. Abdomen long ovate, gray, with dorsal folium outlined with bold broken white lateral margins. Sternum orange, sometimes heavily suffused with brown. Legs pale yellow, weakly annulated with pale brown. Epigynum (figs. 30, 31).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea usitata*, new species**

Figures 32, 33

TYPE: Male holotype from 10 km east of Leticia, Finca Meremberg, Huila, Colombia,

2300 m, Mar. 1979 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning usual.

DIAGNOSIS: The embolus of the male palp is relatively long, and the embolic division has the tail short and truncated, and the lower apophysis bifid distally (fig. 33). The suprategular apophysis is rather slender, with an upturned point distally (fig. 32), and the paracymbium is unusually stout. *D. pullata* (fig. 123) (Peru), *D. furva* (fig. 139) (Peru), and *D. brevis* (fig. 151) (Bolivia) have the suprategular apophysis terminating in an upturned point, but these species are distinguished by the differing shapes of the embolic division, particularly of the lower anterior apophysis and of the tail; *D. brevis* is also smaller. The female is not known.

MALE: Total length 3.55. Carapace length 1.45; orange, darker anteriorly, with faint dusky markings and margins. Abdomen long and cylindrical, dorsally pale gray, with row of small white patches on sides, and gray-black ventrally. Sternum orange, suffused with dark brown. Legs orange. Palp (figs. 32, 33).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea colombiana*, new species**

Figures 34, 35

TYPE: Male holotype from near Manizales, Caldas, Colombia, 2300 m, July 1977 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is an adjective referring to the country of origin.

DIAGNOSIS: The embolus of the male palp is short, and the tail of the embolic division is fairly long and blunt-ended (fig. 35). The suprategular apophysis (fig. 34) is distally slender, terminating in a small, downward-pointing hook, which is also present on the suprategula of *D. propria* (fig. 27) (Colombia), *D. atrolineata* (fig. 36) (Colombia) and *D. fagicola* (fig. 167) (Chile); however, these species are distinguishable by the differing shapes of the suprategulum and the embolic division. The female is not known.

MALE: Total length 3.65. Carapace length 1.65; pale orange, with faint darker margins. Abdomen dorsally silvery white, sides with irregular blackish streaks, brownish black

ventrally. Sternum orange, weakly suffused with brown. Legs pale orange. Palp (figs. 34, 35).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Dubiaranea atrolineata, new species

Figures 36, 37

TYPE: Male holotype from Paramo Purace, Huila, Colombia, 11,000 ft, Mar. 1976 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning with black lines.

DIAGNOSIS: The embolus of the male palp (figs. 36, 37) is moderately long, and the supratregular apophysis is distally broad, but terminates in a narrow, downward-pointing hook. This hook is smaller than in *D. propria* (fig. 27) (Colombia), *D. colombiana* (fig. 34) (Colombia) or *D. fagicola* (fig. 167) (Chile). The female is not known.

MALE: Total length 2.9. Carapace length 1.35; orange, with median blackish stripe. Abdomen whitish gray, with dorsally black blotches and a few white spots; a narrow black line runs along each side. Sternum pale orange. Legs orange, with metatarsi and tarsi suffused weakly with brown. Palp (figs. 36, 37).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Dubiaranea silvicola, new species

Figure 38

TYPE: Female holotype from Paramo de La Rusia, Boyacá, Colombia, wooded area, 3600 m, Sept. 24, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin noun in apposition, meaning a dweller in woods.

DIAGNOSIS: The female epigynum (fig. 38) has a narrow median scape and broad lateral atria. Epigyna of generally similar form are present in *D. veterana* (fig. 69) (Ecuador), which has a scape projecting more posteriorly and somewhat differently shaped atria, and in *D. fulvilineata* (fig. 74) (Peru), which has a narrower but larger scape projecting more posteriorly. The male is not known.

FEMALE: Total length 3.2. Carapace length 1.3; orange, with weak brownish markings and margins. Abdomen gray-brown, with a dorsal median dark stripe and many white blotches. Sternum deep brown. Legs yellow-brown, with metatarsi and tarsi slightly darker. Palp with tibia and tarsus brown. Epigynum (fig. 38).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Dubiaranea gloriosa, new species

Figure 39

TYPE: Female holotype from Paramo de Sanson, Antioquia, Colombia, 3100 m, June 1, 1986 (M. A. Serna); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning glorious.

DIAGNOSIS: The female epigynum (fig. 39) has the scape poorly defined anteriorly, but distinctly projecting posteriorly. *D. habilis* (fig. 56) (Ecuador) and *D. lepida* (fig. 128) (Peru) have somewhat similar epigyna, but in these species the scape is longer and the atria are differently shaped. The male is not known.

FEMALE: Total length 4.0. Carapace length 1.55; pale yellow, with blackish median and lateral stripes. Abdomen fairly long and cylindrical; gray, with dorsally black chevrons and white spots, and with black line along each side. Sternum black. Legs pale yellow, weakly suffused with brown on metatarsi and tarsi. Epigynum (fig. 39).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

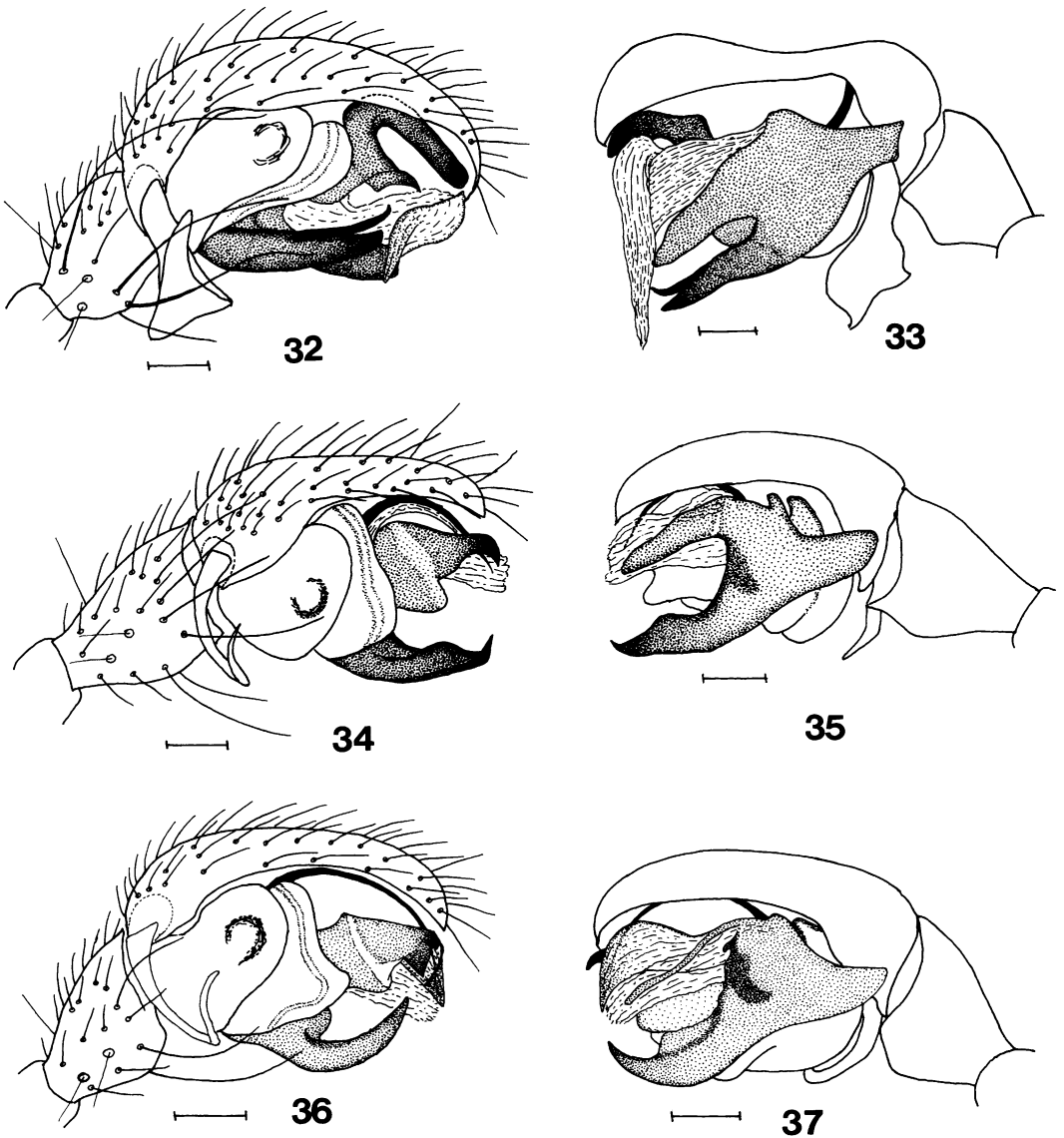
Dubiaranea variegata, new species

Figures 40, 41

TYPES: Female holotype, with one female paratype, from Medellin Valley, Antioquia, Colombia, 1700–1900 m, 1972 (A. B. Schnable); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning variegated.

DIAGNOSIS: The female epigynum (figs. 40, 41) has the scape poorly defined anteriorly, but somewhat projecting posteriorly; the atrial region is fairly clearly defined. *D. atripalpis* (fig. 7) and *D. varia* (fig. 137) have epigyna of a generally similar form, but the atria in



Figs. 32–37. 32, 33. *Dubiaranea usitata*. 34, 35. *D. colombiana*. 36, 37. *D. atrolineata*. 32, 35, 36. Male palp, ectal. 33, 35, 37. Male palp, mesal. Scale lines 0.1 mm.

these species are differently shaped. The male is not known.

FEMALE: Total length 5.0–5.2. Carapace length 2.0; pale orange with dusky margins. Abdomen pale gray, with dorsally white spots and weak black markings. Sternum orange, suffused with brown. Legs orange. Epigynum (figs. 40, 41).

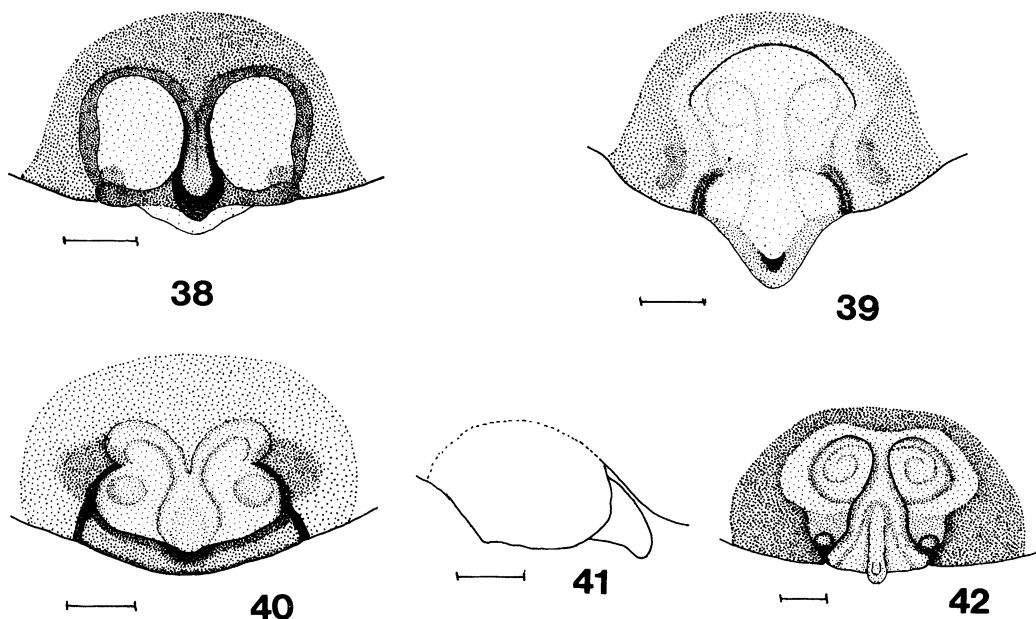
MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Dubiaranea gilva, new species

Figures 43–46

TYPES: Male holotype, with one female paratype, from above Habana, Valle, Colombia, in one web, 2200 m, Apr. 16, 1969 (? collector); deposited in MCZ.



Figs. 38-42. Epigyna. 38. *Dubiaranea silvicola*, ventral. 39. *D. gloriosa*, ventral. 40. *D. variegata*, ventral. 41. *D. variegata*, lateral. 42. *D. solita*, ventral. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning pale yellow.

DIAGNOSIS: The scape of the female epigynum (figs. 44, 46) is fairly narrow anteriorly, broadened posteriorly, with a small socket; there are large atria anteriorly. Epigyna of rather similar form are present in *D. melanocephala* (fig. 125) (Peru) and *D. insignita* (fig. 146) (Bolivia), but in those species the scape projects more posteriorly and the atria are differently shaped. The embolic division of the male palp has the tail short and rounded, the intermediate apophysis serrated anteriorly, and the lower apophysis with a narrow point which is translucent distally (fig. 45). The embolus is long, and the suprategular apophysis (fig. 43) is distally broad and rounded. *D. aureola* (figs. 113, 115) (Peru), *D. insignita* (figs. 144, 145) (Bolivia) and *D. saucia* (figs. 161, 162) (Brazil) have palps of a generally similar form, but these species are distinguishable by the differing shapes of the intermediate apophysis of the embolic division, and of the suprategular apophysis.

FEMALE: Total length 3.1. Carapace length 1.25; yellow, with dusky markings. Abdomen

gray-black, dorsally yellow-white, with a few weak chevrons posteriorly. Sternum orange, suffused with black. Legs pale yellow to orange-yellow. Epigynum (figs. 44, 46).

MALE: Total length 3.9. Carapace length 1.65. Color as female except carapace orange. Palp (figs. 43, 45).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

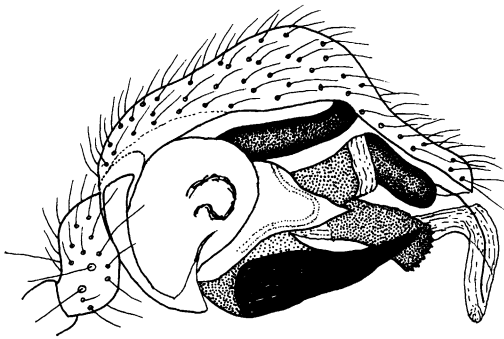
***Dubiaranea distracta*, new species**

Figures 47, 48

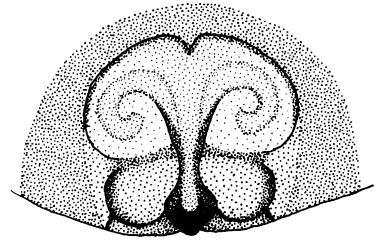
TYPE: Male holotype from Socorpa Mission, Sierra de Perija, César, Colombia, 1300-1400 m, Aug. 10-22, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning broken up.

DIAGNOSIS: The embolic division of the male palp has the tail fairly long, rounded posteriorly (fig. 48), and the suprategular apophysis is distally clawlike. The paracym-



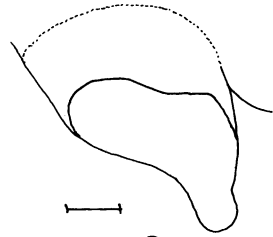
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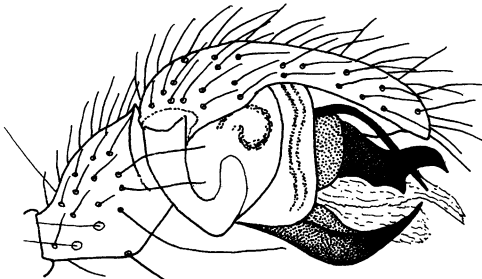
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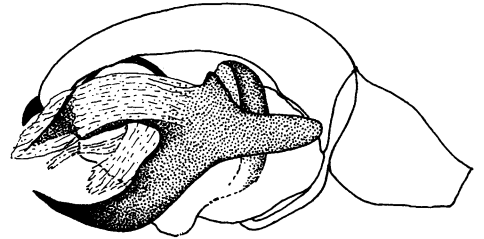
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48

Figs. 43–48. 43–46. *Dubiaranea gilva*. 47, 48. *D. distracta*. 43, 47. Male palp, ectal. 44. Epigynum, ventral. 45, 48. Male palp, mesal. 46. Epigynum, lateral. Scale lines 0.1 mm

bium is moderately large, and the embolus is short. The female is not known.

MALE: Abdomen missing. Carapace length 1.55; orange with blackish median stripe dorsally. Sternum orange. Legs orange. Palp (figs. 47, 48).

MATERIAL EXAMINED: Only the holotype.

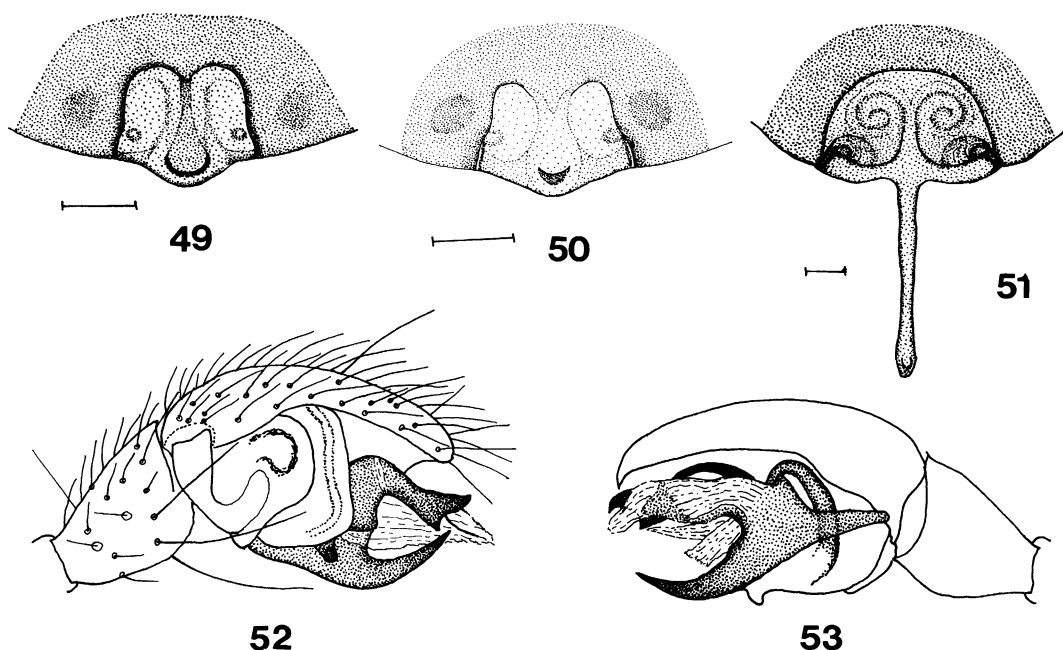
DISTRIBUTION: Known only from Colombia.

Dubiaranea solita, new species

Figure 42

TYPE: Female holotype from Pichinde, near Cali, Valle, Colombia, 1700–1800 m, Nov. 10–11, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning usual.



Figs. 49–53. 49, 50. *Dubiaranea versicolor*. 51–53. *D. vetusta*. 49, 50, 51. Epigynum, ventral. 52. Male palp, ectal. 53. Male palp, mesal. Scale lines 0.1 mm.

DIAGNOSIS: The female epigynum (fig. 42) has the scape narrow anteriorly, but broadened posteriorly, with a tiny socket; the atrial region is large. The epigynum of *D. gilva* (fig. 44) (Colombia) bears a superficial resemblance to that of *D. solita*, but the scape is differently shaped. The male is not known.

FEMALE: Total length 3.35. Carapace length 1.45; orange-brown, with dusky markings and margins. Abdomen whitish gray dorsally, with black lines and chevrons; gray on sides, black ventrally. Sternum orange, heavily suffused with dark brown. Legs orange, weakly annulated with brown. Epigynum (fig. 42).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Dubiaranea versicolor*, new species**

Figures 49, 50

TYPES: Female holotype, with one female paratype, from Sebundoy, Putumayo, Colombia, 2200 m, May 1963 (M. L. Bristol); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning of various colors.

DIAGNOSIS: The scape of the female epigy-

num (figs. 49, 50) is relatively narrow, somewhat widened posteriorly, with fairly large atrial regions. The following species have epigyna of somewhat similar form: *D. insulsa* (fig. 72) (Ecuador)—slightly broader, more highly sclerotized epigynum, with the scape more projecting posteriorly; *D. abundans* (fig. 103) (Peru)—very similar epigynum, but a rather smaller species; *D. argentata* (fig. 148) (Bolivia)—scape relatively shorter and the atria wider, a rather smaller species. The male is not known.

FEMALE: Total length 3.2–3.3. Carapace length 1.2–1.3; orange, suffused with brown from fovea to eyes, with blackish margins. Abdomen—dorsally with folium outlined in black, sides gray with glistening white spots, ventrally dark brown to black. Sternum orange, suffused with brown or black. Legs orange to orange-brown, with sometimes weak brown annulations. Epigynum (figs. 49, 50).

MATERIAL EXAMINED: COLOMBIA: *Putumayo*: the types above. ECUADOR: Bano-si Runtun, 2300 m, Dec. 1938 (W. Clarke-Macintyre), 1 female paratype (AMNH). PERU: *La Libertad*: Otuzco, Apr. 6, 1967 (A. F. Archer), 1 female paratype (AMNH).

Conservidayo R., Aug. 1911 (Yale Peruvian Expedition), 1 female paratype (MCZ).

DISTRIBUTION: Colombia, Ecuador, and Peru.

Dubiaranea vetusta, new species

Figures 51–53

TYPE: Male holotype, with two female paratypes, from Tungurahua, Ecuador, 2600 m, May 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning old, ancient.

DIAGNOSIS: The female epigynum (fig. 51) has a long, narrow scape posteriorly. Long scapes are also present in *D. lugubris* (fig. 58) (Ecuador), *D. aureola* (fig. 114) (Peru), and *D. longa* (fig. 116) (Peru), but these species are distinguishable by the differently shaped atrial regions. The male is diagnosed by the palp; the tail of the embolic division is fairly long and slender (fig. 53), and the suprategular apophysis is weakly bifid distally (fig. 52). The paracymbium is fairly stout, and the embolus is short. Somewhat similar suprategular apophyses are present in *D. persimilis* (figs. 61, 62) (Ecuador), which is a smaller species having a broad tail to the embolic division, and in *D. fruticola* (figs. 80, 81) (Peru), which is a somewhat smaller species with a somewhat broader tail to the embolic division. It is possible, however, that *D. fruticola* will prove to be identical with *D. vetusta*.

FEMALE: Total length 4.55–5.0. Carapace length 1.95–2.0; brown. Abdomen gray dorsally and on sides, with glistening white spots and a few black markings; black ventrally. Sternum orange, suffused with black. Legs brown to orange-brown. Epigynum (fig. 51).

MALE: Abdomen missing. Carapace length 1.8. Color as female. Palp (figs. 52, 53).

MATERIAL EXAMINED: Only the types.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea mirabilis, new species

Figures 54, 55

TYPE: Male holotype from Banos, Tungurahua, Ecuador, 2600 m, May 6, 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning strange.

DIAGNOSIS: The embolic division of the male palp has a short, blunt tail (fig. 55), and

the lower apophysis has two points distally (fig. 54). The suprategular apophysis is broad anteriorly, with a small, downward-pointing hook distally; the embolus is long, and the paracymbium is slender (fig. 54). The female is not known, though this specimen may prove to be a female of *D. habilis* or *D. lugubris*.

MALE: Total length 3.0. Carapace length 1.55; orange-brown. Abdomen gray with a few white spots and blackish margins dorsally. Sternum orange, suffused with black. Legs brown. Palp (figs. 54, 55) slightly expanded.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea habilis, new species

Figures 56, 57

TYPE: Female holotype from Banos, Tungurahua, Ecuador, 2600 m, May 6, 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning suitable.

DIAGNOSIS: The scape of the female epigynum (figs. 56, 57) is moderately broad, and projects well posteriorly. Somewhat similar scapes are present in *D. gloriosa* (fig. 39) (Colombia), in which the scape is shorter, and the atrial region differently shaped, and in *D. lepida* (fig. 128) (Peru), in which the scape is broader, and the atrial region different. The male is not known.

FEMALE: Total length 3.25. Carapace length 1.3; deep brown. Abdomen black. Sternum deep brown, slightly rugose. Legs deep brown. Epigynum (figs. 56, 57). The colors may have darkened as the result of desiccation at some stage.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

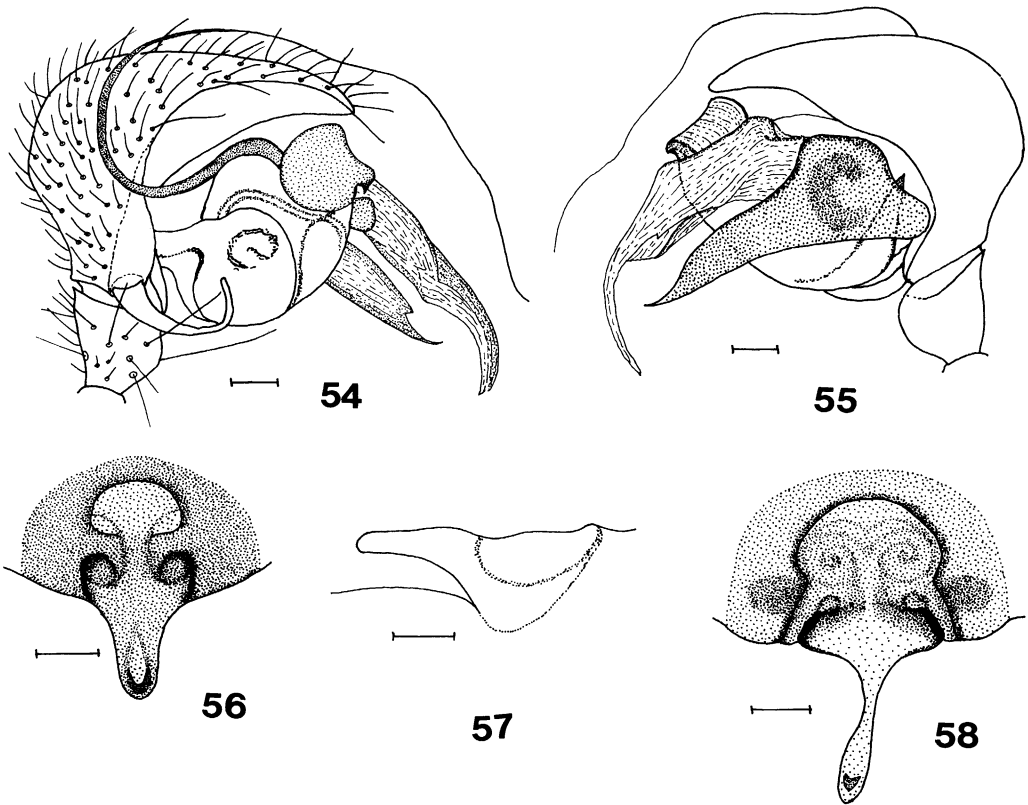
Dubiaranea lugubris, new species

Figure 58

TYPE: Female holotype from Tungurahua, Ecuador, 2600 m, May 6, 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning mournful.

DIAGNOSIS: The female epigynum (fig. 58) has a long, narrow scape, somewhat broadened posteriorly. Long scapes are also present in *D. vetusta* (fig. 51) (Ecuador), *D. aureola*



Figs. 54–58. 54, 55. *Dubiaranea mirabilis*. 56, 57. *D. habilis*. 58. *D. lugubris*. 54. Male palp, ectal. 55. Male palp, mesal. 56, 58. Epigynum, ventral. 57. Epigynum, lateral. Scale lines 0.1 mm.

(fig. 114) (Peru), and *D. longa* (fig. 116) (Peru), but these species are distinguishable by the differently shaped atrial regions. The male is not known.

FEMALE: Total length 4.0. Carapace length 1.55; orange. Abdomen gray, with stout black chevrons and white spots dorsally. Sternum orange, suffused with brown. Legs orange; most segments missing. Epigynum (fig. 58).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea teres, new species

Figures 59, 60

TYPE: Male holotype from Apuela, Otavalo, Ecuador, 2200 m, Sept. 8–9, 1977 (L. E. Peña); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning rounded, referring to the shape of the embolic division.

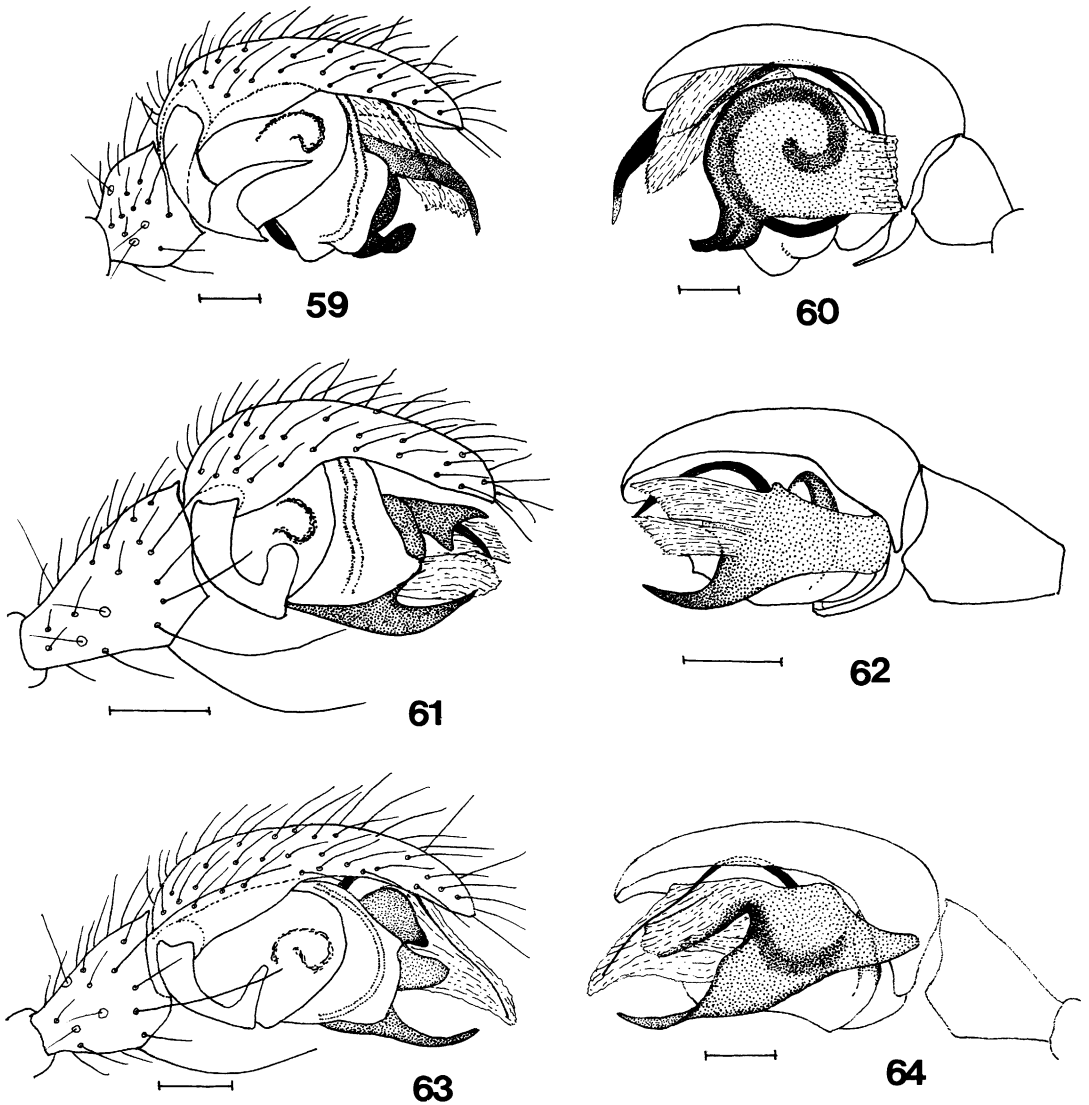
DIAGNOSIS: The embolic division of the

male palp is rounded, with a broad, translucent, truncated tail, and with the lower apophysis short and somewhat blunt distally (fig. 60). The suprategular apophysis is long and slender, curved downward, with a translucent tip (figs. 59, 60). The embolus is short, and the paracymbium fairly stout. The palp is somewhat similar to that of *D. margaritata* (figs. 1, 2) (Venezuela), but in that species the embolic division is much less rounded and the lower apophysis is much longer. The female is not known.

MALE: Total length 2.75. Carapace length 1.2; orange-brown, with dusky markings and margins. Abdomen white dorsally and on sides, with a few black chevrons dorsally; black ventrally. Sternum orange, heavily suffused with black. Legs orange-yellow. Palp (figs. 59, 60).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.



Figs. 59–64. 59, 60. *Dubiaranea teres*. 61, 62. *D. persimilis*. 63, 64. *D. congruens*. 59, 61, 63. Male palp, ectal. 60, 62, 64. Male palp, mesal. Scale lines 0.1 mm.

***Dubiaranea persimilis*, new species**

Figures 61, 62

TYPE: Male holotype from Balzapampa, Ecuador, 700 m, June 1938 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning very similar.

DIAGNOSIS: The tail of the embolic division of the male palp is broad and rather truncated (fig. 62), the suprategular apophysis is weakly

bifid distally (fig. 61), the paracymbium is relatively stout, and the embolus is short. Somewhat similar suprategular apophyses are present in *D. vetusta* (figs. 52, 53) (Ecuador), which is a larger species and has a more slender tail to the embolic division, and in *D. fruticola* (figs. 80, 81) (Peru), which has a somewhat broader tail to the embolic division. The female is not known.

MALE: Total length 2.55. Carapace length

1.2; deep brown. Chelicerae with small boss anteriorly. Abdomen long, cylindrical, black. Sternum brown, suffused with black on margins; rugose. Legs brown. Palp (figs. 61, 62).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea congruens, new species

Figures 63, 64

TYPES: Male holotype, with one male paratype, from Apuela, Otavalo, Ecuador, 2200 m, Sept. 8–9, 1977 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning appropriate.

DIAGNOSIS: The embolic division of the male palp has a rather short tail, and the lower apophysis is slender and slightly twisted (fig. 64). The suprategular apophysis is short, with a blunt point distally (fig. 63); the embolus is moderately long. The female is not known.

MALE: Total length 3.2–4.3. Carapace length 1.55–1.9; orange with median black stripe and black margins. Abdomen gray dorsally and on sides, with a few black chevrons and numerous bright white spots dorsally; black ventrally. Sternum orange, suffused with black. Legs yellow to orange-brown, weakly annulated with brown. Palp (figs. 63, 64).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea proxima, new species

Figure 65

TYPE: Female holotype from Tungurahua, Ecuador, 2600 m, May 6, 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning most similar.

DIAGNOSIS: The scape of the female epigynum (fig. 65) is more or less triangular in shape, and is narrower posteriorly than the width of the atrium. The male is not known.

FEMALE: Total length 2.8. Carapace length 1.1; orange. Abdomen gray, with large white patches dorsally and on sides. Sternum orange, suffused with black. Legs orange-brown. Epigynum (fig. 65).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea affinis, new species

Figure 66

TYPE: Female holotype from Sebundoi, Ecuador, Sept. 11–15, 1977 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The scape of the female epigynum (fig. 66) has a fairly narrow neck, and is broadened posteriorly. The following species have epigyna of the same general form as in *D. affinis*: *D. crebra* (figs. 13, 14) (Colombia, Ecuador, Peru, and Venezuela) has a somewhat broader scape, and is a smaller species; *D. ornata* (fig. 22) (Colombia) has a scape with a much wider neck and socket; *D. modica* (fig. 71) (Ecuador) has the scape broader posteriorly and a wider socket, and is a smaller species; *D. morata* (fig. 73) (Ecuador) has the scape broader posteriorly, and much more projecting posteriorly than in *D. affinis*; and *D. similis* (fig. 171) (Chile) has the scape with a broader neck and socket, and more projecting posteriorly. The male is not known.

FEMALE: Total length 4.1. Carapace length 1.9–2.0; orange to orange-brown, with sometimes a broad median dark stripe. Abdomen brown to gray, with row of glistening white patches on each side, paler dorsally, with weak median black stripe; long and cylindrical. Sternum orange. Legs pale orange to orange, with tibiae and metatarsi suffused distally with brown. Epigynum (fig. 66); atria more or less filled with translucent substance.

MATERIAL EXAMINED: ECUADOR: Sebundoi, the holotype. Tungurahua: Banos, 2600 m, May 6, 1939 (W. Clarke-Macintyre), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Ecuador.

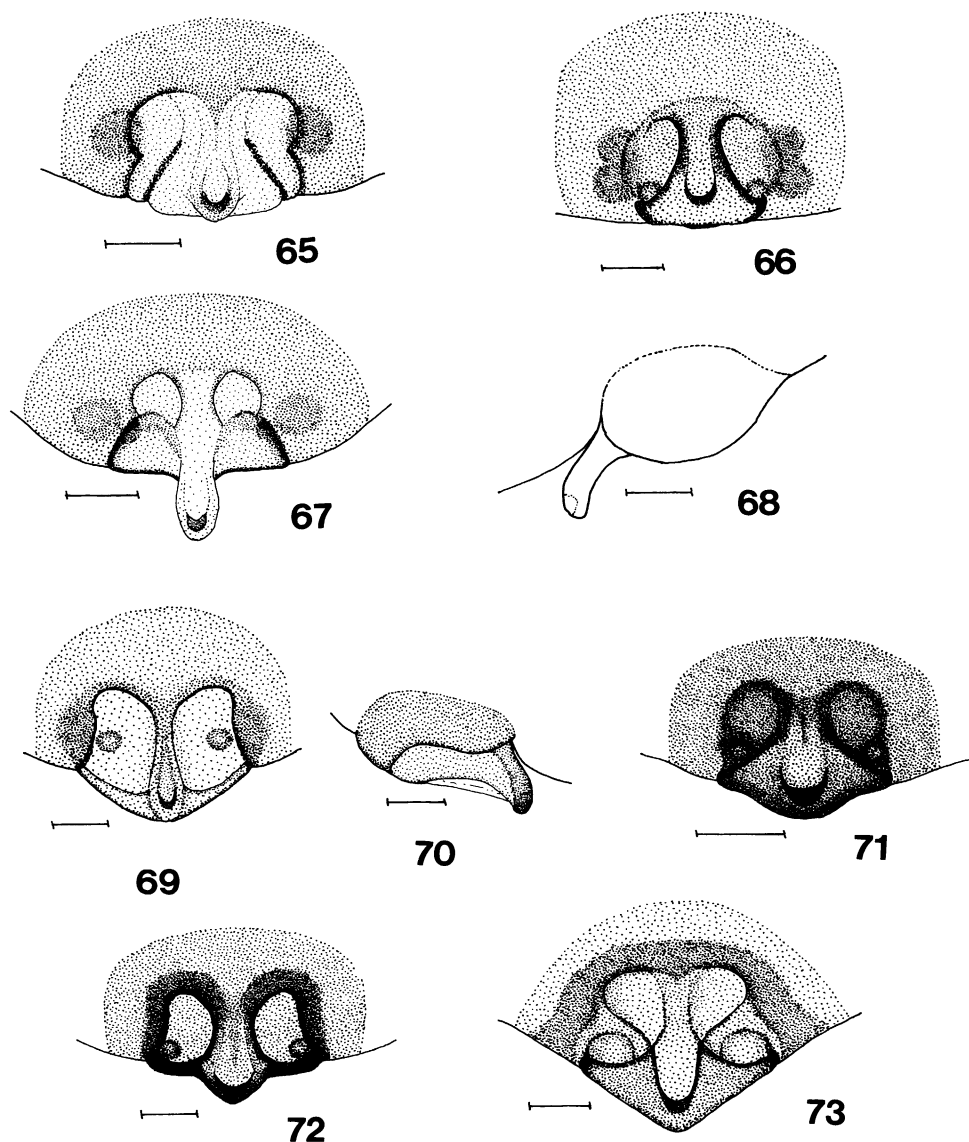
Dubiaranea orba, new species

Figures 67, 68

TYPE: Female holotype from Yocuahacui, Ecuador (no date, no collector); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning orphaned.

DIAGNOSIS: The scape of the female epigy-



Figs. 65–73. Epigyna. 65. *Dubiaranea proxima*, ventral. 66. *D. affinis*, ventral. 67. *D. orba*, ventral. 68. *D. orba*, lateral. 69. *D. veterana*, ventral. 70. *D. veterana*, lateral. 71. *D. modica*, ventral. 72. *D. insulsa*, ventral. 73. *D. morata*, ventral. Scale lines 0.1 mm.

num (figs. 67, 68) is fairly narrow, slightly widened posteriorly, and projects posteriorly. *D. remota* (fig. 174) (Argentina) and *D. subtilis* (Keys.) (Peru) (Millidge, 1985) have somewhat similar epigyna, but with the atria different in shape. The male is not known.

FEMALE: Total length 3.8. Carapace length 1.55; orange, with median and lateral brown

stripes. Abdomen dorsally whitish, with black markings and chevrons, black on sides and ventrally. Sternum orange, suffused with dark brown. Legs mainly absent; orange, possibly annulated with brown. Epigynum (figs. 67, 68).

MATERIAL EXAMINED: Only the types.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea morata, new species

Figure 73

TYPES: Female holotype, with one female paratype, from Sebundoi, Ecuador, 2600 m, Sept. 11–15, 1977 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning characteristic.

DIAGNOSIS: The scape of the female epigynum (fig. 73) is narrow anteriorly, broad and projecting posteriorly, with a moderately wide socket. The following species have epigyna of the same general form as in *D. morata*: scape in *D. crebra* (figs. 13, 14) (Colombia, Ecuador, Peru, and Venezuela) narrower and less projecting posteriorly; in *D. ornata* (fig. 22) (Colombia) with a wider neck and socket; in *D. modica* (fig. 71) (Ecuador) somewhat less projecting, and the atria are somewhat differently shaped; and in *D. similis* (fig. 171) (Chile) with a broader neck and socket. The male is not known.

FEMALE: Total length 3.2–3.5. Carapace length 1.35; yellow-brown, with median dark stripe. Abdomen dorsally brown, with three longitudinal rows of glistening white spots; black ventrally and on sides. Sternum orange, heavily suffused with dark brown. Legs yellow-brown. Epigynum (fig. 73).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea veterana, new species

Figures 69, 70

TYPE: Female holotype from Banos, Tunurahua, Ecuador, 1850 m, Nov. 1, 1937 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning old.

DIAGNOSIS: The female epigynum (figs. 69, 70) has a narrow median scape and fairly broad lateral atria. Epigyna of generally similar form are present in *D. silvicola* (fig. 38) (Colombia), which has the scape less projecting posteriorly, and the atria rather differently shaped, and in *D. fulvolineata* (fig. 74) (Peru), which has a somewhat narrower scape projecting more posteriorly. The male is not known.

FEMALE: Total length 3.9. Carapace length

1.55; brown, with median dark stripe and blackish margins. Abdomen gray, with blackish markings and chevrons dorsally. Sternum orange, suffused with brown. Legs brown. Epigynum (figs. 69, 70).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea modica, new species

Figure 71

TYPES: Female holotype, with one female paratype, from Sebundoi, Ecuador, 2600 m, Sept. 11–15, 1977 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning ordinary.

DIAGNOSIS: The scape of the female epigynum (fig. 71) has a relatively narrow neck, and is broad and slightly projecting posteriorly, with a wide socket. The epigynum is close to that of *D. turbidula* (Keys.) (Millidge, 1985). The following species have epigyna of the same general form as in *D. modica*: in *D. crebra* (figs. 13, 14) (Colombia, Ecuador, Peru, Venezuela) scape is less projecting posteriorly and the socket smaller; in *D. ornata* (fig. 22) (Colombia) scape has a wider neck and larger atria; in *D. morata* (fig. 73) (Ecuador) scape has a narrower neck, projecting more posteriorly; and in *D. similis* (fig. 171) (Chile) scape has a wider neck and socket. The male is not known.

FEMALE: Total length 3.3–3.45. Carapace length 1.25; orange-brown, suffused with brown, to chestnut-brown. Abdomen long ovate, dorsally with white folium; black ventrally. Sternum orange, suffused with brown, to dark brown. Legs pale orange to orange. Palpal tibia and tarsus brown. Epigynum (fig. 71).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea insulsa, new species

Figure 72

TYPE: Female holotype from Runtun, Banos, Ecuador, 2300 m, Dec. 1938 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dull, insipid.

DIAGNOSIS: The scape of the female epigy-

num (fig. 72) is moderately narrow posteriorly, somewhat projecting. The following species have epigyna of a generally similar form: in *D. media* (fig. 10) (Venezuela) with a broader neck and socket; in *D. versicolor* (figs. 49, 50) (Colombia) and *D. abundans* (fig. 103) (Peru) marginally narrower and less pigmented, and the scape less projecting posteriorly; and in *D. albolineata* (figs. 141, 142) (Peru) with differently shaped atria and a narrower socket. The male is not known.

FEMALE: Total length 3.8. Carapace length 1.4; orange-brown, suffused with black anteriorly. Abdomen black. Sternum deep orange-brown. Legs orange-brown; most segments missing. Epigynum (fig. 72); atria more or less filled with translucent substance.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Dubiaranea fulvolineata, new species

Figures 74, 75, 77

TYPE: Female holotype from between Porcello and Olinos, Cajamarca, Peru, ravines at 1400 m, May 19, 1967 (A. F. Archer); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with brown stripes.

DIAGNOSIS: The female epigynum (figs. 74, 75, 77), has a narrow median scape and fairly broad lateral atria. Epigyna of generally similar form are present in *D. silvicola* (fig. 38) (Colombia), which is a somewhat smaller species, with a broader scape projecting less posteriorly, and in *D. veterana* (figs. 69, 70) (Ecuador), which has a rather less projecting scape, and the atria slightly different in shape. The male is not known.

FEMALE: Total length 3.9–4.2. Carapace length 1.65–1.8; pale orange, with median and lateral brown stripes (sometimes weak). Abdomen pale gray dorsally and on sides, with variable pattern of black markings and white spots; ventrally gray-brown. Sternum orange, suffused with brown or gray. Legs orange-brown. Epigynum (figs. 74, 75, 77).

MATERIAL EXAMINED: PERU: *Cajamarca:* the holotype. Zapalache-Carmen Trail, 2250 m, July 6, 1980 (L. J. Barkeley), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Peru.

Dubiaranea mediocris, new species

Figures 76, 78

TYPE: Female holotype from Cuzco, Peru, June 7–8, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning moderate, ordinary.

DIAGNOSIS: The female epigynum (fig. 78) has a more or less straight-sided scape, fairly narrow anteriorly, broader posteriorly, with a very small socket; the lateral atria are large. *D. gregalis* (fig. 79) (Peru) has a similar epigynum, with the scape less broadened posteriorly, but is a larger species. The male is not known.

FEMALE: Total length 4.8. Carapace length 1.65; orange, with brown median stripe. Abdomen gray, speckled with white dorsally; sides with black markings. Sternum orange, suffused with black. Legs orange. Epigynum (figs. 76, 78); the atria are blocked with a hard translucent substance.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Dubiaranea gregalis, new species

Figure 79

TYPES: Female holotype, with two female paratypes, from Puerta del Monte, Parque Nacional Abiseo, San Martin, Peru, 3300 m, Mar. 14, 1988 (D. Silva and A. Salirrosas); deposited in MHNSM.

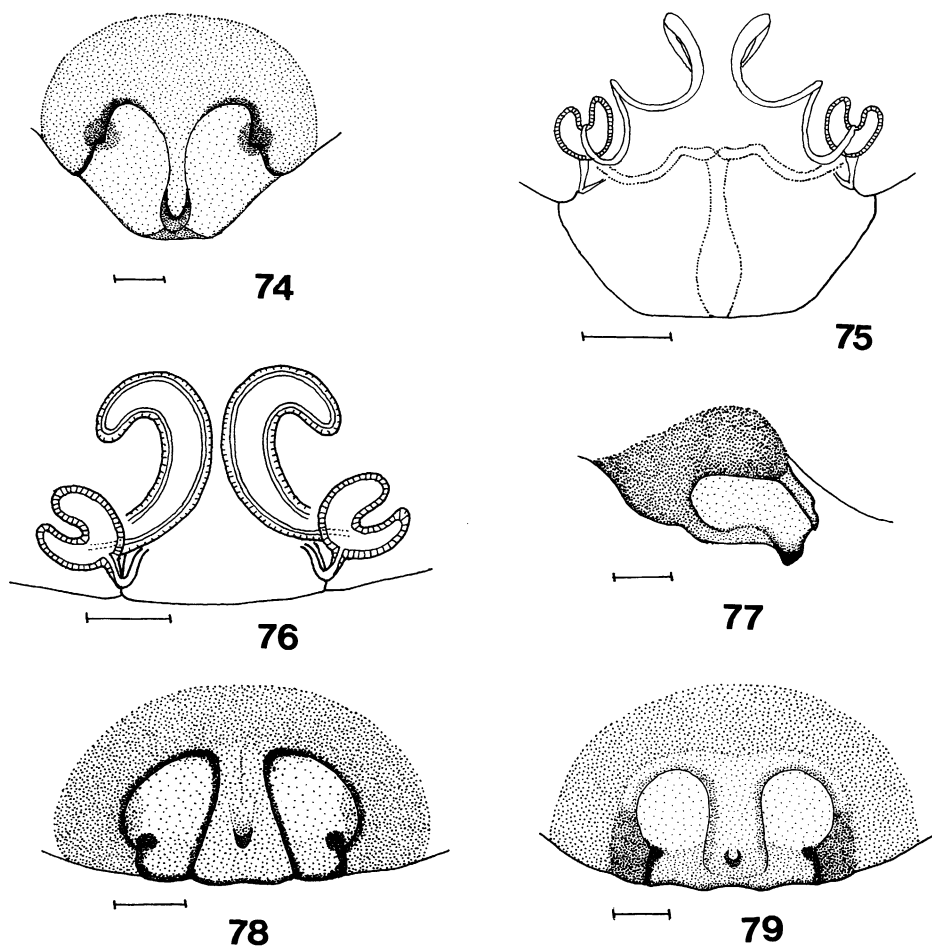
ETYMOLOGY: The specific name is a Latin adjective meaning of the same group.

DIAGNOSIS: The female epigynum (fig. 79) has the scape more or less straight-sided, only slightly widened posteriorly, with a very small socket; the lateral atria are large. *D. mediocris* (fig. 78) (Peru) has a similar epigynum, with the scape more broadened posteriorly, but is a smaller species. The male is not known.

FEMALE: Total length 6.0. Carapace length 2.1; pale brown, with weak brown median stripe and margins. Abdomen long ovate, gray-brown, with bright silvery stripes dorsally. Sternum yellow, suffused with brown. Legs pale yellow, with metatarsi and tarsi suffused with brown. Epigynum (fig. 79).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.



Figs. 74–79. Epigyna. 74, 75, 77. *Lubiaraea fulvolineata*, ventral, internal, and lateral. 76, 78. *D. mediocris*, internal and ventral. 79. *D. gregalis*, ventral. Scale lines 0.1 mm

***Dubiaraea fruticola*, new species**

Figures 80, 81

TYPE: Male holotype from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun, in apposition, meaning dweller in bushes.

DIAGNOSIS: The embolic division of the male palp has a fairly broad tail, rounded posteriorly (fig. 81), and the supra- and paracymbia is bifid distally (fig. 80). The embolus is short, and the paracymbium is fairly stout. *D. vetusta* (figs. 52, 53) (Ecuador) has a closely similar palp, but with the tail of the embolic division rather narrower; it is pos-

sible that *D. fruticola* will prove to be identical with *D. vetusta*. *D. persimilis* (figs. 61, 62) (Ecuador) has a somewhat similar supra- and paracymbia, but this is a smaller species, and the tail of the embolic division is broad. The female is not known.

MALE: Total length 4.45. Carapace length 1.5; orange. Abdomen long and cylindrical, gray, with dorsally two longitudinal rows of silvery white blotches. Sternum orange. Legs orange, with metatarsi and tarsi suffused with brown. Palp (figs. 80, 81).

MATERIAL EXAMINED: PERU: *Cuzco*: the holotype. *San Martin*: Puerta del Monte, Parque Nacional Abiseo, 3300 m, Mar. 14, 1988 (D. Silva and A. Salirrosas), 1 male paratype (MHNSM).

DISTRIBUTION: Known only from Peru.

Dubiaranea silvae, new species

Figures 82, 83, 85

TYPES: Male holotype, with three female paratypes, from Pampo de Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 7, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is in honor of Ms. D. Silva, who has collected many new Peruvian linyphiids.

DIAGNOSIS: The scape of the female epigynum (fig. 85) is fairly broad anteriorly, broader posteriorly, of characteristic shape, with a tiny socket and rather small lateral atria. The embolic division of the male palp (fig. 83) has a rounded tail, and a narrow intermediate apophysis with two points distally. The suprategular apophysis (fig. 82) is stout, strongly sclerotized, and broadened distally; the paracymbium is slender, and the embolus short. *D. discolor* (figs. 19, 20) (Colombia), *D. elegans* (figs. 88, 89) (Peru), *D. truncata* (figs. 90, 91) (Peru), *D. luctuosa* (figs. 107, 108) (Peru), and *D. nivea* (figs. 153, 154) (Bolivia) have palps of similar form, but in each of these species there are clear differences in the form of the suprategular apophysis and of the embolic division (particularly of the intermediate and lower apophyses).

FEMALE: Total length 2.45–3.0. Carapace length 1.05–1.15; brown, suffused to variable extent with dark brown. Abdomen gray-brown, with darker folium dorsally, and with variable white spots dorsally and on sides. Sternum orange, heavily suffused with black, to almost black. Legs yellow to pale brown, with metatarsi and tarsi suffused with deeper brown. Epigynum (fig. 85).

MALE: Total length 3.3. Carapace length 1.35. Color as female except chelicerae deep brown, abdomen long and cylindrical. Palp (figs. 82, 83).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea procera, new species

Figures 84, 86, 87

TYPES: Male holotype, with one female and one male paratype, from Puerta del Monte, Parque Nacional Abiseo, San Martin, Peru, 3300 m, Mar. 13, 1988 (D. Silva and A. Salirrosas); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning long, referring to the palpal tibia.

DIAGNOSIS: The female epigynum (fig. 87) has a small scape carrying a small socket rather anteriorly; the atria are small. The following species have epigyna of generally similar form to that of *D. procera*, but in each case the scape is significantly wider: *D. albodorata* (fig. 15) (Colombia), *D. setigera* (fig. 26) (Colombia), *D. propria* (fig. 29) (Colombia), and *D. grandicula* (fig. 99) (Peru). The embolic division of the male palp (fig. 86) has a fairly long, blunt-ended tail, and a median apophysis with three tiny teeth distally. The suprategular apophysis has a hooklike apophysis distally, and a small tooth on the lower margin. The embolus is short, and the paracymbium stout.

FEMALE: Total length 3.55. Carapace length 1.4; yellow, with broad brown margins. Abdomen long ovate, dorsally black with two broad, brilliant, white longitudinal stripes; brown ventrally. Sternum deep brown to almost black. Legs pale yellow to pale brown. Epigynum (fig. 87).

MALE: Total length 3.9–4.0. Carapace length 1.6–1.65. Color as female, except carapace dark brown, slightly paler on fovea; abdomen long and cylindrical, brown to black, with two narrow white stripes, sometimes broken. Palp (figs. 84, 86); tibia long, cymbium with several strong spines mesally.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

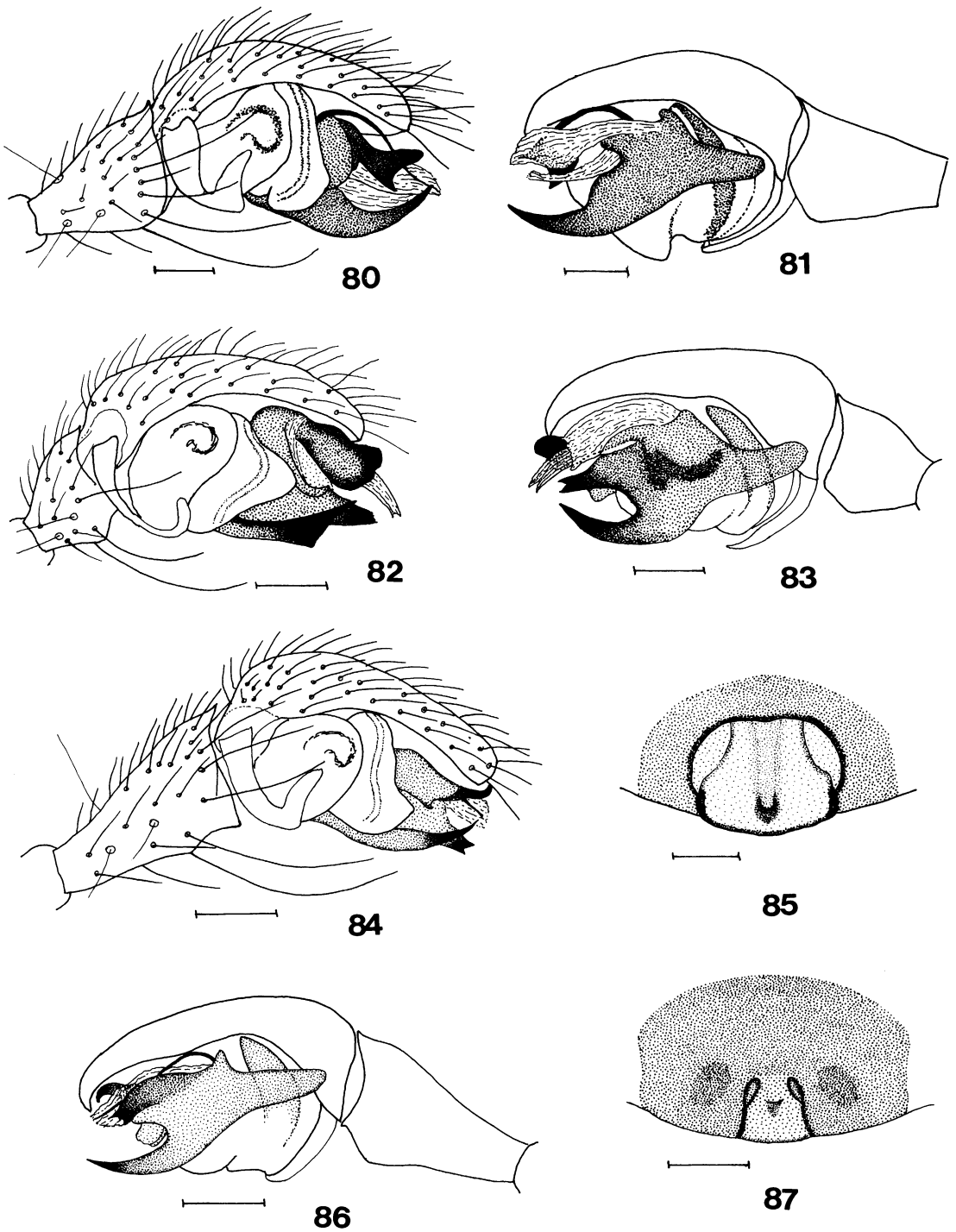
Dubiaranea elegans, new species

Figures 88, 89

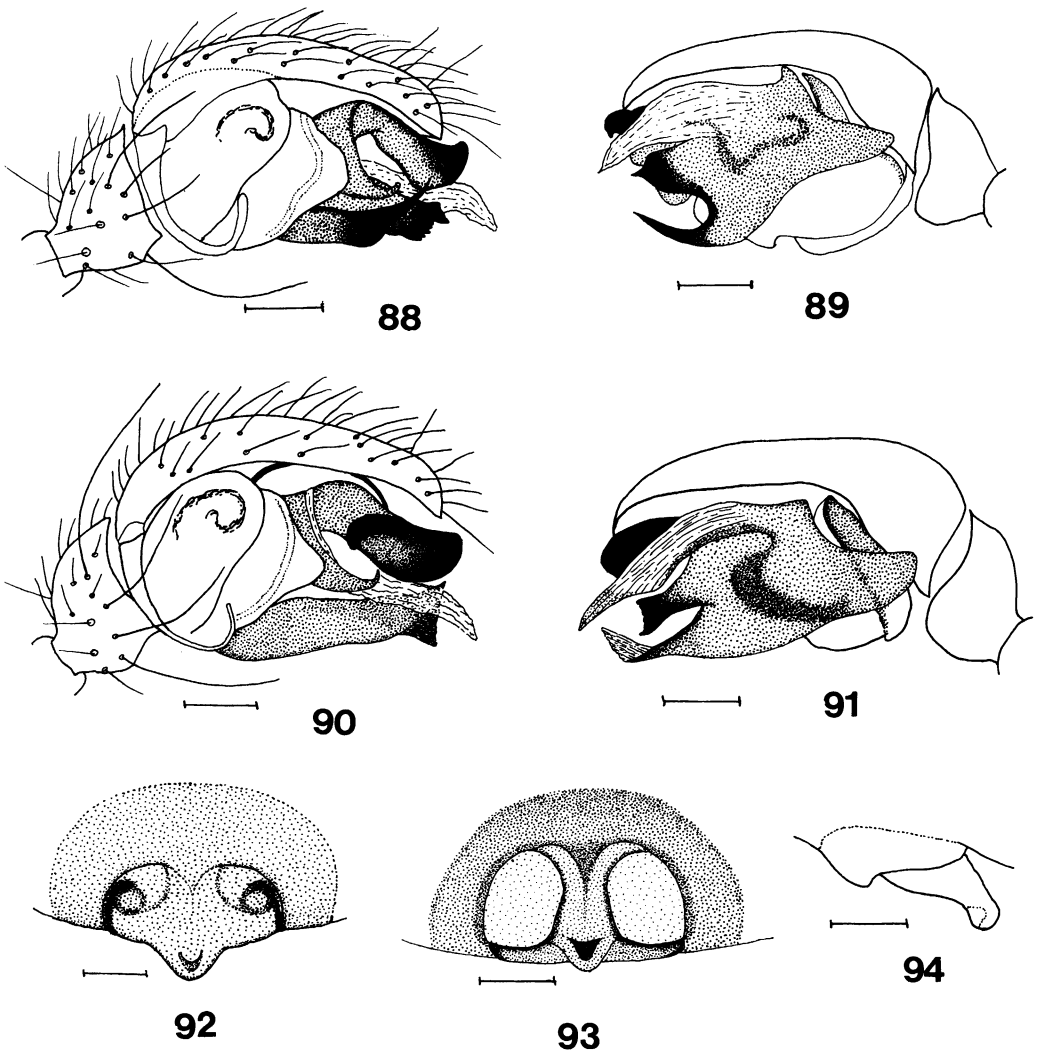
TYPES: Male holotype, with one male paratype, from Puerta del Monte, Parque Nacional Abiseo, San Martin, Peru, 3300 m, Mar. 13, 1988 (D. Silva and A. Salirrosas); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning fine, neat.

DIAGNOSIS: The embolic division of the male palp (fig. 89) has a fairly short tail, and the intermediate apophysis is broad, with a narrow point distally. The suprategular apophysis (fig. 88) is stout, strongly sclerotized, and slightly turned up distally; the paracymbium is slender, and the embolus



Figs. 80–87. 80, 81. *Dubiaranea fruticola*. 82, 83, 85. *D. silvae*. 84, 86, 87. *D. procera*. 80, 82, 84. Male palp, ectal. 81, 83, 86. Male palp, mesal. 85, 87. Epigynum, ventral. Scale lines 0.1 mm.



Figs. 88–94. 88, 89. *Dubiaranea elegans*. 90, 91, 93, 94. *D. truncata*. 92. *D. rufula*. 88, 90. Male palp, ectal. 89, 91. Male palp, mesal. 92, 93. Epigynum, ventral. 94. Epigynum, lateral. Scale lines 0.1 mm.

short. *D. discolor* (figs. 19, 20) (Colombia), *D. silvae* (figs. 82, 83) (Peru), *D. truncata* (figs. 90, 91) (Peru), *D. luctuosa* (figs. 107, 108) (Peru), and *D. nivea* (figs. 153, 154) (Bolivia) have palps of similar form, but in each there are clear differences in the form of the suprategular apophysis and of the embolic division (particularly of the intermediate and lower apophyses). The female is not known.

MALE: Total length 3.0. Carapace length 1.25–1.3; brown to deep brown, slightly paler around fovea. Abdomen long and cylindrical, dorsally brownish black with white markings,

sides with white stripe, black ventrally. Sternum dark brown to almost black. Legs pale yellow to pale brown. Palp (figs. 88, 89).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

***Dubiaranea rufula*, new species**

Figure 92

TYPE: Female holotype from above ruins, Machu Picchu, Cuzco, Peru, beaten from vegetation, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning reddish.

DIAGNOSIS: The female is diagnosed by the reddish color, and by the epigynum (fig. 92); the scape has a short neck, and is broad and projecting posteriorly; the atria are small. The male is not known.

FEMALE: Total length 3.9. Carapace length 1.75; reddish orange. Abdomen pinkish gray. Sternum reddish orange. Legs reddish orange, shading to brown on metatarsi and tarsi. Epigynum (fig. 92).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

***Dubiaranea truncata*, new species**

Figures 90, 91, 93, 94

TYPES: Male holotype, with female paratype, from Yalen La Libertad, Peru, 2850 m, Mar. 26, 1988 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective, referring to the truncated apophysis of the embolic division.

DIAGNOSIS: The scape of the female epigynum (figs. 93, 94) is relatively narrow anteriorly, broadened posteriorly, the socket is relatively small, the atria are large. *D. abstracta* (fig. 100) (Peru) has a similar epigynum, but with a wider socket, and is somewhat larger in size. *D. luctuosa* (fig. 109) (Peru), *D. decora* (fig. 111) (Peru), and *D. difficilis* (fig. 173) (Argentina) have epigyna of the same general form, but with the scape wider anteriorly. The embolic division (fig. 91) of the male palp has a fairly short tail, the intermediate apophysis is truncated and weakly serrated distally, and the lower apophysis is slightly twisted. The suprategular apophysis is stout, strongly sclerotized, and carries a small lateral apophysis (fig. 90); the paracymbium is slender, and the embolus is moderately short. *D. discolor* (figs. 19, 20) (Colombia), *D. silvae* (figs. 82, 83) (Peru), *D. elegans* (figs. 88, 89) (Peru), *D. luctuosa* (figs. 107, 108) (Peru), and *D. nivea* (figs. 153, 154) (Bolivia) have palps of similar form, but in each of these species there are clear differences in the form of the suprategular apophysis and of the embolic division (particularly of the intermediate and lower apophyses).

FEMALE: Total length 2.8. Carapace length 1.2; orange, with faint black marking in fo-

vea. Abdomen fairly long ovate; dorsally gray, with broken black stripe and numerous white blotches, sides with white blotches, ventrally black. Sternum orange. Legs pale yellow to yellow, with tarsi slightly darker. Epigynum (figs. 93, 94).

MALE: Total length 2.9. Carapace length 1.2. Color as female except carapace dark brown, sternum almost black. Palp (figs. 90, 91); cymbium almost black.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

***Dubiaranea grandicula*, new species**

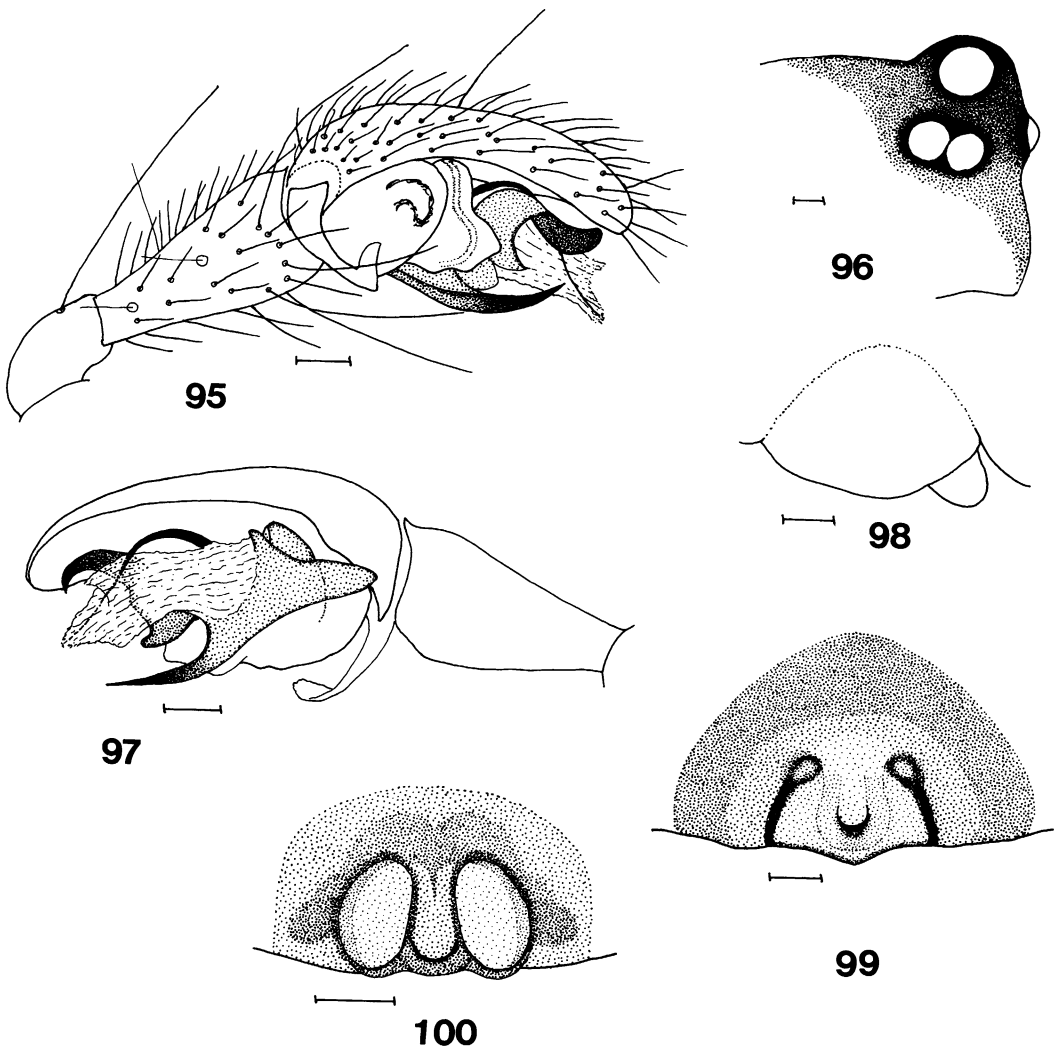
Figures 95–99

TYPES: Male holotype, with one male and 26 female paratypes, from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 7 and 12, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning fairly large.

DIAGNOSIS: The scape of the female epigynum (figs. 98, 99) is fairly broad anteriorly, widened posteriorly, with only small areas of the atria visible. *D. albidorsata* (fig. 15) (Colombia), *D. setigera* (fig. 26) (Colombia), and *D. propria* (fig. 29) (Colombia) have epigyna of a generally similar form, but *D. grandicula* is a much larger species. The male palp has a long tibia (fig. 95). The embolic division has a fairly long, bluntly pointed tail (fig. 97), and the suprategular apophysis is distally curved upward; the paracymbium is moderately stout, and the embolus is short. *D. crebra* (fig. 11) and *D. insulanus* (fig. 163) (Chile) have somewhat similar suprategular apophyses, but *D. grandicula* is a much larger species.

FEMALE: Total length 7.5–9.0. Carapace length 3.1–3.3; pale yellow with dark brown median stripe, widened anteriorly, dark brown margins and black ocular area. Eyes with posterior medians large, on distinct hump (fig. 96). Abdomen brownish gray, with blackish folium marked with white spots (variable) dorsally; sides with black spots. Sternum brown, with dark brown markings. Legs pale brown to brown, heavily annulated and spotted with dark brown or black. Palp yellow, with tarsus dark brown. Epigynum (figs. 98, 99).



Figs. 95–100. 95–99. *Dubiaranea grandicula*. 100. *D. abjecta*. 95. Male palp, ectal. 96. Eyes, female. 97. Male palp, mesal. 98. Epigynum, lateral. 99, 100. Epigynum, ventral. Scale lines 0.1 mm.

MALE: Total length 5.0–5.1. Carapace length 2.2–2.45. Color as female. Abdomen long and cylindrical. Palp (figs. 95, 97); tibia long.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea abjecta, new species

Figure 100

TYPES: Female holotype, with one female paratype, from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–

2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning prosaic.

DIAGNOSIS: The scape of the female epigynum (fig. 100) is relatively narrow anteriorly, broadened posteriorly, the socket is rather wide, and the atria are large. *D. truncata* (fig. 93) (Peru) has a similar epigynum, but with a narrower socket; it is somewhat smaller in size. *D. luctuosa* (fig. 109) (Peru), *D. decora* (fig. 111) (Peru), and *D. difficilis* (fig. 175) (Argentina) have epigyna of the same general

form, but with the scape wider anteriorly. The male is not known.

FEMALE: Total length 4.25–4.4. Carapace length 1.65; orange-brown to orange, with weak median blackish stripe and blackish sides. Abdomen gray-brown, with weak black chevrons dorsally, and numerous silvery white spots, particularly on sides. Sternum orange, margins suffused with brown. Legs orange, with distal ends of metatarsi and tarsi suffused with brown. Epigynum (fig. 100); the atria are more or less filled with a translucent substance.

MATERIAL EXAMINED: PERU: *Cuzco*: the types above. ECUADOR: *Banos*: 1800–3000 m, Apr. 1939 (W. Clarke-Macintyre), 1 female paratype.

DISTRIBUTION: Known from Peru and Ecuador.

***Dubiaranea abundans*, new species**

Figures 101–103

TYPES: Male holotype, with eight female paratypes, from Leguna La Eupidrada, Manachaqui, La Libertad, Peru, 3800 m, Mar. 1, 1988 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning plentiful.

DIAGNOSIS: The scape of the female epigynum (fig. 103) is lightly sclerotized, fairly narrow, widened posteriorly, with well-defined lateral atrial regions. The following species have epigyna of similar form: *D. versicolor* (figs. 49, 50) (Colombia), scape slightly broader posteriorly with a wider socket; *D. insulsa* (fig. 72) (Ecuador), slightly broader, more highly sclerotized epigynum, with scape more projecting posteriorly; and the smaller *D. argentata* (fig. 148) (Argentina), with scape relatively shorter and atria wider. The embolic division of the male palp has a fairly blunt-pointed tail (fig. 102), and the lower apophysis tapers to a sharp point distally. The suprategular apophysis (fig. 101) is large, with a hook distally; the paracymbium is slender, and the embolus long.

FEMALE: Total length 1.75–2.3. Carapace length 0.85–0.95; yellow-brown, with dusky markings and margins. Abdomen with variable dorsal pattern, sometimes with a folium and numerous white markings, sometimes bright white; brown to black ventrally and on sides. Sternum orange, suffused to variable

degree with brown; slightly rugose. Legs yellow to yellow-brown, suffused with, or weakly annulated with, brown. Epigynum (fig. 103).

MALE: Total length 2.1. Carapace length 0.9. Color as female except carapace darker brown; abdomen black, with bright white stripe on each side. Palp (figs. 101, 102); cymbium black.

MATERIAL EXAMINED: PERU: *La Libertad*: the types above. Manachaqui, 3600 m, Mar. 22, 1988 (D. Silva), 1 female paratype (MHNSM). *San Martin*: Pampa del Cuy, Parque Nacional Abiseo, 3550 m, Mar. 15, 1988 (D. Silva et al.), 12 female paratypes (MHNSM).

DISTRIBUTION: Known only from Peru.

***Dubiaranea bacata*, new species**

Figures 104–106

TYPES: Male holotype, with 20 female and 2 male paratypes, from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 2–10, 1988 (D. Silva et al.); deposited in MHNSM.

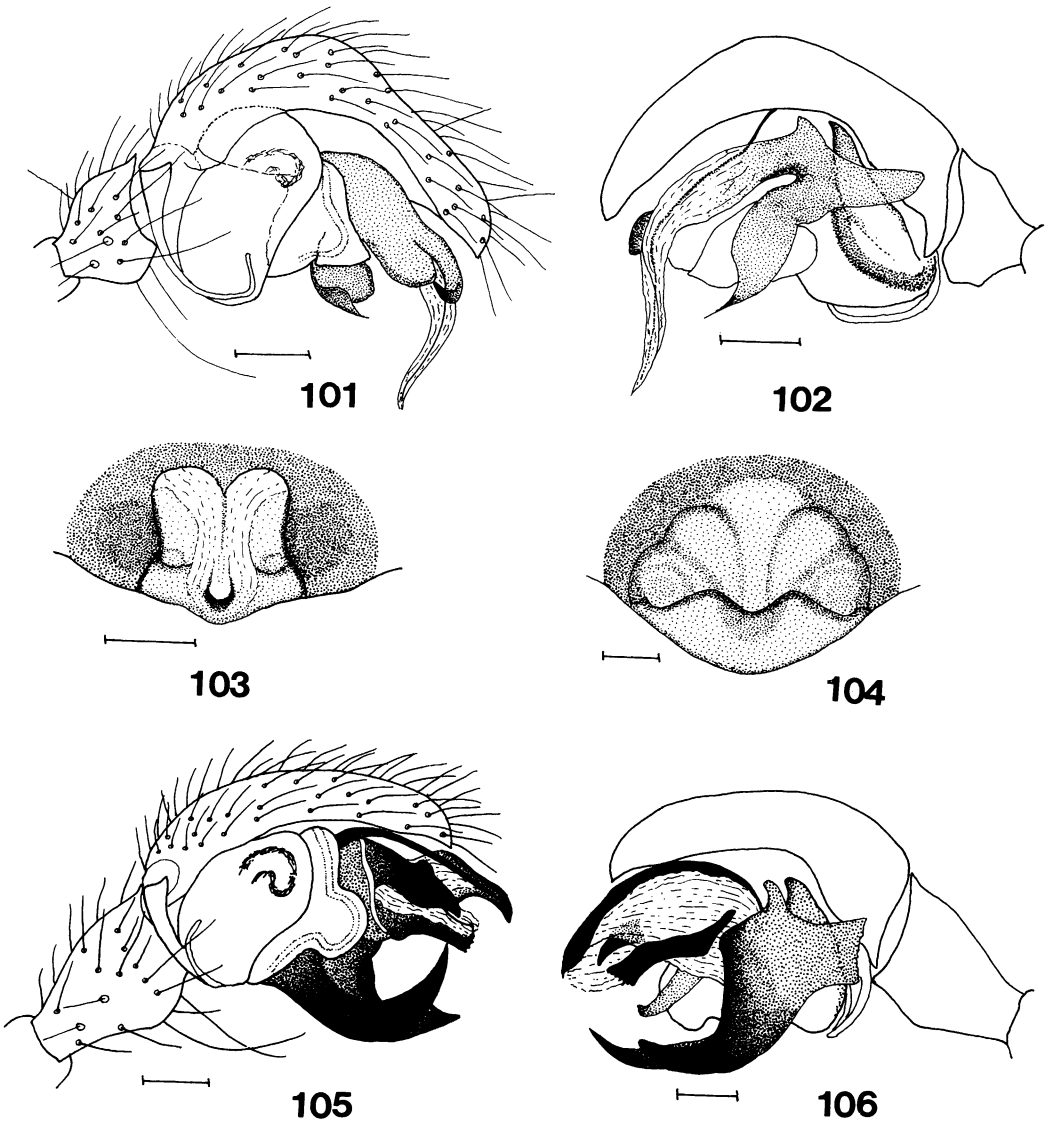
ETYMOLOGY: The specific name is a Latin adjective meaning bedecked with pearls.

DIAGNOSIS: The female epigynum (fig. 104) has a characteristic, rather shell-like appearance, with the scape and atria not clearly defined and a broad socket hidden by the projecting posterior of the scape. The embolic division (fig. 106) of the male palp has a truncated tail; the intermediate apophysis is strongly sclerotized, truncated, and weakly serrated distally, and the lower apophysis has two strongly sclerotized pointed arms. The suprategular apophysis is strongly sclerotized, pointed distally; the paracymbium is slender, and the embolus fairly stout and short.

FEMALE: Total length 3.1–3.75. Carapace length 1.55–1.75; pale yellow to yellow-brown, with median black stripe and blackish margins. Abdomen with variable pattern of black markings and white spots dorsally and on sides, gray to black ventrally. Sternum brown to almost black. Legs yellow to pale brown. Epigynum (fig. 104).

MALE: Total length 3.4–3.55. Carapace length 1.65. Color as female. Palp (figs. 105, 106).

MATERIAL EXAMINED: PERU: *San Martin*: the types above. Type locality, Mar. 6, 1988



Figs. 101–106. 101–103. *Dubiaranea abundans*. 104–106. *D. bacata*. 101, 105. Male palp, ectal. 102, 106. Male palp, mesal. 103, 104. Epigynum, ventral. Scale lines 0.1 mm.

(D. Silva et al.), 14 female, 2 male paratypes (MHNSM); and Mar. 10, 1988 (D. Silva et al.), 9 female, 1 male paratypes (MHNSM). Puerta del Monte, Parque Nacional Abiseo, 3300 m, Mar. 14, 1988 (D. Silva and A. Salirrosas), 1 female paratype (MHNSM).

DISTRIBUTION: Known only from Peru.

***Dubiaranea luctuosa*, new species**

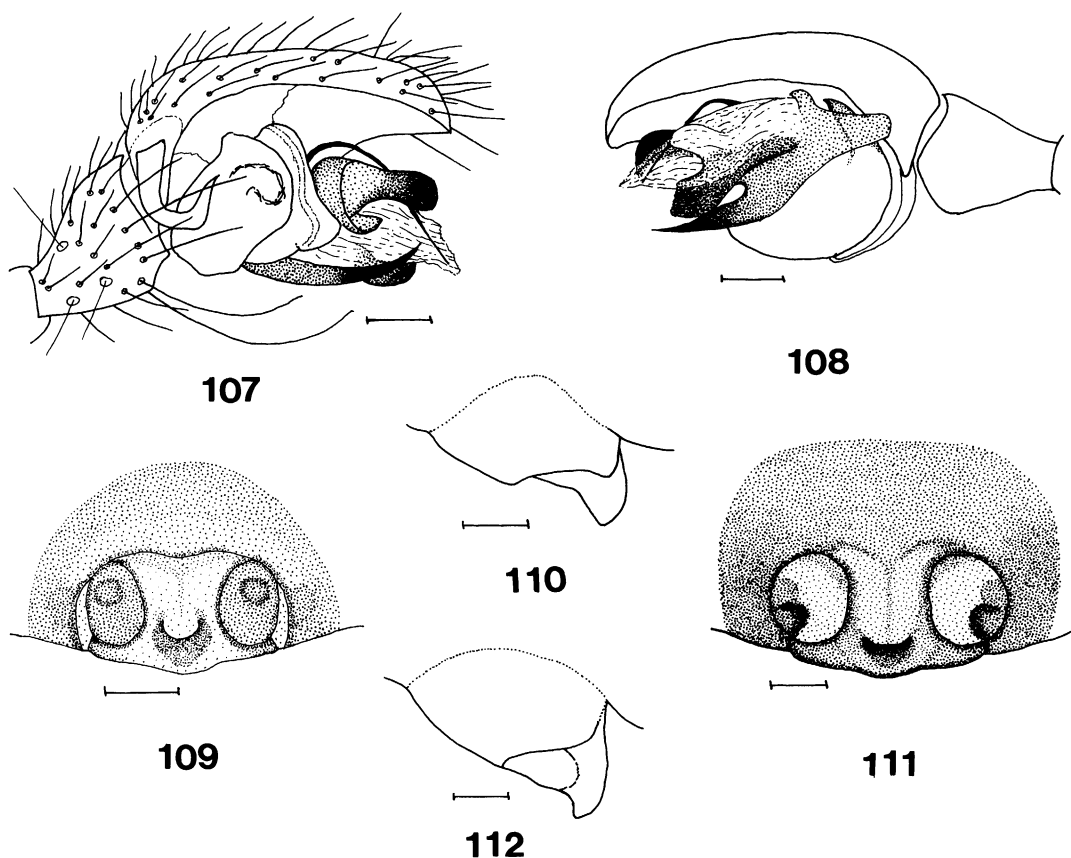
Figures 107–110

TYPES: Male holotype, with 7 female and 2 male paratypes, from Puerta del Monte,

Parque Nacional Abiseo, San Martin, Peru, 3300 m, Mar. 14, 1988 (D. Silva and A. Salirrosas); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning mournful.

DIAGNOSIS: The female epigynum (fig. 109) has the scape and socket relatively broad, and the atria moderately large. Epigyna of a generally similar form are present in the following species: *D. truncata* (fig. 93) (Peru), which has the scape narrower; *D. decora* (fig. 111) (Peru), which has a very similar epigynum,



Figs. 107–112. 107–110. *Dubiaranea luctuosa*. 111, 112. *D. decora*. 107. Male palp, ectal. 108. Male palp, mesal. 109, 111. Epigynum, ventral. 110, 112. Epigynum, lateral. Scale lines 0.1 mm.

perhaps slightly broader, and is a much larger species; *D. abjecta* (fig. 100) (Peru), which has a much narrower scape; and *D. difficilis* (fig. 173) (Argentina), in which the socket is marginally wider. The male is diagnosed by the palp; the embolic division (fig. 108) has a blunt-ended tail, the intermediate apophysis is broad, slightly truncated distally, and the lower apophysis is sharply pointed. The suprategular apophysis (fig. 107) is rounded and strongly sclerotized distally; the embolus is moderately short. *D. discolor* (figs. 19, 20) (Colombia), *D. silvae* (figs. 82, 83) (Peru), *D. elegans* (figs. 88, 89) (Peru), *D. truncata* (figs. 90, 91) (Peru), and *D. nivea* (figs. 153, 154) (Bolivia) have palps of a similar form, but in each of these species there are clear differences in the form of the suprategular apophysis, and of the embolic division (particularly of the intermediate and the lower apophyses).

FEMALE: Total length 3.2–3.65. Carapace length 1.45–1.55; pale yellow, with broad

median black stripe and brown margins. Abdomen dorsally gray, with variable pattern of black bars/chevrons and white spots; ventrally black. Sternum yellow, suffused to variable degree with black. Legs yellow, with variable brown annulations. Epigynum (figs. 109, 110).

MALE: Total length 3.2–3.35. Carapace length 1.65. Color as female. Palp (figs. 107, 108).

MATERIAL EXAMINED: PERU: *San Martin*: the types above. Pampa del Cuy, Parque Nacional Abiseo, 3550 m, Mar. 10, 1988 (D. Silva et al.), 2 female paratypes (MHNSM).

DISTRIBUTION: Known only from Peru.

Dubiaranea decora, new species
Figures 111, 112

TYPE: Female holotype from 15 km east Oxapampa, Pasco, Peru, 2000 m, June 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning beautiful.

DIAGNOSIS: The scape and socket of the female epigynum are broad, and the atria are large (fig. 111). Epigyna of a generally similar form are present in the following species: *D. truncata* (fig. 93) (Peru), which has the scape narrower; *D. abjecta* (fig. 100) (Peru), which has the scape much narrower; *D. luctuosa* (fig. 109) (Peru), which has a very similar, but slightly narrower, epigynum, and is a smaller species; and *D. difficilis* (fig. 173) (Argentina), which has a very similar epigynum, with a marginally wider socket, and is a somewhat smaller species. The male is not known.

FEMALE: Total length 6.5. Carapace length 2.0; yellow-brown, with weak median dark stripe. Abdomen dorsally gray, with blackish chevrons and silvery spots; brownish ventrally and on sides. Sternum orange, suffused with dark brown. Legs pale orange-brown, but most segments missing. Epigynum (figs. 111, 112); orange-brown.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Dubiaranea aureola, new species

Figures 113–115

TYPES: Male holotype, with three female paratypes, from Oxapampa, Pasco, Peru, 2800 m, July 24–25, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning golden.

DIAGNOSIS: The female epigynum (fig. 114) has a long, narrow scape, and a rounded atrial region. Long, narrow scapes are also present in *D. vetusta* (fig. 51) (Ecuador), *D. lugubris* (fig. 88) (Ecuador), *D. longa* (fig. 116) (Peru), and *D. longiscapa* (Millidge) (Chile), but these species are distinguishable by the differing shapes of the scapes and atrial regions. The male is diagnosed by the palp; the embolic division (fig. 115) has a fairly broad, pointed tail, a narrow intermediate apophysis with two small points distally, and a lower apophysis with a narrow curved point distally. The supratergular apophysis (fig. 113) is pointed distally, and the embolus is long. Palps of generally similar form are present in *D. gilva* (figs. 43, 45) (Colombia), *D. insignita* (figs. 144, 145) (Bolivia), and *D. saucia* (figs. 161, 162) (Brazil), but these species are distinguishable by the differing shapes of the in-

termediate apophysis of the embolic division and the supratergular apophysis.

FEMALE: Total length 2.55–2.9. Carapace length 1.1; yellow-orange to orange, eyes on black spots. Abdomen whitish gray, suffused with brown around spinnerets. Sternum orange. Legs with femora yellow to orange, remaining segments brown. Epigynum (fig. 114).

MALE: Total length 3.2. Carapace length 1.55. Color as female. Palp (figs. 113, 115).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea tristis, new species

Figures 117, 118

TYPE: Male holotype from Oxapampa, Pasco, Peru, ca. 3000 m, June 25, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning dismal.

DIAGNOSIS: The embolic division of the male palp (fig. 118) is abnormal in shape, with a short, broad tail, a slender dorsal apophysis, a short membranous intermediate apophysis, and a short lower apophysis which splits into two pointed arms. The supratergular apophysis (fig. 117) is large and prominent, the paracymbium is slender, and the embolus is long. The female is not known.

MALE: Total length 4.3. Carapace length 1.7; chestnut-brown. Abdomen long and cylindrical, brownish black dorsally and on sides, black ventrally. Sternum almost black. Legs yellow-brown. Palp (figs. 117, 118); tibia and cymbium heavily suffused with black.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

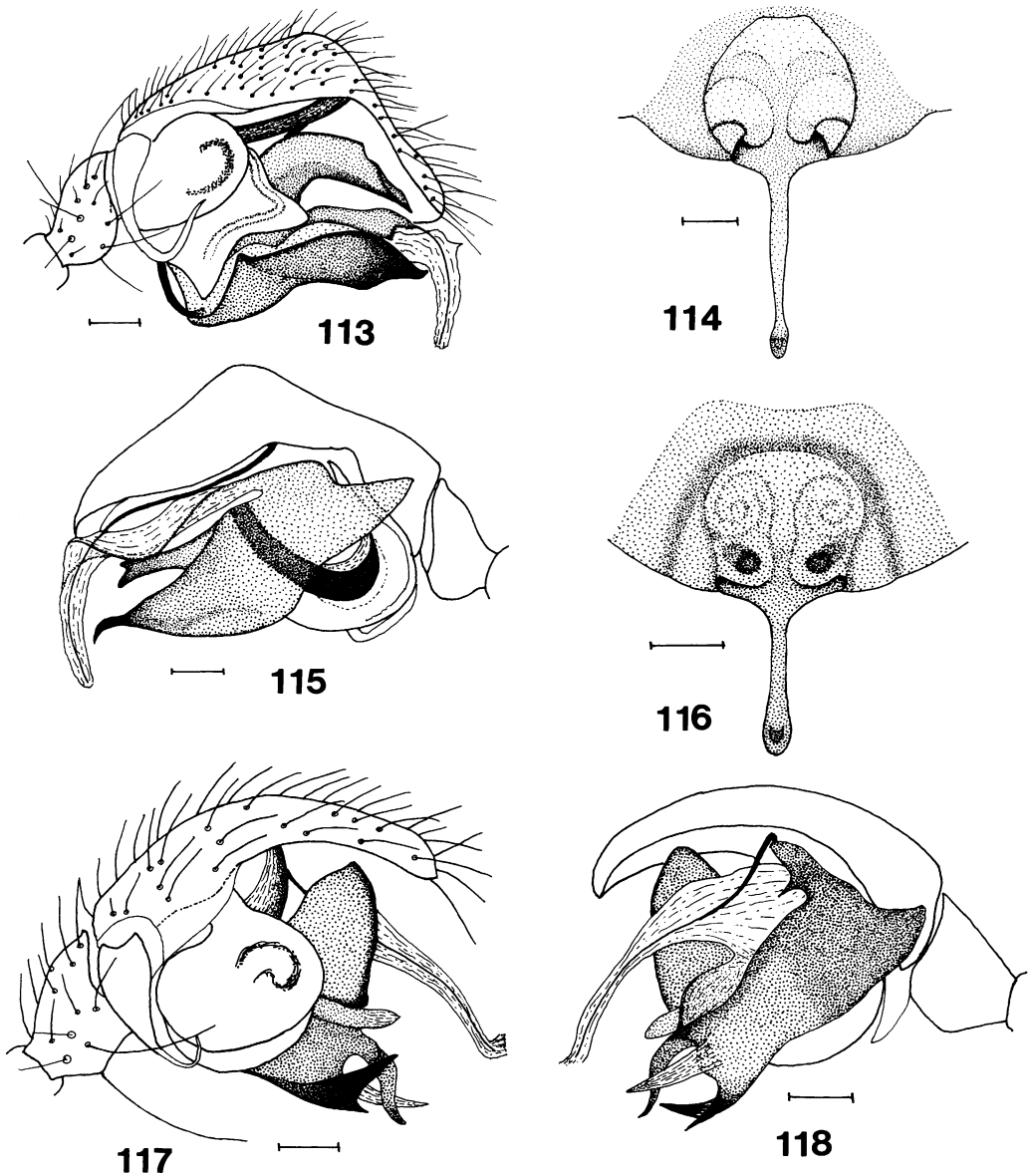
Dubiaranea longa, new species

Figure 116

TYPE: Female holotype from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective, referring to the scape.

DIAGNOSIS: The female epigynum (fig. 116) has a long, narrow scape, and a broad, rounded atrial region. Long, narrow scapes are also present in *D. vetusta* (fig. 51) (Ecuador), *D. lugubris* (fig. 58) (Ecuador), and *D. longiscapa*



Figs. 113–118. 113–115. *Dubiaranea aureola*. 116. *D. longa*. 117, 118. *D. tristis*. 113, 117. Male palp, ectal. 115, 118. Male palp, mesal. 114, 116. Epigynum, ventral. Scale lines 0.1 mm.

(Millidge) (Chile), but these species are distinguishable by the differing shapes of the scapes and of the atrial regions. The male is not known.

FEMALE: Total length 2.1. Carapace length 1.0; orange-brown, with grayish markings and margins. Posterior median eyes very large. Abdomen whitish yellow dorsally and on sides, with black markings dorsally; brownish

black ventrally. Sternum orange, suffused with brown. Epigynum (fig. 116).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Dubiaranea speciosa, new species

Figures 119, 120

TYPES: Male holotype, with two male paratypes, from Machu Picchu, Cuzco, Peru,

beaten from vegetation, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning handsome.

DIAGNOSIS: The embolic division of the male palp (fig. 120) is somewhat abnormally shaped, with a short, broad tail and a relatively short, pointed lower apophysis. The suprategular apophysis (figs. 119, 120) is large and prominent, with a slightly turned-up point distally. The paracymbium is slender, and the embolus long. The female is not known.

MALE: Total length 3.65–3.75. Carapace length 1.65–1.75; orange-brown, with weak median black stripe. Chelicerae orange, suffused with dark brown. Abdomen brownish yellow dorsally and on sides, with variable black markings; brown-black ventrally. Sternum orange, heavily suffused with black. Legs orange-brown. Palp (figs. 119, 120).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea atriceps, new species

Figures 121, 122

TYPE: Male holotype from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a black head.

DIAGNOSIS: The embolic division (fig. 122) of the male palp has a broad, rather truncated tail, the intermediate apophysis is truncated distally, and the lower apophysis is broad ectally (fig. 121), reducing to a narrow point distally. The suprategular apophysis has a long, narrow point distally, with a small tooth near to the distal end; the paracymbium is slender, and the embolus long. The female is not known.

MALE: Total length 3.0. Carapace length 1.25; deep chestnut-brown, shading to almost black anteriorly. Chelicerae deep brown. Abdomen dorsally gray with black patches and chevrons, ventrally black; dorsally and on sides with glistening white spots. Sternum deep brown. Legs orange-brown. Palp (figs. 121, 122).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Dubiaranea pullata, new species

Figures 123, 124

TYPES: Male holotype, with one male paratype, from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning clad in dark clothing.

DIAGNOSIS: The embolic division of the male palp (fig. 124) has a short, rounded tail, the intermediate apophysis is slender and membranous, and the lower apophysis has two arms, one long, pointed and well sclerotized, the other short and translucent. The suprategular apophysis (fig. 123) is relatively slender, with an upturned point distally; the paracymbium is slender, and the embolus long. The form of the embolic division, particularly the bifid lower apophysis, distinguishes it from all other species. The female is not known.

MALE: Total length 2.75–3.1. Carapace length 1.2–1.35; deep chestnut-brown, shading to almost black anteriorly. Chelicerae chestnut-brown. Abdomen long and cylindrical; dorsally whitish yellow, with irregular black markings, whitish yellow on sides, black ventrally. Sternum almost black. Legs orange-brown. Palp (figs. 123, 124).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

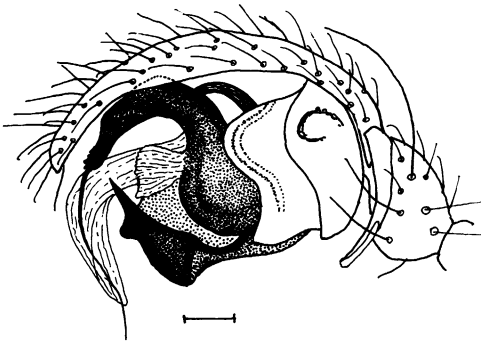
Dubiaranea melanocephala, new species

Figure 125

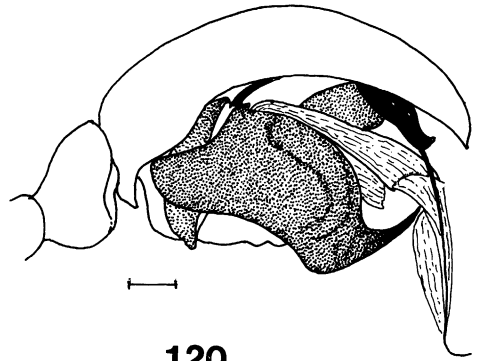
TYPES: Female holotype, with one female paratype, from Machu Picchu, Cuzco, Peru, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a latinized adjective meaning with a black head.

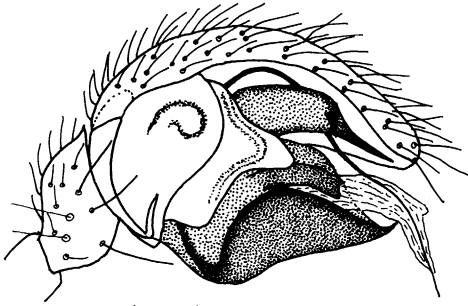
DIAGNOSIS: The scape of the female epigynum (fig. 125) is narrow anteriorly, broadened and projecting posteriorly, with a fairly large socket and large atria. *D. gilva* (fig. 44) (Colombia) and *D. insignita* (fig. 146) (Bolivia) have epigyna of a similar form, but these species are distinguishable by the differing shapes of the scapes and atria. The male is not known.



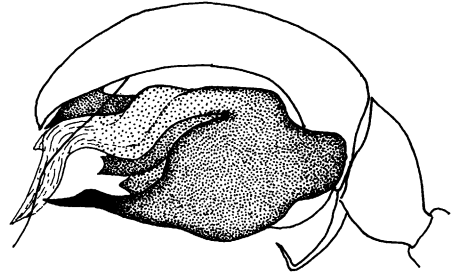
119



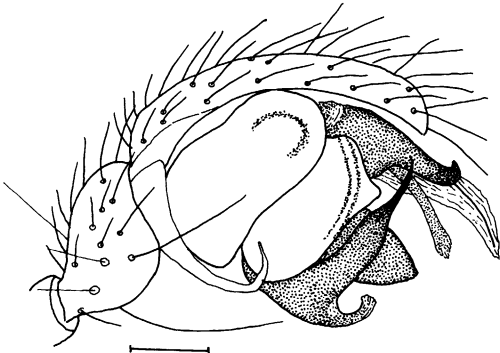
120



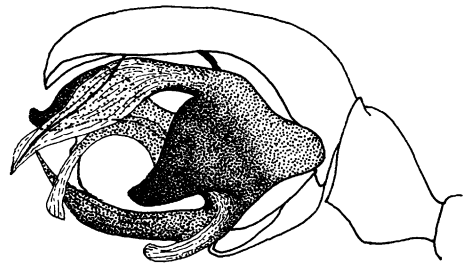
121



122



123



124

Figs. 119–124. 119, 120. *Dubiaranea speciosa*. 121, 122. *D. atriceps*. 123, 124. *D. pullata*. 119. Male palp, left, ectal. 120. Male palp, left, mesal. 121, 123. Male palp, ectal. 122, 124. Male palp, mesal. Scale lines 0.1 mm.

FEMALE: Total length 3.8–4.1. Carapace length 1.45–1.55; orange, with dusky markings and margins; ocular area suffused with black. Chelicerae deep brown. Abdomen rather cylindrical; black, with yellow-white

markings and small glistening white spots dorsally and on sides. Sternum orange, heavily suffused with black. Legs orange-brown, with metatarsi and tarsi suffused with deeper brown. Epigynum (fig. 125).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea melica, new species

Figures 126, 127

TYPES: Female holotype, with one female paratype, from Oxapampa, Pasco, Peru, 3000 m, June 25, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning musical, referring to the shape of the epigynum.

DIAGNOSIS: The scape of female epigynum (figs. 126, 127) has a broad neck, widening posteriorly, the whole shape reminiscent of a cello. The male is not known.

FEMALE: Total length 4.0–4.2. Carapace length 1.55, deep brown. Abdomen long and cylindrical, brown-black to black, with dorsally a broad white stripe, and sometimes with two white spots on each side. Sternum deep brown to black. Legs yellow to yellow-brown. Palp with tibia and tarsus black. Epigynum (figs. 126, 127).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea lepida, new species

Figure 128

TYPE: Female holotype from Oxapampa, Pasco, Peru, 2000 m, June 26, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning pleasant.

DIAGNOSIS: The scape of the female epigynum (fig. 128) is long and broad, projecting posteriorly, and the atria are relatively small. *D. gloriosa* (fig. 39) (Colombia) and *D. habilis* (fig. 56) (Ecuador) have epigyna of a similar form, but with the scape and atria differently shaped. The male is not known.

FEMALE: Total length 4.1. Carapace length 1.65; pale yellow, with broad lateral brown stripes. Abdomen gray dorsally and on sides, with irregular dark brown markings and small white spots; black ventrally. Sternum yellow, suffused with gray. Legs yellow-brown, with

distal ends of femora and tibiae suffused with black. Epigynum (fig. 128).

MATERIAL EXAMINED: PERU: Pasco: the holotype. San Martin: Parque Nacional Abiseo, 3550 m, Mar. 15, 1988 (D. Silva), 1 female paratype (MHNSM).

DISTRIBUTION: Known only from Peru.

Dubiaranea opaca, new species

Figures 129, 130

TYPES: Female holotype, with one female paratype, from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 7, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning dark, obscure.

DIAGNOSIS: The female epigynum (figs. 129, 130) has a short, rounded scape, and small atria. The male is not known.

FEMALE: Total length 6.1–6.45. Carapace length 2.65–2.9; brown, slightly darkened anteriorly. Abdomen brownish black, with dorsally black markings and a few white spots. Sternum orange, suffused with dark brown. Legs brown, weakly annulated with dark brown. Epigynum (figs. 129, 130).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea castanea, new species

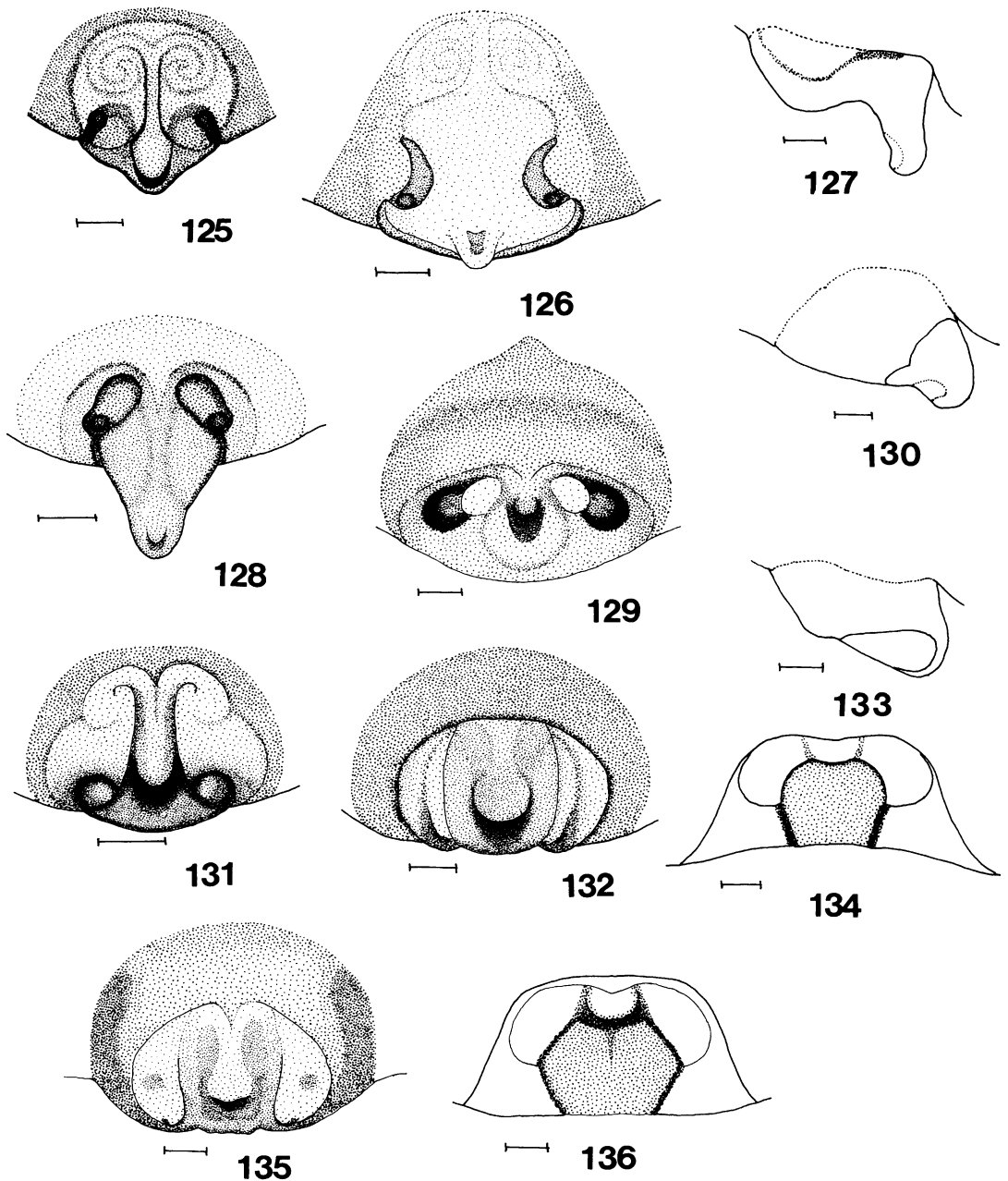
Figure 131

TYPES: Female holotype, with 12 female paratypes, from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 16, 1988 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning chestnut-colored.

DIAGNOSIS: The scape of the female epigynum (fig. 131) is narrow anteriorly, broadened posteriorly, with a wide socket and clear genital openings within wide atria. The epigynum is somewhat similar to that of *D. turbidula* (Keys.) (Millidge, 1985; Brazil, Peru), but in that species the scape is shorter and the socket larger. The male is not known.

FEMALE: Total length 3.0–3.35. Carapace length 1.2–1.35; chestnut-brown, suffused



Figs. 125–136. Epigyna. 125. *Dubiaranea melanocephala*, ventral. 126, 127. *D. melica*, ventral and lateral. 128. *D. lepida*, ventral. 129, 130. *D. opaca*, ventral and lateral. 131. *D. castanea*, ventral. 132–134. *D. amoena*, ventral, lateral and caudal. 135, 136. *D. fusca*, ventral and caudal. Scale lines 0.1 mm.

anteriorly with black; slightly rugose. Chelicerae deep chestnut-brown. Abdomen dorsally white, enclosing dark chevrons, but variable; ventrally black. Sternum chestnut-brown

to almost black. Legs pale brown. Epigynum (fig. 131).

MATERIAL EXAMINED: PERU: *San Martin*: the types above. *La Libertad*: Manachaqui,

3600 m, Mar. 22, 1988 (D. Silva), 2 female paratypes (MHNSM).

DISTRIBUTION: Known only from Peru.

Dubiaranea amoena, new species

Figures 132–134

TYPE: Female holotype, with two female paratypes and two subadult males, from Choutabamba, Pasco, Peru, 2500 m, June 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning pleasant.

DIAGNOSIS: The scape of the female epigynum (fig. 132) is broad, with more or less parallel but slightly convex sides, with a wide socket. The epigynum is very close to that of *D. fusca* (fig. 135) (Peru), and these two species are separated by the differing shapes of the dorsal plates (fig. 134; cf. fig. 136). *D. discolor* (fig. 21) (Colombia) has a broad scape with more or less parallel sides, but in that species the sides are slightly concave and the socket is narrower. The male is not known.

FEMALE: Total length 4.1–4.2. Carapace length 1.8–2.0; pale yellow to brown, with blackish markings and margins. Abdomen dorsally with folium, sides with silvery patches forming longitudinal stripe, ventrally black. Sternum brown, suffused with black, to almost black. Legs yellow to brown, with a few darker markings. Epigynum (figs. 132–134).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Dubiaranea fusca, new species

Figures 135, 136

TYPE: Female holotype from Oxapampa, Pasco, Peru, 2000 m, Jan. 26, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The scape of the epigynum (fig. 135) is broad, with more or less parallel but slightly convex sides, with a fairly wide socket. The epigynum is very close to that of *D. amoena* (fig. 132) (Peru), but these two species are distinguishable by the differing shapes of the dorsal plates (fig. 136; cf. fig. 134). The male is not known.

FEMALE: Total length 4.75. Carapace length

1.8; dark brown, with blackish markings and margins. Chelicerae dark brown. Abdomen black, dorsally with folium, with whitish chevrons and a few silvery spots. Sternum black brown, slightly rugose. Legs dark brown, with paler annulations. Epigynum orange; atria filled with translucent substance.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Dubiaranea varia, new species

Figures 137, 138

TYPE: Female holotype from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Mar. 10, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning of various colors.

DIAGNOSIS: The female epigynum (fig. 137) has an ill-defined scape which projects slightly posteriorly, and a fairly clearly defined atrial region anteriorly. *D. atripalpis* (fig. 7) (Venezuela) and *D. variegata* (fig. 40) (Colombia) have epigyna of a generally similar form, but the scape and atria are differently shaped in those species. The male is not known.

FEMALE: Total length 6.2. Carapace length 3.35; yellow, with wide black margins and a black mark anterior to fovea. Chelicerae brown. Abdomen fairly long, clothed in coarse hairs; brown, with numerous black markings and a few white spots dorsally and on sides. Sternum yellow, suffused with black. Legs yellow, annulated with dark brown or black. Epigynum (figs. 137, 138).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

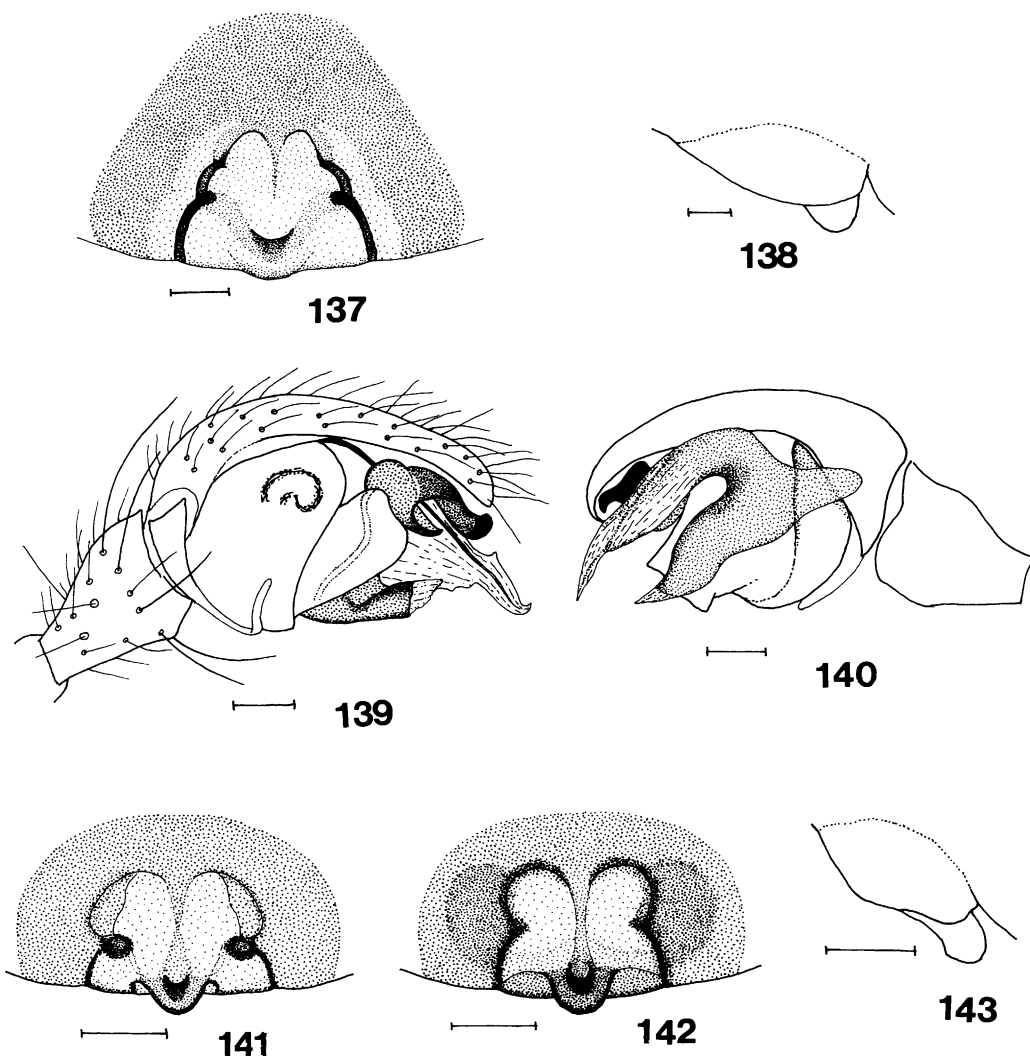
Dubiaranea furva, new species

Figures 139, 140

TYPE: Male holotype from Molinos de Sipandia, Arequipa, Peru, Oct. 8, 1983 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The embolic division of the male palp (fig. 140) has a moderately long, rounded tail, and the lower apophysis has a small membranous branch distally. The suprategular apophysis (fig. 139) is relatively slender distally, with an upturned point; the



Figs. 137–143. 137, 138. *Dubiaranea varia*. 139, 140. *D. furva*. 141–143. *D. albolineata*. 137, 141, 142. Epigynum, ventral. 138, 143. Epigynum, lateral. 139. Male palp, ectal. 140. Male palp, mesal. Scale lines 0.1 mm.

paracymbium is slender, and the embolus long. *D. usitata* (figs. 32, 33) (Colombia), *D. pullata* (figs. 123, 124) (Peru), and *D. brevis* (figs. 151, 152) (Bolivia) have somewhat similar palps, with an upturned point on the suprategular apophysis, but these are all distinguishable by the differing shapes of the embolic divisions, and particularly of the lower bifid apophyses. In addition, *D. usitata* has a stouter paracymbium, and *D. brevis* is a smaller species. The female is not known.

MALE: Total length 3.45. Carapace length 1.55; chestnut-brown. Abdomen black, with

narrow white, broken stripes on each side. Sternum brown, heavily suffused with chestnut-brown. Legs pale orange-brown. Palp (figs. 139, 140).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

***Dubiaranea albolineata*, new species**

Figures 141–143

TYPE: Female holotype from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru, 3550 m, Feb. 29, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning with a white stripe.

DIAGNOSIS: The scape of the female epigynum (figs. 141, 142) is narrow anteriorly, widened posteriorly, with fairly large atrial regions. *D. versicolor* (figs. 49, 50) (Colombia), *D. insulsa* (fig. 72) (Ecuador), and *D. abundans* (fig. 103) (Peru) have epigyna of somewhat similar forms, but are distinguishable by the differing shapes of the scapes and atrial regions. The male is not known.

FEMALE: Total length 2.75–3.3. Carapace length 1.15–1.35; yellow-brown to orange-brown, with variable darker markings and margins. Abdomen dorsally with folium edged with black, sides with white stripe, ventrally brown-black. Sternum orange, heavily suffused with black, to black; slightly rugose. Legs yellow to orange-brown. Epigynum somewhat variable (figs. 141–143).

MATERIAL EXAMINED: PERU: *San Martin:* the holotype. Same locality, Mar. 2–11 and 15, 1988 (D. Silva et al.), 4 female paratypes (MHNSM). *La Libertad:* Manachaqui, 3600 m, Mar. 22, 1988 (D. Silva), 1 female paratype (MHNSM). *Pasco:* Oroya, Apr. 12, 1914 (H. P. Anderson), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Peru.

Dubiaranea insignita, new species

Figures 144–146

TYPES: Male holotype, with one female paratype, from Ingava-Coroico Road, Sacramento Camp, Yungas, Bolivia, 2500 m, July 9–13, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning marked, conspicuous.

DIAGNOSIS: The scape of the female epigynum (fig. 146) is narrow anteriorly, broadened and projecting posteriorly, and the atrial region is large. Epigyna of a similar general form are present in *D. gilva* (fig. 44) (Colombia), which has the scape differently shaped and less projecting posteriorly, and in *D. melanocephala* (fig. 125) (Peru), which has a differently shaped scape and atrial region. The embolic division of the male palp (fig. 145) has the tail short and rounded, the intermediate apophysis weakly serrated anteriorly, and the lower apophysis with a narrow point distally. The suprategular apophysis (fig. 144) is short, and rounded anteriorly; the paracymbium is slender, and the embolus is long.

D. gilva (figs. 43, 45), *D. aureola* (figs. 113, 115) (Peru) and *D. saucia* (figs. 161, 162) (Brazil) have palps of a generally similar form, but these species are distinguishable by the differing shapes of the embolic division and of the suprategular apophysis.

FEMALE: Total length 3.55–3.8. Carapace length 1.45; orange-brown to brown, with median black stripe running anteriorly from fovea, and blackish margins. Abdomen blackish, with yellow-brown markings and small glistening white spots dorsally and on sides. Sternum orange, suffused with black, to almost black. Legs yellow to orange, sometimes weakly annulated with brown; metatarsi and tarsi suffused with brown. Epigynum (fig. 146).

MALE: Total length 4.35. Carapace length 1.9–2.0. Color as female. Cymbium more or less black. There are small differences in the shape of the embolic division between the Bolivian and Peruvian specimens.

MATERIAL EXAMINED: BOLIVIA: *Yungas:* the types above. PERU: *Cuzco:* Torentoy Canyon, base of Machu Picchu, 2000–2200 m, June 19–23, 1964 (B. Malkin), 1 male paratype (AMNH). Machu Picchu, beaten from vegetation above ruins, 2600–2800 m, July 1–5, 1964 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Bolivia and Peru.

Dubiaranea signifera, new species

Figure 147

TYPES: Female holotype from Coroici, Yungas, Bolivia, May 30–31, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning carrying marks.

DIAGNOSIS: The scape of the female epigynum (fig. 147) is broad, widened posteriorly, with a broad socket, and fairly wide lateral atria. *D. discolor* (fig. 21) (Colombia) has an epigynum of the same general form, but with the scape less broadened posteriorly, and the socket much narrower. The male is not known.

FEMALE: Total length 4.65. Carapace length 1.8; orange-brown, with blackish markings and margins. Chelicerae orange, but distally and fang dark brown. Abdomen dorsally yellow-brown with black blotches; ventrally black, sides yellow-brown. Sternum almost

black. Legs brown, with femora, tibiae, and metatarsi suffused distally with black. Palp with tibia and tarsus dark brown. Atria partially filled with translucent substance.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

***Dubiaranea argentata*, new species**

Figure 148

TYPE: Female holotype from Oruro City, Oruro, Bolivia, in rock pile at 12,500 ft, Mar. 16, 1958 (F. Walsh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning adorned with silver.

DIAGNOSIS: The scape of the female epigynum (fig. 148) is short and rather narrow, and the atria are relatively broad. *D. media* (fig. 10) (Venezuela) has a somewhat similar epigynum, but both scape and atria are much broader, and the species is much larger. Epigyna of a similar general form are present in *D. versicolor* (figs. 49, 50) (Colombia, Ecuador, Peru), *D. insulsa* (fig. 72) (Ecuador), *D. abundans* (fig. 103) (Peru), and *D. albolineata* (figs. 141, 142) (Peru), but in all these species the scape is relatively longer. The male is not known.

FEMALE: Total length 2.65. Carapace length 1.0; brown, with darker markings and margins. Abdomen brownish gray, with numerous glistening silvery markings dorsally and on sides. Sternum brown, suffused with black. Legs yellow, but many segments missing. Epigynum (fig. 148).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

***Dubiaranea decurtata*, new species**

Figures 149, 150

TYPE: Male holotype from Coroico, Yungas, Bolivia, May 30–31, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning mutilated.

DIAGNOSIS: The embolic division of the male palp (fig. 150) has a short, broad tail, with the lower apophysis long and pointed. The supratregular apophysis (fig. 149) is prominent, distally curved downward to a point; the paracymbium is fairly slender, and the embolus fairly long. *D. similis* (fig. 169) (Chile) has a rather similar supratregular

apophysis, but that species has a longer embolus, a longer tail to the embolic division (fig. 170), and a somewhat stouter paracymbium. The female is not known, but it is possible that *D. decurtata* is the male of *D. signifera*.

MALE: The single male is in poor condition, with the abdomen missing, but the palps are intact. Carapace length 1.5; orange, with blackish median stripe. Sternum orange, suffused with black. Legs orange, but most segments missing. Palp (figs. 149, 150).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

***Dubiaranea brevis*, new species**

Figures 151, 152

TYPE: Male holotype from Avenida Sport Club, La Paz, Bolivia, Jan. 4, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning short.

DIAGNOSIS: The embolic division of the male palp (fig. 152) has a moderately long, rounded tail, and the lower apophysis is weakly bifid distally. The supratregular apophysis (fig. 151) is slender distally, with an upturned point; the paracymbium is slender, and the embolus long. *D. usitata* (figs. 32, 33) (Colombia), *D. pullata* (figs. 123, 124) (Peru), and *D. furva* (figs. 139, 140) (Peru) have supratregula with an upturned point distally, but these species are distinguishable by the differing shapes of the embolic division, and particularly of the lower bifid apophysis and of the tail; *D. brevis* is also a smaller species. The female is not known.

MALE: Total length 2.2. Carapace length 1.0; brown, with blackish margins. Chelicerae long, divergent. Abdomen gray dorsally with faint black markings, whitish on sides, black ventrally. Sternum brown, with blackish margins. Legs yellow, but mostly missing. Palp (figs. 151, 152).

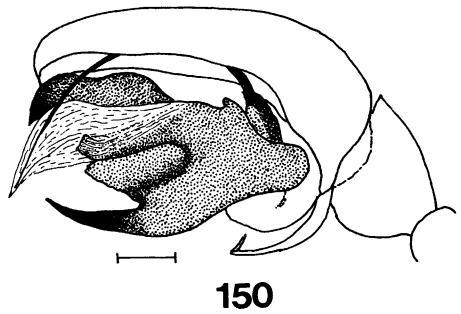
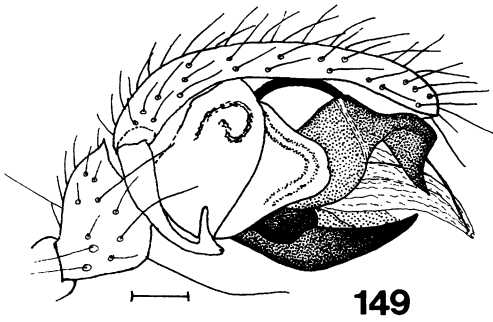
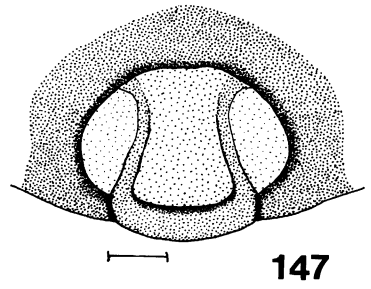
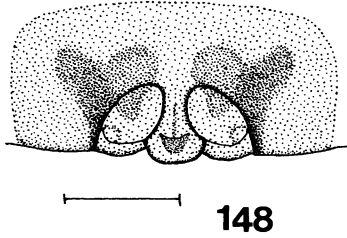
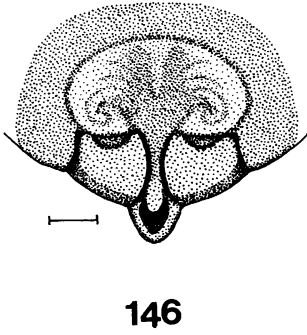
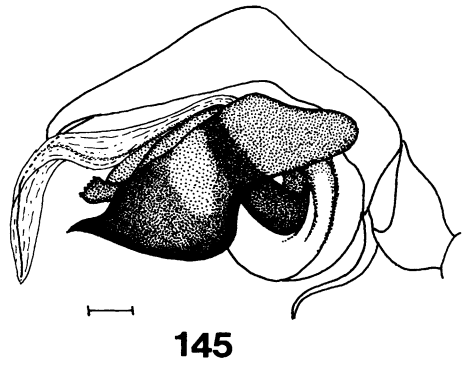
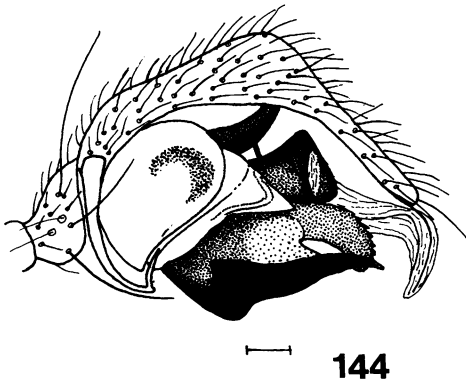
MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

***Dubiaranea nivea*, new species**

Figures 153, 154

TYPES: Male holotype, with two male paratypes, from Sebundoi, Bolivia, 2600 m, Sept.



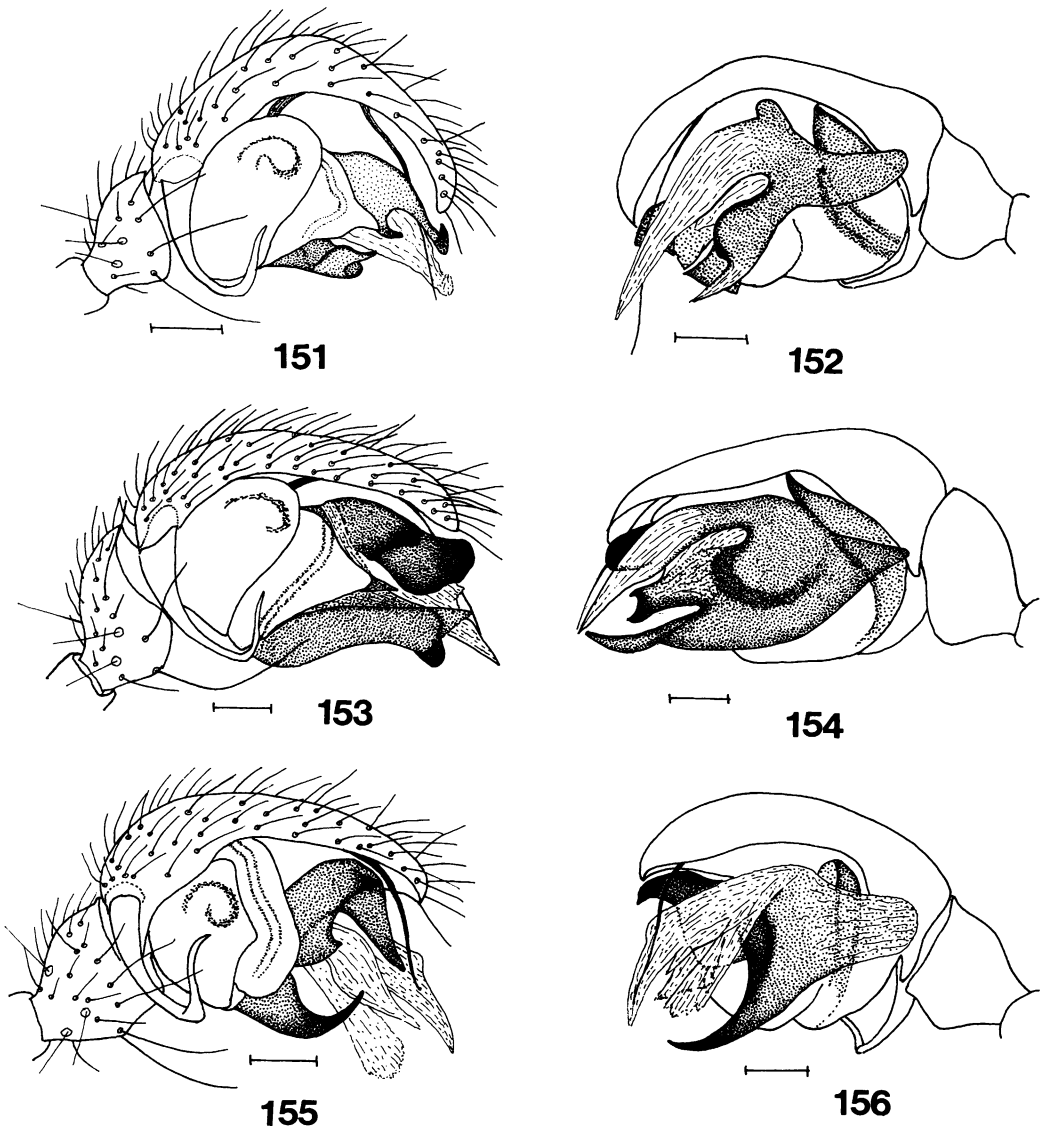
Figs. 144–150. 144–146. *Dubiaranea insignita*. 147. *D. signifera*. 148. *D. argentata*. 149, 150. *D. decurtata*. 144, 149. Male palp, ectal. 145, 150. Male palp, mesal. 146–148. Epigynum, ventral. Scale lines 0.1 mm.

11–15, 1977 (L. E. Peña); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning white as snow, referring to the abdominal markings.

DIAGNOSIS: The embolic division of the male palp (fig. 154) has a short, pointed tail, the intermediate apophysis has two points

distally, and the lower apophysis is slightly twisted distally. The suprategular apophysis (fig. 153) is stout, strongly sclerotized, and bears a small lateral apophysis; the paracymbium is slender, and the embolus fairly long. The palp is very close to that of *D. truncata* (figs. 90, 91), but the tail of the embolic division is more pointed and the intermediate



Figs. 151–156. 151, 152. *Dubiaranea brevis*. 153, 154. *D. nivea*. 155, 156. *D. atra*. 151, 153, 155. Male palp, ectal. 152, 154, 156. Male palp, mesal. Scale lines 0.1 mm.

and lower apophyses are slightly different in shape; it is possible that *D. nivea* will prove to be the same species as *D. truncata*. *D. discolor* (figs. 19, 20) (Colombia), *D. silvae* (figs. 82, 83) (Peru), *D. elegans* (figs. 88, 89) (Peru), and *D. luctuosa* (figs. 107, 108) (Peru) have palps of a similar general form, but in each of these species there are clear differences in the form of the suprategular apophysis and of the embolic division. The female is not known.

MALE: Total length 3.1–3.25. Carapace length 1.35–1.45; dark chestnut-brown. Ab-

domen long and cylindrical; black, with row of shining white spots along each side. Sternum almost black. Legs orange to orange-brown. Palp (figs. 153, 154).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Bolivia.

Dubiaranea atra, new species

Figures 155, 156

TYPE: Male holotype from Rio Mamore, ca. 5 km northwest of mouth of Rio Grande,

Beni, Bolivia, Aug. 5, 1965 (J. K. Bouseman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning black.

DIAGNOSIS: The embolic division of the male palp (fig. 156) has a broad, rounded, translucent tail, and the lower apophysis is pointed, sharply curved upward distally (fig. 155). The suprategular apophysis (fig. 155) curves downward distally to a point, with a small tooth near the summit of the curve; the embolus is long, and the paracymbium slender. The female is not known.

MALE: Total length 2.9. Carapace length 1.3; chestnut-brown. Abdomen black. Sternum orange, heavily suffused with brown; slightly rugose. Legs orange. Palp (figs. 155, 156).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

Dubiaranea levii, new species

Figures 157–160

TYPES: Male holotype, with two female paratypes, from Lavras, Minas Gerais, Brazil, Oct. 20, 1978 (W. D. Frank); deposited in MCZ.

ETYMOLOGY: The specific name is a patronym in honor of H. W. Levi.

DIAGNOSIS: The scape of the female epigynum (fig. 159) is short and broad, not noticeably broadened posteriorly, and the atria are wide and rounded. *D. media* (fig. 10) (Venezuela) has a somewhat similar epigynum, but with the scape distinctly broadened posteriorly. The embolic division of the male palp (fig. 158) has a fairly long tail, and the lower apophysis is long and pointed, strongly curved upward. The suprategular apophysis (fig. 157) is moderately slender anteriorly, with the tip curved upward, and a small lateral projection near the tip; the paracymbium is relatively stout, and the embolus is short.

FEMALE: Total length 4.8. Carapace length 1.9; brown to orange-brown, with faint darker markings. Abdomen long ovate, gray, dorsally with weak black markings and white spots. Sternum pale orange, weakly suffused with brown. Legs yellow to pale orange, weakly annulated with brown. Epigynum (figs. 159, 160).

MALE: Total length 5.0. Carapace length 2.0. Color as female. Palp (figs. 157, 158).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

Dubiaranea saucia, new species

Figures 161, 162

TYPE: Male holotype from Pedra Azul, Minas Gerais, Brazil, Dec. 1970 (F. M. Oliveira); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning injured.

DIAGNOSIS: The embolic division of the male palp (fig. 162) is rather abnormally shaped, with a broad tail, a slender intermediate apophysis with two small points distally, and a lower apophysis with two points distally, the larger one translucent at the tip. The suprategular apophysis (fig. 161) is fairly slender, and somewhat membraneous distally; the paracymbium is slender, and the embolus is long. Palps of generally similar form are present in *D. gilva* (figs. 43, 45) (Colombia), *D. aureola* (figs. 113, 115) (Peru), and *D. insignita* (figs. 144, 145) (Bolivia), but these species are distinguishable by the differing shapes of the embolic division and of the suprategular apophysis. The female is not known.

MALE: Total length 3.55. Carapace length 1.6; deep orange-brown. Abdomen blackish brown, with yellow-white blotches dorsally and yellow-white stripes on sides. Sternum deep orange. Legs missing. Palp (figs. 161, 162); cymbium black.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

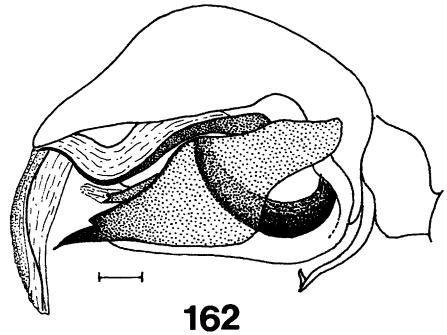
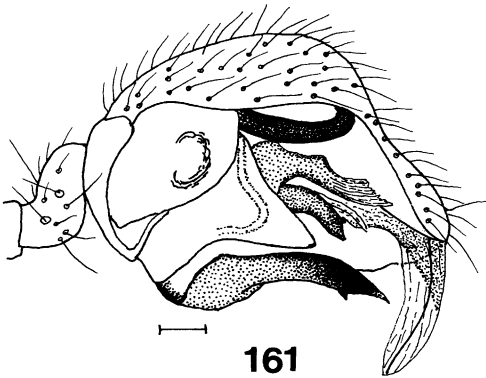
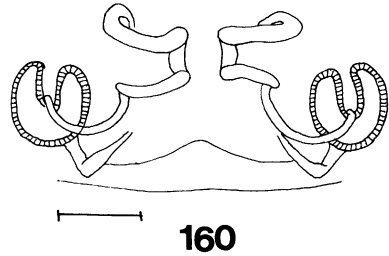
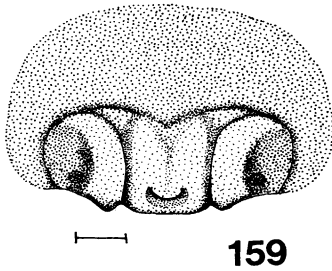
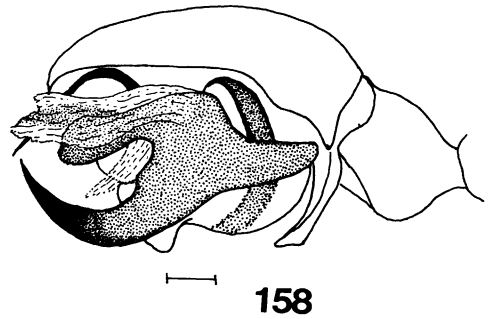
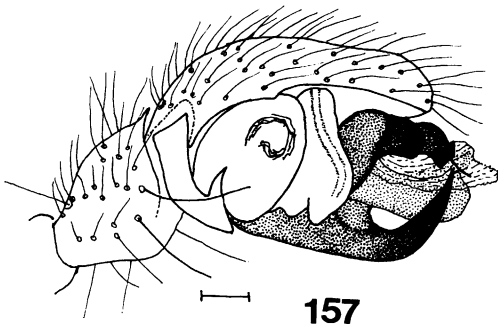
Dubiaranea insulanus, new species

Figures 163–166

TYPES: Male holotype, with 24 female and 12 male paratypes, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernandez Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning an islander.

DIAGNOSIS: The female epigynum (fig. 165) has no clear scape; the well-defined socket is set somewhat anteriorly, but there appear to be no atria. *D. caeca* (fig. 5) (Venezuela) has an epigynum of generally similar form, but is much broader. The embolic division of the male palp (fig. 164) is rather simple, with a moderately long tail and a fairly short, pointed lower apophysis. The suprategular apophysis (fig. 163) is weakly sclerotized, slender distally, and slightly curved upward; the paracymbium is moderately stout, and the



Figs. 157–162. 157–160. *Dubiaranea levii*. 161, 162. *D. saucia*. 157, 161. Male palp, ectal. 158, 162. Male palp, mesal. 159, 160. Epigynum, ventral and internal. Scale lines 0.1 mm.

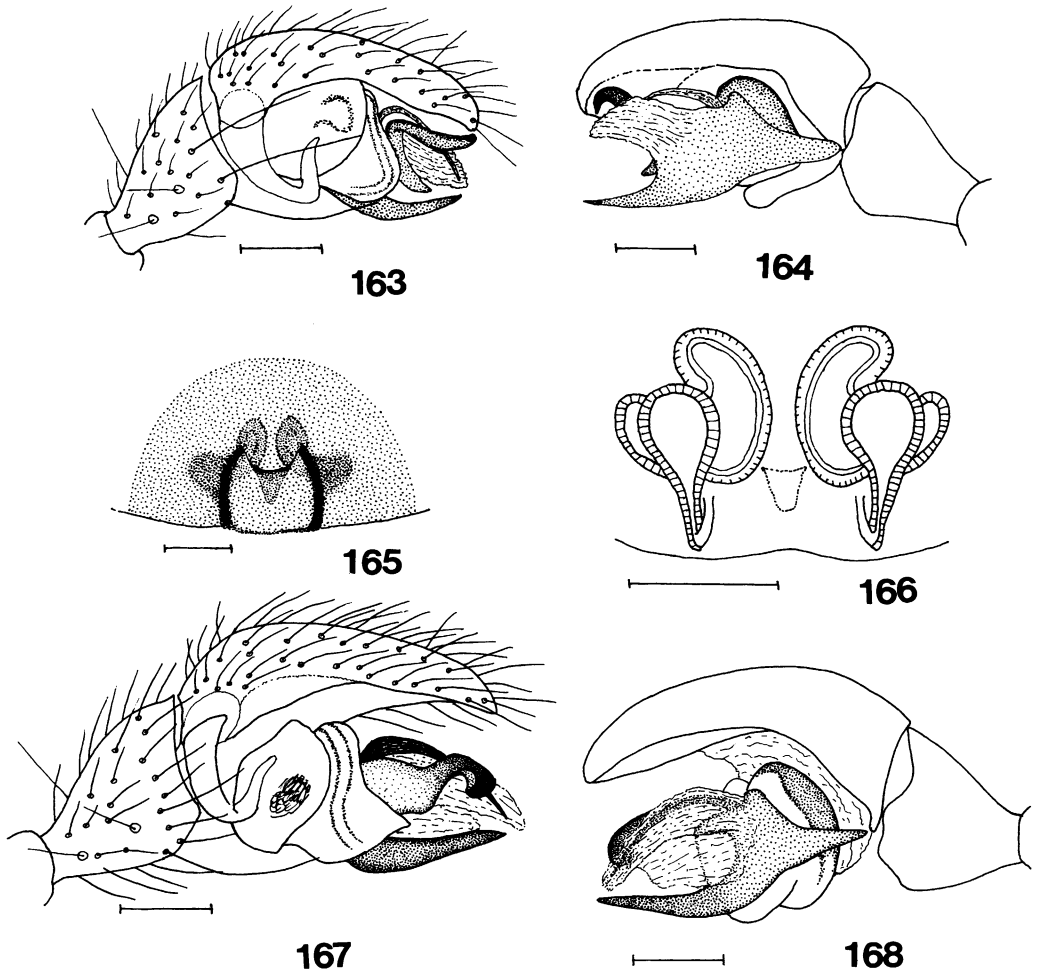
embolus is short. *D. crebra* (figs. 11, 12) (Colombia, Ecuador, Peru, and Venezuela) has a similar palp, but the lower apophysis of the embolic division is larger and more curved, and the supratergular apophysis is distally wider and more strongly sclerotized.

FEMALE: Total length 3.1–3.9. Carapace length 1.55–1.65; pale orange-brown to orange, with foveal area and margins sometimes suffused with black; occasionally with median black stripe. Abdomen gray to gray-brown dorsally, with median black stripe and black chevrons, and usually some glistening

white spots; sides gray, with white spots, ventrally gray to black. Sternum orange, heavily suffused with black. Legs yellow to orange-brown, sometimes weakly annulated. Epigynum (figs. 165, 166); the spermathecae do not appear to be U-shaped as in most *Dubiaranea* species.

MALE: Total length 2.9–3.2. Carapace length 1.35–1.45. Color as female. Palp (figs. 163, 164).

MATERIAL EXAMINED: CHILE: *Juan Fernandez Islands*: Mas a Tierra, the types above. Valle Villagra, Apr. 19 and 23–24, 1962 (B.



Figs. 163–168. 163–166. *Dubiaranea insulanus*. 167, 168. *D. fagicola*. 163, 167. Male palp, ectal. 164, 168. Male palp, mesal. 165, 166. Epigynum, ventral and internal. Scale lines 0.1 mm.

Malkin), 3 female paratypes (AMNH). El Camote, 600 m, Apr. 19, 1962 (B. Malkin), 2 female paratypes (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Dubiaranea fagicola, new species

Figures 167, 168

TYPE: Male holotype from 3 km west of Victoria, Malleco, Chile, mixed *Nothofagus* forest, 100 m, Dec. 13–Feb. 12, 1985 (S. and J. Peck); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning a dweller in beeches.

DIAGNOSIS: The embolic division of the male palp (fig. 168) is simple, with a slender pointed tail and a long, slender lower apophysis. The suprategular apophysis (fig. 167) is slender distally, curved into a characteristic “swan-neck” shape; the paracymbium is fairly stout, and the embolus is short. The female is not known.

MALE: Total length 3.0. Carapace length 1.1; brown, suffused with dark brown anteriorly and on margins. Abdomen long and cylindrical, black, dorsally with two white spots anteriorly and two posteriorly. Sternum brown, suffused with dark brown on margins; slightly rugose. Legs brown. Palp (figs. 167, 168); slightly expanded.

MATERIAL EXAMINED: Only the holotype.
DISTRIBUTION: Known only from Chile.

Dubiaranea similis, new species

Figures 169–172

TYPE: Male holotype, with four female paratypes, from central coast, Valparaíso, Chile, Oct. 31, 1982 (collector unknown); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning similar.

DIAGNOSIS: The scape of the female epigynum (fig. 171) has a broad neck, and is very broad posteriorly, with a wide socket. *D. turbidula* (Keys.) (Peru, Brazil) (Millidge, 1985) has a rather similar epigynum, but in that species the scape has a narrower neck and the atrial region is differently shaped. Epigyna of a similar general form are present in *D. crebra* (figs. 13, 14) (Colombia, Ecuador, Peru, and Venezuela), *D. ornata* (fig. 22) (Colombia), *D. affinis* (fig. 66) (Ecuador), *D. modica* (fig. 71) (Ecuador), and *D. morata* (fig. 73) (Ecuador), but these species are all distinguishable by the differing forms of the scapes, the sockets, and the atrial regions. The embolic division of the male palp (fig. 170) has a fairly long, broad tail, and the lower apophysis tapers to a fairly long, narrow point. The suprategular apophysis (fig. 169) is prominent, distally curved downward to a point; the paracymbium is relatively stout, and the embolus is long. The suprategular apophysis is similar to that of *D. decurtata* (fig. 149) (Bolivia), but that species has a somewhat shorter embolus and a shorter tail to the embolic division. *D. caledonica* (Millidge) (Chile) also has a somewhat similar suprategular apophysis, but the shape of the lower apophysis (“lamella”) is different in that species.

FEMALE: Total length 3.1–3.5. Carapace length 1.2–1.35; yellow-brown to brown, with median black line forked anteriorly; margins sometimes blackened. Abdomen with variable pattern of black and white patches on grayish background dorsally and on sides; black ventrally. Sternum yellow to orange, heavily diffused with black. Legs yellow to orange, with weak brown annulations. Epigynum (figs. 171, 172).

MALE: Total length 4.0. Carapace length 1.55. Color as female except: abdomen long

and cylindrical, black, with row of white marks on each side; chelicerae long and divergent, with small boss anterolaterally. Palp (figs. 169, 170).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Chile.

Dubiaranea difficilis (Mello-Leitão)

Figure 173

Paranesticus difficilis Mello-Leitão, 1944: 333 [female holotype from General Guido, Buenos Aires, Argentina (M. Biraben), in Museo de la Plata, Argentina, examined].—Brignoli, 1983: 223.

DIAGNOSIS: The scape of female epigynum (fig. 173) is broad anteriorly, widened posteriorly, with a wide socket and wide atria. *D. truncata* (fig. 93) (Peru) and *D. abjecta* (fig. 100) (Peru) have epigyna of similar form, but with narrower scapes; *D. luctuosa* (fig. 109) (Peru) has a very similar epigynum, but with a narrower socket. The epigynum of *D. decora* (fig. 111) (Peru) appears to be almost identical with that of *D. difficilis*, but *D. decora* is a significantly larger species. The male is not known.

FEMALE: Total length 4.5. Carapace length 1.8. The single specimen is rather bleached. Carapace pale brown, with slightly darker median stripe and margins. Abdomen pale brown, with dorsally a few blackish chevrons. Sternum brown. Legs pale brown. Epigynum (fig. 173).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

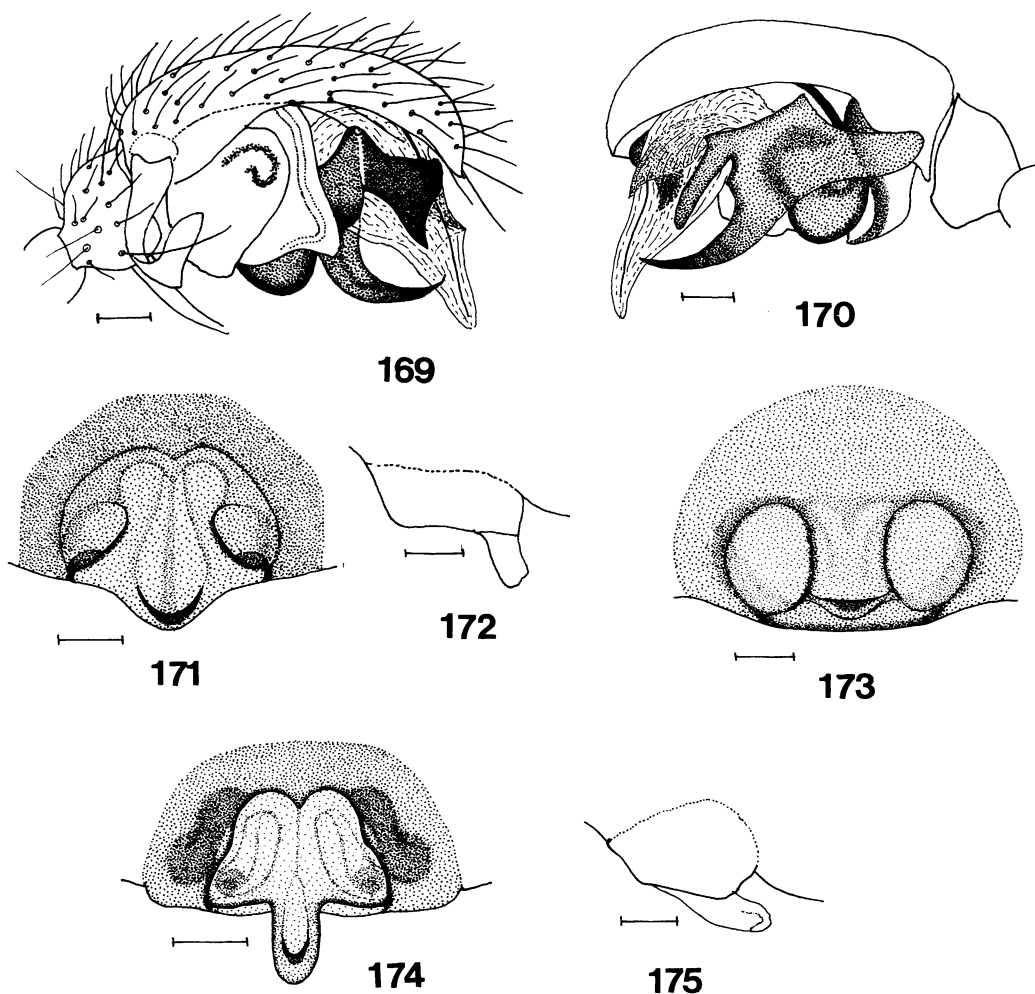
Dubiaranea remota, new species

Figures 174, 175

TYPES: Female holotype, with two female paratypes, from Norquínco, Rio Negro, Argentina, July 3, 1966 (A. Kovacs); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning isolated.

DIAGNOSIS: The epigynal scape (fig. 174) is not well defined anteriorly, and has a fairly short, narrow projection posteriorly. *D. orba* (fig. 67) (Ecuador) and *D. subtilis* (Keys.) (Peru) have somewhat similar epigyna, but



Figs. 169–175. 169–172. *Dubiaranea similis*. 173. *D. difficilis*. 174, 175. *D. remota*. 169. Male palp, ectal. 170. Male palp, mesal. 171, 173, 174. Epigynum, ventral. 172, 175. Epigynum, lateral. Scale lines 0.1 mm.

in both species the atria and scapes are differently shaped. The male is not known.

FEMALE: Total length 3.6–3.7. Carapace length 1.35–1.45; orange-brown, with blackish markings and margins. Abdomen gray to black, with variable amounts of shining white dorsally and on sides. Sternum orange, suffused with brown. Legs orange-brown, annulated to variable extent with brown. Epigynum (figs. 174, 175).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Argentina.

NOTIOHYPHANTES MILLIDGE

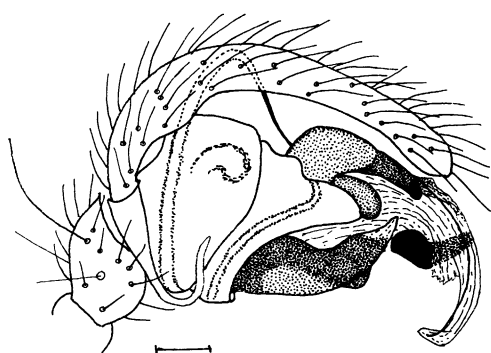
Notiohyphantes laudatus, new species

Figures 176–179

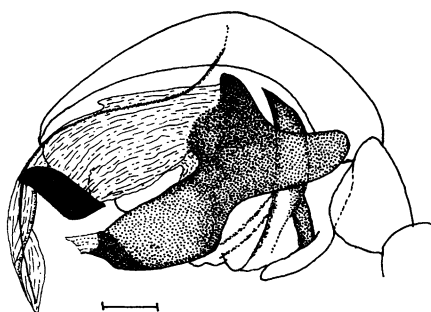
TYPES: Male holotype, with three female paratypes, from S. Jose Berreiro, Sierra de Bocaina, São Paulo, Brazil, 1960 m, Nov. 1968 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning esteemed.

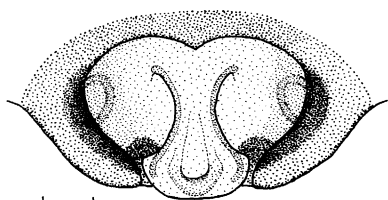
DIAGNOSIS: The scape of the female epigynum (fig. 178) is short, rather narrow, and the atrium is wide. The shape of the scape



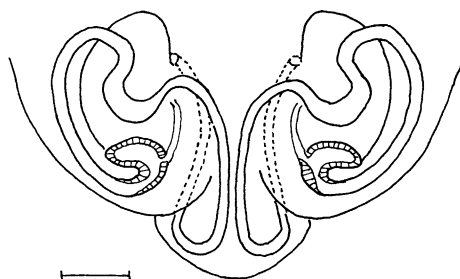
176



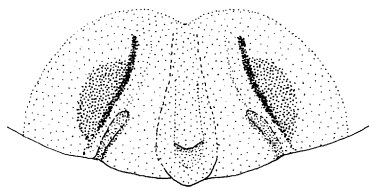
177



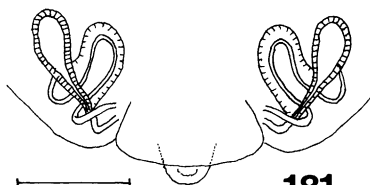
178



179



180



181

Figs. 176–181. 176–179. *Notiohyphantes laudatus*. 180, 181. *Totua gracilipes*. 176. Male palp, ectal. 177. Male palp, mesal. 178, 180. Epigynum, ventral. 179, 181. Epigynum, internal. Scale lines 0.1 mm.

readily distinguishes this species from *N. meridionalis* (Tullg.) (Millidge, 1985) and *N. excelsa* (Keys.) (Baert, 1990). The embolic division of the male palp (fig. 177) has a short, rounded tail, the dorsal apophysis has a black protuberance, and the pointed lower apophysis is distally translucent. The supratregular apophysis is rather slender, with an upturned point distally. The palp is distinguished from those of *N. meridionalis* (Millidge, 1985) and *N. excelsa* (*N. elegans*) (Millidge, 1985; Baert, 1990) by the forms of the embolic division and of the supratregular apophysis.

FEMALE: Total length 2.75–3.3. Carapace

length 1.1–1.3; orange to orange-brown, ocular area black. Abdomen black, sometimes gray dorsally. Sternum orange. Legs orange to orange-brown, sometimes weakly annulated with dark brown. Spines typical of genus; TmI ca. 0.15. Epigynum (figs. 178, 179).

MALE: Total length 2.75. Carapace length 1.2. Color, etc. as female, except: chelicerae rugose anterolaterally. Abdomen whitish, dark around spinnerets. Sternum orange, suffused with black. Palp (figs. 176, 177).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

TOTUA KEYSERLING

Totua Keyserling 1891: 216 (type species by monotypy *Totua gracilipes* Keys., from Brazil).—Roewer, 1942: 970.—Bonnet, 1959: 4663.

This genus was originally described in Araneidae, and was later (Brignoli, 1983: 239) transferred to Theridiosomatidae. Examination of the unique female of *T. gracilipes* indicates that the genus should be transferred to the Linyphiidae.

DIAGNOSIS: The female would be diagnosed by the epigynum and the chaetotaxy. The single specimen is badly bleached, the leg spines have vanished, and the detail of the epigynum is none too clear (figs. 180, 181), and chaetotaxy is not determinable for the most part. Males are not known.

DESCRIPTION: Because of the state of the specimen, the description given is necessarily sparse. The female has total length 2.35. The carapace is unmodified, and the posterior median eyes are not on black humps as in *Dubiaranea*. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.2. The female palp is clawless. The tracheal form is not known. The epigynum (fig. 180) has a median septum which carries a genital socket; internally, the short duct from the spermatheca to the opening is encapsulated (fig. 181).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Brazil.

TAXONOMIC POSITION: The eyes, the lack of the claw on the female palp, and the internal epigynal structure indicate that *Totua* is not a senior synonym of *Dubiaranea*. The characters just given, however, are similar to those of *Notholepthyphantes* Millidge, and it possible that *Totua* will prove to be a senior synonym of *Notholepthyphantes*. At this stage, it would be wise, in the interests of nomenclatural stability, to ignore this possible synonymy, which cannot satisfactorily be decided until fresh specimens identifiable as *Totua gracilipes* are found.

Totua gracilipes Keyserling
Figures 180, 181

Totua gracilipes Keyserling, 1891: 216 (female holotype from Rio Grande del Sul, Brazil, in BMNH, examined).—Roewer, 1942: 970.—Bonnet, 1959: 4663.

DIAGNOSIS: See generic description; fresh specimens are required before a reliable diagnosis can be proposed.

FEMALE: Total length 2.35. Carapace length 1.0. Color a uniform pale yellow, obviously faded. TmI ca. 0.2. Epigynum (figs. 180, 181).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

VESICAPALPUS, NEW GENUS

TYPE SPECIES: *Vesicapalpus simplex*, new species.

ETYMOLOGY: From the Latin *vesica*, a bladder, and *palpus*, referring to the swollen tegulum of the palp. Gender masculine.

DIAGNOSIS: The male palp (figs. 182, 183) has a bloated tegulum, a relatively simple embolic division, and a stout, curved, pointed suprategular apophysis. No females are known.

DESCRIPTION: The single male known has total length 2.6. The carapace is unmodified. The eyes are fairly large, with posteriors ca. 0.5 d apart. The male chelicerae are long and divergent, slightly granulated on the anterior face. The abdomen is moderately long and cylindrical. The legs are long and slender, with tibia 1 l/d ca. 20. The dorsal tibial spines are 2222; femora 1 have a single prolateral spine, and the metatarsi are spineless. Metatarsi 1–3 have a trichobothrium, but metatarsi 4 are missing; TmI ca. 0.25. The tracheal form is not known. The palp has a fairly long tibia, and the paracymbium is small (fig. 182); the tegulum is swollen anteriorly, and the suprategular apophysis is stout, curved, and pointed anteriorly (fig. 183). The embolic division (fig. 183) is simple, comprising a translucent plate with a curved point anteriorly; the fairly stout embolus arises from the inner (lateral) side of the plate, and curves round to the anterior.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Argentina.

TAXONOMIC POSITION: The palpal organ appears to be a reduced form of that present in *Dubiaranea*; the embolic division is of the same basic form as in that genus, and the large size and position of the suprategular apophysis also show a resemblance. *Vesica-*

palpus is therefore grouped provisionally with *Dubiaranea*.

Vesicapalpus simplex, new species

Figures 182, 183

TYPE: Male holotype from Tobunas Misiones, Argentina, July–Aug. 1959 (O. de'Ferrariis); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning simple.

DIAGNOSIS: The male palp has a lengthened tibia (fig. 182) and a swollen tegulum. The embolic division (fig. 183) is of characteristic shape, with a relatively long, curved embolus, and the suprategular apophysis (not visible from the ectal side) is slender, curved, and pointed distally. The female is not known.

MALE: Total length 2.6. Carapace length 1.1; orange. Abdomen gray, dorsally rather paler with darker chevrons posteriorly. Sternum orange, weakly suffused with black. Legs orange to orange-brown; TmI 0.25. Palp (figs. 182, 183).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

EXECHOPSIS, NEW GENUS

TYPE SPECIES: *Exechopsis versicolor*, new species.

ETYMOLOGY: From the Greek *exechon*, prominent, and *opsis*, eye. Gender feminine.

DIAGNOSIS: Males are diagnosed by the palp (figs. 184–187), particularly by the form of the embolic division, and by the large eyes, the anteriors of which are protuberant (figs. 188, 189). The genus *Exocora*, n. gen., also has large eyes, but these are not quite so prominent (fig. 194). Females are not known.

DESCRIPTION: Only males are known; these have total length 1.65–1.8. The carapace is unmodified. The eyes are all large and closely spaced, with the anterior medians projecting over the clypeus (figs. 188, 189). The legs are of moderate length, with tibia 1 l/d ca. 8. The dorsal tibial spines are 1111; the femora and metatarsi are spineless. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.3. The tracheal form is not known. The palpal tibia has no apophysis; the paracymbium is small (figs. 184, 186). The tegulum is produced to a blunt point anteriorly; a large suprategular apophysis, with two branches, arises from the tegu-

lum. The embolic division is a long plate, pointed anteriorly; the curved embolus arises from near the posterior of the plate, on the inner (lateral) side, and is stout basally, but slender distally (figs. 185, 187).

INCLUDED SPECIES: *Exechopsis versicolor*, new species and *E. conspicua*, new species.

DISTRIBUTION: Colombia, Ecuador, and Brazil.

TAXONOMIC POSITION: The palpal organ is basically similar to those of *Dubiaranea*, both in the form of the embolic division (although the embolus is fused to the plate), and in the presence and position of the complex suprategular apophysis. At the present time, and in the absence of females, *Exechopsis* is provisionally regarded as related to *Dubiaranea*.

Exechopsis versicolor, new species

Figures 184, 185, 188

TYPE: Male holotype from Cent. Hid. An-chicaya, Valle, Colombia, 400 m, 1977 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning of various colors.

DIAGNOSIS: The male palp (figs. 184, 185) is similar to that of *E. conspicua* (figs. 186, 187), but the embolic division is less up-turned posteriorly and less sharply pointed anteriorly, the embolus is narrower basally, and the suprategular apophysis is differently shaped, with the distal point slightly downturned. The female is not known.

MALE: Total length 1.45–1.8. Carapace length 0.7–0.8; yellow, with brown median and lateral longitudinal stripes. Abdomen brownish, but dorsally white anteriorly, with narrow white stripe along each side. Sternum yellow, with brown margins. Legs yellow, annulated with brown; TmI ca. 0.3. Palp (figs. 184, 185).

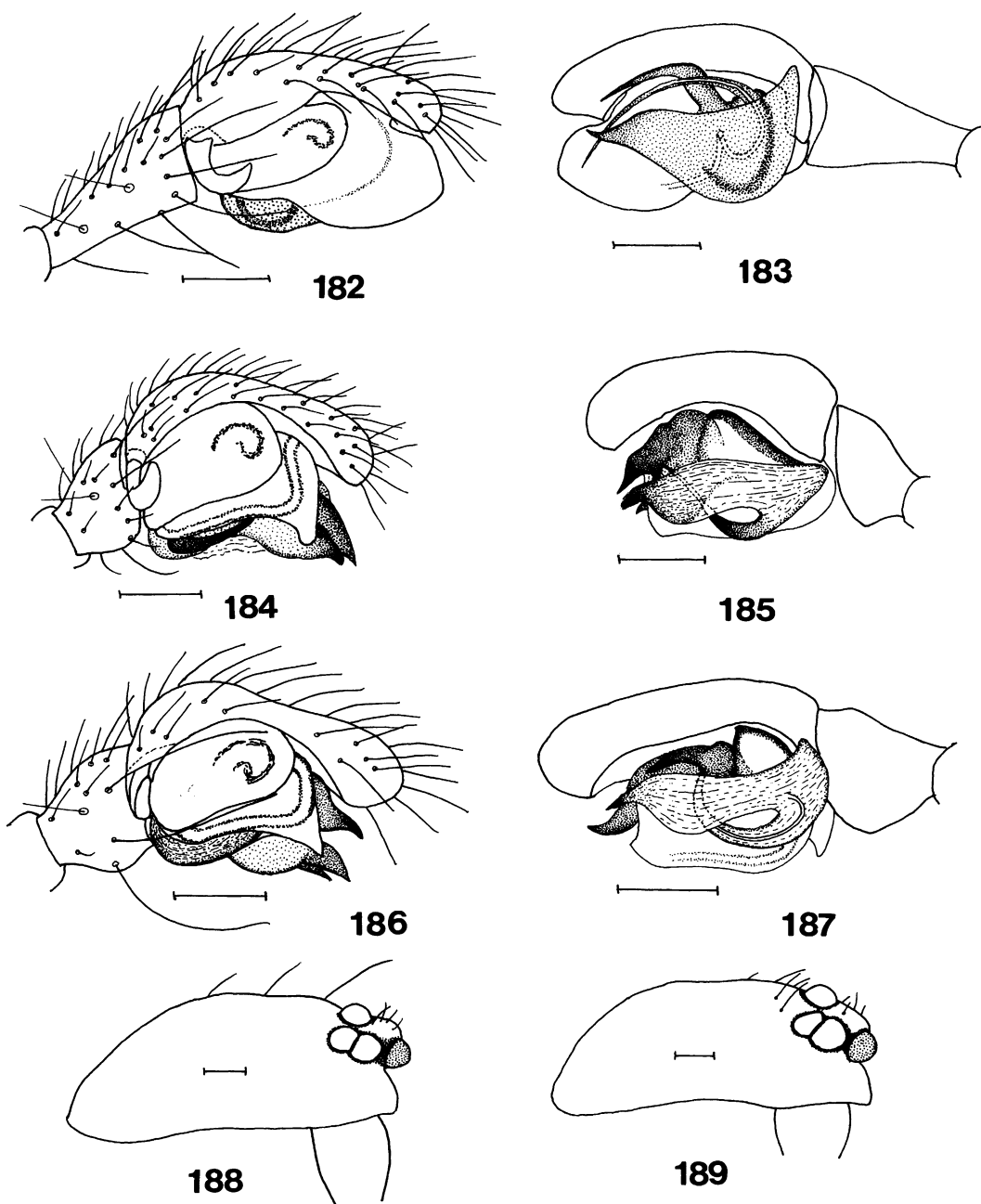
MATERIAL EXAMINED: COLOMBIA: *Valle*: the holotype. ECUADOR: *Oriente*: headwaters of Rio Arajuno, Napo watershed, 1000 m, April 28, 1941 (W. Clarke-Macintyre), 2 male paratypes (AMNH).

DISTRIBUTION: Colombia and Ecuador.

Exechopsis conspicua, new species

Figures 186, 187, 189

TYPE: Male holotype from Sinop, Mato Grosso, Brazil, Oct. 1976 (M. Alvarenga); deposited in AMNH.



Figs. 182–189. 182, 183. *Vesicapalpus simplex*. 184, 185, 188. *Exechopsis versicolor*. 186, 187, 189. *E. conspicua*. 182, 184, 186. Male palp, ectal. 183, 185, 187. Male palp, mesal. 188, 189. Male carapace and eyes, lateral. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning striking.

DIAGNOSIS: The male palp (figs. 186, 187) is similar to that of *E. versicolor* (figs. 184, 185), but distinguishable by differences in the

embolic division and suprategular apophysis (see *E. versicolor* diagnosis). The female is not known.

MALE: Total length 1.65. Carapace length 0.8; orange, anteriorly dark brown. Abdomen

gray, with dorsally whitish markings and a white spot anterior to spinnerets. Sternum orange. Legs with femora orange, suffused with brown; all other segments missing. Palp (figs. 186, 187).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

EXOCORA, NEW GENUS

TYPE SPECIES: *Exocora proba*, new species.

ETYMOLOGY: From the Greek *exo*, outward, and *kore*, eyeball, referring to the projecting eyes. Gender feminine.

DIAGNOSIS: The male is diagnosed by the palp (figs. 190–193), and particularly by the forms of the embolic division and the suprategular apophysis. The projecting eyes (fig. 194) are a confirmatory character, but this character is less developed than in *Exechopsis*. No females are known.

DESCRIPTION: Males have total length 1.7. The carapace is unmodified; the eyes are large and closely spaced, with the ocular area projecting over the clypeus (fig. 194), and there are several long bristles in the ocular area. The legs are fairly stout, with tibia 1 l/d ca. 7–8; dorsal tibia spines are 2222, femora and metatarsi are spineless. No trichobothria are visible on the metatarsi. The tracheal form is not known. The palpal tibia is short (fig. 195); the paracymbium is small, though distinct. The tegulum has a projection anteriorly, and there is a prominent suprategular apophysis (figs. 191, 193). The embolic division comprises a relatively small radical part, which is extended anteriorly, via a lightly sclerotized region, into a long, pointed section. The long, curved embolus, which is slender distally, arises from the posterior end of the radical part, and runs to the ectal side of the palp (figs. 191, 193).

INCLUDED SPECIES: *Exocora proba*, new species, and *Exocora pallida*, new species.

DISTRIBUTION: Bolivia and Venezuela.

TAXONOMIC POSITION: This genus is clearly related to *Exechopsis*, and as in that genus the palpal organ is basically similar to that of *Dubiaranea*. In the absence of females, and with lack of knowledge of the tracheal form, it is difficult to draw any firm conclusions on the relationships of *Exocora*, but for the present this genus should be grouped with *Dubiaranea* and *Exechopsis*.

Exocora proba, new species

Figures 190, 191, 194, 195

TYPE: Male holotype from Ingavi-Coroico Road, Sacramento Camp, Yungas, Bolivia, 2500 m, July 9–13, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning excellent.

DIAGNOSIS: The embolic division of the male palp (figs. 190, 191) is extended anteriorly into a long, narrow, pointed apophysis, and the slender embolus is long and free. The suprategular apophysis is extended anteriorly into a long arm which is bifid distally. The palp is readily distinguishable from that of *E. pallida* by the longer embolus and by the differing shapes of the embolic division and suprategular apophysis. The female is not known.

MALE: Total length 1.7. Carapace length 0.85; brown, with darker markings and margins; eyes large (fig. 194). Abdomen gray, with irregular white and blackish markings. Sternum orange, with brown margins. Legs yellow to orange, annulated with brown; many segments missing. Palp (figs. 190, 191, 195).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

Exocora pallida, new species

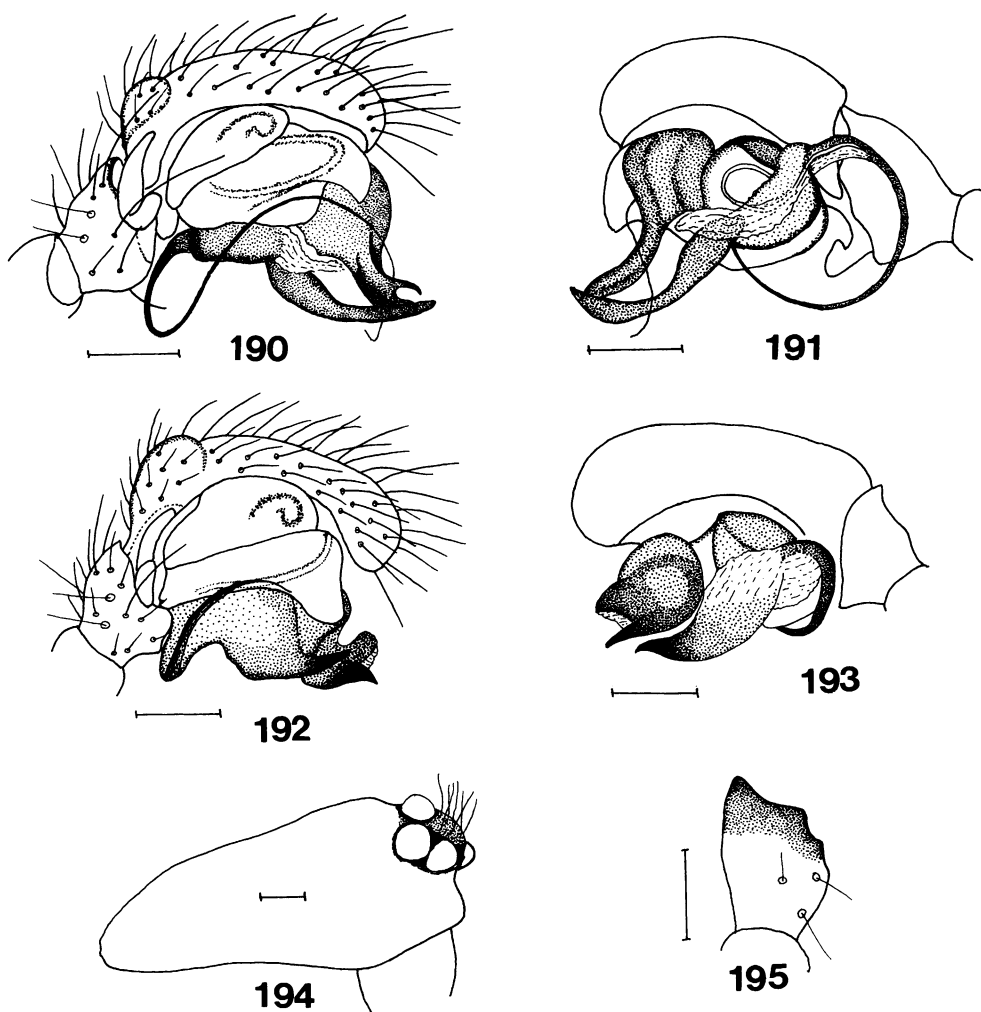
Figures 192, 193

TYPE: Male holotype from H. Pittler Nat. Park, Rancho Grande, Portachuelo, Aragua, Venezuela, 1150 m, Feb. 19, 1984 (J. Codrington); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning pale colored.

DIAGNOSIS: The embolic division of the male palp (figs. 192, 193) is extended anteriorly into a short, curved point, and the embolus is free but relatively short. The suprategular apophysis has a short, pointed extension anteriorly. The palp is readily distinguishable from that of *E. proba* by the shorter embolus and the much shorter extensions to the embolic division and the suprategular apophysis. The female is not known.

MALE: Total length 1.7. Carapace length 0.8; yellow-orange; eyes large, but somewhat smaller than in *E. proba*. Abdomen whitish gray, with a few white spots dorsally. Sternum pale orange. Legs pale orange. Palp (figs. 192, 193).



Figs. 190–195. 190, 191, 194, 195. *Exocora proba*. 192, 193. *E. pallida*. 190, 192. Male palp, ectal. 191, 193. Male palp, mesal. 194. Male carapace and eyes, lateral. 195. Male palpal tibia, dorsal. Scale lines 0.1 mm.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

STICTONANUS, NEW GENUS

TYPE SPECIES: *Stictonanus paucus*, new species.

ETYMOLOGY: From the Greek *stiktos*, punctate, and *nanos*, a dwarf. Gender masculine.

DIAGNOSIS: Both sexes are recognizable by the punctate carapace; the female is then diagnosed by the epigynum (figs. 198, 199), and the male by the palp (figs. 196, 197).

DESCRIPTION: The two known species have total length 1.65–2.45. The carapace in both sexes has numerous small pits radiating from the fovea and along the margins, including the clypeus; the pits are more strongly developed in the male. The lateral eyes are on shallow tubercles. The chelicerae have small pointed warts on the anterior face, but these are weak in the female; the maxillae of the male have a few small pointed warts. The legs are long and slender, with tibia 1 l/d (female) ca. 15. Femora 1 have one dorsal spine; dorsal tibial spines are 2222, and tibiae 1 and 2 have additionally one prolateral and several ventral spines. The metatarsi are

spineless. Metatarsi 1–3 have a trichobothrium; TmI 0.3. The female palp is clawless. The tracheal system (determined on an immature male) comprises four simple tubes restricted to the abdomen. The epigynum is rather simple (figs. 198, 199); internally, the spermathecae appear to be twin-chambered (fig. 201), and the duct is a short spiral. The male palp (unfortunately expanded) is of the same general form as those of some *Haplinis* species; the cymbium is pointed anteriorly, and the paracymbium is simple (fig. 196). There is a pointed supratergular apophysis; the simple embolic division is connected to the tegulum by a broad junction (fig. 197), from which arises an embolic membrane.

INCLUDED SPECIES: *Stictonanus paucus*, new species, and *Stictonanus exiguus*, new species.

TAXONOMIC POSITION: Although the male palp resembles that of *Haplinis*, the chirality (Millidge, 1985: 74–75) of the internal duct of the epigynum is similar to that of the Linyphiinae, rather than that of the Mynogleninae. At the present time, the taxonomic position of *Stictonanus* is unclear.

Stictonanus paucus, new species

Figures 196, 197, 199, 201

TYPES: Male holotype, with two female paratypes, from Palmas de Ocoa, Parque Nacional La Campana, Quillota, Valparaiso, Chile, pitfall trap on burned site, May 17, 1985 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning few.

DIAGNOSIS: The female epigynum (fig. 199) is close to that of *S. exiguus* (fig. 198), but is less squat in appearance. *S. exiguus* is also somewhat larger in size. The embolic division of the male palp (figs. 196, 197) is simple, and carries a moderately long embolus; the supratergular apophysis is pointed distally, and the paracymbium is fairly stout.

FEMALE: Total length 1.65–2.2. Carapace length 0.75–0.9; orange-brown, with heavy black margins, to almost black, with numerous pits as given in generic description. Abdomen dorsally white, with a wide broken median black stripe; ventrally whitish, sides black. Sternum orange, with black margins, somewhat rugose. Legs pale yellow, with

variable black annulations. Epigynum (figs. 199, 201).

MALE: Total length 1.9. Carapace length 0.8. Color as female. Carapace pitting greater than in female. Abdomen fairly long and cylindrical. Palps (figs. 196, 197); both expanded.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Chile.

Stictonanus exiguus, new species

Figure 198

TYPE: Female holotype from Anticura, near Puyehue, Osorno, Chile, Dec. 1985 (L. E. Peña); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning scanty.

DIAGNOSIS: The female epigynum (fig. 198) is close to that of *S. paucus* (fig. 199), but is more squat in appearance. *S. paucus* is also somewhat smaller in size. The male is not known.

FEMALE: Total length 2.45. Carapace length 1.0; orange-brown, with black markings; with numerous pits as given in generic description. Abdomen yellow-gray, speckled with shining white blotches, and with black markings on sides. Sternum orange, with black markings. Legs pale orange, not annulated. TmI 0.3. Epigynum (fig. 198).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Chile.

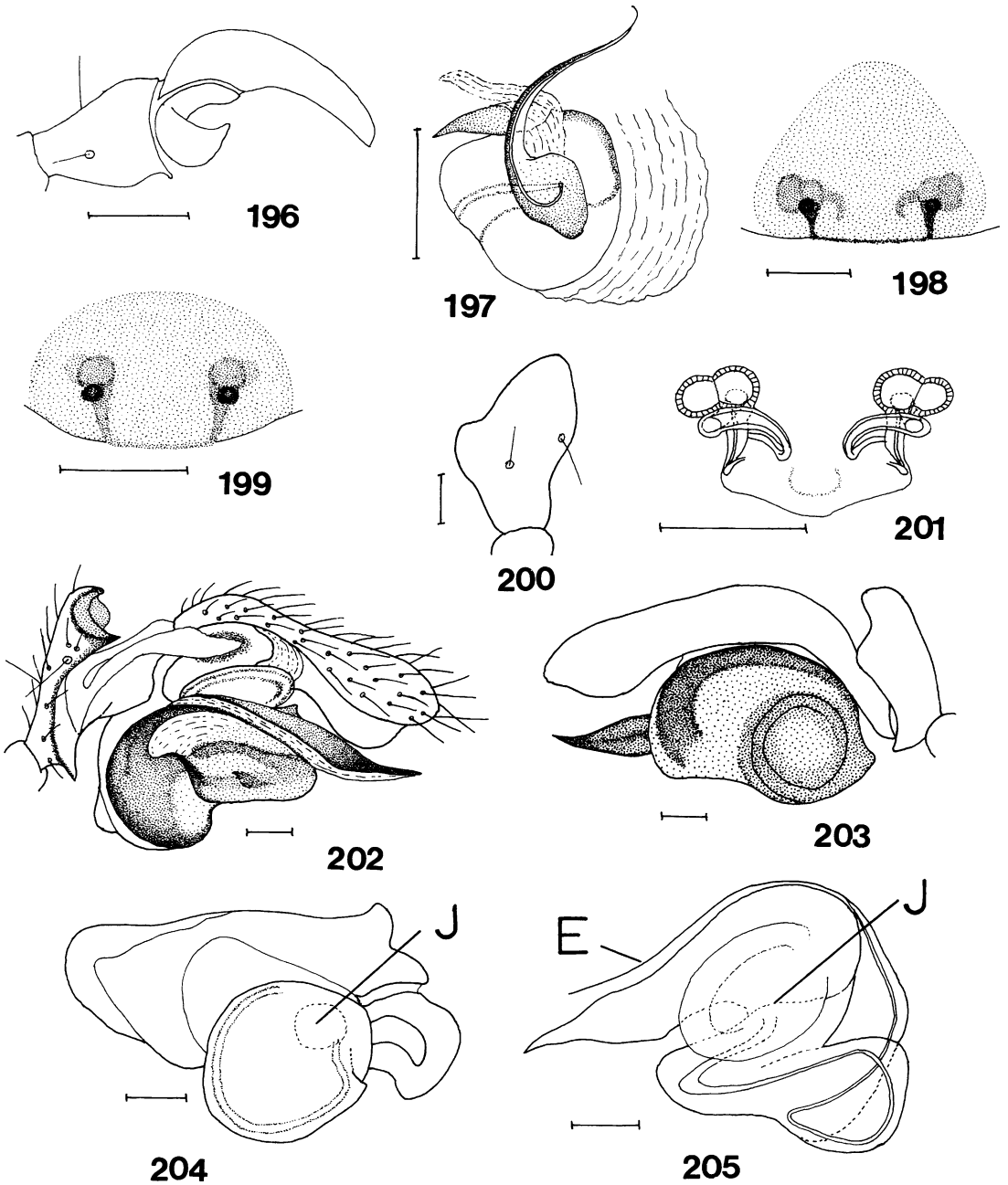
CALEUREMA, NEW GENUS

TYPE SPECIES: *Caleurema involutum*, new species.

ETYMOLOGY: From the Greek *kalos*, beautiful, and *eurema*, a discovery. Gender neuter.

DIAGNOSIS: The characteristic male palp (figs. 202, 203) is described below. No females are known.

DESCRIPTION: The male of the single species has total length 2.2. The carapace is unmodified; the eyes are rather small, with posteriors 1.5 d or more apart. The chelicerae are somewhat short and weak. The legs are fairly long and slender; many segments, and all the spines are missing in the two specimens available. Metatarsi 1–4 have a tricho-



Figs. 196–205. 196, 197, 199, 201. *Stictonanus paucus*. 198. *S. exiguus*. 200, 202–205. *Caleurema involutum*. 196, 202. Male palp, ectal. 197. Palpal bulb, expanded, ventral. 198, 199. Epigynum, ventral. 200. Male palpal tibia, dorsal. 201. Epigynum, internal. 203. Male palp, mesal. 204. Male palp, mesal, embolic division removed to show junction. 205. Male palp, embolic division, mesal, cleared to show duct. Abbreviations: E, embolus; J, junction. Scale lines 0.1 mm.

bothrium; TmI ca. 0.3. The tracheal form is not known. The palpal tibia is produced anteriorly (fig. 200) into a claw-shaped apophysis (lateral aspect) (fig. 202). The paracymbium is large. The tegulum of the palpal organ is small, and there appears to be no suprattegulum. The embolic division is large, with a complex radical part carrying a pointed process anteriorly (figs. 203, 205). The embolic division is attached to the tegulum by a broad, lightly sclerotized junction (fig. 204), and the duct to the embolus follows a serpentine course within the radical part. The embolus, which is long and slender, arises from the posterior of the radical part, and runs anteriorly; the distal end of the embolus lies along the anterior pointed process.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Ecuador.

TAXONOMIC POSITION: The broad junction of the embolic division with the tegulum, and the convoluted duct *within* the embolic division, are characters which are absent in the vast majority of current linyphiid genera. These characters are probably primitive, or relatively so, for the Linyphiidae (Millidge, 1988a). Like some other genera in the South American linyphiid fauna, *Caleurema* may be the remnant of an evolutionary side-branch which does not fit into any of the linyphiid subfamilies so far proposed; these families have been defined mainly on the Linyphiidae of the Northern Hemisphere.

Caleurema involutum, new species

Figures 200, 202–205

TYPE: Male holotype from Banos, Tungurahua, Ecuador, 1800 m, Mar. 1–15, 1939 (F. M. Brown); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning involved, convoluted.

DIAGNOSIS: The structure of the male palp (figs. 200, 202–205) is described under the generic description; the palpal form distinguishes this species from all other known linyphiids. The female is not known.

MALE: Total length 2.2. Carapace length 1.0; deep brown, with blackish margins. Abdomen shiny black. Sternum brown, suffused with black. Legs (some missing) deep brown, with coxae, trochanters and distal ends of

tarsi paler; TmI ca. 0.3. Palp (figs. 200, 202–205).

MATERIAL EXAMINED: ECUADOR: *Tungurahua*: Banos, the holotype. Banos, 1900 m, Oct. 1938 (W. Clarke-Macintyre), 1 male paratype (poor condition).

DISTRIBUTION: Known only from Ecuador.

ASEMONETES, NEW GENUS

TYPE SPECIES: *Asemonetes arcanus*, new species.

ETYMOLOGY: From the Greek *asemos*, obscure, and *netes*, a spinner. Gender masculine.

DIAGNOSIS: The epigynum of the female (figs. 210, 211) is not very distinctive. The male palp (figs. 206, 207) is somewhat similar to that of *Caleurema* (fig. 202), but readily distinguishable.

DESCRIPTION: The single known species has total length ca. 1.35. The carapace is unmodified. The female's eyes are large with posteriors ca. 0.5 d apart; smaller in the male, with posteriors less than 1 d apart. The sternum is broad. The legs are fairly stout, with tibia 1 1/d 5 (female), 8 (male); tarsi 1 and metatarsi 1 are of equal length in the female. Tibial spines are 1111; metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.4. The female palp is clawless. The tracheal form is not known. The epigynum (figs. 210, 211) is simple, with short internal ducts. The male palpal tibia has short distal apophyses (figs. 206, 209); the paracymbium is well developed. The mesal margin of the tegulum is only weakly sclerotized, and there is no suprattegular apophysis. The embolic division is large (fig. 207); the posterior is rounded, and the anterior projects as a sclerotized apophysis. The embolic division is attached to the tegulum by a fairly broad junction (fig. 208) near to the posterior of the organ, and the duct is coiled inside the embolic division before it enters the long, curved embolus, which is hairlike distally and runs in a groove along the anterior apophysis (fig. 207).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Venezuela.

TAXONOMIC POSITION: The palp appears to be of a primitive form rather similar to that

of *Caleurema*. The relationships of *Asemonetes* within the Linyphiidae must at present be regarded as obscure.

Asemonetes arcanus, new species

Figures 206–211

TYPES: Male holotype, with female paratype, from Rancho Grande, Aragua, Venezuela, Dec. 20, 1954 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning secret.

DIAGNOSIS: The two sexes were taken in the same locality, on the same date, and are assumed to be the same species. The female is diagnosed by the epigynum, which is simple and rather nondescript (fig. 210), coupled with the small size of the species. The male is diagnosed by the palp; the tibia has a short dorsolateral apophysis which is distally bifid (figs. 206, 209), and the embolic division (fig. 207) (described in the generic description) is characteristic and distinguishes the species from other known linyphiids.

FEMALE: Total length 1.35. Carapace length 0.55; orange; eyes large (see generic description). Abdomen white. Sternum orange. Legs brown; TmI ca. 0.4. Epigynum (figs. 210, 211).

Male: Abdomen missing. Carapace length 0.65. Color as female. Palp (figs. 206–209).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Venezuela.

CRYPTOLINYPHIA, NEW GENUS

TYPE SPECIES: *Cryptolinyphia sola*, new species.

ETYMOLOGY: From the Greek *kryptos*, hidden, and *Linyphia*. Gender feminine.

DIAGNOSIS: The female epigynum (figs. 212, 213) externally is somewhat like those of *Dubiaranea*, but internally it is quite different. No males are known.

DESCRIPTION: Only the female is known. The carapace is unmodified; the posterior median eyes are fairly large, but not on raised tubercles as in *Dubiaranea*. The abdomen has a pattern of glistening white patches. The legs are fairly long, with tibia 1 l/d ca. 13; most of the spines in the single specimen are missing. Metatarsi 1–3 have a trichobothrium;

TmI ca. 0.2. The female palp is clawless. The tracheal form is not known. The epigynum (fig. 212) has a median septum on either side of which is a shallow atrium; the septum carries a genital socket. Internally (fig. 213) the spermathecae are banana-shaped, placed well to the anterior, and the duct runs in a tight spiral to the openings in the atria; the chirality of the coil is as in *Linyphia*.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The internal epigynal structure indicates a fairly close relationship to *Microlinyphia* Gerhardt; the external structure, however, is closer to that of *Dubiaranea*. The discovery of the male will permit a more definite assessment of the taxonomic position.

Cryptolinyphia sola, new species

Figures 212, 213

TYPE: Female holotype from Socorpa Mission, Finca San Jose, Sierra de Perija, César, Colombia, forest trail, beaten from dry foliage, 1500–1600 m, Aug. 16–17, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning alone.

DIAGNOSIS: The female epigynum (fig. 212) has a median scape carrying a socket, and lateral atria confirmed by internal epigynal structure (fig. 213), which has clearly coiled ducts leading to the genital openings. The male is not known.

FEMALE: Total length 2.4. Carapace length 1.1; orange-brown, with broad blackish median stripe. Abdomen with numerous glistening white patches, and two median black patches dorsally. Sternum almost black. Legs yellow-brown, weakly annulated with dark brown; TmI ca. 0.2. Epigynum (figs. 212, 213).

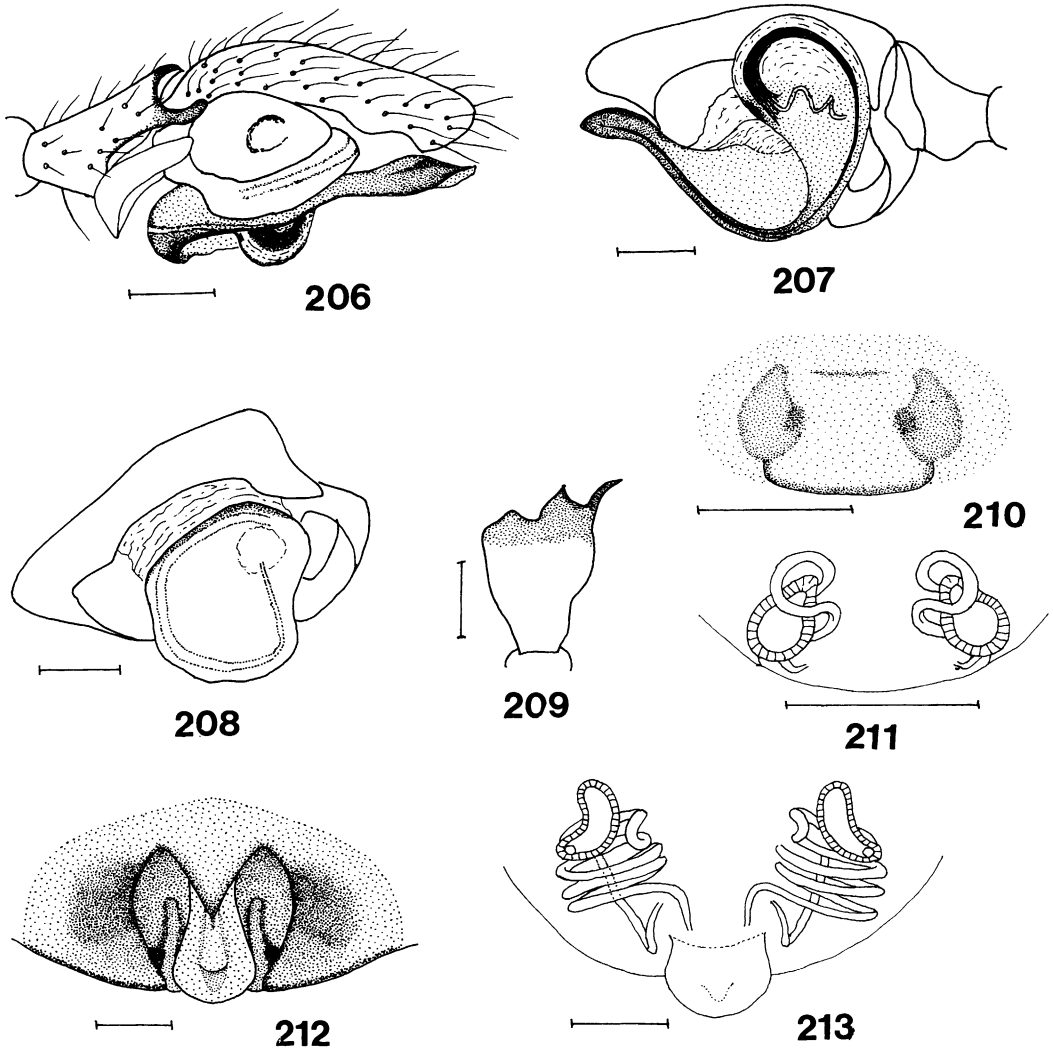
MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

NOVAFRONTINA, NEW GENUS

TYPE SPECIES: *Frontina bipunctata* Keyserling.

ETYMOLOGY: From the Latin *novus*, new, and the old generic name *Frontina*. Gender feminine.



Figs. 206–213. 206–211. *Asemonetes arcanus*. 212, 213. *Cryptolinyphia sola*. 206. Male palp, ectal. 207. Male palp, mesal. 208. Male palp, mesal, embolic division removed to show junction. 209. Male palpal tibia, dorsal. 210, 212. Epigynum, ventral. 211, 213. Epigynum, internal. Scale lines 0.1 mm.

DIAGNOSIS: Females are diagnosed by the epigynum (figs. 220–225); the shape of the abdomen (fig. 218) is a confirmatory character, but several other genera have this character. Males are diagnosed by the palp (figs. 214–217, 226, 227), particularly by the short spur on the patella (fig. 214) (also present in *Frontinella* F. O. P.-Cambr.), and by the shapes of the paracymbium and embolic division (both different from those of *Frontinella*); The abdominal shape (fig. 219) is a

confirmatory character, but is present in other genera.

DESCRIPTION: The three known species have total length 3.6–4.9 (female) and 3.0–3.9 (male). The carapace is unmodified; the posterior median eyes are on raised black spots, not quite so pronounced as in *Dubiaranea*. The male chelicerae are weakly granulated anteriorly. The abdomen projects strongly over the spinnerets (figs. 218, 219), and is constricted at midpoint in the male, and some-

times in the female. The legs are long and slender, with tibia 1 l/d (female) 12–15. Dorsal tibial spines are 2222, and there are ventral and lateral spines on tibiae and sometimes on metatarsi; spines are weaker in male. Metatarsi 1–3 have a trichobothrium; TmI 0.15–0.2. Female palp has a claw. The tracheal system comprises four simple tubes limited to the abdomen. The epigyna are all of the same general form (figs. 220–222, 225); anteriorly there is a shallow atrium which carries the genital openings, and there is no genital socket. Internally the ducts follow a spiral course to the openings (figs. 223, 224); the chiral form of the duct is as in *Linyphia* Latr. The male palp has a short, pointed spur on the patella (fig. 214); the tibia has no apophysis. The paracymbium, which lies more or less at right angles to the cymbium, is relatively long, with a short distal arm (fig. 216); in *Frontinella* the paracymbium lies more or less parallel to the cymbium. The palpal organ lacks a suprategular apophysis. The embolic division (figs. 215, 217, 227) has a large radical part, pointed and twisted anteriorly, and with a long tail; the embolus arises on the inner side of the radical part, on the ectal side of the palp, and runs round the bulb to the mesal side and then back to the ectal side, where the distal end lies along the anterior twisted end of the radical part. The embolic division is firmly attached to the tegulum, near to the point of origin of the embolus; there appears to be no lightly sclerotized stalk of the kind typically present in the Linyphiidae.

INCLUDED SPECIES: *Novafrontina bipunctata* (Keyserling), *N. uncata* (F. O. P.-Cambridge) and *N. patens*, new species.

DISTRIBUTION: Mexico, Panama, Guatemala, Venezuela, Colombia, Peru, Ecuador, and Brazil.

TAXONOMIC POSITION: The embolic division of the male palp is of the *Linyphia* type, but simpler and probably more primitive. The epigynum lacks a genital socket, and the internal duct system appears to be of a primitive form. *Novafrontina* does not fit into the subfamily Linyphiinae as currently defined (Millidge, 1984), but presumably is related to one of the precursors of this subfamily. The embolic division of the male palp is also

of the same general form as that of *Dubiaranea*, though simpler, but the chirality of the female epigynal duct is linyphiine, which is the converse of that of *Dubiaranea* and the Mynogleninae (Millidge, 1985: 75). *Novafrontina* is probably quite closely related to *Frontinella* (type species *Frontinella laeta* F. O. P.-Cambridge), and to certain new genera which are required to accommodate several other species from Central America and southern U.S.A., which are at present placed in *Frontinella* and *Linyphia*.

Novafrontina bipunctata (Keyserling)

Figures 214, 215, 218, 220, 223

Frontina bipunctata Keyserling, 1886: 105 (female type from Peru, in BMNH, examined). The male figured by Keyserling (1886, fig. 192c) appears to be a *Notiohyphantes*, probably *excelsa* (Keys.). *Linyphia bipunctata*: Roewer, 1942: 587. Bonnet, 1957: 2492.

DIAGNOSIS: The female epigynum (fig. 220) has two distinct rounded openings anteriorly; in *N. uncata* (figs. 221, 222) the openings are smaller, and in *N. patens* (fig. 225) they are larger, and in both these species the region demarcated by the dark lines is differently shaped than in *N. bipunctata*. The male is diagnosed by the palp; the embolic division (fig. 215) is more slender, and extends to a lesser degree to the ectal side (fig. 214), than in *N. uncata* and *N. patens*, and the anterior apophysis of the embolic division is shorter than in the other two species.

FEMALE: Total length 4.25–4.9. Carapace length 1.45–1.55. Carapace and chelicerae brown to almost black. Abdomen brown-black to black, with one white spot on either side; shape (fig. 218) characteristic of genus, sometimes constricted at midpoint. Sternum deep brown to almost black. Legs brown, with dark brown markings and annulations. Palp black. Epigynum (figs. 220, 223).

MALE: Total length 3.1. Carapace length 1.35. Color as in female. Palp (figs. 214, 215), dark brown.

MATERIAL EXAMINED: ECUADOR: *Oriente*: Rio Puyo, 900 m, Mar. 1941 (W. Clarke-Macintyre), 2 females (AMNH). Huagra-Yacu, Apr. 1941 (W. Clarke-Macintyre), 1 female (AMNH). PERU: *Loreto*: Janaro

Henera, Aug. 27, 1988 (D. Silva), 3 females, 3 males (MHNSM). *Madre de Dios*: Zona Reservada de Manu, Oct. 3–4, 1987 (D. Silva and J. Coddington), 4 females (MHNSM). Zona Reservada Tambopata, 290 m, June 10–13, 1988 (D. Silva), 3 females (MHNSM). *Ucayali*: Parque Nacional A. von Humboldt, July 25, 1986 (D. Silva), 1 female, 1 male (MHNSM).

DISTRIBUTION: Ecuador and Peru. The record for Panama (Roewer, 1942) may refer to *N. uncata*.

Novafrontina uncata (F. O. P.-Cambridge)
Figures 216, 217, 219, 221, 222, 224

Frontinella uncata F. O. Pickard-Cambridge 1902: 421 (male and female syntypes from Guatemala (Sarg), in BMNH, examined).

Linyphia uncata: Roewer, 1942: 591. Bonnet, 1957: 2537.

DIAGNOSIS: The female epigynum (figs. 221, 222), has two small openings anteriorly; in *N. bipunctata* and *N. patens* the openings are larger, and the region demarcated by the dark lines is differently shaped. The embolic division of the male palp (fig. 217) is similar to that of *N. bipunctata*, but extends to a greater degree to the ectal side (fig. 216), and the anterior apophysis is longer than in *N. bipunctata*. The embolic division is markedly different in shape from that of *N. patens* (figs. 226, 227).

FEMALE: Total length 3.7–4.45. Carapace length 1.25–1.45; brown to deep chestnut-brown, with black markings and margins. Chelicerae dark brown. Abdomen brown to black, with three white patches on each side; shape typical of genus, constricted at midpoint. Sternum orange to deep brown, suffused to variable degree with black. Legs brown to orange-brown, with sometimes weak annulations. Epigynum (figs. 221, 222, 224); atrium often plugged with a translucent substance.

MALE: Total length 3.0–3.9. Carapace length 1.3–1.55. Color as female, except: Abdomen (fig. 219) black, whitish dorsally. Palp (figs. 216, 217); cymbium deep brown.

MATERIAL EXAMINED: BRAZIL: *Para*: Jacare-Acanga, Dec. 1968 (M. Alvarenga), 1 female, 2 males (AMNH). COLOMBIA: *Meta*: Finca Chenevo, 170 m, 1978 (W. Eberhard), 1 female (MCZ). *Valle*: Rio Janandi near Janandi, 1000 m, Dec. 9, 1969 (no col-

lector), 1 female (MCZ). GUATEMALA: the types above. VENEZUELA: *Amazonas*: Cerro de la Neblina Basecamp, 140 m, Feb. 10–20 (P. J. Spengler et al.), 1 male (USNM).

DISTRIBUTION: Mexico, Guatemala, Panama, Venezuela, Colombia, and Brazil.

Novafrontina patens, new species
Figures 225–227

TYPES: Male holotype, with one female and one male paratype, from central Anchicayn, Valle, Colombia, 400 m, Apr. 24, 1975 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning evident.

DIAGNOSIS: The female epigynum (fig. 225) has two moderate-size openings anteriorly, and is differently shaped from the epigyna of *N. bipunctata* and *N. uncata*. The embolic division of the male palp (fig. 227) is differently shaped, and much more obvious on the ectal side (fig. 226), than in the other species, and the anterior apophysis is broader and not pointed distally.

FEMALE: Total length 3.65. Carapace length 1.35. Carapace and chelicerae dark brown. Abdomen with typical shape; dark brown, with a pale spot dorsally, and three bright white spots on each side. Sternum orange-brown, suffused with dark brown, to very dark brown. Legs brown, with dark brown annulations. Palp with tibia and tarsus black. Epigynum (fig. 225).

MALE: Total length 3.2. Carapace length 1.3. Color as in female, except carapace orange-brown, suffused anteriorly with black. Abdomen dark brown, with constricted region pale yellow. Palp (figs. 226, 227); cymbium dark brown to black.

MATERIAL EXAMINED: Only the types above.

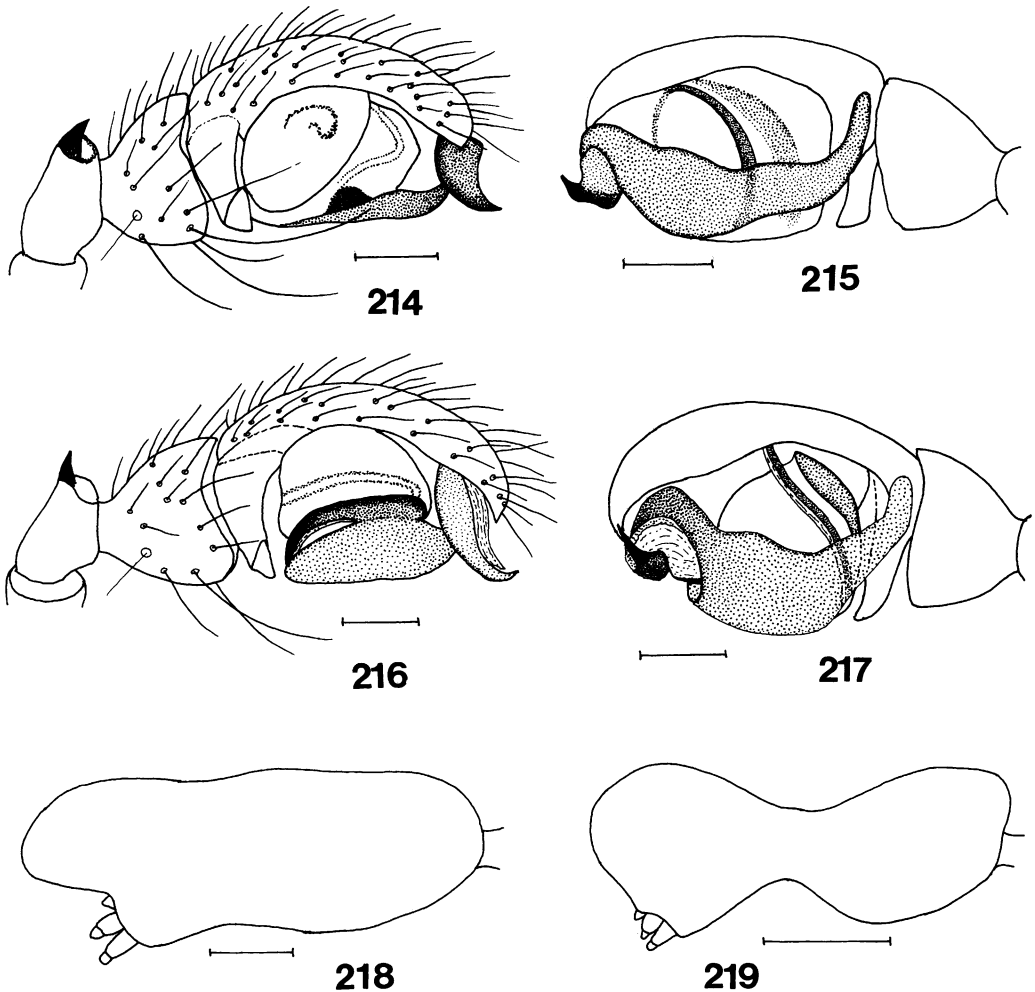
DISTRIBUTION: Known only from Colombia.

DIPLOTHYRON, NEW GENUS

TYPE SPECIES: *Diplothyron fuscus*, new species.

ETYMOLOGY: From the Greek *diplos*, double, and *thyron*, a vestibule, referring to the form of the epigynum. Gender masculine.

DIAGNOSIS: The female is diagnosed by the epigynum (figs. 228, 229); the abdominal shape is a confirmatory character (fig. 231).



Figs. 214–219. 214, 215, 218. *Novafrofrontina bipunctata*. 216, 217, 219. *N. uncata*. 214, 216. Male palp, ectal. 215, 217. Male palp, mesal. 218. Female abdomen, lateral. 219. Male abdomen, lateral. Scale lines 0.1 mm, except 218, 219: 0.5 mm.

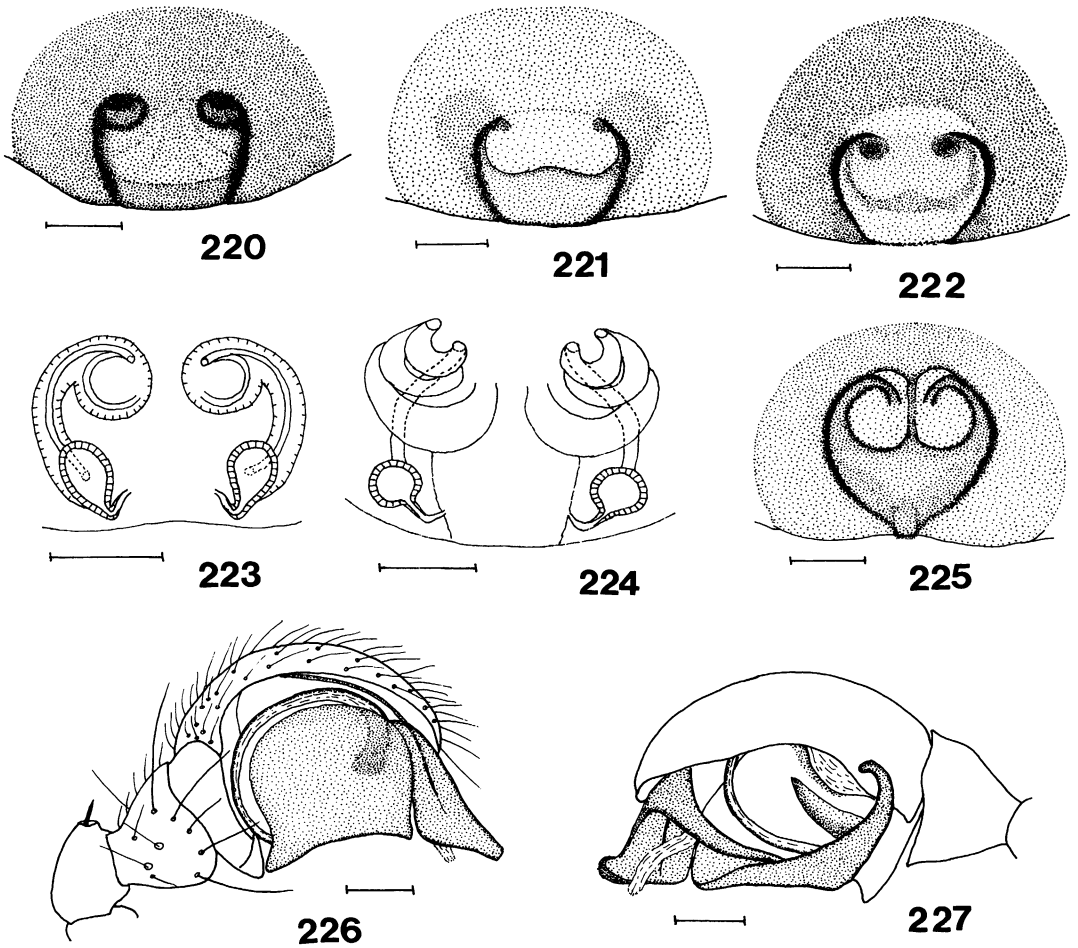
DESCRIPTION: Only the female is known; this has total length 3.45–4.0. The carapace is unmodified; the posterior median eyes are on raised black tubercles. The abdomen projects to a variable degree over the spinnerets (fig. 231). The legs are long, with tibia 1 $1/d$ ca. 11. Dorsal tibial spines are 2222, and there are several long lateral and ventral spines on the femora, tibiae, and metatarsi. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.15. The palp is clawless. The tracheal form is not known. The epigynum (fig. 228) has an atrium on either side of a median septum; there is no genital socket. Internally, the duct runs in a short spiral through a lamellar infrastructure (fig. 229).

INCLUDED SPECIES: Only the type species.
DISTRIBUTION: Known only from Venezuela.

TAXONOMIC POSITION: The epigynal structure indicates a probable relationship to *Novafrofrontina* and *Frontinella*, but specimens of the male are needed before a more definite opinion can be given.

***Diplothyron fuscus*, new species**
 Figures 228, 229, 231

TYPES: Female holotype, with one female paratype, from Rancho Grande, Aragua, Venezuela, Dec. 16, 1954 (A. M. Nadler); deposited in AMNH.



Figs. 220–227. 220, 223. *Novafrontina bipunctata*. 221, 222, 224. *N. uncata*. 225–227. *N. patens*. 220, 225. Epigynum, ventral. 221, 222. Epigynum, ventral, Guatemala and Colombia specimens. 223, 224. Epigynum, internal. 226. Male palp, ectal. 227. Male palp, mesal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning dark in color.

DIAGNOSIS: The female epigynum (fig. 228) has two large atria, with a median septum but no genital socket; internal structure is distinctive (fig. 229). The male is not known.

FEMALE: Total length 3.45–4.0. Carapace length 1.3–1.35; deep brown, lighter anteriorly. Abdomen brown-black to black, with pale markings and chevrons dorsally, and broken stripe of glistening white along each side; projecting over spinnerets (fig. 231). Sternum deep brown to black. Legs orange-brown, with sometimes faint brown annulations on tibiae and metatarsi; TmI ca. 0.15. Palpal tarsus black. Epigynum (figs. 228, 229).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Venezuela.

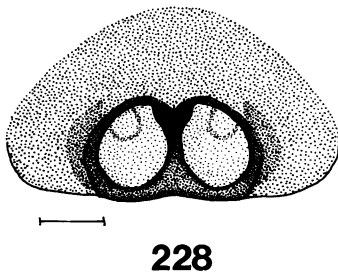
SCHISTOGYNA, NEW GENUS

TYPE SPECIES: *Schistogyna arcana*, new species.

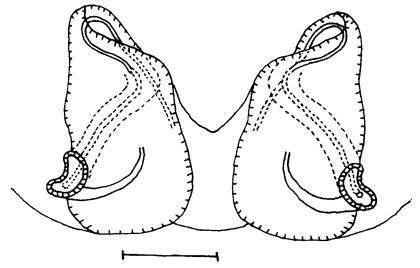
ETYMOLOGY: From the Greek *schistos*, divided, and *gyne*, woman, female, referring to the form of the epigynum. Gender feminine.

DIAGNOSIS: The female epigynum (figs. 230, 232) is distinctive. The male is not known.

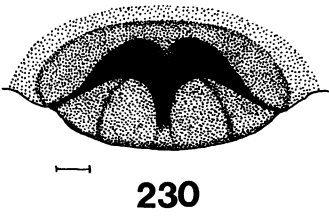
DESCRIPTION: The female carapace is unmodified, but there are three rows of bristles



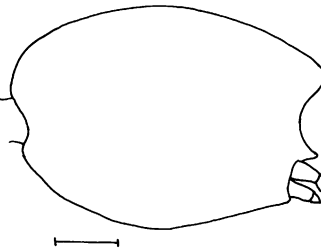
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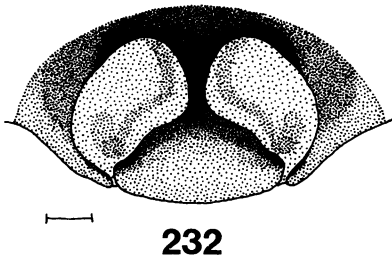
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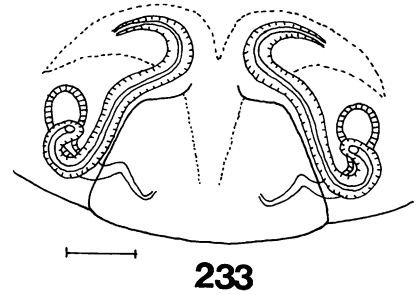
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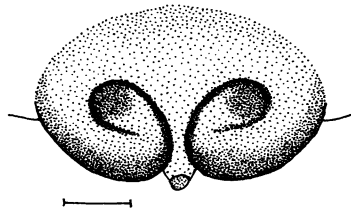
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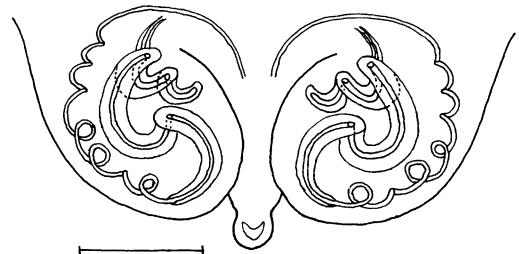
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233



234



235

Figs. 228–235. 228, 229, 231. *Diplothyron fuscus*. 230, 232, 233. *Schistogyna arcana*. 234, 235. *Jalapyphantes obscurus*. 228, 230, 234. Epigynum, ventral. 231. Female abdomen, lateral. 232. Epigynum, caudal. 229, 233, 235. Epigynum, internal. Scale lines 0.1 mm, except 231: 0.5 mm.

radiating from the fovea to the eyes; the eyes are not on raised black tubercles. The chelicerae are stout. The legs are fairly long, with tibia 1 l/d 10–11. The dorsal tibial spines are 2211, and tibia 1 has a prolateral spine; the metatarsi have one weak dorsal spine. The femora have rows of long, straight bristles ventrally. Metatarsi 1–4 have a trichobothrium; TmI ca. 0.15. The female palp is claw-

less. The tracheal form is not known. The epigynum is divided into two large atria; internally (fig. 233) a stout duct runs anteriorly in a short spiral from the small spermatheca to the opening. Males are not known.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from the Juan Fernandez Islands, Chile.

TAXONOMIC POSITION: The internal epigy-

nal structure appears to be somewhat primitive for the family, but until the male is taken the taxonomic position of this genus must remain obscure.

Schistogyna arcana, new species

Figures 230, 232, 233

TYPE: Female holotype from Portezuelo Trail, Valle Villagra, Mas a Tierra, Juan Fernandez Islands, Chile, 400–450 m, Apr. 19, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning mysterious.

DIAGNOSIS: The female epigynum (figs. 230, 232) has two large atria separated by a narrow septum, with no socket; internal genitalia distinctive (fig. 233). The male is not known.

FEMALE: Total length 6.65. Carapace length 3.0; orange-brown, with blackish markings. Chelicerae orange-brown, distally black. Abdomen black, with irregular whitish markings, and a few pale chevrons dorsally. Sternum orange, suffused with black. Legs deep orange-brown; TmI ca. 0.15. Epigynum (figs. 230, 232, 233).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

JALAPYPHANTES GERTSCH and DAVIS

Jalapyphantes Gertsch and Davis, 1946: 7 (type species *Jalapyphantes cuernavaca* Gertsch and Davis, by original designation).—Brignoli, 1983: 295.

The three known species of this genus are from Mexico. The species described below is assigned to the genus on the basis of the epigynal form.

Jalapyphantes obscurus, new species

Figures 234, 235

TYPE: Female holotype from Sebundoi, Ecuador, 2600 m, Sept. 11–15, 1977 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dull in color.

DIAGNOSIS: The female epigynum (fig. 234) has a short median scape with a tiny socket, and two broad lateral lobes, and a complex internal genitalic structure (fig. 235); confusion with the Mexican species is unlikely. The male is not known.

FEMALE: The single specimen is in poor condition. Total length 2.0. Carapace length 0.9; orange-brown, with weak dark median stripe; eyes on black spots. Abdomen blackish. Sternum orange, heavily suffused with dark brown. Legs brown, with most segments and spines missing; TmIII ca. 0.45. Palp with tarsus dark brown. Epigynum (figs. 234, 235); the internal structure is fairly similar to that of *J. cuernavaca* (Millidge, 1984, fig. 29).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

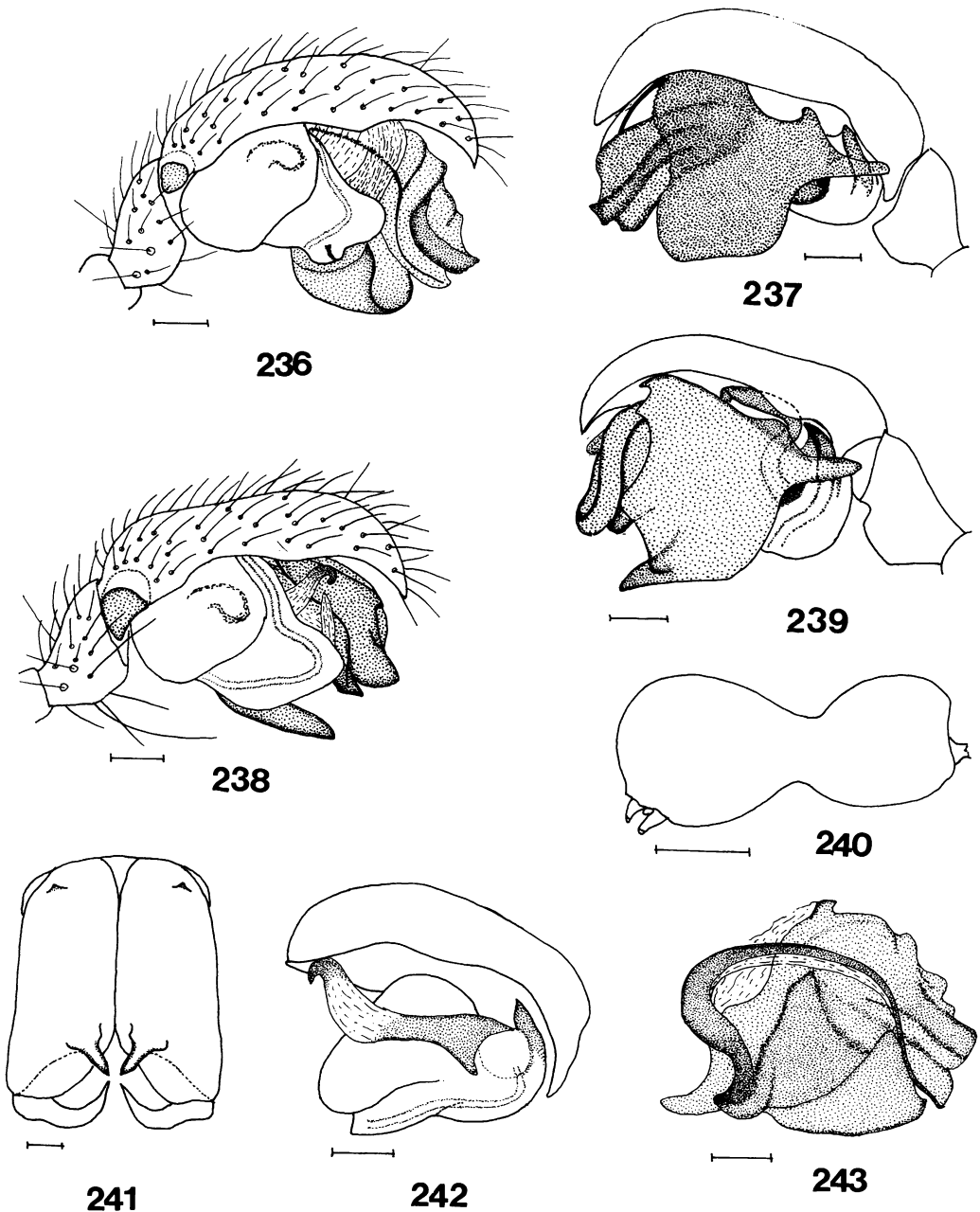
EURYCOLON, NEW GENUS

TYPE SPECIES: *Eurycolon insigne*, new species.

ETYMOLOGY: From the Greek *eurys*, broad, and *kolon*, a limb, a member, referring to the embolic division of the male palp. Gender neuter.

DIAGNOSIS: The male palp has a very small and simple paracymbium (figs. 236, 238) and a complex, distinctive embolic division (figs. 237, 239, 243). Females are not known.

DESCRIPTION: Only males are known; these have total length of 2.8–3.45. The carapace is unmodified; the eyes are fairly small, heavily margined with black, with posterior medians on shallow tubercles. The chelicerae (male) carry a strong pointed boss anteriorly, and a small tubercle basally (fig. 241). The abdomen is elongated, projecting slightly over the spinnerets, and constricted to a variable degree at midpoint (fig. 240). The legs are long and slender; the femora have one pro-lateral and one dorsal spine, the tibiae and metatarsi have several dorsal, lateral and ventral spines. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.15. Tracheal form not known, but almost certainly simple and restricted to the abdomen. The palp has no tibial apophysis; the paracymbium is a tiny plate, not U-shaped (figs. 236, 238). The suprategulum is at the posterior of the organ, and a long suprategular apophysis arises from this region (fig. 242); this apophysis is hooked anteriorly, and is in part only lightly sclerotized. The embolic division comprises a broad plate which virtually covers the mesal side of the organ; the plate has a narrow point posteriorly, and is rather complex anteriorly (figs. 237, 239, 243). The embolus, which is stout basally but slender distally, originates



Figs. 236–243. 236, 237, 240–243. *Eurycolon insigne*. 238, 239. *E. nobile*. 236, 238. Male palp, ectal. 237, 239. Male palp, mesal. 240. Male abdomen, lateral. 241. Male chelicerae, anterior. 242. Male palp, mesal, embolic division removed to show suprategular apophysis. 243. Embolic division, inner (lateral) side. Scale lines 0.1 mm, except 240: 0.5 mm.

on the inner (ectal) side of the plate, and runs in a semicircle to the ectal side of the palp, where the distal end lies on the complex anterior of the plate (fig. 243).

INCLUDED SPECIES: *Eurycolon insigne*, new species, and *Eurycolon nobile*, new species.
 DISTRIBUTION: Known only from Brazil.
 TAXONOMIC POSITION: The palpal organ

shows a strong basic resemblance to those of *Novafrontina* and *Linyphia*. In the absence of females, it is not known whether the epigynum has a genital socket. Like *Novafrontina*, *Eurycolon* must be regarded provisionally as related to the precursors of the Linyphiinae.

Eurycolon insigne, new species

Figures 236, 237, 240–243

TYPE: Male holotype from Floresta da Tijuana, Guanabara, Brazil, Jan. 1974 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning distinguished.

DIAGNOSIS: The embolic division of the male palp (fig. 237) has the ventral margin upturned (fig. 236), and the paracymbium is tiny. The palp of *E. nobile* is similar, but in that species the embolic division is drawn out ventrally to a pointed apophysis (figs. 238, 239), and the paracymbium is somewhat larger. The female is not known.

MALE: Total length 2.8–3.45. Carapace length 1.35–1.55; yellow, with dusky markings and margins. Chelicerae with strong pointed boss anteriorly (fig. 241). Abdomen dorsally whitish with darker chevrons, gray ventrally; constricted at midpoint (fig. 240). Sternum orange, suffused with gray. Legs yellow-brown, weakly annulated with brown; TmI ca. 0.15. Palp (figs. 236, 237, 242, 243).

MATERIAL EXAMINED: BRAZIL: *Guanabara*: the holotype. *Rio de Janeiro*: Mangaratiba, Feb. 1976 (M. Alvarenga), 1 male paratype (AMNH).

DISTRIBUTION: Known only from Brazil.

Eurycolon nobile, new species

Figures 238, 239

TYPE: Male holotype from S. Jose Barreiro, São Paulo, Brazil, 1960 m, Nov. 1968 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning renowned, distinguished.

DIAGNOSIS: The embolic division of the male palp (fig. 239) has the ventral margin drawn out to a point (figs. 238, 239), and the paracymbium is small. The palp of *E. insigne* is similar, but distinguishable by the embolic division and the smaller paracymbium in that species. The female is not known.

MALE: Total length 3.2. Carapace length 1.55. Carapace orange, darker anteriorly and

on margins. Chelicerae as in *E. insigne*, but with boss smaller. Abdomen gray, somewhat paler dorsally; constriction present, but less pronounced than in *E. insigne*. Sternum orange. Legs yellow-brown; many missing, hence chaetotaxy unknown. Palp (figs. 238, 239).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

LAMINACAUDA MILLIDGE

Laminacauda Millidge, 1985: 26 (type species *Laminacauda diffusa* Millidge, by original designation).—Platnick, 1989: 246.

Twenty additional species of this genus are described below, in the order of their country of origin. Several species are recorded from Juan Fernandez Islands, and one of these is very large, which parallels the situation in the islands of Tristan da Cunha (Millidge, 1985). One of the species has the unusual character of a large lobe on the male carapace.

The somatic characters of the members of this genus are, apart from size, fairly similar, but some species have a trichobothrium on metatarsus 4 while in others this is absent. With most species, diagnosis must be based on the genitalia. The shape of the epigynal scape is always slightly variable; the dorsal aspect of the scape is often a useful diagnostic character.

Oedothorax orinus Chamberlin (1916: fig. 8), from Peru, is almost certainly a *Laminacauda*, but the type has not been examined. *L. dentichelis* Millidge appears to be close to, if not identical with, *L. orina* (Chamberlin), new combination.

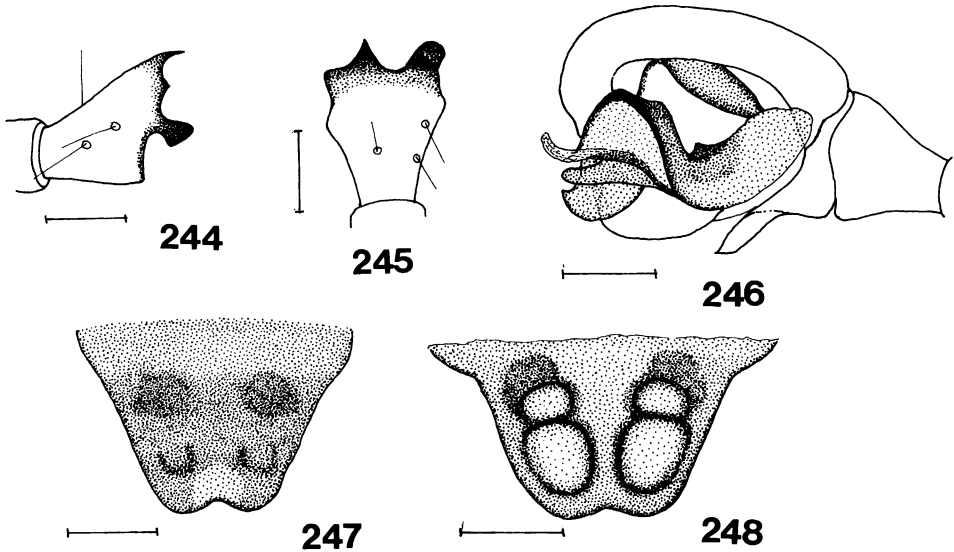
Laminacauda grata, new species

Figures 244–248

TYPES: Male holotype, with one female and two male paratypes, from south side of Sierra Nevada de Santa Marta, Magdalena, Colombia, 8000–10,000 ft, Apr. 1938 (T. D. Cabot); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning pleasing.

DIAGNOSIS: The female is diagnosed by the trichobothrium on metatarsus 4, and by the epigynum (fig. 247). The ventral aspects of the epigynum are, however, close to those of *L. suavis* (fig. 249) and *L. peruensis* Millidge, both of which have a trichobothrium on



Figs. 244–248. *Laminacauda grata*. 244. Male palpal tibia, ectal. 245. Male palpal tibia, dorsal. 246. Male palpal, mesal. 247. Epigynum, ventral. 248. Epigynum, dorsal. Scale lines 0.1 mm.

metatarsus 4; *L. grata* is distinguished from these two species by the dorsal aspect of the epigynum (fig. 248, cf. figs. 250, 262). The embolic division of the male palp (fig. 246) is very similar to that of *L. dentichelis* Millidge (which lacks a trichobothrium on metatarsus 4), but the tibial apophyses (figs. 244, 245) separate *L. grata* from *L. dentichelis* and other *Laminacauda* species.

FEMALE: Total length 2.4. Carapace length 1.1; orange-brown, with dusky markings and margins. Abdomen black, with weak paler chevrons dorsally. Sternum orange, suffused with gray. Legs pale orange to orange; TmI ca. 0.6. Epigynum (figs. 247, 248).

MALE: Total length 1.9–2.2. Carapace length 1.0. Color as in female. Chelicerae with pointed boss anteriorly. TmI ca. 0.5. Palp (figs. 244–246).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Laminacauda suavis, new species

Figures 249, 250

TYPE: Female holotype from Cumbal, Narino, Colombia, 3500 m, Oct. 20, 1978 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning pleasant.

DIAGNOSIS: The female is diagnosed by the trichobothrium on metatarsus 4, and by the epigynum (fig. 249). The ventral aspects of the epigynum is close to those of *L. grata* (fig. 247) and *L. peruensis*, both of which have a trichobothrium on metatarsus 4; *L. suavis* is distinguished from these two species by the dorsal aspect of the epigynum (fig. 250, cf. figs. 248, 262). The male is not known.

FEMALE: Total length 3.0. Carapace length 1.15; orange-brown, with dusky markings and margins. Abdomen gray, with dorsally two longitudinal white stripes anteriorly and white chevrons posteriorly; ventrally with whitish patch. Sternum orange-brown, suffused with black. Legs orange-brown; metatarsi 1–4 with trichobothrium; TmI 0.55. Epigynum (figs. 249, 250).

MATERIAL EXAMINED: Only the holotype.

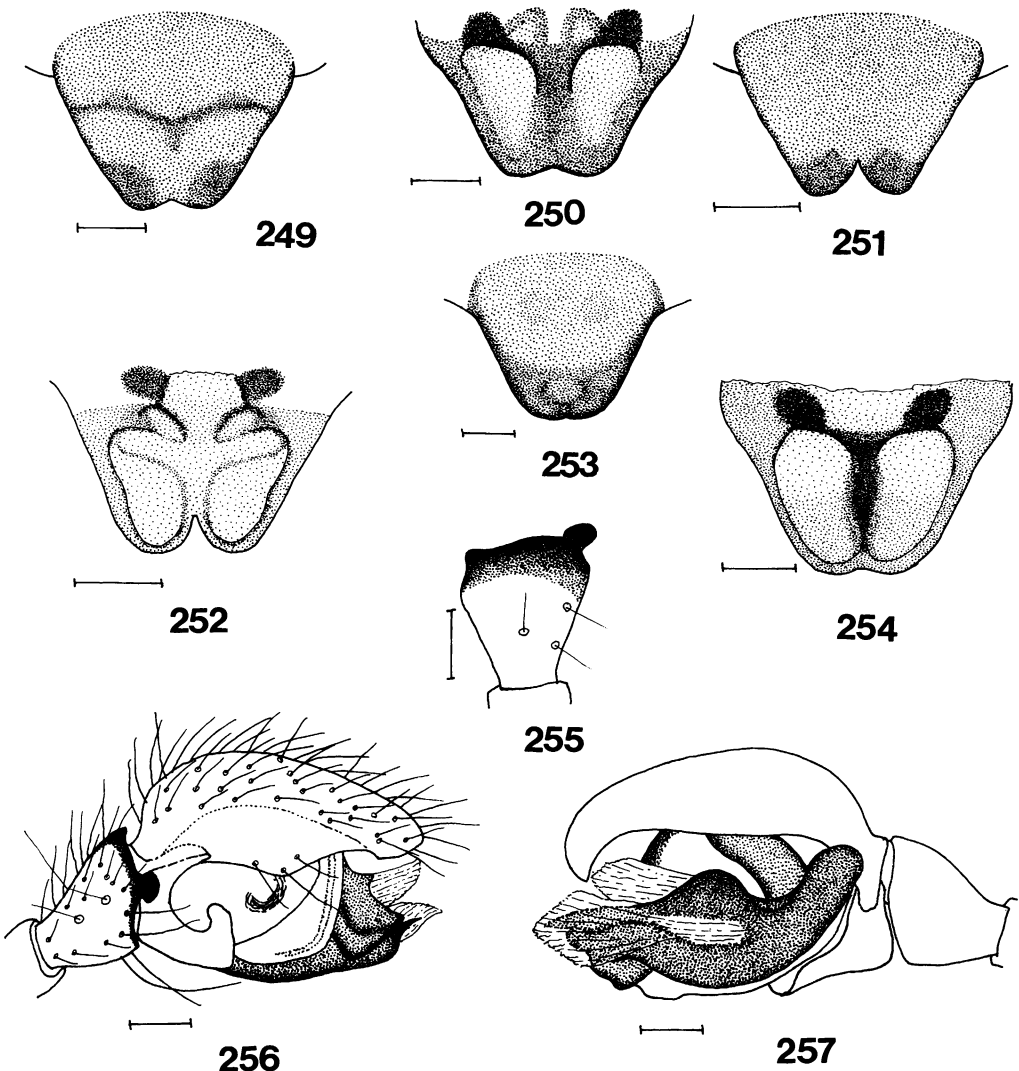
DISTRIBUTION: Known only from Colombia.

Laminacauda palustris, new species

Figures 253–257

TYPES: Male holotype, with two female and three male paratypes, from 28 km south of Quito, Pichincha, Ecuador, seep at base of roadcut, 2700 m, Feb. 1, 1976 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning of a marsh.



Figs. 249–257. 249, 250. *Laminacauda suavis*. 251, 252. *L. denticelis*. 253–257. *L. palustris*. 249, 251, 253. Epigynum, ventral. 250, 252, 254. Epigynum, dorsal. 255. Male palpal tibia, dorsal. 256. Male palp, ectal. 257. Male palp, mesal. Scale lines 0.1 mm.

DIAGNOSIS: The female is diagnosed by the trichobothrium on metatarsus 4, and by the epigynum (fig. 253), which is not, or scarcely, indented posteriorly. The dorsal aspect (fig. 254) is a confirmatory character. The male is diagnosed by the trichobothrium on metatarsus 4, and by the palp; the tibia has a single lateral apophysis (figs. 255, 256), and the embolic division (fig. 257) is long and somewhat differently shaped from that of other *Laminacauda* species.

FEMALE: Total length 2.75–3.0. Carapace length 1.2–1.35; yellow-brown to orange-brown, with dusky markings and margins. Abdomen gray-black, with dorsally two longitudinal white bars anteriorly and pale chevrons posteriorly. Sternum brown, suffused with black. Legs yellow-brown to brown; metatarsi 1–4 with trichobothrium: TmI ca. 0.5. Epigynum (figs. 253, 254).

MALE: Total length 2.75–3.0. Carapace length 1.35–1.5. Color and trichobothria as

female. Carapace slightly raised behind eyes. Chelicerae with pointed boss anteriorly; endites with pointed tubercles. Palp (figs. 255–257).

MATERIAL EXAMINED: ECUADOR: *Pichincha*: the types above. 42 km east of Quito, seep area, Feb. 3, 1976 (R. T. Schuh), 1 female paratype (AMNH). 48 km east of Quito, muddy margin of small lake, 3850 m, Feb. 3, 1976 (R. T. Schuh), 1 female paratype (AMNH). *Napa*: 53 km east of Quito, damp seep area, 3800 m, Feb. 3, 1976 (R. T. Schuh), 2 female paratypes (AMNH).

DISTRIBUTION: Known only from Ecuador.

Laminacauda sublimis, new species

Figures 258, 259

TYPES: Female holotype, with one female paratype, from Tilarnioc, Junin, Peru, 4000 m, July 13, 1965 (P. and B. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning raised high.

DIAGNOSIS: The female epigynum (fig. 258) is broad and atypically shaped. *L. sacra* (fig. 268) has a rather similar epigynum, but that of *L. sublimis* is more concave posteriorly, and the ventral aspects of the epigyna are different (fig. 259; cf. fig. 269). The male is not known.

FEMALE: Total length 3.9. Carapace length 1.55; brown to orange-brown. Abdomen gray to black, with faint paler chevrons dorsally. Sternum orange-brown, margins suffused with black. Legs orange-brown; metatarsi 1–4 with trichobothrium: TmI 0.6–0.65. Epigynum (figs. 258, 259).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Laminacauda expers, new species

Figures 260, 261

TYPE: Female holotype from Machu Picchu, Cuzco, Peru, above ruins, beaten from vegetation, 2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning without a husband.

DIAGNOSIS: Ventral aspect of the female

epigynum (fig. 260) is close to that of *L. peruenensis*; these two species are distinguishable by the dorsal aspect of the epigynum (fig. 261, cf. fig. 262). The male is not known.

FEMALE: Total length 2.0. Carapace length 0.95; orange, ocular area suffused with black. Abdomen gray, with dorsally white blotches and chevrons. Sternum orange, suffused with gray. Legs orange-brown; metatarsi 1–4 with trichobothrium: TmI 0.5. Epigynum (figs. 260, 261).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Laminacauda nigriceps, new species

Figures 263–267

TYPES: Male holotype, with three female paratypes, from Sacramento Camp, Ingavi-Coroico Road, Yungas, Bolivia, 2500 m, July 9–13, 1964 (B. Malkin); deposited in AMNH.

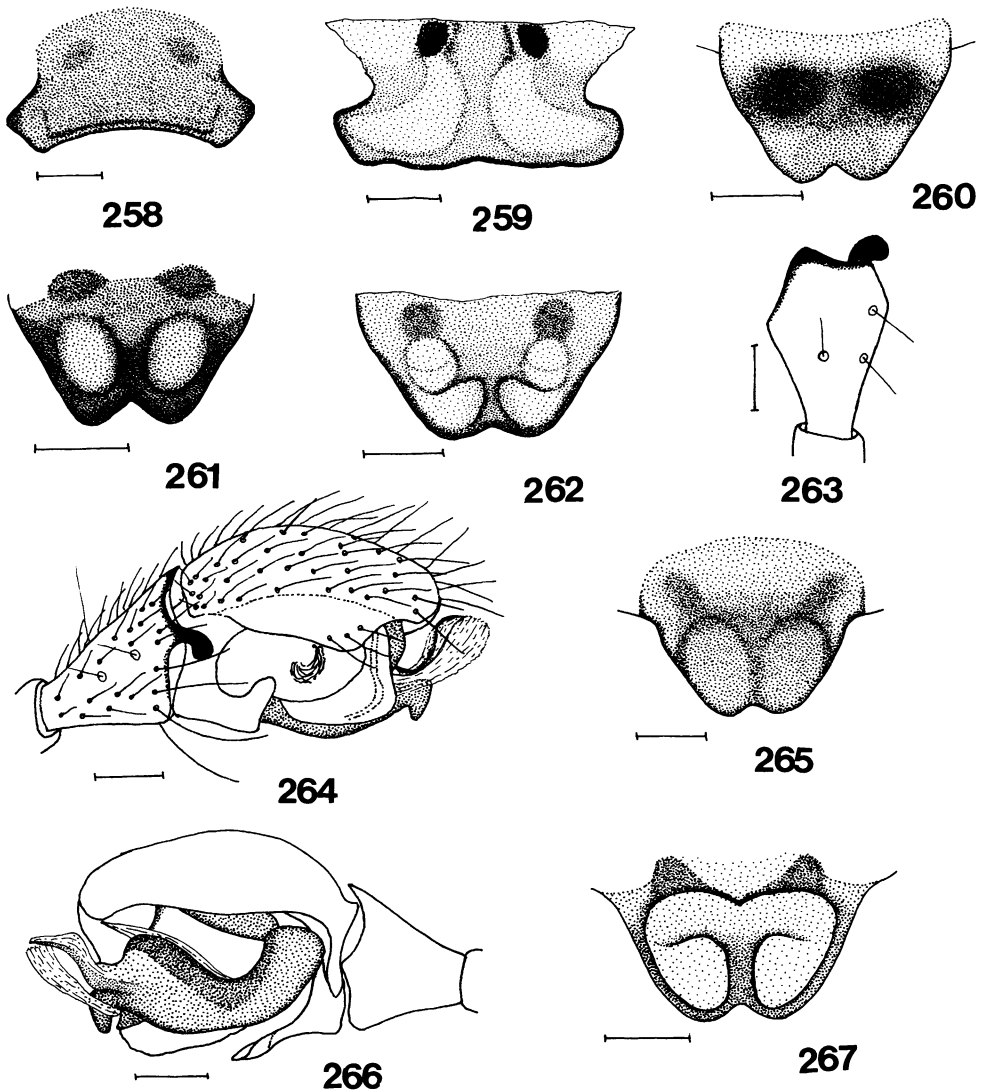
ETYMOLOGY: The specific name is a Latin adjective meaning with a black head.

DIAGNOSIS: The female epigynum (fig. 265) is similar to that of *L. suavis* (fig. 249); these two species are distinguishable by the dorsal aspect of the epigynum (fig. 267; cf. fig. 250). The male is diagnosed by the palp; the tibia has a single lateral apophysis (figs. 263, 264), and the embolic division (fig. 266) has a prominent embolus projecting anteriorly, which distinguishes this species from other *Laminacauda* species.

FEMALE: Total length 2.7–3.0. Carapace length 1.35–1.45; orange, with dusky markings and margins; ocular area often suffused with black. Abdomen gray-black, with dorsally longitudinal dark stripe anteriorly and dark chevrons posteriorly. Sternum orange, suffused with variable amount of black. Legs yellow-brown to orange-brown; metatarsi 1–4 with trichobothrium: TmI ca. 0.55. Epigynum (figs. 265, 267).

MALE: Total length 2.75. Carapace length 1.35. Color and trichobothria as female. Chelicerae with small pointed boss anteriorly. Palp (figs. 263, 264, 266).

MATERIAL EXAMINED: BOLIVIA: *Santa Cruz*: San Antonio de Parapeti, Rio Parapeti, July 15–25, 1964 (B. Malkin), 1 female paratype (AMNH). *Yungas*: the types above. 13 km from Sacramento Camp, on Ingavi-Co-



Figs. 258–267. 258, 259. *Laminacauda sublimis*. 260, 261. *L. expers*. 262. *L. peruensis*. 263–267. *L. nigriceps*. 258, 260, 265. Epigynum, ventral. 259, 261, 262, 267. Epigynum, dorsal. 263. Male palpal tibia, dorsal. 264. Male palp, ectal. 266. Male palp, mesal. Scale lines 0.1 mm.

roico Road, 1400 m, July 11, 1964 (B. Malkin), 1 male paratype (AMNH). PERU: *Huanuco*: Sariapamp, 3600 m, no date (F. Woytkowski), 1 female paratype (AMNH).

DISTRIBUTION: Bolivia and Peru.

***Laminacauda sacra*, new species**

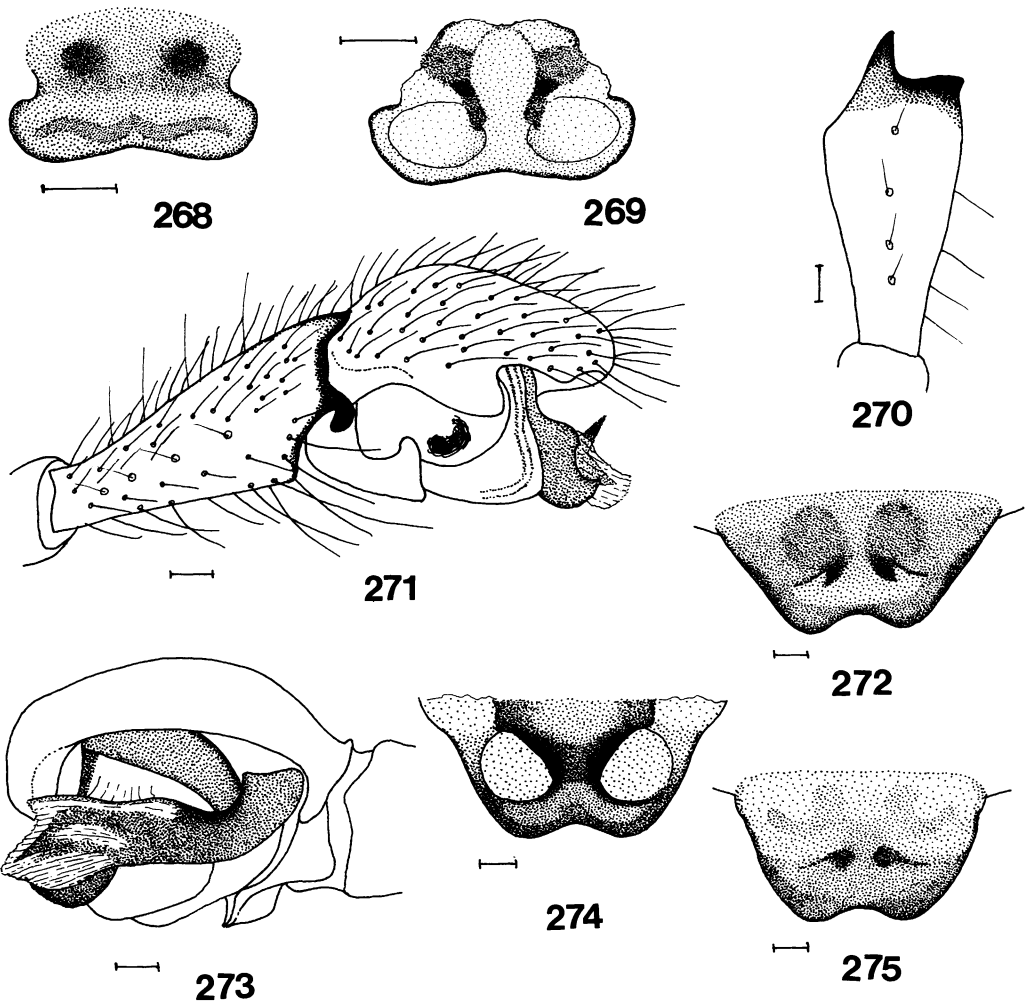
Figures 268, 269

TYPE: Female holotype from Camino al Ilimana, La Paz, Bolivia, 3700–4000 m, Dec. 25, 1975 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning sacred, referring to the date of capture of the type.

DIAGNOSIS: The female epigynum is broad and atypically shaped (fig. 268). *L. sublimis* has a rather similar epigynum (fig. 258), but in that species the posterior margin is more concave, and the dorsal aspects of the epigyna are different (fig. 269; cf. fig. 259). The male is not known.

FEMALE: Total length 2.85. Carapace length 1.3; yellow, shading to orange anteriorly. Ab-



Figs. 268–275. 268, 269. *Laminacauda sacra*. 270–275. *L. gigas*. 268, 272, 275. Epigynum, ventral. 269, 274. Epigynum, dorsal. 270. Male palpal tibia, dorsal. 271. Male palp, ectal. 273. Male palp, mesal. Scale lines 0.1 mm.

domen gray, with dorsally yellowish chevrons posteriorly. Sternum orange, suffused with black. Legs orange-brown; metatarsi 1–4 with trichobothrium: TmI 0.6. Epigynum (figs. 268, 269).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

***Laminacauda gigas*, new species**

Figures 270–275

TYPES: Male holotype, with male paratype, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernández Islands, Chile, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning the giant.

DIAGNOSIS: The female is diagnosed by the large size, by the presence of a dorsal spine on each metatarsus, and by the epigynum (figs. 272, 274, 275), which is a broad scape. The male is diagnosed by its large size, the presence of a dorsal spine on metatarsi 3 and 4, and by the palp; the latter has a long tibia, with two apophyses distally, and two rows of four trichobothria (figs. 270, 271), and the embolic division is long, posteriorly somewhat truncated (fig. 273).

FEMALE: Total length 8.1–9.9. Carapace length 3.9–4.0; deep orange-brown. Abdo-

men brown-black, with whitish areas and markings dorsally, ventrally and on sides. Sternum orange-brown, with blackish margins. Legs orange-brown, suffused with dark brown, particularly on tibiae, metatarsi, and tarsi; metatarsi 1–4 with one dorsal spine. TmI 0.6–0.65. Epigynum (figs. 272, 274, 275).

MALE: Total length 6.5–7.1. Carapace length 3.3–3.5. Color and trichobothria as female. Metatarsi 3 and 4 with one dorsal spine. Palp (figs. 270, 271, 273).

MATERIAL EXAMINED: CHILE: *Juan Fernandez Islands*: the types above. Mas a Tierra, Quebra de Demajuana, Apr. 5, 1962 (B. Malkin), 1 female paratype (AMNH). Mas a Tierra, Valle Villagra, 400–450 m, Apr. 19, 1962 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda tuberosa, new species

Figures 276–281

TYPES: Male holotype, with two female paratypes, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernandez Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective referring to the carapace lobe of the male.

DIAGNOSIS: The scape of the female epigynum has a broadened “shoulder” anteriorly (figs. 280, 281); this cannot be confused with the epigynum of any other species from Juan Fernandez Islands. The male is diagnosed by the large carapace lobe (fig. 277), and by the palp, which has a long tibia (figs. 276, 279) and a characteristic embolic division (fig. 278).

FEMALE: Total length 2.75–3.0. Carapace length 1.45; dark brown, with orange patch on fovea; gently raised behind eyes. Chelicerae dark brown. Abdomen black, with pale markings and broken chevrons dorsally, and a pale area ventrally. Sternum orange, heavily suffused with dark brown. Legs yellow to orange-brown, with dark brown annulations, particularly on femora and tibiae; TmI 0.25–0.3. Epigynum (figs. 280, 281).

MALE: Total length 2.2. Carapace length 1.1. Carapace orange-brown, raised into large,

pale-colored lobe behind eyes (fig. 277). Chelicerae with tiny boss anteriorly. Abdomen as female. Sternum yellow, with darker margins. Legs as female. Palp (figs. 276, 278, 279).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from the Juan Fernandez Islands, Chile.

Laminacauda ansoni, new species

Figures 282–286

TYPES: Male holotype, with five female paratypes, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernandez Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name refers to the locality of capture of the holotype.

DIAGNOSIS: The scape of the female epigynum (fig. 284) is of normal shape, but the markings differ from those in other species. The dorsal aspect of the epigynum (fig. 285) is also characteristic. The male is diagnosed by the palp. The tibia is elongated (fig. 286) and carries dorsolaterally a black apophysis, which is knoblike from the dorsal aspect but hooked from the lateral aspect (fig. 282); the embolic division (fig. 283) is characteristically shaped.

FEMALE: Total length 4.3–5.1. Carapace length 2.0–2.4; orange, with dusky markings and margins. Abdomen whitish gray to gray, with dark chevrons dorsally. Sternum orange, with darker margins. Legs orange-brown, with dark annulations; TmI ca. 0.4. Epigynum (figs. 284, 285).

MALE: Total length 4.45. Carapace length 2.2. Color and trichobothria as in female. Palp (figs. 282, 283, 286).

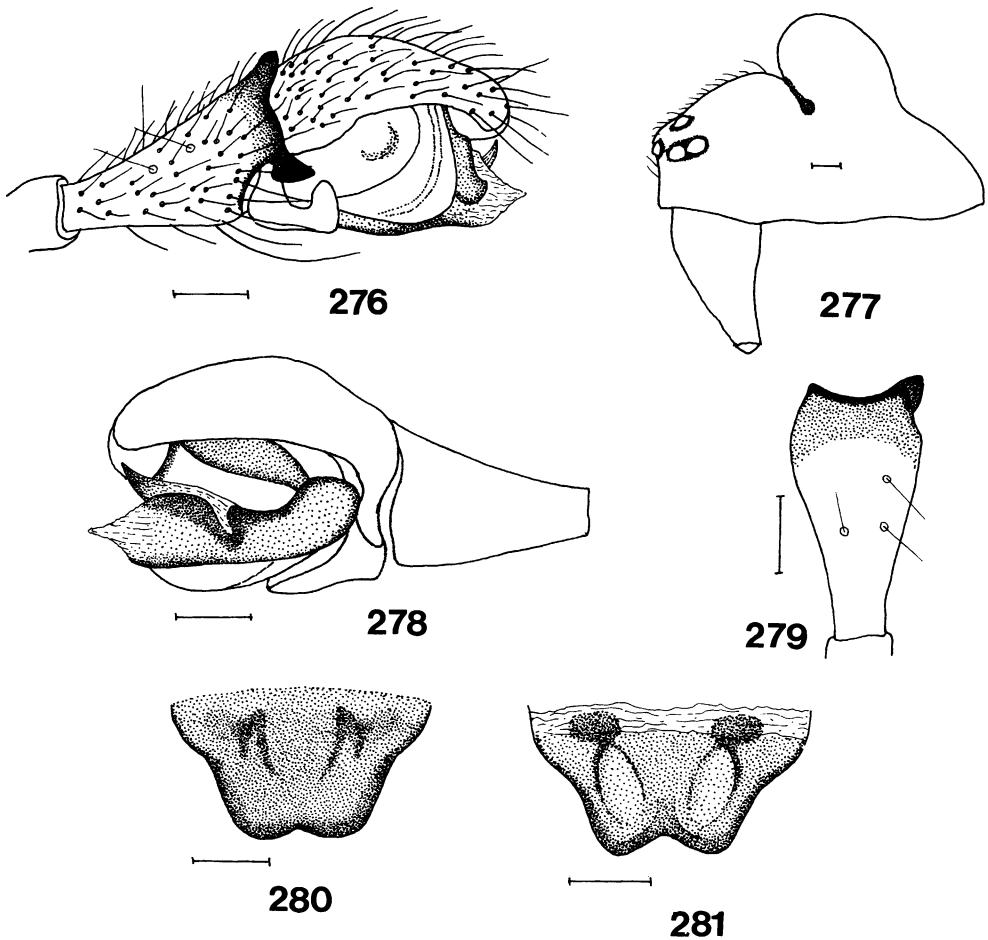
MATERIAL EXAMINED: CHILE: *Juan Fernandez Islands*: the types above. Portazuelo Trail, Valle Villagra, Mas a Tierra, 400–450 m, Apr. 19, 1962 (B. Malkin), 2 female paratypes (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda magna, new species

Figures 287–290

TYPES: Male holotype, with 6 female and 2 male paratypes, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernandez



Figs. 276–281. *Laminacauda tuberosa*. 276. Male palp, ectal. 277. Male carapace, lateral. 278. Male palp, mesal. 279. Male palpal tibia, dorsal. 280. Epigynum, ventral. 281. Epigynum, dorsal. Scale lines 0.1 mm.

Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning large.

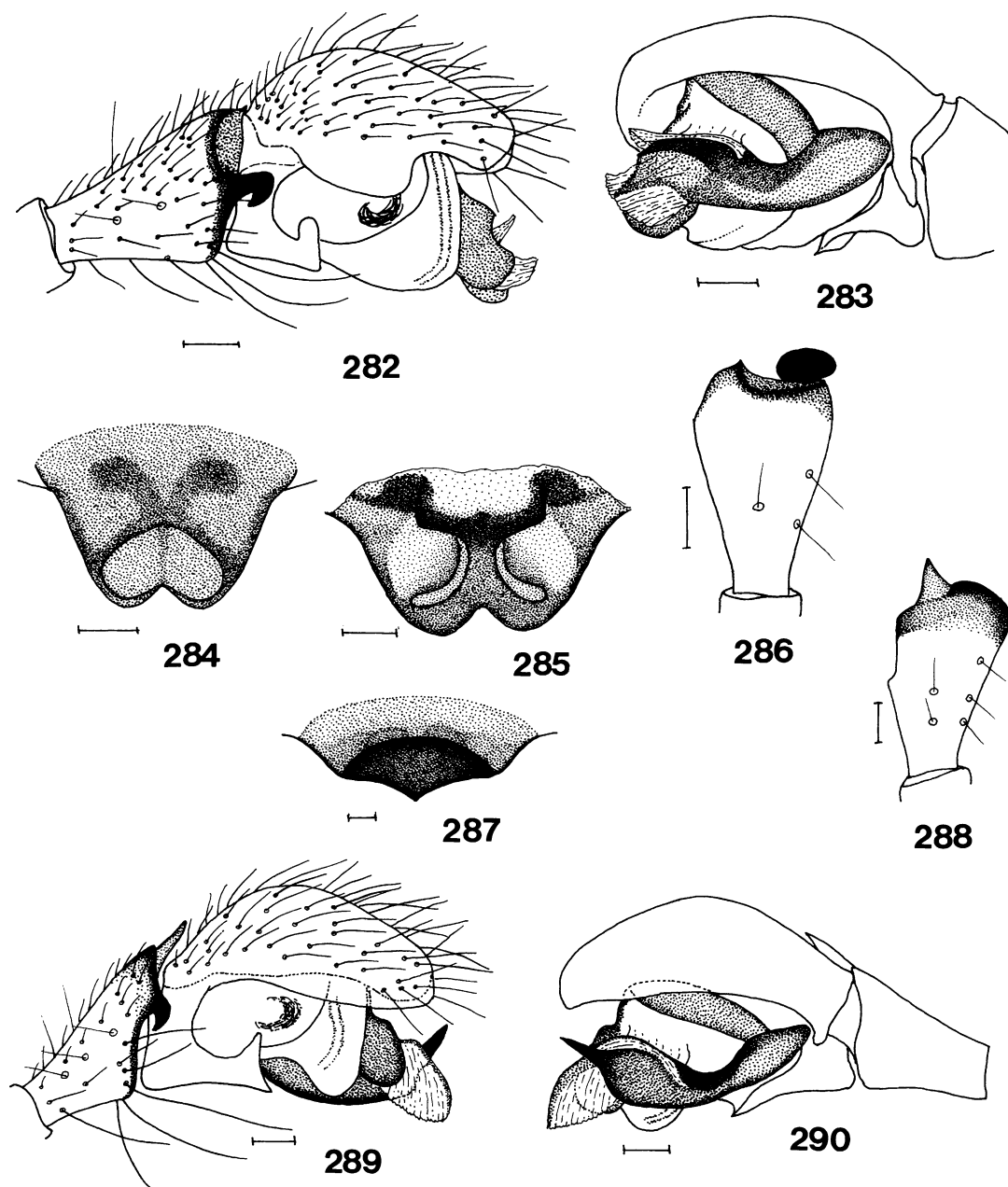
DIAGNOSIS: The female is diagnosed by the relatively large size, and by the epigynum, which is squat and pointed posteriorly (fig. 287). The male is diagnosed by its relatively large size, and by the palp, which has a somewhat elongated tibia (fig. 288) which has two apophyses, the dorsal pointed and lightly sclerotized, the lateral heavily sclerotized and hook-shaped (lateral aspect) (figs. 288, 289). The embolic division (fig. 290) has a narrow tail and a black, pointed embolus anteriorly; this embolic division is similar to that of *L.*

malkini (fig. 300), but that species is readily distinguishable by its smaller size and by the palpal tibia.

FEMALE: Total length 6.6–7.1. Carapace length 2.9–3.0; orange-brown, with darker markings and margins. Cheliceral claw and teeth deep brown. Abdomen gray to black, dorsally dappled with pale yellow to white markings, and with pale chevrons posteriorly. Sternum orange, suffused with gray. Legs orange-brown, shading distally to deeper brown; TmI ca. 0.3. Epigynum (fig. 287).

MALE: Total length 5.0–5.1. Carapace length 2.35–2.65. Color and trichobothria as female. Palp (figs. 288–290).

MATERIAL EXAMINED: CHILE: *Juan Fer-*

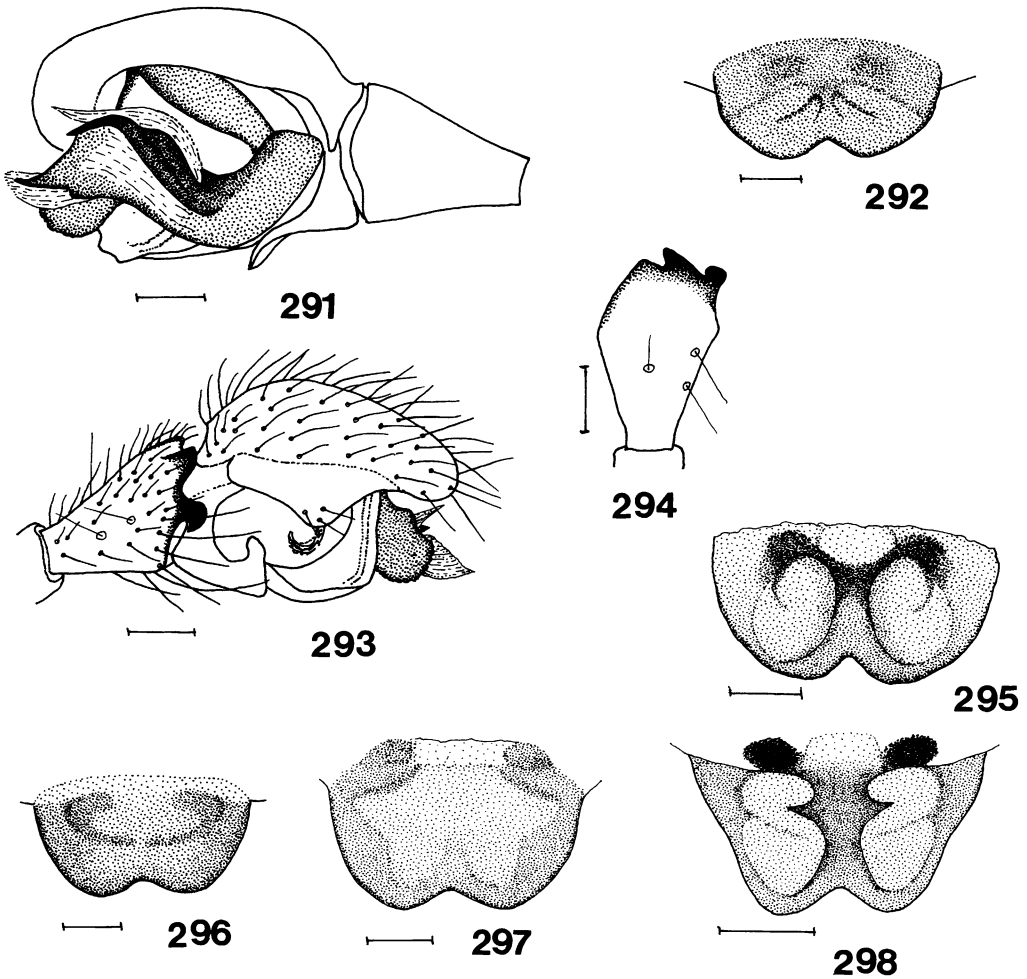


Figs. 282–290. 282–286. *Laminacauda ansoni*. 287–290. *L. magna*. 282, 289. Male palp, ectal. 283, 290. Male palp, mesal. 284, 287. Epigynum, ventral. 285. Epigynum, dorsal. 286, 288. Male palpal tibia, dorsal. Scale lines 0.1 mm.

nandez Islands: the types above. Portazuela Trail, Mas a Tierra, Apr. 7, 1962 (B. Malkin), 2 female, 1 male paratype (AMNH). El Camote, Mas a Tierra, 600–650 m, Apr. 25, 1962 (B. Malkin), 1 female paratype

(AMNH). Valle Villagra, Mas a Tierra, 400–450 m, Apr. 19, 1962 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.



Figs. 291–298. 291–295. *Laminacauda rubens*. 296, 297. *L. villagra*. 298. *L. diffusa*. 291. Male palp, mesal. 292, 296. Epigynum, ventral. 293. Male palp, ectal. 294. Male palpal tibia, dorsal. 295, 297, 298. Epigynum, dorsal. Scale lines 0.1 mm.

***Laminacauda rubens*, new species**

Figures 291–295

TYPES: Male holotype, with 14 female and 13 male paratypes, from Plazoletto de Yunque, Valle Anson, Mas a Tierra, Juan Fernandez Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning red-colored.

DIAGNOSIS: The female is diagnosed by the reddish color, and by the epigynum (fig. 292), which has the scape broader than long. The epigynum is similar to that of *L. villagra* (fig. 296), but that species is distinguishable from *L. rubens* by the color and by the dorsal as-

pects of the epigyna (fig. 295; cf. fig. 297). The male is diagnosed by the reddish color, and by the palp (figs. 291, 293, 294). *L. diffusa* Millidge (Argentina, Chile) has a very similar palp, but in that species the tibial apophysis is somewhat different, and the embolic division is relatively shorter. *L. rubens* and *L. diffusa* male are also distinguishable by the color, and by the lack of a cheliceral boss in *L. rubens*.

FEMALE: Total length 3.0–3.65. Carapace length 1.35–1.45; bright orange to reddish orange. Eyes moderate in size, with posteriors ca. 1 d apart and 1.5 d from laterals. Abdomen with sides gray, dorsally variable, from

red to gray with red chevrons, to wholly gray; ventrally pink to red with two gray lines. Sternum bright orange, margins suffused with gray. Legs orange: TmI ca. 0.45. Epigynum (figs. 292, 295).

MALE: Total length 2.9–3.1. Carapace length 1.35–1.55. Color and trichobothria as female, except: abdomen often wholly red-pink. Chelicerae without anterior boss. Palp (figs. 291, 293, 294).

MATERIAL EXAMINED: CHILE: *Juan Fernandez Islands*: the types above. Portazuelo Trail, Valle Villagra, Mas a Tierra, 400–450 m, Apr. 19, 1962 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda villagra, new species

Figures 296, 297

TYPE: Female holotype from Portazuelo Trail, Valle Villagra, Mas a Tierra, Juan Fernandez Islands, Chile, 400–450 m, Apr. 19, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is an adjective, referring to the locality of the type.

DIAGNOSIS: The scape of the female epigynum (fig. 296), as in *L. rubens*, is broader than long. The dorsal aspect of the epigynum (fig. 297), and the absence of the reddish color in *L. villagra*, distinguish *L. villagra* and *L. rubens*. The epigynum is also close to that of *L. diffusa*, but the species are distinguishable by the dorsal aspects of the epigyna (fig. 297; cf. fig. 298), and also by the higher value of TmI in *L. villagra*. The male is not known.

FEMALE: Total length 2.95. Carapace length 1.45; yellow, shading to pale brown anteriorly and on margins. Posterior eyes large, with medians less than 0.5 d apart and less than 1 d from laterals. Abdomen whitish yellow dorsally, with a blackish line anteriorly and blackish chevrons posteriorly; ventrally pale yellow, sides mottled with black. Sternum yellow, with grayish margins. Legs yellow, with a few dark brown annulations; TmI 0.6. Epigynum (figs. 296, 297).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda malkini, new species

Figures 299–301, 303, 304

TYPES: Male holotype, with 14 female and 4 male paratypes, from Galpon, Valle Villagra, Mas a Tierra, Juan Fernandez Islands, Chile, Apr. 23–24, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a patronym in honor of B. Malkin, who collected many new *Laminacauda* species in the Juan Fernandez Islands.

DIAGNOSIS: The female epigynum (fig. 303) is broader than long and of distinctive form. The tibia of the male palp has no real dorsal apophysis (fig. 301), and the lateral apophysis (fig. 299) is weak. The embolic division has a narrow tail and a sclerotized pointed embolus anteriorly (fig. 300); this embolic division is similar to that of *L. magna*, but that species is readily distinguishable by size and by the palpal tibia.

FEMALE: Total length 3.0–3.45. Carapace length 1.35–1.55; brown, with dusky markings and margins; ocular area sometimes suffused with black. Abdomen whitish yellow, with dorsally a longitudinal black bar and black chevrons posteriorly; occasionally almost completely black. Sternum orange, suffused with black. Legs yellow, with dark brown annulations; TmI 0.35. Epigynum (figs. 303, 304).

MALE: Total length 2.45–2.5. Carapace length 1.05–1.25. Color and trichobothria as female. Palp (figs. 299–301).

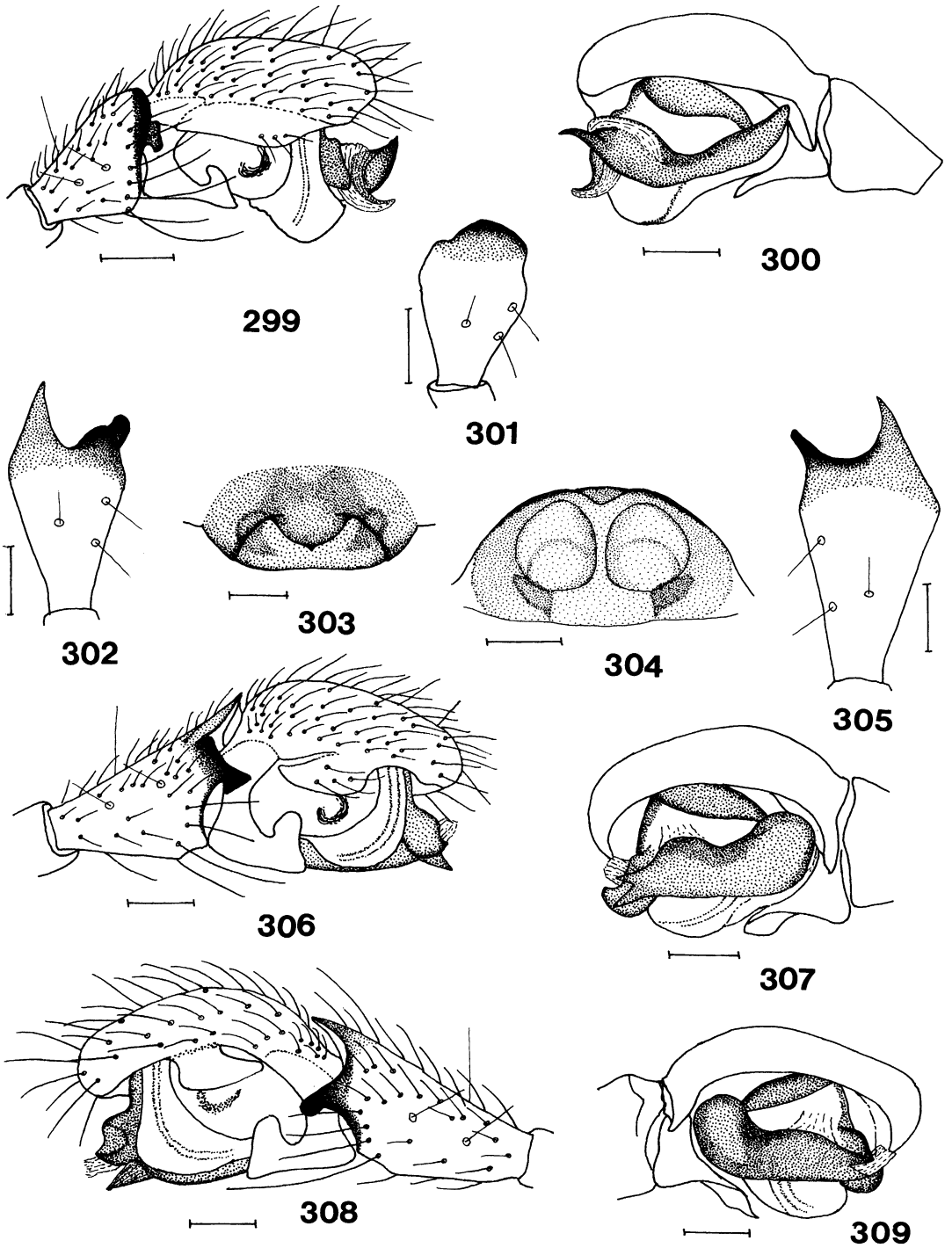
MATERIAL EXAMINED: CHILE: *Juan Fernandez Islands*: the types above. Quebrada Demajiara, Mas a Tierra, Apr. 5, 1962 (B. Malkin), 2 female, 1 male paratypes (AMNH). Plazoletto de Yunque, Valle Anson, Mas a Tierra, 200–250 m, Apr. 1–28, 1962 (B. Malkin), 5 female, 4 male paratypes (AMNH).

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda propinqua, new species

Figures 302, 306, 307

TYPES: Male holotype, with one male paratype, from Quebrada Casa, Mas Afuera, Juan Fernandez Islands, Chile, Mar. 13–31, 1962 (B. Malkin); deposited in AMNH.



Figs. 299-309. 299-301, 303, 304. *Laminacauda malkini*. 302, 306, 307. *L. propinqua*. 305, 308, 309. *L. cognata*. 299, 306. Male palp, ectal. 300, 307. Male palp, mesal. 301, 302. Male palpal tibia, dorsal. 303. Epigynum, ventral. 304. Epigynum, caudal. 305. Male palpal tibia, left, dorsal. 308. Male palp, left, ectal. 309. Male palp, left, mesal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning nearly related.

DIAGNOSIS: The tibia of the male palp has a pointed dorsal apophysis (fig. 302) and a hooked lateral apophysis (fig. 306); the embolic division (fig. 307) is very close to that of *L. cognata* (fig. 309), but these two species are distinguished by the shorter palpal tibia in *L. propinqua*, by the stouter legs in *L. propinqua* (tibia 1 l/d ca. 9, cf. ca. 16 in *L. cognata*), and by the value of TmI (0.65–0.7 in *L. propinqua* cf. 0.35 in *L. cognata*). The embolic division is also close to that of *L. plagiata* (Tullgren), but the latter species has no trichobothrium on metatarsus 4 and has TmI somewhat lower at 0.5–0.55. The female is not known.

MALE: Total length 2.75–2.85. Carapace length 1.45; orange, with darker markings and margins, and suffused from fovea to eyes with brown. Abdomen black, with dorsally some white patches and chevrons; ventrally with broad longitudinal white stripe. Sternum orange, suffused with black on margins. Legs yellow to orange, with weak blackish annulations; tibia 1 l/d ca. 9. Metatarsi 1–4 with trichobothrium; TmI 0.65–0.7. Palp (figs. 302, 306, 307).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda cognata, new species

Figures 305, 308, 309

TYPE: Male holotype from Cerro Innocentes, Mas Afuera, Juan Fernandez Islands, Chile, 1200–1300 m, Mar. 18, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The tibia of the male palp is fairly long and has a pointed dorsal apophysis (fig. 305) and a knoblike lateral apophysis (fig. 308). The embolic division (fig. 309) is close to that of *L. propinqua* (see *L. propinqua* diagnosis) and is also close to that of *L. plagiata*, but *L. cognata* is distinguished from that species by the presence of a trichobothrium on metatarsus 4, by the more slender legs (tibia 1 l/d ca. 16 cf. ca. 7 in *L. plagiata*), and by the lower value of TmI (0.35 cf. 0.5 in *L. plagiata*). The female is not known.

MALE: Total length 3.1. Carapace length 1.45; orange. Abdomen black, with two broad yellow stripes dorsally, one yellow stripe ventrally and yellow stripes on sides. Sternum orange, suffused with gray. Legs brown; tibia 1 l/d ca. 16. Metatarsi 1–4 with trichobothrium; TmI ca. 0.35. Palp (figs. 305, 308, 309).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Laminacauda nana, new species

Figures 310–312

TYPES: Male holotype, with 9 male paratypes, from Las Palmas de Ocoa, Valparaiso, Chile, in burned area, June 22, 1984 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dwarf.

DIAGNOSIS: The tibia of the male palp has two apophyses, a pointed dorsal one (fig. 312) and a stout dorsolateral hook (fig. 310). The embolic division (fig. 311) is of a simple form, which characterizes the species. The female is not known.

MALE: Total length 1.35–1.45. Carapace length 0.65–0.75; brown, with dusky markings and margins. Abdomen black. Sternum orange-brown. Legs orange-brown, with tibiae, metatarsi and to lesser extent tarsi, suffused with black; TmI ca. 0.4. Palp (figs. 310–312); the embolic division of the palp is somewhat simplified.

MATERIAL EXAMINED: CHILE: *Valparaiso:* the types above. Same locality, May 25, 1984 (R. Calderón), 2 male paratypes (AMNH).

DISTRIBUTION: Known only from Chile.

Laminacauda salsa, new species

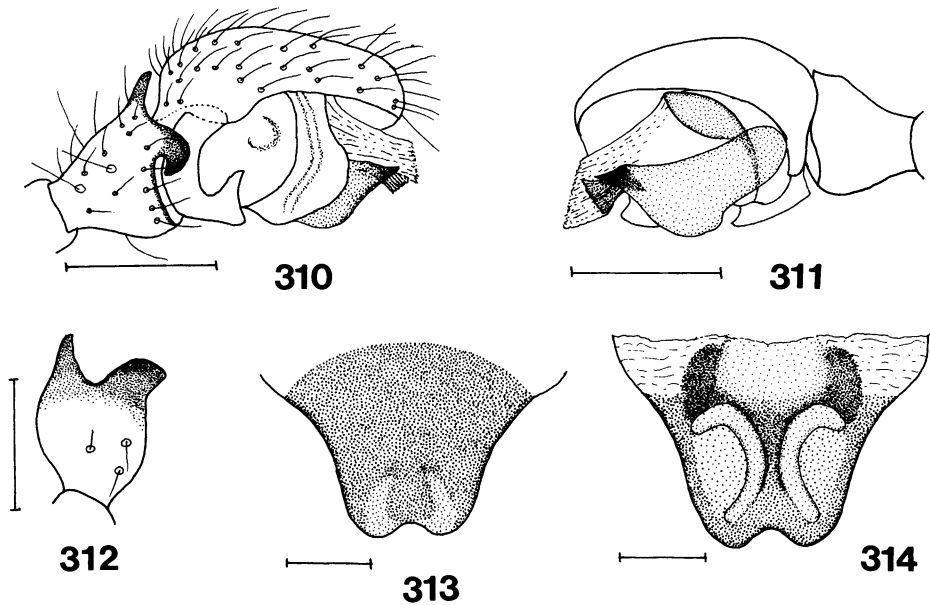
Figures 313, 314

TYPE: Female holotype from salt flat off Atacama Road, between San Pedro de Atacama and Toconao, Atacama, Chile, Nov. 12, 1982 (T. Cekalovic); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning salt.

DIAGNOSIS: The scape of the female epigynum (fig. 313, 314) has concave sides but is otherwise featureless. The dorsal aspect of the epigynum distinguishes *L. salsa* from other *Laminacauda* species. The male is not known.

FEMALE: Total length 2.3. Carapace length



Figs. 310–314. 310–312. *Laminacauda nana*. 313, 314. *L. salsa*. 310. Male palp, ectal. 311. Male palp, mesal. 312. Male palpal tibia, dorsal. 313. Epigynum, ventral. 314. Epigynum, dorsal. Scale lines 0.1 mm.

1.0; brown, with dusky markings and blackish margins. Abdomen black, with faint paler chevrons dorsally. Sternum brown, suffused with black. Legs brown; TmI ca. 0.4. Epigynum (figs. 313, 314).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Chile.

***Laminacauda ignobilis*, new species**

Figures 315–319

TYPES: Male holotype, with one female paratype, from Rio Cuarto, 5 km west of La Carlota, Cordoba, Argentina, Nov. 28, 1971 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning obscure, unknown.

DIAGNOSIS: The female epigynum (fig. 318), is somewhat broader than long and with indented sides. The epigynum is rather similar to that of *L. boliviensis* Millidge, but is shorter, and the dorsal aspect distinguishes from that species (fig. 319; cf. fig. 320). The male is diagnosed by the palp; the embolic division (fig. 316) has a pointed, rather than the usual rounded, tail.

FEMALE: Total length 2.65. Carapace length 1.1; pale brown to brown, darker anteriorly. Abdomen dorsally white to pale yellow,

shading to brownish gray round spinnerets; ventrally and on sides brownish gray. Sternum yellow to brown, suffused with gray. Legs pale brown to brown; TmI ca. 0.4. Epigynum (figs. 318, 319).

MALE: Total length 2.1. Carapace length 0.9. Color and trichobothria as female, except: abdomen whitish ventrally. Chelicerae deep brown, with pointed boss anteriorly; maxillae with pointed tubercles. Palp (figs. 315–317).

MATERIAL EXAMINED: ARGENTINA: *Cordoba*: the types above. BRAZIL: *Buenos Aires*: Punta Lava, Nov. 17, 1971 (L. Herman), 3 females, 1 male paratype (AMNH). *Rio Grande do Sul*: Pelotas, May 1954 (G. Biezanko), 1 male paratype (AMNH).

DISTRIBUTION: Argentina and Brazil.

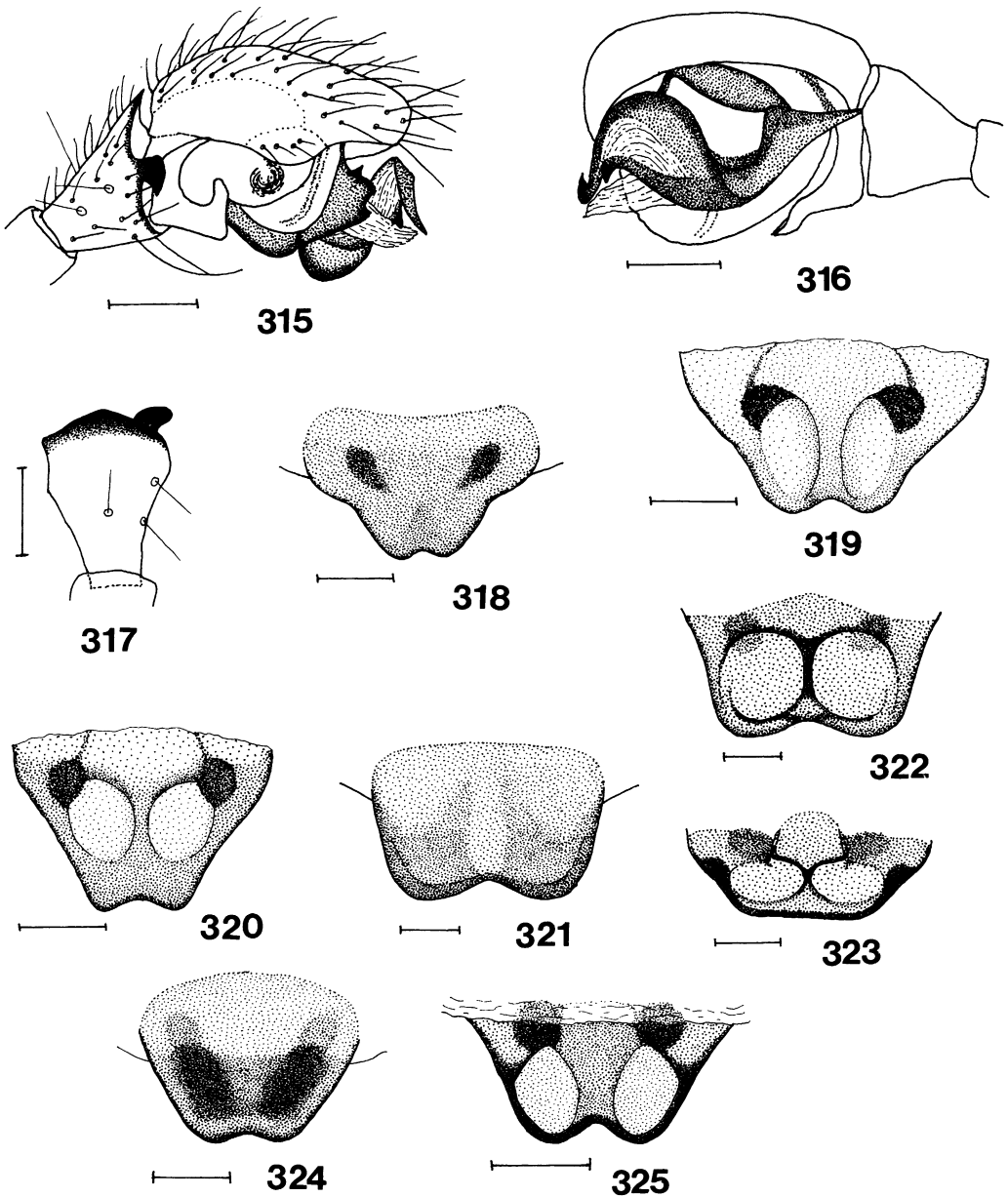
***Laminacauda aluminensis*, new species**

Figures 321, 322

TYPE: Female holotype from Lago Alumina, Neuquen, Argentina, Jan. 1976 (O. de Ferrariis); deposited in AMNH.

ETYMOLOGY: The specific name is an adjective, referring to the locality of capture of the type.

DIAGNOSIS: The female epigynum (fig. 321)



Figs. 315–325. 315–319. *Laminacauda ignobilis*. 320. *L. boliviensis*. 321, 322. *L. aluminensis*. 323. *L. argentinensis*. 324, 325. *L. tucumani*. 315. Male palp, ectal. 316. Male palp, mesal. 317. Male palpal tibia, dorsal. 318, 321, 324. Epigynum, ventral. 319, 320, 322, 323, 325. Epigynum, dorsal. Scale lines 0.1 mm.

is broader than long; the ventral aspect is somewhat similar to that of *L. argentinensis* Millidge, but the two species are distinguishable by the dorsal aspects (fig. 322; cf. fig.

323). *L. aluminensis* is also distinguished by the presence of a trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 4.35. Carapace length

1.65; orange-brown, with dusky markings and margins. Abdomen gray-black, with faint paler chevrons dorsally. Sternum orange-brown, suffused with black on margins. Legs orange-brown; metatarsi 1–4 trichobothrium: TmI 0.4. Epigynum (figs. 321, 322).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

Laminacauda tucumani, new species

Figures 324, 325

TYPE: Female holotype from Villa Noguez, Tucuman, Argentina, 1350 m, Dec. 11, 1971 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name refers to the type locality.

DIAGNOSIS: The female is diagnosed by the epigynum (figs. 324, 325), and by the presence of a trichobothrium on metatarsus 4. Two other Argentinian species, *L. aluminensis* and *L. fuegiana* (Tullgren) have a trichobothrium on metatarsus 4. The epigynum of *L. tucumani* is quite distinct from that of *L. aluminensis* (fig. 321), but is fairly close to that of *L. fuegiana* (Millidge, 1985: fig. 128); *L. tucumani* is however considerably smaller than *L. fuegiana* (carapace length 1.0 cf. *L. fuegiana* 2.0). The male is not known.

FEMALE: Total length 2.5. Carapace length 1.0; orange-brown. Abdomen gray, with pale broken chevrons dorsally, and whitish markings on sides. Sternum orange, suffused with gray. Legs orange-brown; metatarsi 1–4 with trichobothrium: TmI ca. 0.5. Epigynum (figs. 324, 325).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

NEOMASO FORSTER

Neomaso Forster, 1970: 39 (type species *Neomaso claggi* Forster by original designation).—Brignoli, 1983: 348.—Millidge, 1985: 46.—Platnick, 1989: 266.

This genus appears to be restricted to the more southern parts of South America. Descriptions are given of nine new species, from Brazil, Chile and Argentina, and several pre-

viously described species are synonymized. Diagnoses are based almost entirely on the genitalia.

SYNONYMS:

N. tullgreni Millidge, 1985 = *N. patagonicus* (Tullgren, 1901). **NEW SYNONYMY.**

N. cavus Millidge, 1985 = *N. patagonicus* (Tullgren, 1901). **NEW SYNONYMY.**

Examination of large numbers of specimens of *N. patagonicus* has shown that the forms of the epigynal scape and the embolic division are somewhat variable, and that *N. tullgreni* and *N. cavus* are almost certainly only small variants of *N. patagonicus*.

N. gibber Millidge, 1985 = *N. bilobatus* (Tullgren, 1901). **NEW SYNONYMY.**

N. bilobatus was previously known only in the female sex; capture of several specimens of both sexes together has shown that the species has a somewhat variable epigynum, and that *N. gibber* is a slight variant of *N. bilobatus*.

Neomaso arundicola, new species

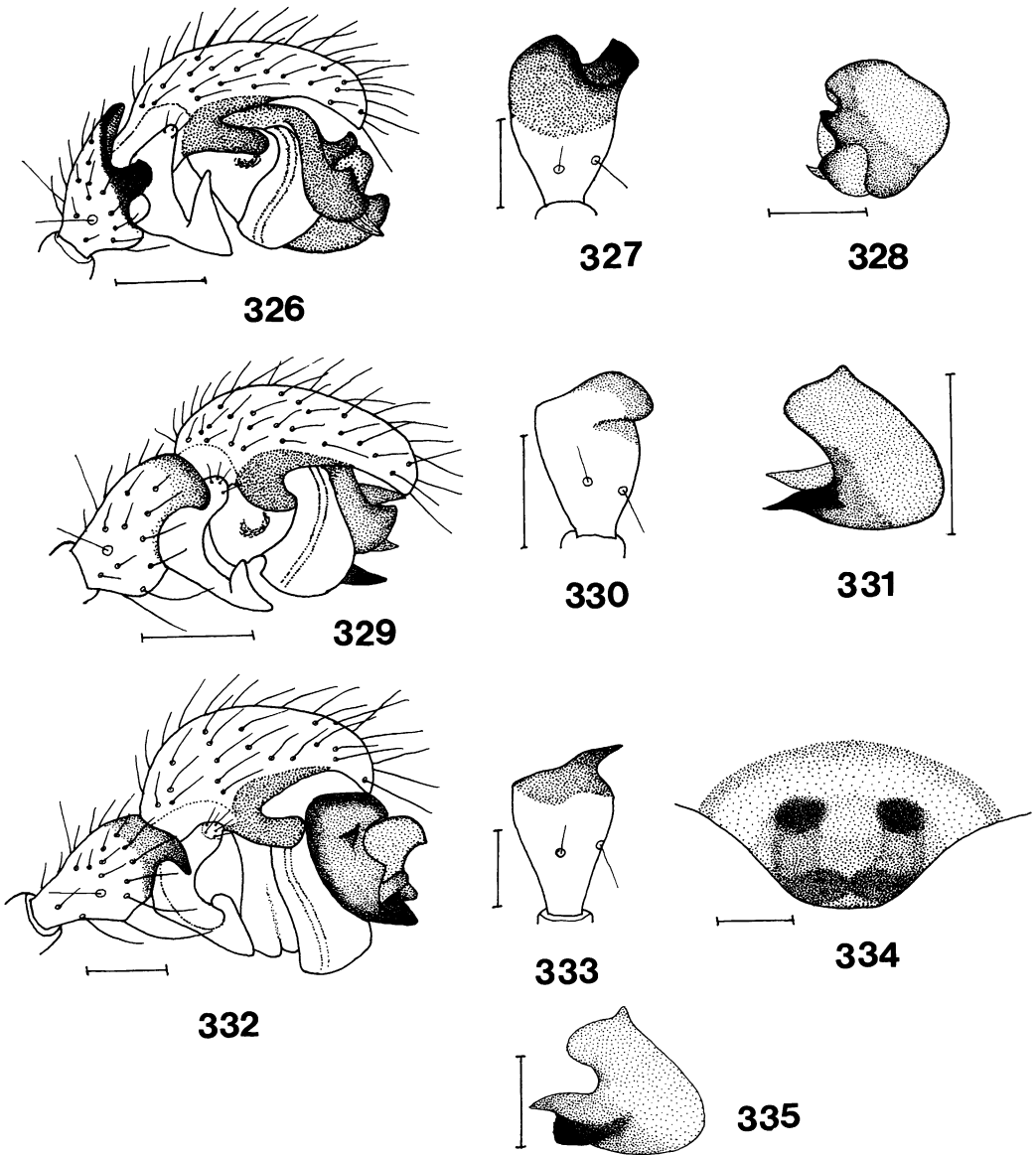
Figures 326–328

TYPE: Male holotype from Teresopolis, Rio de Janeiro, Brazil, in bamboo undergrowth, 1000 m, Mar. 1946 (H. Sick); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition, meaning one who lives in reeds.

DIAGNOSIS: The palpal tibia of the male has a rounded dorsal apophysis and a well-defined lateral apophysis (figs. 326, 327); the tibia is generally similar to that of *N. bilobatus* (Tullg.) (*N. gibber* Millidge), but in *N. arundicola* the dorsal apophysis is broader and the lateral apophysis (lateral aspect) is differently shaped. The embolic division of *N. arundicola* (fig. 328) is significantly different in shape from that of *N. bilobatus*. The female is not known.

MALE: Total length 1.55. Carapace length 0.8; brown, with dusky markings and margins. Eyes fairly large, with posteriors less than 1 d apart. Abdomen black, with white markings dorsally and ventrally. Sternum yellow-brown, suffused with gray, particularly on margins. Legs yellow-brown; TmI 0.35. Palp (figs. 326–328).



Figs. 326–335. 326–328. *Neomaso arundicola*. 329–331. *N. insulanus*. 332–335. *N. articeps*. 326, 329, 332. Male palp, ectal. 327, 330, 333. Male palpal tibia, dorsal. 328, 331, 335. Embolic division, mesal. 334. Epigynum, ventral. Scale lines 0.1 mm.

MATERIAL EXAMINED: Only the holotype.
DISTRIBUTION: Known only from Brazil.

Neomaso insulanus, new species
 Figures 329–331

TYPE: Male holotype from Quebrada de Piedra, Mas a Tierra, Juan Fernandez Is-

lands, Chile, 600–700 m, Apr. 9, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning an islander.

DIAGNOSIS: The tibia of the male palp has a single, rounded apophysis (figs. 329, 330), and the embolic division has a pointed, sclerotized ventral apophysis (fig. 331). These

characters separate *N. insulanus* from other *Neomaso* species. The female is unknown.

MALE: Total length 1.55. Carapace length 0.7; deep brown, with black markings and margins; slightly raised behind eyes. Abdomen gray-black, with faint paler markings. Sternum deep brown, suffused with black. Legs brown; TmI ca. 0.35. Palp (figs. 329–331).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Neomaso articeps, new species

Figures 332–337

TYPE: Male holotype from Las Palmas de Ocoa, Quillota, Valparaiso, Chile, traps on unburnt area, Sept. 28, 1984 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a narrow head.

DIAGNOSIS: The female epigynum (fig. 334) is similar to that of *N. angusticeps* Millidge, and is distinguished by the differing outlines of the internal organs. The tibial apophysis of the male palp (figs. 332, 333) is longer and rather more pointed than in *N. angusticeps*, and the ventral apophysis on the embolic division (fig. 335) is not bifid as in *N. angusticeps*.

FEMALE: Total length 1.95–2.4. Carapace length 0.9–1.05; golden yellow to orange; ocular area rather narrow. Abdomen gray to black, with variable whitish markings. Sternum yellow, with gray or black markings. Legs orange-brown; TmI ca. 0.45. Epigynum (fig. 334).

MALE: Total length 2.0–2.1. Carapace length 1.0–1.05. Color and trichobothria as female. Carapace raised anteriorly (fig. 336), with ocular area (fig. 337) narrow and projecting somewhat over clypeus. Palps (figs. 332, 333, 335) in all specimens expanded to a greater or lesser degree.

MATERIAL EXAMINED: CHILE: *Coquimbo*: Parque Nacional Fray Jorge, pitfalls in relict valdivian forest, Nov. 16, 1984 (R. Calderón), 1 female, 1 male paratype (AMNH). *Valparaiso*: the holotype. Same locality, Aug. 31–Oct. 26, 1984, and June 21–Sept. 27, 1985 (R. Calderón), 8 female and 6 male paratypes

(AMNH). Quintero, pitfalls in relict forest, Mar. 26, Aug. 12, and Oct. 2, 1968 (R. Calderón), 4 male paratypes (AMNH).

DISTRIBUTION: Known only from central Chile.

Neomaso setiger, new species

Figures 338–342

TYPES: Male holotype, with one male paratype, from 11 km west of Angol, Arauco, Chile, in carrion trap, boggy mixed forest remnant, 1000 m, Dec. 9, 1984–Feb. 16, 1985 (S. and J. Peck); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning hairy.

DIAGNOSIS: The male is diagnosed by the bristly carapace (fig. 338), and by the palp; the tibia is fairly long, with a small dorsal apophysis (fig. 340), and the embolic division (fig. 341) has a short lateral apophysis (figs. 341, 342). These characters distinguish *N. setiger* from other *Neomaso* species. The female is not known.

MALE: Total length 2.7–2.9. Carapace length 1.4–1.45; brown, with dusky markings; raised anteriorly, with ocular area projecting over clypeus (fig. 338); numerous forward-directed bristles in ocular area. Abdomen gray. Sternum yellow, suffused with deep brown. Legs brown; TmI 0.5. Palp (figs. 339–341). The embolic division of the palp has a short lateral apophysis, best seen from the ventral aspect (fig. 342).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Chile.

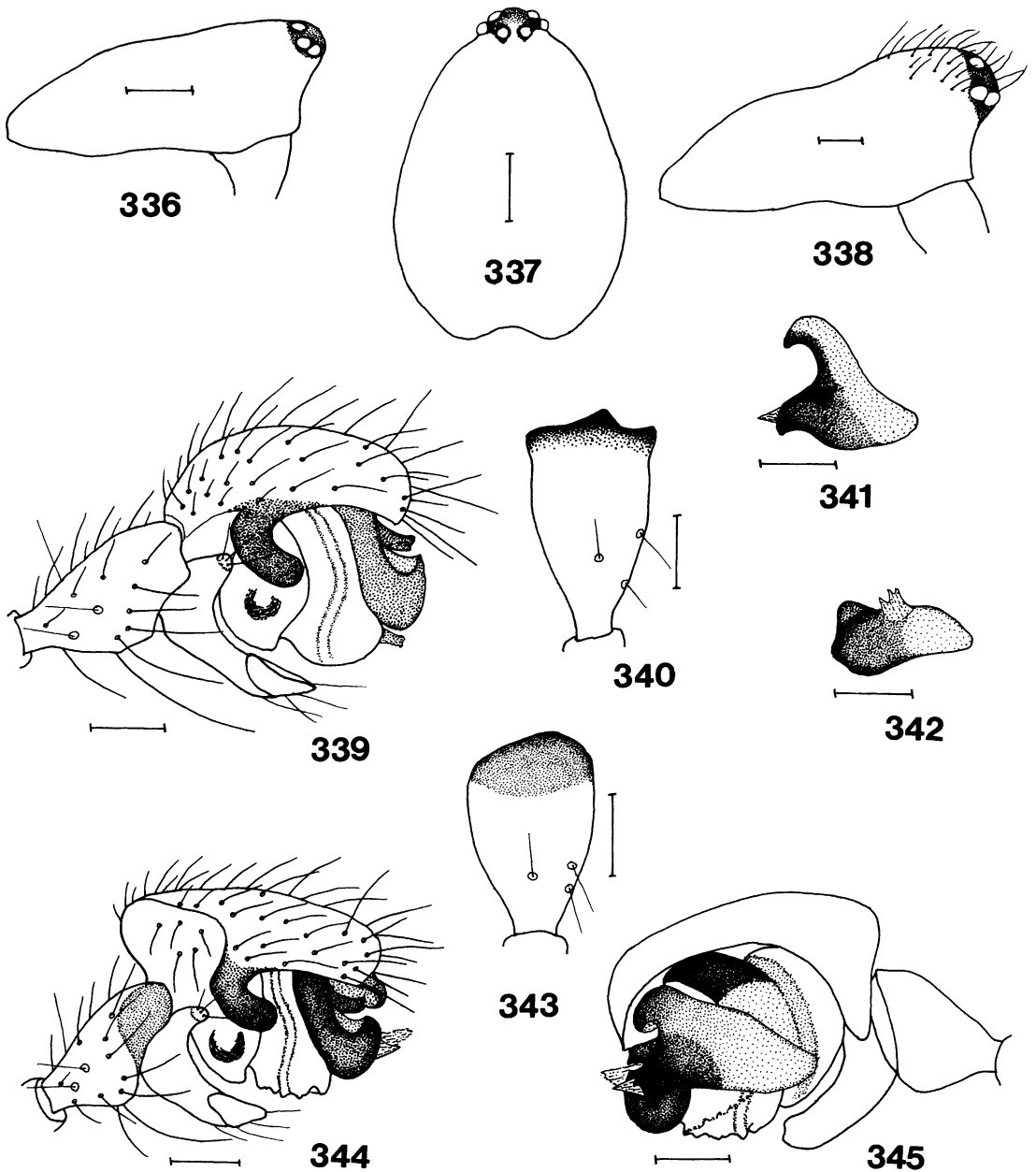
Neomaso fluminensis, new species

Figures 343–345

TYPE: Male holotype from 70 km south of Chaitén, Palena, Chile, wet stream bank, 500 m, Jan. 18, 1986 (N. I. Platnick et al.); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning associated with a stream.

DIAGNOSIS: The tibia of the male palp is rounded anteriorly, with no apophysis (fig. 343), and the embolic division is elongated (fig. 345), with anteriorly a pointed, sclerotized ventral apophysis. These palpal char-



Figs. 336–345. 336, 337. *Neomaso articeps*. 338–342. *N. setiger*. 343–345. *N. fluminensis*. 336, 338. Male carapace, lateral. 337. Male carapace, dorsal. 339, 344. Male palp, ectal. 340, 343. Male palpal tibia, dorsal. 341. Embolic division, mesal. 342. Embolic division, ventral. 345. Male palp, mesal. Scale lines 0.1 mm.

acters separate *N. fluminensis* from other *Neomaso* species. The female is not known.

MALE: Total length 2.1. Carapace length 1.0. Carapace yellow-brown; somewhat raised

anteriorly. Chelicerae with small pointed boss anteriorly. Abdomen black, with faint paler markings dorsally. Sternum yellow, suffused with black on margins. Legs yellow-brown; TmI 0.4. Palp (figs. 343–345).

MATERIAL EXAMINED: Only the holotype.
DISTRIBUTION: Known only from Chile.

Neomaso abnormis, new species
 Figures 346–349, 352

TYPE: Male holotype from Las Trancas, 19.5 km east-south-east of Recinto, Nuble, Chile, ex berlese sample of forest leaf and log litter in *Nothofagus* forest, 1250 m, Dec. 10, 1982–Jan. 3, 1983 (A. Newton and M. Thayer), deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning irregular.

DIAGNOSIS: The female epigynum (fig. 352) has a long scape; this is similar to that of *N. claggi* Forster, but the scape is longer and more rounded distally. *N. claggi* also lacks the trichobothrium on metatarsus 4. The male carapace projects over the clypeus (fig. 348). The palpal tibia has a prominent lateral apophysis (figs. 346, 347), uniquely shaped for the genus, and the embolic division (fig. 349) is also unique in form.

FEMALE: This was not taken with the male, but comes from the same area, and agrees with the male in size and the presence of the trichobothrium on metatarsus 4. Total length 4.0–5.1. Carapace length 1.7–1.8; orange-brown, slightly darker anteriorly. Abdomen gray-black to black, with faint paler markings dorsally and ventrally. Sternum orange to orange-brown, margins suffused with black. Legs deep orange-brown; TmI 0.5. Epigynum (fig. 352).

MALE: Total length 4.2. Carapace length 2.2. Color and trichobothria as female. Carapace raised anteriorly, with ocular area projecting forward (fig. 348), and with numerous bristles in ocular area. Palp (figs. 346, 347, 349).

MATERIAL EXAMINED: CHILE: *Nuble*: the holotype. Termas de Chillan, alpine brook near treeline, 1770 m, Oct. 14, 1981 (N. I. Platnick and R. T. Schuh), 2 female paratypes (AMNH).

DISTRIBUTION: Known only from Chile.

Neomaso bidentatus, new species
 Figures 350, 351

TYPE: Female holotype from Parque Nacional Nahuelbuta, Malleco, Chile, in mossy forest floor litter (*Nothofagus*, *Araucaria*),

1250 m, Nov. 19, 1981 (N. I. Platnick and R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with two denticles, referring to the epigynum.

DIAGNOSIS: This species is placed provisionally in *Neomaso*. The female epigynum is indented posteriorly (figs. 350, 351); this is similar to that of *N. tridentatus* (fig. 358), but lacks the central point present in that species. The male is not known.

FEMALE: Total length 2.0. Carapace length 0.75; orange-brown, with dusky markings and margins. Abdomen black, with faint paler markings dorsally. Sternum orange, suffused with black. Legs orange-brown; metatarsi missing on legs 1 and 2, TmIII 0.35. Epigynum (figs. 350, 351).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Chile.

Neomaso aequabilis, new species
 Figures 353–355

TYPES: Male holotype, with three male paratypes, from Villa Nougues, Tucumán, Argentina, 1480 m, Dec. 12–13, 1971 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning similar, equal.

DIAGNOSIS: The tibia of the male palp is extended distally to a broad point (fig. 354), and there is a small lateral apophysis (fig. 353). The embolic division (fig. 355) is very close to that of *N. parvus* Millidge, but that species has a definite dorsal apophysis and no lateral apophysis on the tibia. The female is not known.

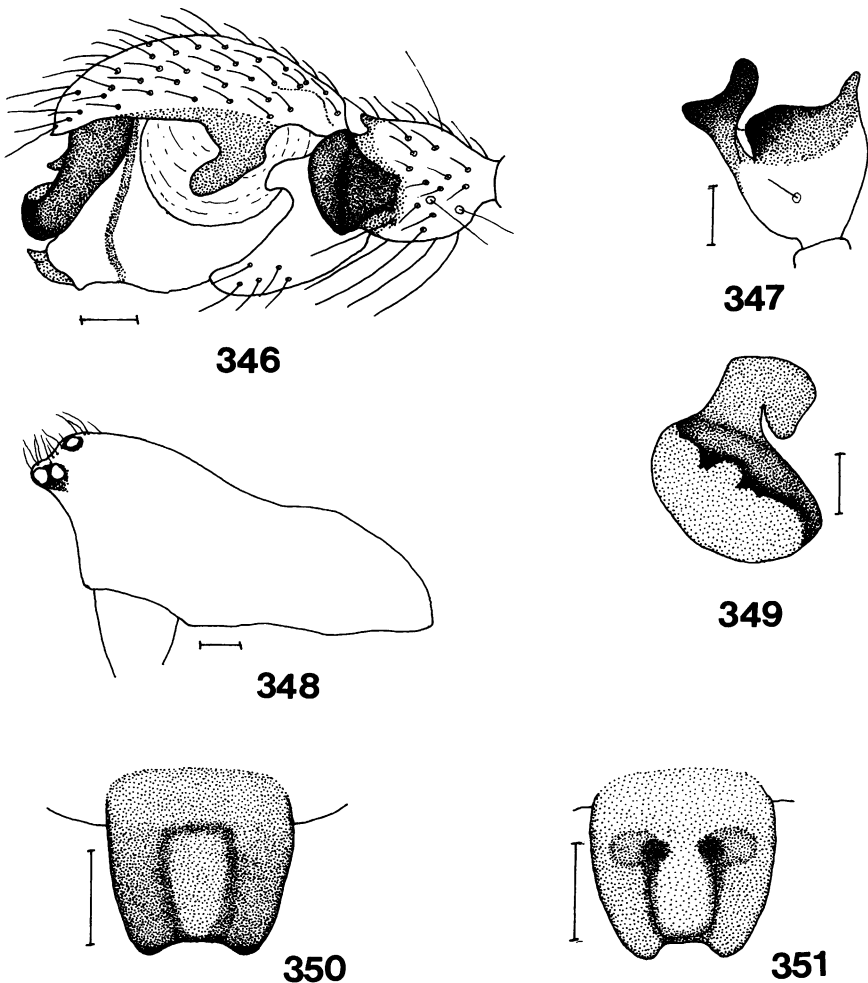
MALE: Total length 1.8. Carapace length 0.9; orange-brown. Abdomen gray to black, with faint paler markings dorsally. Sternum yellow, with darker margins. Legs brown; TmI ca. 0.35. Palp (figs. 353–355).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Argentina.

Neomaso vicinus, new species
 Figure 356

TYPES: Female holotype, with one female paratype, from 7 km west of San Pedro de Colalao, Argentina, Dec. 15, 1971 (L. Herman); deposited in AMNH.



Figs. 346–351. 346–349. *Neomaso abnormis*. 350, 351. *N. bidentatus*. 346. Male palp, left, ectal. 347. Male palpal tibia, left, dorsal. 348. Male carapace, lateral. 349. Embolic division, left, mesal. 350. Epigynum, ventral. 351. Epigynum, dorsal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning neighboring.

DIAGNOSIS: The female epigynum is broader than long (fig. 356). This is rather similar to that of *N. scutatus* Millidge, but the epigynum of that species is relatively longer and with somewhat different markings. The epigynum is also fairly similar to that of *N. insperatus* (fig. 357), but in that species the scape is more rounded and the markings are different; *N. insperatus* also has a trichobothrium on metatarsus 4, which is absent in *N. vicinus*. The male is not known.

FEMALE: Total length 1.75. Carapace length 0.75–0.8; brown. Abdomen gray, with faint

paler markings dorsally. Sternum brown. Legs brown to orange-brown; TmI 0.35. Epigynum (fig. 356).

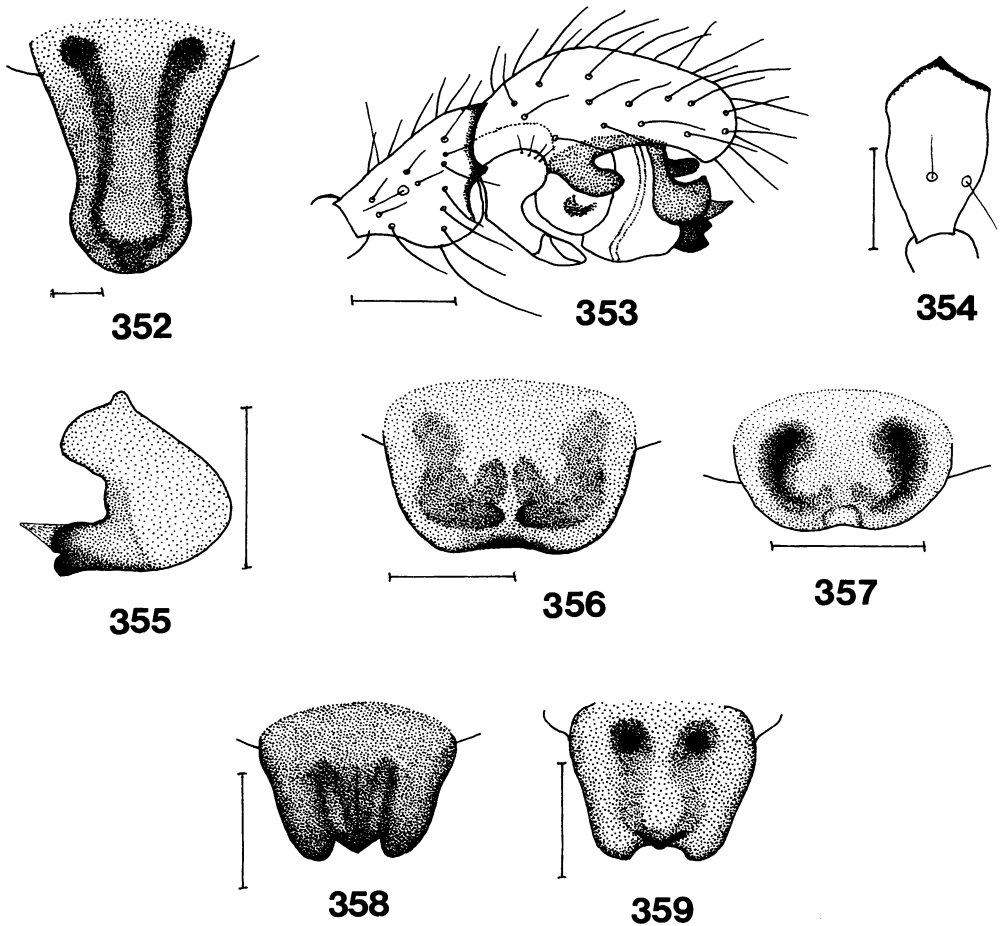
MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Argentina.

Neomaso insperatus, new species

Figure 357

TYPE: Female holotype from Cerro Las Animas Tandil, Buenos Aires, Argentina, Nov. 14, 1961 (O. de Ferrariis); deposited in AMNH.



Figs. 352–359. 352. *Neomaso abnormis*. 353–355. *N. aequabilis*. 356. *N. vicinus*. 357. *N. insperatus*. 358, 359. *N. tridentatus*. 352, 356–358. Epigynum, ventral. 353. Male palp, ectal. 354. Male palpal tibia, dorsal. 355. Embolic division, mesal. 359. Epigynum, dorsal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning unexpected.

DIAGNOSIS: The female has a trichobothrium on metatarsus 4, and the epigynum (fig. 357) is broader than long, rather oval in shape. The epigynum is fairly similar to that of *N. vicinus* (fig. 356), but the shape is more rounded and the markings are different; *N. vicinus* also lacks the trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 1.45. Carapace length 0.65; fairly long and narrow, yellow-brown with narrow black margins. Abdomen gray, with faint paler markings dorsally. Sternum yellow, suffused with gray. Legs yellow-brown; metatarsi 1–4 with trichobothrium; Tml ca. 0.4. Epigynum (fig. 357).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

Neomaso tridentatus, new species
Figures 358, 359

TYPE: Female holotype from 11 km west San Carlos de Barriloche, Cerro Otto, Rio Negro, Argentina, Jan. 14, 1972 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with three teeth, referring to the epigynum.

DIAGNOSIS: This species is placed provisionally in *Neomaso*. The scape of the female epigynum (figs. 358, 359) is indented poste-

riorly, with a point projecting from the indentation. The epigynum is similar to that of *N. bidentatus* (fig. 350), but that species lacks the central point. The male is not known.

FEMALE: Total length 1.8–2.1. Carapace length 0.8–0.9; pale orange. Abdomen gray. Sternum orange, suffused with gray. Legs orange; tibial spines 2222, TmI 0.35. Epigynum (figs. 358, 359).

MATERIAL EXAMINED: ARGENTINA: *Rio Negro*: the holotype. *Chubut*: El Hoyo, May 26, 1962 (A. Kovacs), 1 female paratype (AMNH). *Neuquen*: 16 km from Rahne, on Route 46, Feb. 1, 1972 (L. Herman), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Argentina.

MEIONETA HULL

This genus is widely distributed, with numerous species in Europe, Asia, North and Central America, and Africa. Twenty-four new species are described in the present paper, from Venezuela, Colombia, Peru, Brazil, and Chile.

The *Meioneta* species are diagnosed almost entirely by the genitalia in most instances. The males of many of the Central and South American species, from tropical latitudes, have relatively complex cymbia, which can be good diagnostic characters. One very interesting species (*M. disjuncta*, new species) has the lateral eyes well separated, and several have relatively large posterior eyes. One female (*M. lauta*, new species) has a trichothrium on metatarsus 4, but in the absence of the male the generic placing may be incorrect.

The South American species have the tracheal system typical of the genus, with numerous tracheoles extending into the prosoma.

The species are described in the order of the country of origin.

Meioneta montivaga, new species

Figures 360, 361

TYPE: Female holotype from La Aguada cable car station, Mérida, Venezuela, 3452 m, Feb. 23–25, 1968 (P. and B. Wygodzinsky and M. Cormons); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning wandering on mountains.

DIAGNOSIS: The female epigynum (figs. 360, 361) has a small socket at the distal end of the scape not visible from the ventral aspect. The form of the epigynum appears to distinguish *M. montivaga* from other South American species. The male is not known.

FEMALE: Total length 1.5. Carapace length 0.75; brown, with blackish markings and margins. Abdomen black, dorsally yellow-white anteriorly. Sternum brown, suffused with black, particularly on margins. Legs orange-brown; TmI 0.25–0.3. Epigynum (figs. 360, 361).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

Meioneta luctuosa, new species

Figures 362–364

TYPE: Male holotype from Cerro de la Neblina Basecamp, Amazonas, Venezuela, 140 m, Jan. 26–31, 1985 (P. J. Spengler et al.); deposited in USNM.

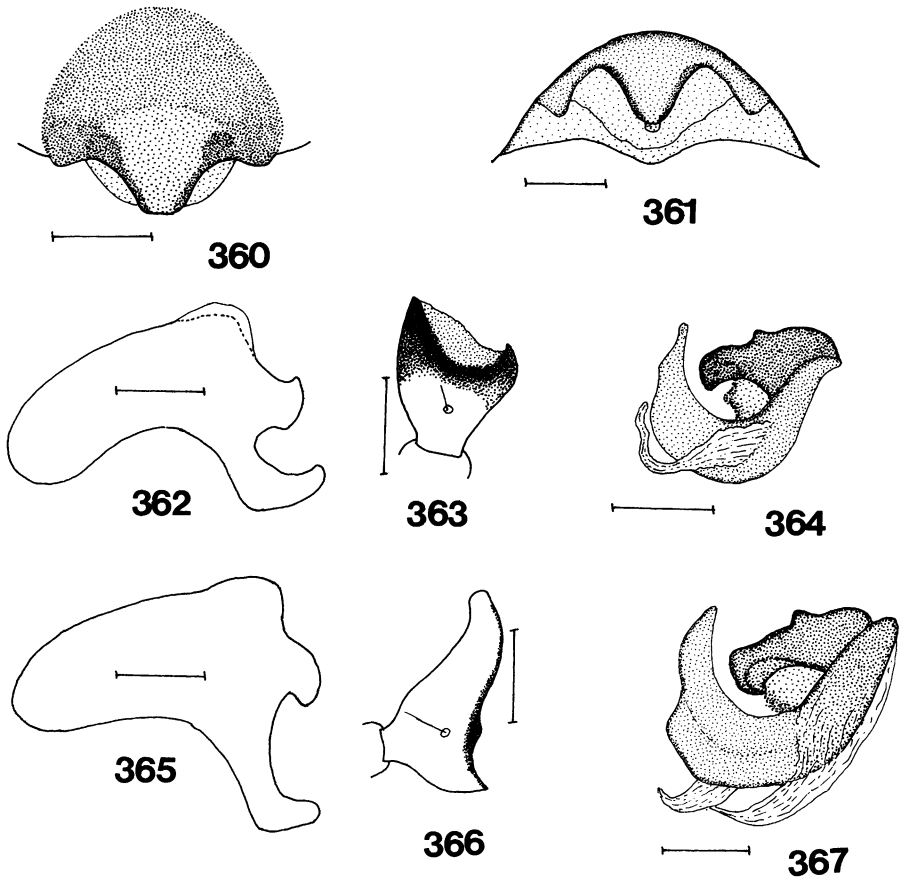
ETYMOLOGY: The specific name is a Latin adjective meaning mournful.

DIAGNOSIS: The cymbium (fig. 362) of the male palp has the posterior apophysis upturned (mesal aspect) and the mesal apophysis footlike; the tibia has two pointed apophyses joined by a translucent region (fig. 363). The embolic division (fig. 364) has a membranous apophysis arising from the mesal side of the embolus. The palp is similar to that of *M. collina* (figs. 376–378), but these two species differ in the shapes of the cymbium and of the embolic membranous apophysis. The female is not known.

MALE: Total length 1.45. Carapace length 0.65; deep chestnut brown. Eyes moderately large, with posteriors less than 1 d apart. Abdomen gray-black. Sternum black. Legs brown, femora suffused with black; TmI 0.3. Palp (figs. 362–364).

MATERIAL EXAMINED: VENEZUELA: *Amazonas*: the holotype. Same locality, flight intercept pans, Feb. 10–20, 1985 (P. J. Spengler et al.), 2 male paratypes (USNM).

DISTRIBUTION: Known only from Venezuela.



Figs. 360–367. 360, 361. *Meioneta montivaga*. 362–364. *M. luctuosa*. 365–367. *M. atra*. 360, 361. Epigynum, ventral and caudal. 362, 365. Male cymbium, mesodorsal. 363. Male palpal tibia, dorsal. 364, 367. Embolic division, mesal. 366. Male palpal tibia, ectal. Scale lines 0.1 mm.

***Meioneta atra*, new species**
 Figures 365–367

TYPE: Male holotype from Cerro de la Neblina Base Camp, Amazonas, Venezuela, 140 m, flight intercept trap, Feb. 10–20, 1985 (P. J. Spengler et al.); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning black.

DIAGNOSIS: The cymbium (fig. 365) of the male palp has a long mesal apophysis; the tibia is distally lengthened (fig. 366). The membranous apophysis arising from the embolus is broad, narrowing to a point distally (fig. 367). These features distinguish *M. atra* from other *Meioneta* species. The female is not known.

MALE: Total length 1.65. Carapace length

0.8; dark brown. Abdomen black. Sternum dark brown. Legs brown, with femora suffused with black; TmI 0.3. Palp (figs. 365–367).

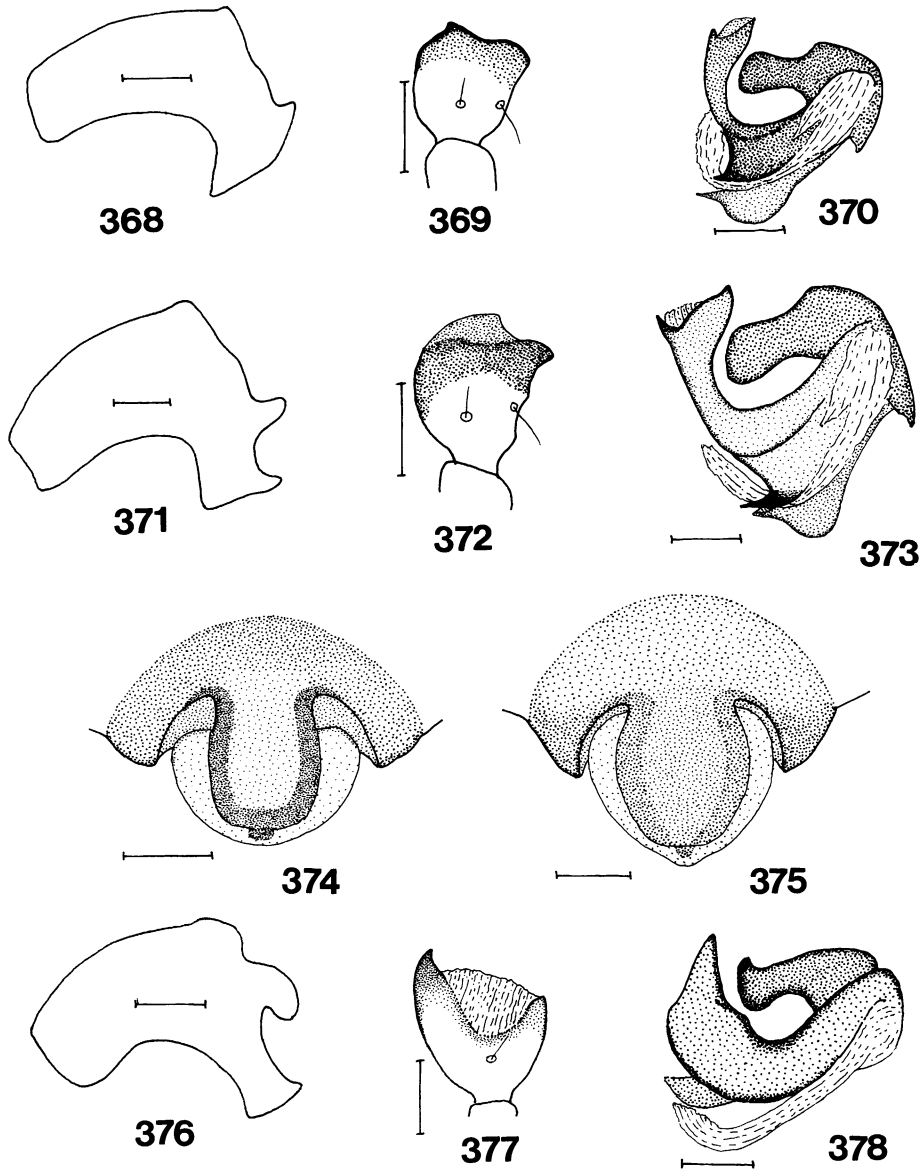
MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

***Meioneta prima*, new species**
 Figures 368–370, 374

TYPES: Male holotype, with four female and three male paratypes, from Paramo de Monserrate, Bogotá, Colombia, in dead leaves of *Espeleta grandiflora*, 1968–1969 (H. Sturm); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning first.



Figs. 368–378. 368–370, 374. *Meioneta prima*. 371–373, 375. *M. proxima*. 376–378. *M. collina*. 368, 371, 376. Male cymbium, mesodorsal. 369, 372, 377. Male palpal tibia, dorsal. 370, 373, 378. Embolic division, mesal. 374, 375. Epigynum, ventral. Scale lines 0.1 mm.

DIAGNOSIS: The female epigynum (fig. 374) has a broad basal section with almost straight sides, with a broader, translucent section distally. *M. proxima* has a similar epigynum, but in that species the basal section is broader with more convex sides (fig. 375). The cymbium (fig. 368) of the male palp has the mesal apophysis rather hammer-shaped; the em-

bolus (fig. 370) is bifid distally, with a membranous junction between the two points, and the opening of the embolus lies in a stout pointed apophysis on the lower side. The palpal organ is very close to that of *M. proxima* (fig. 373), but in that species the distal end of the embolus is wider, and the pointed apophysis on the lower side is differently

shaped. These two species also differ in the shapes of the cymbium (fig. 368; cf. fig. 371).

FEMALE: Total length 1.5–1.6. Carapace length 0.7–0.75; yellow to brown, with variable blackish markings and margins. Eyes fairly large, with posteriors all less than 1 d apart. Abdomen gray to black. Sternum yellow, heavily suffused with black, to black. Legs pale yellow to pale brown; TmI 0.25. Epigynum (fig. 374).

MALE: Total length 1.45–1.55. Carapace length 0.7–0.8. Color and TmI as female. Palp (figs. 368–370).

MATERIAL EXAMINED: COLOMBIA: *Bogotá*: the types above. Same locality, barber traps, 1968–1969 (H. Sturm), 8 female, 18 male paratypes (poor condition) (AMNH).

DISTRIBUTION: Known only from Colombia.

Meioneta proxima, new species

Figures 371–373, 375

TYPES: Male holotype, with 16 female and 34 male paratypes, from Paramo de Monserrate, Bogotá, Colombia, in barber traps, Apr.–Nov. 1968 (H. Sturm); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning closely related.

DIAGNOSIS: The female epigynum (fig. 375) has a broad scape, very similar to that of *M. prima* (fig. 374), but broader, with the sides of the basal part more convex. The cymbium (fig. 371) of the male palp has a short posterior apophysis, as well as a mesal footlike apophysis; the tibia (fig. 372) has a short dorsolateral apophysis. The embolic division (fig. 373) is similar to that of *M. prima* (fig. 370), but the bifid end of the embolus is wider, and the pointed apophysis on the lower side is somewhat differently shaped.

FEMALE: Total length 1.8–1.9. Carapace length 0.85–0.9; yellow-brown to brown, with blackish markings and margins. Posterior eyes ca. 1 d apart. Abdomen gray to black, with sometimes weak whitish markings dorsally. Sternum orange, suffused with black, to almost black. Legs yellow to orange-brown; TmI 0.25. Epigynum (fig. 375).

MALE: Size, color, and TmI as female. Palp (figs. 371–373).

One hermaphrodite, with a perfect epigy-

num, one female palp, and one imperfectly developed male palp, was present among the paratypes.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Meioneta collina, new species

Figures 376–378

TYPE: Male holotype from La Aguadita, Cundinamarca, Colombia, 2000 m, Aug. 31, 1969 (P. and B. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning on a hill.

DIAGNOSIS: The male palp (figs. 376–378) is very similar to that of *M. luctuosa* (figs. 362–364); the two species are distinguished by the different shapes of the cymbium and of the membraneous apophysis of the embolus. The female is not known.

MALE: Total length 1.8. Carapace length 0.8; yellow, with grayish margins. Abdomen gray, with dorsally a whitish patch anteriorly. Sternum pale yellow, with grayish margins. Legs pale yellow; TmII 0.35 (metatarsi 1 missing). Palp (figs. 376–378).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta mendosa, new species

Figures 379–381

TYPE: Male holotype from Paramo de Monserrate, Bogotá, Colombia, barber traps, Apr.–Nov. 1968 (H. Sturm); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning faulty, referring to the state of the type.

DIAGNOSIS: The tibia (fig. 380) of the male palp has a pointed dorsolateral apophysis connected to a translucent region; the cymbium (fig. 379) is relatively simple, close to that of *M. opaca* (fig. 396). The embolus has a dark-colored, pointed tooth and a short membraneous apophysis on the ventral side (fig. 381), and the lamella is split distally into a short, sclerotized, truncated section and a pointed translucent section. These characters

distinguish *M. mendosa* from other *Meioneta* species. The female is not known.

MALE: The only specimen is in poor condition, with abdomen missing, but the palps are intact, though expanded. Carapace length 0.75; dark brown. Sternum deep brown. Legs mainly absent; femora orange, basally suffused with black. Palp (figs. 379–381).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta cincta, new species

Figures 382–384

TYPE: Male holotype from Finca San Jose, 8 km SE Socorpa Mission, Sierra de Perija, César, Colombia, beaten from dry foliage in forest, 1450–1500 m, July 27, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning girdled.

DIAGNOSIS: The tibia (fig. 383) of the male palp has a short, curved dorsolateral apophysis, connected to a translucent region; the cymbium (fig. 382) is complex, and is characteristic of the species. The embolus (fig. 384) carries a curved apophysis anteriorly. The female is not known.

MALE: Total length 2.1. Carapace length 0.9. This sex has a somewhat antlike appearance. Carapace orange-brown, with darker markings and margins. Abdomen fairly long and cylindrical, black, with broad white encircling band around middle. Sternum orange, suffused with dark brown on margins. Legs orange-brown, with coxae and trochanters almost white, and with bases of femora black; TmI 0.3. Palp (figs. 382–384).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta disjuncta, new species

Figures 385, 386

TYPE: Female holotype from Paramo Alto Belem, Boyacá, Colombia, on *Espeleta*, Sept. 23, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning separated, referring to the eyes.

DIAGNOSIS: The female is diagnosed by the

epigynum (fig. 386), and by the separated lateral eyes (fig. 385), a character which distinguishes *M. disjuncta* from all other *Meioneta* species.

FEMALE: Total length 2.0. Carapace length 0.75; brown, heavily suffused with black. Posterior eyes fairly large, less than 1 d apart; lateral eyes distinctly separated (fig. 385). Abdomen black. Sternum black, slightly rugose. Legs with coxae and trochanters pale yellow, femora black, tibiae and metatarsi pale brown suffused with black, tarsi pale brown; TmI 0.5. Epigynum (fig. 386).

MATERIAL EXAMINED: COLOMBIA: *Boyacá*: the holotype. *Cundinamarca*: Paramo de Chisaca, thin soil, humus, on sand, 3720 m, Aug. 26, 1985 (H. Sturm), 1 female paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

Meioneta straminicola, new species

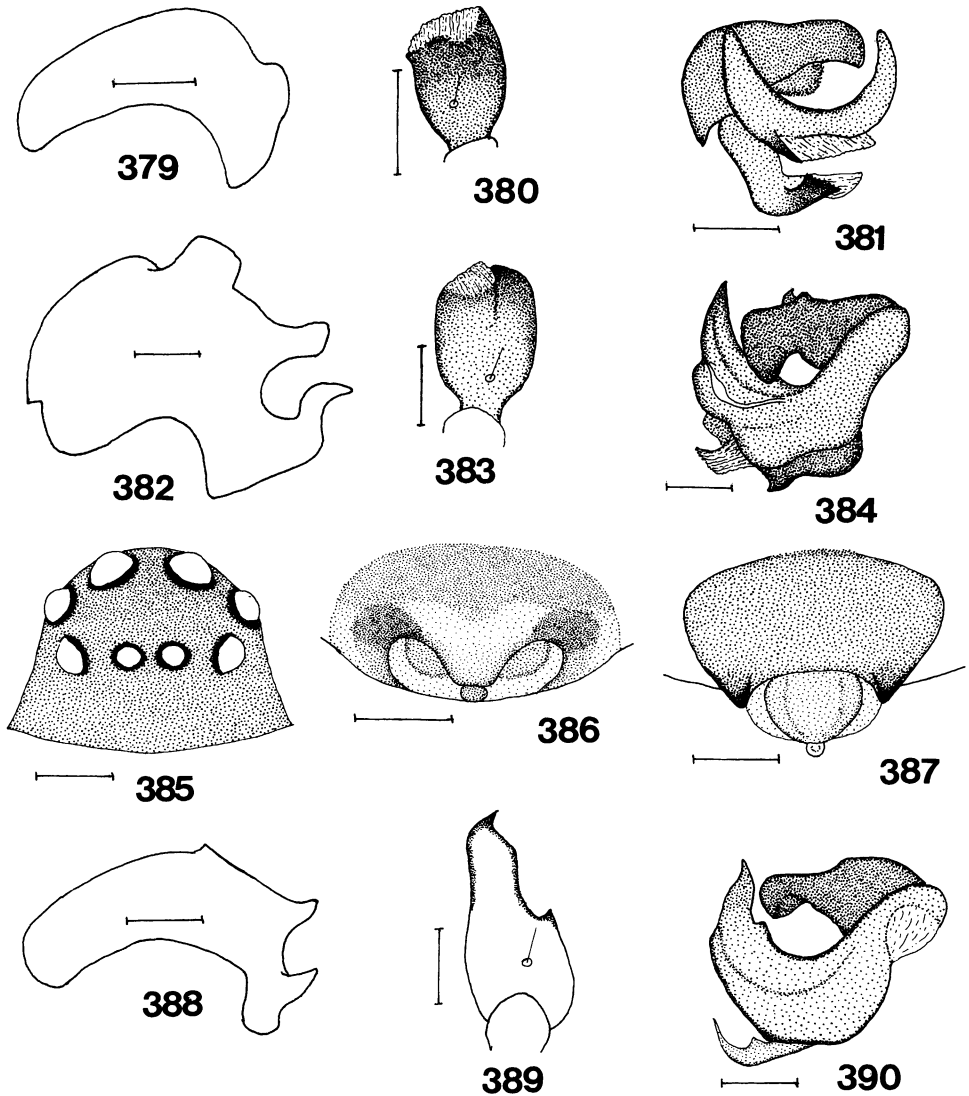
Figures 387–390

TYPES: Male holotype, with six female and three male paratypes, from Rio San Juan, Quebrada Docordo, Choco, Colombia, from dead foliage, Jan. 1–5, 1969 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning one who lives in litter.

DIAGNOSIS: The female epigynum (fig. 387) has a wide, dark-colored area anteriorly, which carries two sclerotized points posteriorly, and the scape is rounded basally, with the distal part broader and lightly sclerotized. The cymbium (fig. 388) of the male palp has a rather T-shaped mesal apophysis, and the tibia (fig. 389) has a long, pointed, dorsal apophysis and a short pointed lateral apophysis. The embolic division (fig. 390) is relatively simple.

FEMALE: Total length 1.55–1.8. Carapace length 0.6–0.65; pale brown to deep orange-brown, with blackish markings. Eyes large, with posteriors less than 0.5 d apart. Abdomen gray to black, with dorsally whitish patches anteriorly and near spinnerets. Sternum yellow to brown, suffused with gray or black. Legs yellow-brown to orange-brown; TmI 0.25. Epigynum (fig. 387).



Figs. 379–390. 379–381. *Meioneta mendosa*. 382–384. *M. cincta*. 385, 386. *M. disjuncta*. 387–390. *M. straminicola*. 379, 382, 388. Male cymbium, mesodorsal. 380, 383, 389. Male palpal tibia, dorsal. 381. Embolic division, mesal, left palp. 384, 390. Embolic division, mesal. 385. Female eyes, anterior. 386, 387. Epigynum, ventral. Scale lines 0.1 mm.

MALE: Total length 1.65–1.9. Carapace length 0.75–0.8. Color and TmI as female, except that abdomen is sometimes girdled with a white band. Palp (figs. 388–390).

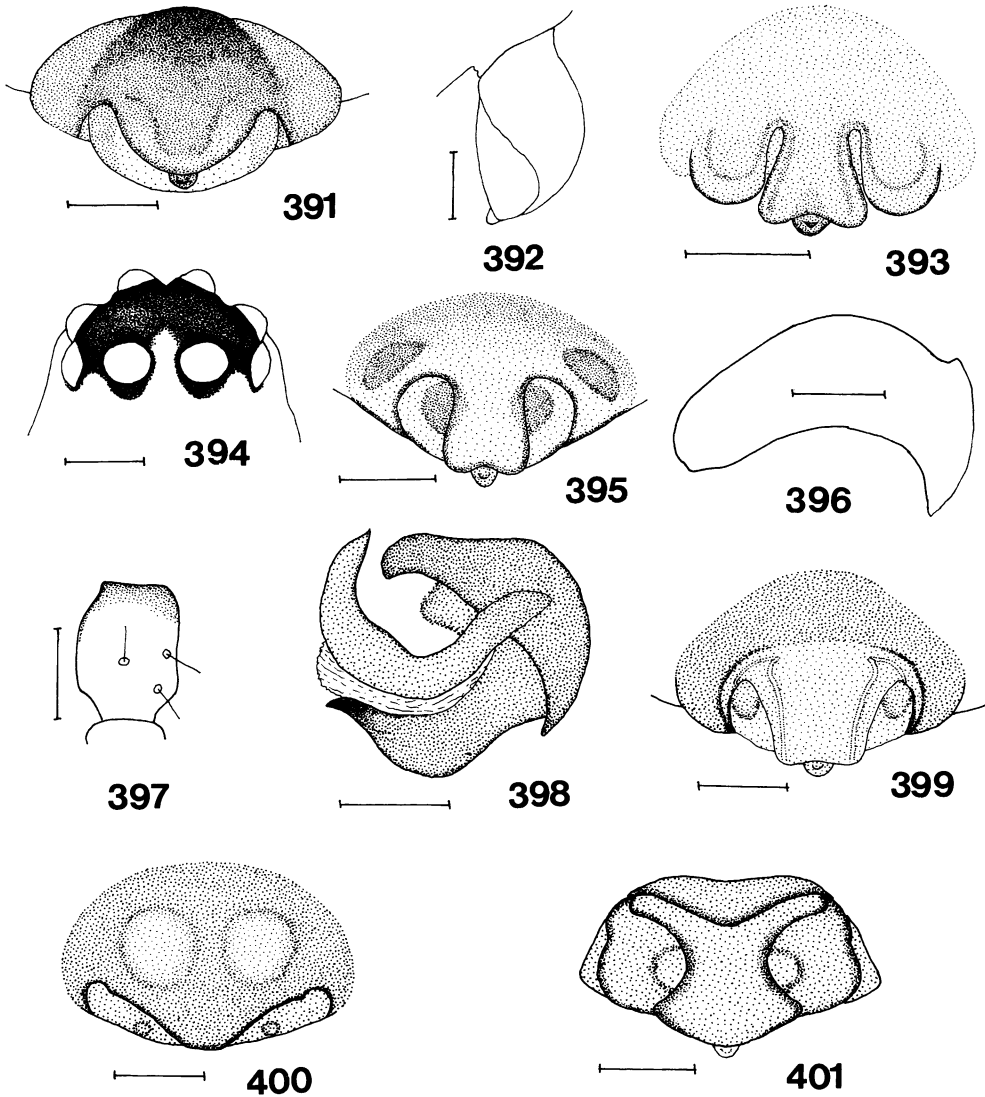
MATERIAL EXAMINED: COLOMBIA: the types above. ECUADOR: *Banos*: Balzapampa, 700 m, May 28, 1938 (W. Clarke-Macintyre), 1 female paratype (AMNH).

DISTRIBUTION: Colombia and Ecuador.

Meioneta mediocris, new species
Figures 391, 392

TYPE: Female holotype from 12 mi east of Santa Leticia, Huila, Colombia, 2300 m, March 1976 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning ordinary.



Figs. 391–401. 391, 392. *Meioneta mediocris*. 393, 394. *M. albinotata*. 395. *M. discolor*. 396–398. *M. opaca*. 399. *M. frigida*. 400, 401. *M. propria*. 391, 393, 395, 399, 400. Epigynum, ventral. 392. Epigynum, lateral. 394. Female eyes, dorsal. 396. Male cymbium, mesodorsal. 397. Male palpal tibia, dorsal. 398. Embolic division, mesal. 401. Epigynum, caudal. Scale lines 0.1 mm.

DIAGNOSIS: The female epigynum (figs. 391, 392) has a wide, dark-colored area anteriorly, and the scape is basally short, broad, and rounded, distally broader and translucent. The epigynum is of the same general form as those of *M. prima* (fig. 372) and *M. proxima* (fig. 375), but the scape is basally much shorter. The male is not known.

FEMALE: Total length 2.1. Carapace length 0.8; pale orange-brown, with ocular area and margins suffused with black. Abdomen gray.

Sternum orange, suffused with black. Legs orange-brown; TmI 0.25. Epigynum (figs. 391, 392).

MATERIAL EXAMINED: Only the holotype.
DISTRIBUTION: Known only from Colombia.

Meioneta albinotata, new species
 Figures 393, 394

TYPES: Female holotype, with one female paratype, from Finca Chenevo, 20 km north

of Rio Muco, 20 km south of El Porvenir, Meta, Colombia, 170 m, 1976 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning with a white spot.

DIAGNOSIS: The scape of the female epigynum (fig. 393) is basally rather narrow anteriorly, but broadened posteriorly, with more or less straight sides; the atria on either side of the scape are narrow. The large eyes (fig. 394) also serve to diagnose this species. The male is not known.

FEMALE: Total length 1.4. Carapace length 0.6; pale yellow-brown, with dusky markings and margins. Eyes large (fig. 394). Abdomen brownish, with large white patch dorsally. Sternum yellow, suffused with gray. Legs pale yellow; TmI ca. 0.25. Epigynum (fig. 393).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Meioneta discolor, new species

Figure 395

TYPE: Female holotype from Paramo de Chingaza, Cundinamarca, Colombia, in woods, Sept. 24, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning of several colors.

DIAGNOSIS: The scape of the female epigynum (fig. 395) is basally moderately narrow anteriorly, slightly wider posteriorly; the atria are fairly wide, and there is an oval dark spot near each atrium. The wider atria and the smaller eyes distinguish *M. discolor* from *M. albinotata*. The male is not known.

FEMALE: Total length 1.9. Carapace length 0.9; yellow, heavily suffused with dark brown. Posterior eyes ca. 1 d apart. Abdomen black, with faint white markings dorsally. Sternum black. Legs yellow; TmI 0.3. Epigynum (fig. 395).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta opaca, new species

Figures 396–398

TYPE: Male holotype from Paramo de Chisaca, Cundinamarca, Colombia, in clumps of grass in woods, 3720 m, Sept. 8, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning dark.

DIAGNOSIS: The cymbium of the male palp is relatively simple (fig. 396), and the tibia is truncated distally (fig. 397). The embolus (fig. 398) is simple, and the lamella has a curved black point distally. *M. mendosa* has a similar cymbial form (fig. 379), but this species is readily distinguished from *M. opaca* by the palpal tibia and embolic division. The female is not known.

MALE: Total length 1.75. Carapace length 0.8. Carapace brown, with blackish markings and margins; ocular area black. Abdomen black. Sternum black. Legs pale orange-brown; TmI 0.25. Palp (figs. 396–398).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta frigida, new species

Figure 399

TYPE: Female holotype from Paramo de Chingaza, Cundinamarca, Colombia, 3550 m, Sept. 14, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning cold, dull.

DIAGNOSIS: The female epigynum (fig. 399) has the basal part of the scape broader anteriorly than posteriorly, and truncated posteriorly. This form of epigynum distinguishes *M. frigida* from other South American *Meioneta* species. The male is not known.

FEMALE: Total length 1.6. Carapace length 0.8. Carapace yellow, with grayish margins. Abdomen black ventrally, yellow-white dorsally. Sternum orange, suffused with gray. Legs yellow-brown; TmI 0.25. Epigynum (fig. 399).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Meioneta propria, new species

Figures 400, 401

TYPE: Female holotype from Juan Montalvo, Los Rios, Ecuador, Mar. 1938 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning distinctive.

DIAGNOSIS: The female epigynum has the basal part of the scape short, very broad anteriorly (fig. 400), then narrowed before

broadening again posteriorly (fig. 401). Anterior to the scape there are two circular markings. These epigynal characters distinguish *M. propria* from other South American species of the genus. The male is not known.

FEMALE: The single specimen is in poor condition, with all legs missing. Total length 1.65. Carapace length 0.75. Carapace orange-brown, with dusky markings and margins. Abdomen black. Sternum orange-brown, suffused with gray. Epigynum (figs. 400, 401).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Meioneta montana, new species

Figures 402–404

TYPE: Male holotype from Minza Chica, Tungurahua, Ecuador, 3500 m, Apr. 1939 (F.M. Brown); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning of mountains.

DIAGNOSIS: The cymbium of the male palp has a narrow mesal apophysis (fig. 402), the tibia has no apophysis (fig. 403), and the embolic division (fig. 404) has a simple embolus and a lamella with a curved point distally. The shape of the cymbium is close to that of *M. prima* (fig. 368), but that species is readily separable from *M. montana* by the embolic division. The female is not known.

MALE: Total length 1.7. Carapace length 0.75; yellow-brown, suffused with deep brown anteriorly and on margins. Abdomen black, with broad pale yellow chevrons dorsally, and mainly pale yellow ventrally. Sternum yellow-brown, with broad blackish margin. Legs yellow-brown, annulated with black at distal ends of tibiae and metatarsi; TmI 0.25. Palp (figs. 402–404).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Meioneta silvae, new species

Figures 405–408

TYPES: Male holotype, with six female paratypes, from Dantas La Molina, Huanuco, Peru, 270 m, May 30, 1987 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a patronym in honor of the collector.

DIAGNOSIS: The female epigynum (fig. 408) has the basal part of the scape rather narrow anteriorly, much broader posteriorly, with

more or less straight sides; there are moderately wide atria on each side. The epigynum of *M. propinqua* (fig. 410) is similar, but in that species the scape is much broader anteriorly. The male palp of *M. silvae* has a cymbium (fig. 405) with a squat ectal apophysis and a mesal apophysis which is bifid caudally, and the tibia has three short apophyses distally (fig. 407). The embolus has two small, dark-colored teeth, one basally, the other anteriorly, and the lamella is membranous.

FEMALE: Total length 1.8–1.9. Carapace length 0.65–0.7; brown to deep brown, with blackish markings and margins. Eyes moderately large, with posteriors less than 1 d apart. Abdomen gray to black, with dorsally a white spot anterior to spinnerets, ventrally usually with a large white patch. Sternum yellow, heavily suffused with black, to almost black. Legs orange-brown, with coxae, trochanters and tips of tarsi almost white; TmI ca. 0.3. Palp with tibia and tarsus black. Epigynum (fig. 408).

MALE: Total length 1.9. Carapace length 0.85. Color and TmI as female, except: abdomen black, with small white spot ventrally anterior to spinnerets. Palp (figs. 405–407).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Meioneta propinqua, new species

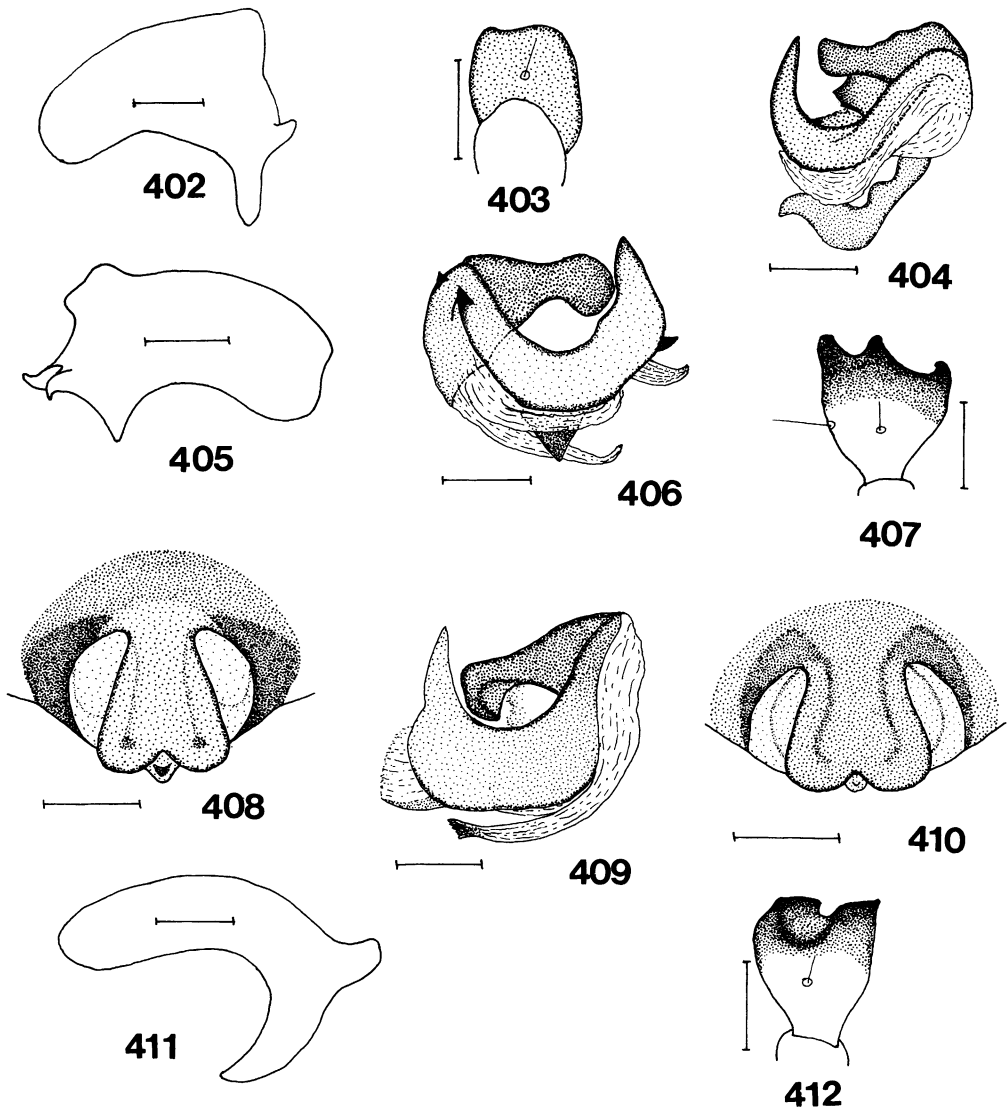
Figures 409–412

TYPE: Male holotype from Zona Reservada Pakitza, Madre de Dios, Peru, Zone 2, forest, Oct. 6, 1987 (D. Silva and J. Coddington); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The female epigynum (fig. 410) is similar to that of *M. silvae* (fig. 408), but has the basal part of the scape much broader anteriorly. The cymbium of the male palp has a long, curved mesal arm (fig. 411), and the tibia has two short, broad apophyses (fig. 412). The embolus is simple (fig. 409), and the lamella is membranous.

FEMALE: Total length 2.0–2.2. Carapace length 0.75–0.8; brown to deep brown. Abdomen gray-black dorsally and on sides, with white patch anterior to spinnerets, and sometimes white patch on either side; ventrally whitish. Sternum orange, suffused with black,



Figs. 402–412. 402–404. *Meioneta montana*. 405–408. *M. silvae*. 409–412. *M. propinqua*. **402, 411.** Male cymbium, mesodorsal. **405.** Male cymbium, mesodorsal, left palp. **403, 412.** Male palpal tibia, dorsal. **407.** Male palpal tibia, dorsal, left palp. **404, 409.** Embolic division, mesal. **406.** Embolic division, mesal, left palp. **408, 410.** Epigynum, ventral. Scale lines 0.1 mm.

to almost black. Legs pale orange to orange-brown; TmI 0.35. Palp with tibia and tarsus suffused with brown to dark brown. Epigynum (fig. 410).

MALE: Total length 1.9. Carapace length 0.9. Color and TmI as female, except abdomen with no white patch dorsally, and ventrally less white. Palp (figs. 409, 411, 412).

MATERIAL EXAMINED: PERU: *Madre de Dios*: the holotype. Same locality, Oct. 3, 1987 (J. Coddington and D. Silva), 2 female para-

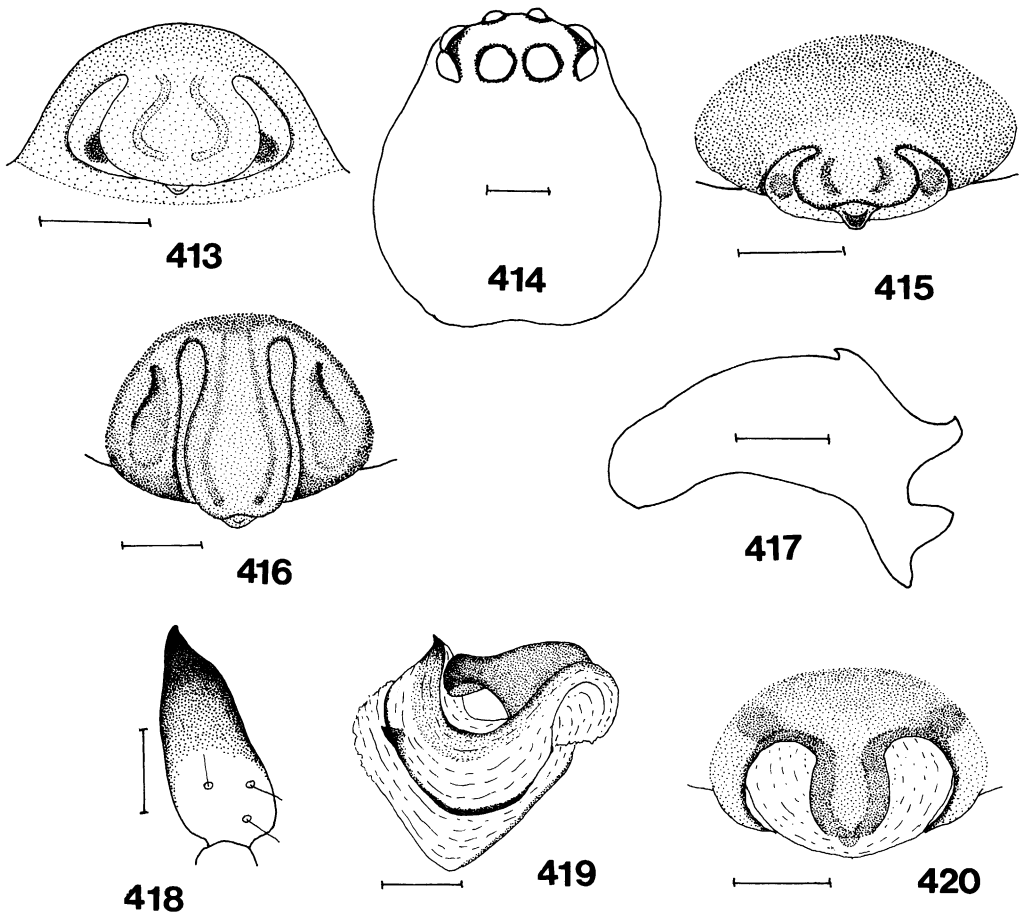
types (MHNSM). BRAZIL: *Matto Grosso*: Sinop, Oct. 1976 (M. Alvarenga), 1 female paratype (AMNH).

DISTRIBUTION: Peru and Brazil.

***Meioneta oculata*, new species**

Figures 413, 414

TYPE: Female holotype from Dantas La Molina, Huanuco, Peru, 270 m, May 30, 1987 (D. Silva); deposited in MHNSM.



Figs. 413–420. 413, 414. *Meioneta oculata*. 415. *M. brevis*. 416. *M. lauta*. 417–419. *M. fusca*. 420. *M. adami*. 413, 415, 416, 420. Epigynum, ventral. 414. Female carapace/eyes, dorsal. 417. Male cymbium, mesodorsal. 418. Male palpal tibia, dorsal. 419. Embolic division, mesal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective referring to the conspicuous posterior median eyes.

DIAGNOSIS: The female is diagnosed by its relatively small size, large posterior eyes (fig. 414), and epigynum (fig. 413); the basal part of the scape is short, broad and rounded, and there is a narrow atrium on either side. The eyes are not quite so large as in *M. albinotata* (fig. 394), but these two species cannot be confused because of the very different epigyna. The male is not known.

FEMALE: Total length 1.3. Carapace length 0.55; pale yellow, with narrow blackish margins. Posterior median eyes very large (fig. 414). Abdomen grayish yellow. Sternum pale yellow, suffused with gray. Legs pale yellow-brown; TmI ca. 0.2. Epigynum (fig. 413).

MATERIAL EXAMINED: Only the holotype.
DISTRIBUTION: Known only from Peru.

Meioneta brevis, new species
Figure 415

TYPE: Female holotype from Pucalina, Ucayali, Peru, July 26, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning short.

DIAGNOSIS: The female epigynum (fig. 415) has the basal part of the scape short, broad, and rounded, with a narrow atrium on each side. This epigynum distinguishes *M. brevis* from other *Meioneta* species. The male is not known.

FEMALE: Total length 1.45. Carapace length

0.6. Carapace yellow-brown with blackish margins. Abdomen black, with dorsally a large white patch, and a white spot anterior to spinnerets; ventrally with whitish gray patch. Sternum brown, suffused with gray. Legs brown; TmI 0.25. Palpal tibia and tarsus deep brown. Epigynum (fig. 415).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Meioneta lauta, new species

Figure 416

TYPE: Female holotype from Rio Chispa, northwest of Iscozacín, Pasco, Peru, 345 m, Sept. 30, 1987 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning elegant.

DIAGNOSIS: This species is placed provisionally in *Meioneta*. The female has a trichobothrium on metatarsus 4 and an epigynum (fig. 416) in which the basal part of the scape is elongated and club-shaped, with a narrow atrium on either side. This epigynum cannot be confused with that of any other South American *Meioneta* species. The male is not known.

FEMALE: Total length 1.75. Carapace length 0.7; deep brown, with blackish margins. Abdomen black, with ventrally a gray patch and a white spot anterior to spinnerets. Sternum brown, with blackish margins. Legs pale orange-brown, with coxae, trochanters, and tips of tarsi almost white; metatarsus 4 with trichobothrium; TmI 0.35. Palp with tibia and tarsus darkened. Epigynum (fig. 416).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Meioneta fusca, new species

Figures 417–419

TYPE: Male holotype from Santa Cruz, Cajamarca, Peru, 1400 m, Jan. 8–14, 1985 (J. Carpenter); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning dark in color.

DIAGNOSIS: The cymbium (fig. 417) of the male palp has three apophyses, and the tibia is elongated to a pointed apophysis (fig. 418). The embolus is lightly sclerotized, and has a small black tooth anteriorly (fig. 419). The female is not known.

MALE: Total length 1.75. Carapace length

0.75; brown, with blackish margins. Abdomen black, with irregular whitish markings. Sternum black. Legs brown; TmI 0.2. Palp (figs. 417–419).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Meioneta adami, new species

Figure 420

TYPE: Female holotype, with one female paratype, from Manaus, Amazonas, Brazil, Feb. 1977 (N. A. Locket); deposited in AMNH.

ETYMOLOGY: The specific name is a patronym in recognition of the collector.

DIAGNOSIS: The female epigynum (fig. 420) is of the same general form as those of *M. prima* (fig. 374), *M. proxima* (fig. 375), and *M. mediocris* (fig. 391), but the basal part of the scape is much narrower, with a wide atrium on each side filled by the translucent distal part of the scape. The male is not known.

FEMALE: Total length 1.8–1.9. Carapace length 0.65–0.75; brown, margins suffused with black. Abdomen gray dorsally, with white spot anterior to spinnerets; whitish ventrally. Sternum yellow-brown, suffused with black. Legs yellow, with femora suffused with brown; TmI 0.35. Epigynum (fig. 420); scape embedded on either side by translucent, lightly sclerotized material, which, as in *M. prima* and *M. proxima*, is the wide lateral extensions of the more distal part of the folded scape.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

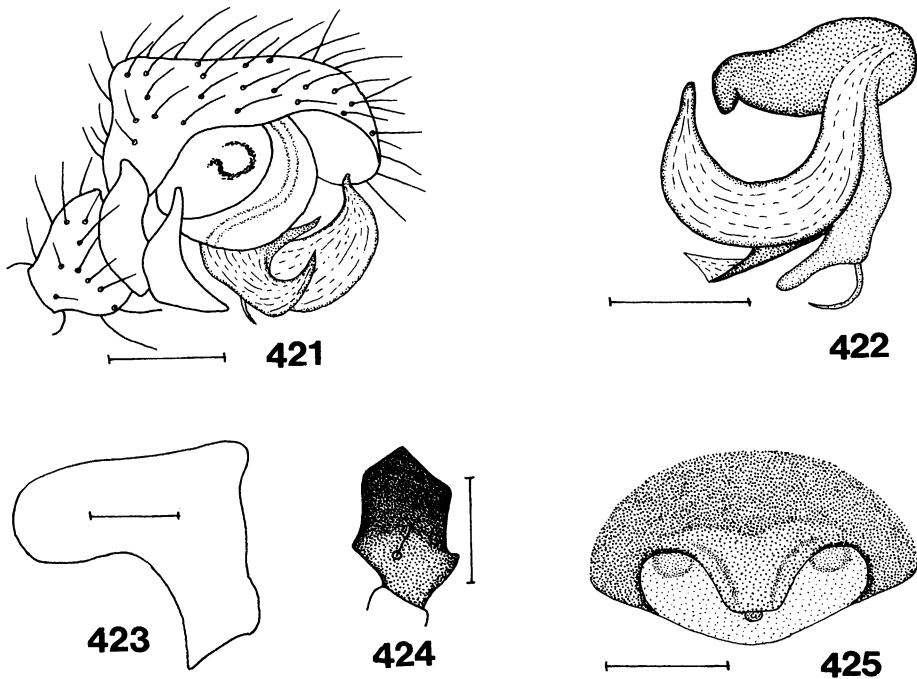
Meioneta castanea, new species

Figures 421–425

TYPE: Male holotype from Las Palmas de Ocoa, Valparaíso, Chile, trap on burned area, Oct. 26, 1984 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning chestnut-brown.

DIAGNOSIS: The female epigynum (fig. 425) is typical of the genus, but not otherwise very distinctive. *M. disjuncta* has a similar epigynum (fig. 386), but is readily distinguishable from *M. castanea* by the eyes, and probably the locality of capture. The cymbium (fig. 423) of the male palp is relatively simple, with a



Figs. 421–425. *Meioneta castanea*. 421. Male palp, ectal. 422. Embolic division, mesal. 423. Male cymbium, mesodorsal. 424. Male palpal tibia, dorsal. 425. Epigynum, ventral. Scale lines 0.1 mm.

broad mesal apophysis, and the tibia (fig. 424) is dark in color and broadly pointed distally. The embolus is lightly sclerotized, simple in form (fig. 422), and the lamella is bifid distally with a narrow hooklike apophysis ventrally. These palpal characters distinguish *M. castanea* from other *Meioneta* species.

FEMALE: Total length 1.7–1.95. Carapace length 0.6–0.65; deep brown. Eyes moderate in size, with posteriors 1 d or slightly more apart. Chelicerae and palp deep brown. Abdomen dorsally gray, with a white spot sometimes close to spinnerets; ventrally black or brownish black. Sternum brown to deep brown. Legs brown; TmI ca. 0.3. Epigynum (fig. 425).

MALE: Total length 1.45–1.85. Carapace length 0.65–0.75. Color, etc. as female except carapace dark brown, blackish anteriorly and on margins. Abdomen fairly long and cylindrical; dorsally gray with whitish patch, ventrally black, often with brown patch. Palp (figs. 421–424).

MATERIAL EXAMINED: CHILE: *Osorno*: Oct. 1977 (A. Tobar), 1 female paratype (AMNH). *Talca*: Alto de Valdes. *Nothofagus* forest,

1300 m, Dec. 5, 1984–Feb. 20, 1985 (S. and J. Peck), 1 male paratype (AMNH). *Valparaíso*: the holotype. Same locality, Nov. 30, 1984, 2 male paratypes; May 17, 1985, 4 male paratypes; June 21–22, 1985, 5 male paratypes; Aug. 23, 1985, 2 female, 2 male paratypes; Sept. 27, 1985, 3 female, 1 male paratypes (all R. Calderón) (all AMNH).

DISTRIBUTION: Known only from Chile.

LYGARINA SIMON

Lygarina Simon, 1894: 648 (type species by original designation *Lygarina nitida* Simon).—Roewer, 1942: 675.—Bonnet, 1957: 2674.—Brignoli, 1983: 344.

DIAGNOSIS: The female epigynum has two pointed projections arising from the ventral surface (figs. 427, 437). The epigyna are similar to that of *Antronetes* (fig. 834), but that genus is distinguishable by the tibial spines (2221, cf. 1111 in *Lygarina*) and by the small eyes (fig. 837). Males are diagnosed by the palp, particularly by the tibial apophyses (figs. 431, 439) and the embolic division (figs. 430, 440).

DESCRIPTION: Members of the genus have total length 1.15–1.6. The carapace is often slightly rugose, but is otherwise unmodified. The eyes are usually of moderate size, with posteriors ca. 1 d apart, but in *L. caracasana* they are larger. The sternum is slightly rugose. The legs are short and stout, with tibia 1 1/d (female) ca. 4. Tibial spines are 1111, short and weak, but sometimes 1100 or 0000 in the male. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.4. The female palp is clawless. The tracheal system comprises four short tubes limited to the abdomen. The epigynum has two rather pointed projections arising from the ventral surface, particularly visible from the caudal aspect (figs. 427, 442). The internal duct system is simple, with a short curved duct running from the spermatheca to the opening, which appears to lie on the pointed projection (fig. 443). The male palpal tibia has a hammer-shaped lateral apophysis, and a long curved dorsal apophysis (figs. 429, 431). The paracymbium is well developed; there appears to be no suprategular apophysis. The embolic division is a plate with a fairly large tail, and a lightly sclerotized anterior, the distal blunt end of which forms the embolus (figs. 430, 440).

INCLUDED SPECIES: *Lygarina nitida* Simon, *Lygarina caracasana* Simon, *Lygarina silvicola*, new species and *Lygarina finitima*, new species.

EXCLUDED SPECIES: It is unlikely that *Lygarina monticola* Simon, from Sri Lanka, is correctly placed in this genus, but it has not been possible to find a specimen for examination.

DISTRIBUTION: Venezuela, Peru, and Brazil.

TAXONOMIC POSITION: The members of this genus have a simple tracheal system, and despite the very erigonine appearance, they cannot be regarded as members of the Erigoninae. The lateral tibial apophysis of the male palp is similar to that of *Laminacauda*, but the epigynum is quite different. The taxonomic position of *Lygarina* in the Linyphiidae is for the present obscure.

Lygarina nitida Simon
Figures 426, 427

Lygarina nitida Simon 1894: 648 (male and female syntypes from south Brazil; female syn-

type in MNHN, examined. Male syntype not located).—Roewer, 1942: 675.—Bonnet, 1957: 2674.

DIAGNOSIS: The shape of the female epigynus (fig. 426) and the form of the pointed elevations (fig. 427), distinguish *L. nitida* from the other *Lygarina* species. The male has not been seen.

FEMALE: Total length 1.55. Carapace length 0.7. Colors rather faded. Carapace orange, with faint dusky markings; slightly raised behind eyes. Abdomen gray-black. Sternum pale orange, with blackish margins. Legs pale brown; TmI 0.4. Epigynum (figs. 426, 427); somewhat bleached.

MATERIAL EXAMINED: Only the female syntype.

DISTRIBUTION: Known only from Brazil.

Lygarina caracasana Simon
Figures 428–432

Lygarina caracasana Simon, 1894: 604 (male and female syntypes from Caracas, Venezuela; one male and one female syntype in MNHN, examined).—Roewer, 1942: 675.—Bonnet, 1957: 2674.

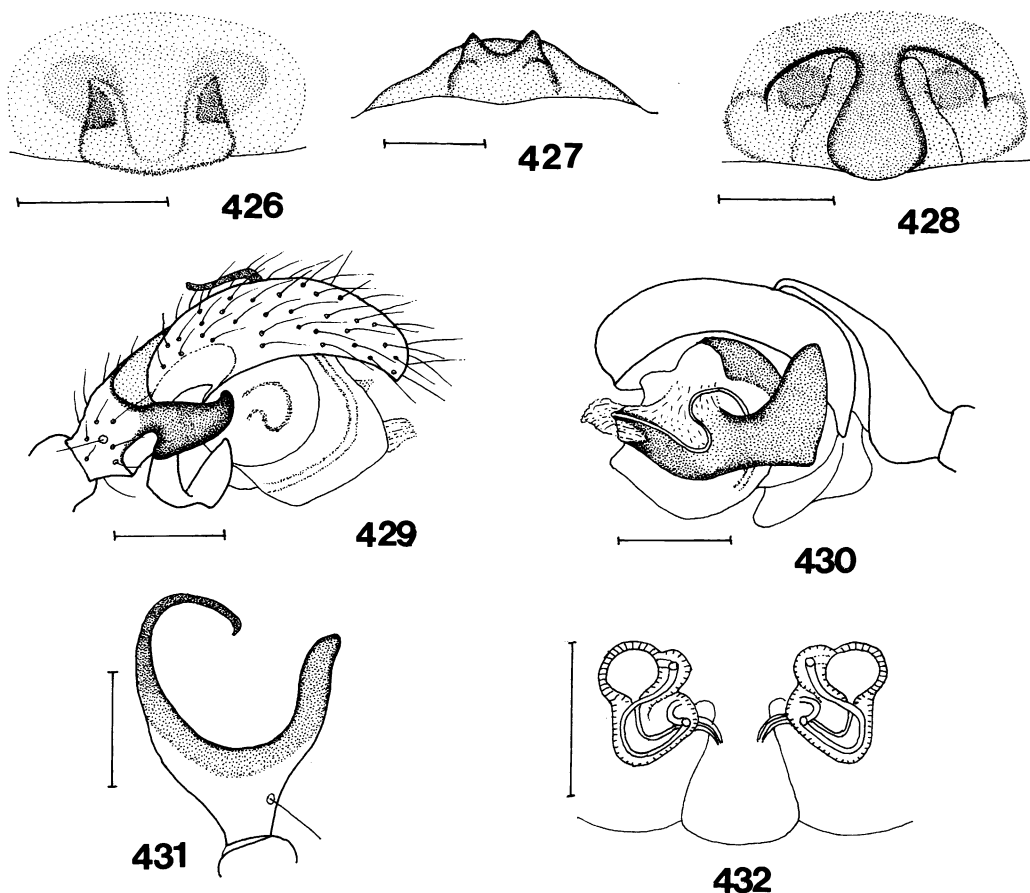
DIAGNOSIS: The female epigynum (figs. 428, 432) has a median, flask-shaped scape, but, in the rather faded syntype, no pointed projections are visible. Possibly this is not the female of *L. caracasana*. The tibia (fig. 431) of the male palp has a long, curved mesal apophysis, and a long ectal apophysis which is hammer-shaped when viewed ectally (fig. 429); the embolic division has a stout tail (fig. 430), and is rather close to that of *L. silvicola* (fig. 435), but the tibial apophyses of these two species are easily distinguishable (fig. 431; cf. fig. 434).

FEMALE: Total length 1.4. Carapace length 0.6; pale brown, with dusky markings and margins. Abdomen whitish gray. Sternum pale brown, suffused with black, particularly on margins. Legs pale brown; TmI 0.4. Epigynum (figs. 428, 432).

MALE: Abdomen missing. Carapace length 0.65. Color as female. Palp (figs. 429–431).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Venezuela.



Figs. 426–432. 426, 427. *Lygarina nitida*. 428–432. *L. caracasana*. 426, 428. Epigynum, ventral. 427. Epigynum, caudal. 429. Male palp, ectal. 430. Male palp, mesal. 431. Male palpal tibia, dorsal. 432. Epigynum, internal. Scale lines 0.1 mm.

Lygarina silvicola, new species

Figures 433–437

TYPE: Male holotype from Itu, São Paulo, Brazil, Jan. 14, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning one who lives in woods.

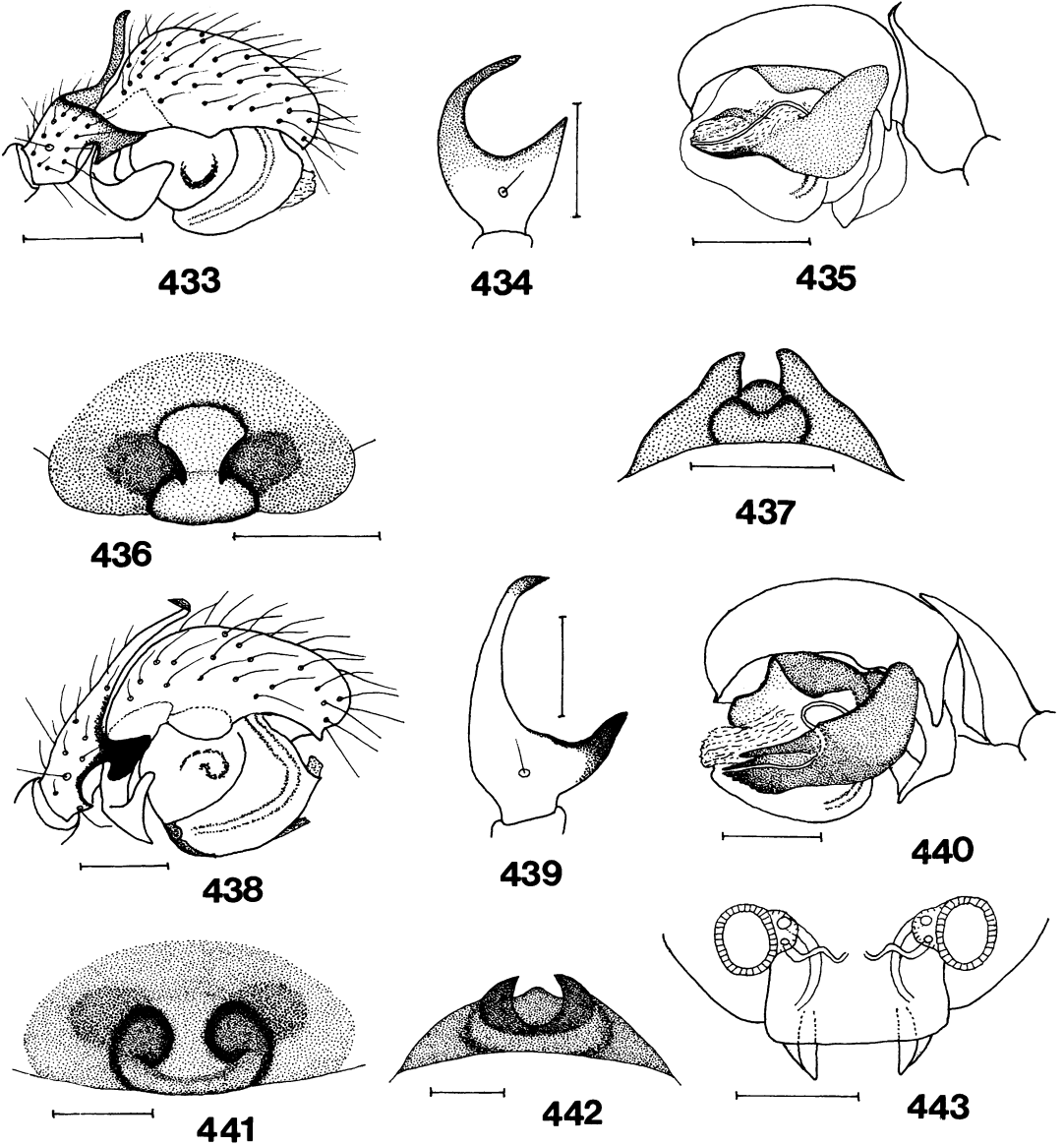
DIAGNOSIS: The female epigynum (figs. 436, 437) has two black, pointed projections at the posterior end of a clearly defined atrium. The shape of the epigynum readily distinguishes *L. silvicola* from the other *Lygarina* species. The tibia (fig. 434) of the male palp has a fairly long, curved mesal apophysis, and a shorter ectal apophysis which, viewed mesally, is somewhat hammer-shaped (fig. 433).

The embolic division (fig. 435) is fairly close to that of *L. caracasana* (fig. 430), but these two species are readily separable by the tibial apophyses.

FEMALE: This specimen was taken in the same general area as the male, but not with it. Total length 1.45. Carapace length 0.55; brown to chestnut-brown, with darker markings and margins. Abdomen black. Sternum brown, suffused with dark brown or black. Legs brown, many segments missing. Epigynum (figs. 436, 437).

MALE: Total length 1.15. Carapace length 0.5. Color as female. TmI 0.4. Palp (figs. 433–435).

MATERIAL EXAMINED: BRAZIL: *São Paulo*: Itu, the holotype. Forest Reservation, Jan.



Figs. 433–443. 433–437. *Lygarina silvicola*. 438–443. *L. fnitima*. 433, 438. Male palp, ectal. 435, 440. Male palp, mesal. 434, 439. Male palpal tibia, dorsal. 436, 441. Epigynum, ventral. 437, 442. Epigynum, caudal. 443. Epigynum, internal. Scale lines 0.1 mm.

16, 1959 (A. M. Nadler), one female paratype.

DISTRIBUTION: Known only from Brazil.

Lygarina fnitima, new species

Figures 438–443

TYPES: Male holotype, with three female and two male paratypes, from Torentoy Can-

yon, base of Machu Picchu, Cuzco, Peru, 2000 m, June 16–17, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning adjacent, similar.

DIAGNOSIS: The female epigynum (fig. 441) has two pointed projections bordering an atrium (fig. 442); the form of the atrium readily distinguishes *L. fnitima* from the oth-

er *Lygarina* species. The tibia (fig. 439) of the male palp has a long, relatively straight mesal apophysis, which is curved ectally at the tip (fig. 438), and a short ectal apophysis which is rather hammer-shaped viewed ectally (fig. 438). The embolic division (fig. 440) is straighter than in *L. caracasana* and *L. silvicola*. The tibial apophyses separate *L. fnitima* without difficulty from the other *Lygarina* species.

FEMALE: Total length 1.5–1.6. Carapace length 0.6–0.65; deep chestnut-brown, rather darker anteriorly. Abdomen shiny black. Sternum deep brown, suffused with black. Legs dark brown, with tarsi somewhat lighter; TmI 0.4. Epigynum (figs. 441–443).

MALE: Total length 1.5–1.55. Carapace length 0.6. Color as female. Palp (figs. 438–440).

MATERIAL EXAMINED: PERU: *Cuzco*: the types above. Machu Picchu, beaten from vegetation, 2600–2800 m, July 1–5, 1964 (B. Malkin), 2 female, 3 male paratypes (AMNH).

DISTRIBUTION: Known only from Peru.

ANTRONETES, NEW GENUS

TYPE SPECIES: *Antronetes pallidus*, new species.

ETYMOLOGY: From the Greek *antron*, a cave, and *netes*, a spinner. Gender masculine.

DIAGNOSIS: The female of the single species is diagnosed by the epigynum (figs. 834, 835); this is very similar to those of *Lygarina* (e.g., fig. 436), but *Antronetes* is distinguished from the latter genus by the tibial spines (2221, cf. 1111 in *Lygarina*), by the longer, more slender legs (tibia 1 l/d ca. 12, cf. ca. 4), and by the smaller eyes (fig. 837). The male of the single species is diagnosed by the palp, particularly by the cymbial spine (fig. 831), the embolic division (fig. 832), and the tibial apophyses (figs. 831, 833), and by the small eyes.

DESCRIPTION: The single known species has total length 1.55–2.2, is fairly pale in color, and has been taken only in caves. The carapace is unmodified in both sexes. The eyes are small and widely spaced (fig. 837). The legs are fairly long and slender, with tibia 1 l/d ca. 12 (female). The tibial spines are 2221, fairly long and stout; the metatarsi and femora are spineless. Metatarsi 1–3 have a trich-

obothrium; TmI 0.35–0.40. The female palp is clawless. The tracheal system comprises four simple tubes, fairly long but not extending into the cephalothorax. The epigynum has two projections, terminating in a curved point, arising from the ventral surface (figs. 834, 835); the internal duct system is simple, with a short, curved duct running from the spermatheca to the opening, which appears to lie near the distal end of the pointed projection (fig. 836). The tibia of the male palp has a short pointed lateral apophysis, and a short rounded dorsal apophysis (fig. 833). The cymbium has a stout, backward-pointing spine on the apex (fig. 831). The paracymbium is well developed; the suprategular apophysis is short and blunt-ended (fig. 831). The embolic division is a roughly triangular plate, from which the embolus arises as a short stub (fig. 832).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Caves in northwest Patagonia, Argentina.

TAXONOMIC POSITION: The genus has a simple tracheal system, and consequently cannot be regarded as a member of the Eriogoninae. The epigynum is close to those of *Lygarina*; the male palp has a short, stublike embolus, different from that in *Lygarina*, and the embolic division and tibial apophyses are differently shaped. *Antronetes* can be regarded provisionally as weakly related to *Lygarina*, but its taxonomic position in the Linyphiidae is at present obscure.

Antronetes pallidus, new species

Figures 831–837

TYPE: Male holotype from Caverna del Arenal, Sistema de Cuchillo Cura, Neuquén, Argentina, Jan. 17, 1988 (D. Anghilante); deposited in MACN.

ETYMOLOGY: The specific name is a Latin adjective meaning pale colored.

DIAGNOSIS: The female epigynum has two pointed projections arising from the ventral surface (figs. 834, 835); this is similar to the epigyna of *Lygarina* (e.g., fig. 436), but *Antronetes pallidus* is distinguished from the *Lygarina* species by the tibial spines (2221, cf. 1111) and by the small eyes (fig. 837). The male is diagnosed by the palp, particularly by the embolic division (fig. 832), which is

roughly triangular in shape, and by the forms of the tibial apophyses (figs. 831, 833); the small eyes are a confirmatory character.

FEMALE: Total length 1.9–2.2. Carapace length 0.8–0.85. Carapace pale orange to orange, slightly darker anteriorly. Eyes small, well separated (fig. 837). Abdomen pale yellow-white to white, clothed with moderately long hairs. Sternum pale yellow. Legs pale orange to orange; TmI 0.35. Epigynum (figs. 834–836).

MALE: Total length 1.55. Carapace length 0.8. Color and eyes as female. TmI 0.4. Palp (figs. 831–833).

MATERIAL EXAMINED: ARGENTINA: Neuquén: Sistema de Cuchillo Cura: Caverna del Arenal: the holotype; Jan. 4–6, 1987, 5 female paratypes (E. Maury); Nov. 19, 1987, 2 female paratypes (E. Maury). Caverna de los Cabritos, Jan. 1988 (D. Anghilante), 1 female paratype. Caverna del Templo, Jan. 18–19, 1988 (D. Anghilante), 2 female paratypes. All paratypes in MACN.

DISTRIBUTION: Known only from caves in Neuquén, Argentina.

HYPSELOCARA, NEW GENUS

TYPE SPECIES: *Cineta altissima* Simon. The type species of *Cineta* Simon is *Erigone genistae* Simon (from Corsica), but this name, based on an immature male, must probably be regarded as a nomen dubium. The validity of the name *Cineta* must consequently be in doubt. *Cineta altissima* is certainly not congeneric with either *C. genistae* or *C. gradata* (Simon), the other European species assigned to *Cineta*.

ETYMOLOGY: From the Greek *hypselos*, high, and *kara*, head. Gender neuter.

DIAGNOSIS: The female of the single species must be diagnosed by the epigynum (figs. 447, 448), although this does not appear to have any characteristic features which can be used to define the genus. The male is diagnosed by the embolic division of the palp (fig. 445), the tibial apophysis (figs. 444, 446), and the high elevation of the carapace (fig. 449).

DESCRIPTION: The single known species has total length 1.3–1.45. The carapace is strongly elevated in the male (fig. 449), less so in the female (fig. 450). The legs are short and stout, with tibia 1 l/d (female) 4. Tibial spines

are 1111, but very weak. Metatarsi 1–3 have a trichobothrium; TmI 0.55–0.6. The female palp is clawless. The tracheal system comprises four simple tubes, limited to the abdomen. The epigynum (figs. 447, 451) is of simple construction, with short internal ducts. The tibia of the male palp has a knoblike lateral apophysis, but no dorsal apophysis (figs. 444, 446); the paracymbium and suprategular apophysis are well developed. The embolic division (fig. 445) comprises a simple plate, with two pointed projections anteriorly; the lower of these is the embolus.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Venezuela.

TAXONOMIC POSITION: The single species of the genus has a very erigonine appearance, but the simple tracheal system shows that it is not in fact a member of the Erigoninae. The lateral tibial apophysis, and the embolic division of the male palp, show similarities to those of *Lygarina* and *Laminacauda*. The epigynum is also fairly close to those of *Lygarina*. Provisionally, *Hypselocara* is regarded as close to *Lygarina*, and less closely related to *Laminacauda*.

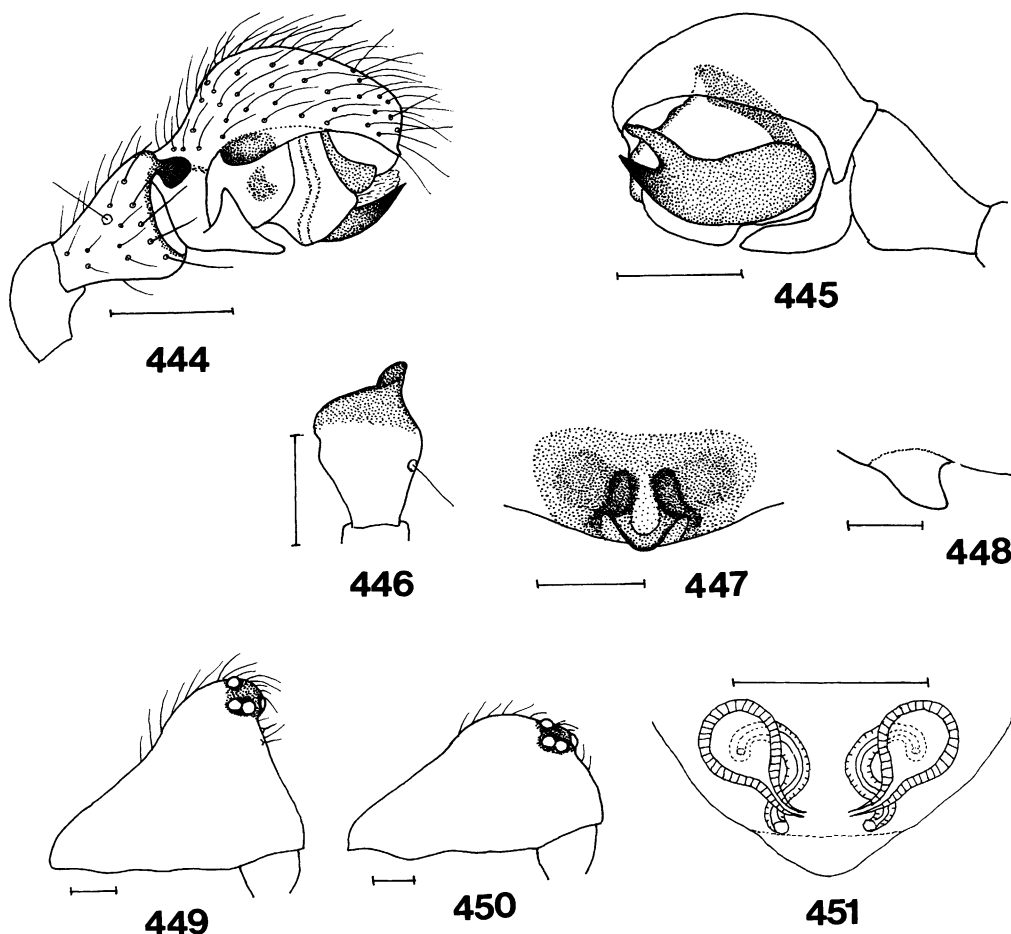
Hypselocara altissimum (Simon), new combination Figures 444–451

Cineta altissima Simon, 1894: 648 (male and female syntypes from Venezuela, in MNHN, examined).—Roewer, 1942: 675.—Bonnet, 1956: 1092.

DIAGNOSIS: The female epigynum (figs. 447, 448) has a short scape, but is not otherwise very distinctive; the raised carapace (fig. 450) is a confirmatory character. The male has a high cephalic elevation (fig. 449) and the palp has a short, dorsolateral apophysis (fig. 446), which viewed ectally is knoblike (fig. 444). The embolic division is simple (fig. 445).

FEMALE: Total length 1.35–1.45. Carapace length 0.6–0.65; brown, with dusky markings and margins; distinctly elevated (fig. 450). Abdomen gray to black. Sternum yellow-brown, suffused with black. Legs yellow to orange-brown; TmI 0.55–0.6. Epigynum (figs. 447, 448, 451).

MALE: Total length 1.3–1.4. Carapace length 0.65. Color and TmI as female. Car-



Figs. 444–451. *Hypselocara altissimum*. 444. Male palp, ectal. 445. Male palp, mesal. 446. Male palpal tibia, dorsal. 447. Epigynum, ventral. 448. Epigynum, lateral. 449. Male carapace, lateral. 450. Female carapace, lateral. 451. Epigynum, internal. Scale lines 0.1 mm.

apace strongly elevated (fig. 449). Palp (figs. 444–446).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Venezuela.

DIECHOMMA, NEW GENUS

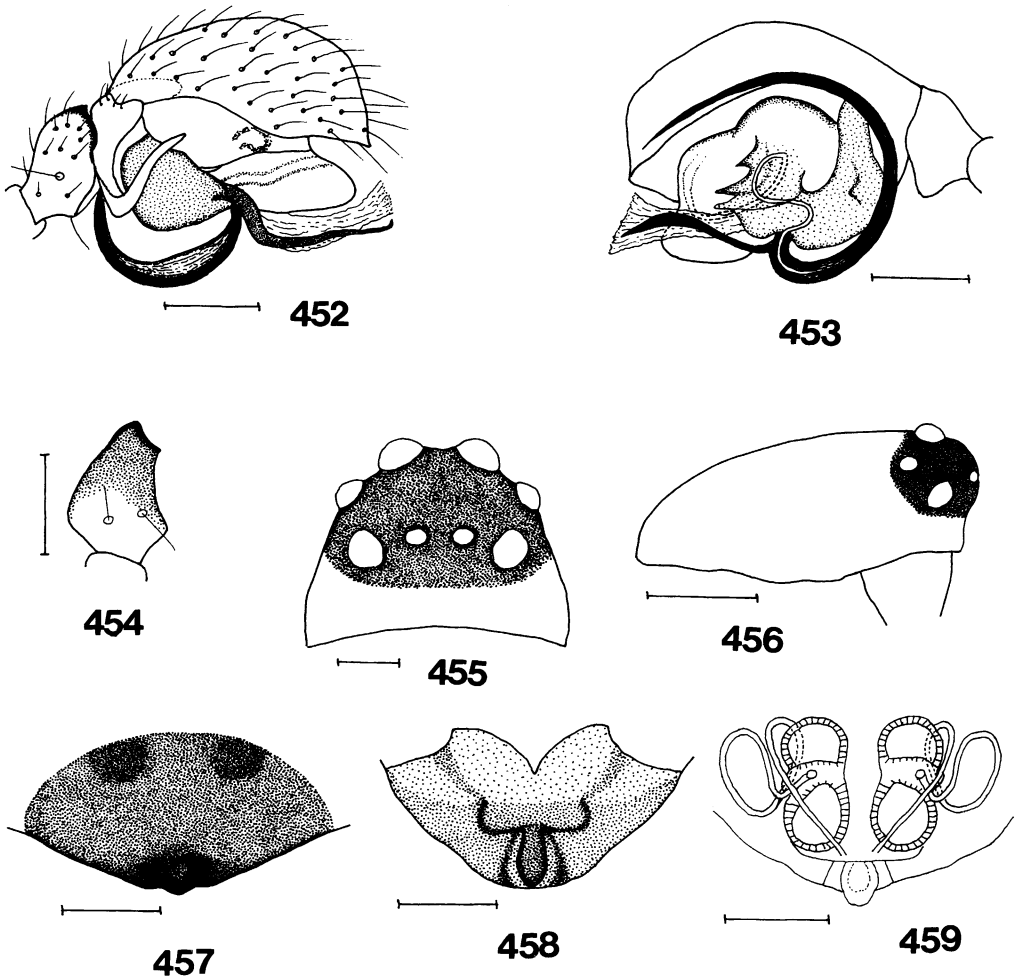
TYPE SPECIES: *Diechomma pretiosum*, new species.

ETYMOLOGY: From the Greek, *diecho*, to stand apart, and *omma*, eye, referring to the spacing of the lateral eyes. Gender neuter.

DIAGNOSIS: Both sexes are diagnosed by the arrangement of the eyes (figs. 455, 456), with the laterals well separated. The female is di-

agnosed by the epigynum (fig. 457), and the male by the palp (figs. 452–454).

DESCRIPTION: The single known species has total length 1.6–1.9. The carapace is unmodified in both sexes. The posterior median and lateral eyes are large; the eye arrangement is reminiscent of *Textrix* Sundevall, with the laterals well separated (figs. 455, 456). The legs are short and stout, with tibia 1 1/d (female) ca. 5. The dorsal tibial spines are 2222 (female), 2211 (male); the femora and metatarsi are spineless. Metatarsi 1–3 have a trichobothrium; TmI 0.5–0.55. The female palp is clawless. The tracheal system comprises four simple tubes, restricted to the abdomen. The epigynum is in the form of a broad scape,



Figs. 452–459. *Diechomma pretiosum*. 452. Male palp, ectal. 453. Male palp, mesal. 454. Male palpal tibia, dorsal. 455. Female eyes, anterior. 456. Female carapace, lateral. 457. Epigynum, ventral. 458. Epigynum, dorsal. 459. Epigynum, internal. Scale lines 0.1 mm, except 456: 0.25 mm.

which has a tiny secondary scape, with socket, arising from the dorsal plate (fig. 458); only the tip of the secondary scape is visible from the ventral side (fig. 457). The spermathecae have two chambers (fig. 459), and the duct runs in a short spiral to the genital openings, which appear to lie on the dorsal side of the principal scape close to the secondary scape. The male palp has no tibial apophysis; there is a well-developed paracymbium (fig. 452). The mesal margin of the tegulum is only weakly sclerotized, and there is no suprategulum. The embolic division comprises a broad radix from which arises the curved embolus and a black, forward-

directed apophysis (fig. 453); the embolic division is attached to the tegulum near the posterior of the organ by a broad, lightly sclerotized junction.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The broad junction between the embolic division and the tegulum, located at the posterior of the male palpal organ, and the complex spermathecae of the female epigynum, are almost certainly primitive characters. No other known linyphiid species has the ocular arrangement of *Diechomma*, with the lateral eyes so well sep-

arated. The presence of a small scape with socket on the dorsal plate of the epigynum indicates a relationship to the Linyphiinae (sensu stricto) and the chirality of the sperm duct (Millidge, 1985: 74) is in agreement with this. The male palp has a similar structure to that of "*Linyphia*" *palmaria* Marples from Samoa (Millidge, in prep.), but in this species the eye configuration is normal for the family. The epigynum of *L. palmaria* is also very different from that of *Diechomma*, and the chirality of the sperm duct indicates a relationship with the Mynogleninae rather than the Linyphiinae. *Diechomma* must for the present be regarded as a relict which has retained several primitive characters of the family.

Diechomma pretiosum, new species

Figures 452–459

TYPES: Male holotype, with two male paratypes, from near Laguna Negra, Paramo de Chisaca, Cundinamarca, Colombia, in wooded area, 3720 m, Sept. 18, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning of great value.

DIAGNOSIS: Both sexes are diagnosed by the arrangement of the eyes (figs. 455, 456). Diagnosis of the female is confirmed by the epigynum (figs. 457–459), which carries a small scape posteriorly (somewhat difficult to see). Diagnosis of the male is confirmed by the palp (figs. 452–454); the embolic division (fig. 453) has a stout curved embolus, and a narrow, pointed, sclerotized apophysis anteriorly.

FEMALE: Total length 1.8–1.9. Carapace length 0.75; brown to dark brown, suffused with black. Eyes (figs. 455, 456). Abdomen glossy black. Sternum brown, suffused with black, to practically black. Legs yellow-brown to brown, suffused to variable extent with black; TmI 0.5–0.55. Epigynum (figs. 457–459).

MALE: Total length 1.6–1.7. Carapace length 0.75–0.8. Color as female. Palp (figs. 452–454).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the types above. Same locality, Sept. 7, 1985 and Sept. 17, 1986 (H. Sturm), 24 females, 10 males paratypes (MCZ). *Es-*

pec: Paramo de Sumapaz, 3600 m, Oct. 4, 1978 (H. Sturm), 1 male paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

EPIWUBANA, NEW GENUS

TYPE SPECIES: *Epiwubana jucunda*, new species.

ETYMOLOGY: From the greek *epi*, near, and *Wubana*, a current generic name. Gender feminine.

DIAGNOSIS: No females are known. The male palp has a large paracymbium (fig. 460), and the embolic division is distinctive (fig. 461). The embolic division is generally similar to those of the genus *Wubana* Chamberlin, which is probably limited to western North America.

DESCRIPTION: The male of the single known species has length 1.8. The carapace is unmodified; the eyes are of moderate size, with posteriors 1 d or slightly less apart. The legs are fairly long, with tibia 1 1/d 7–8. Tibial spines are 2211; femoral and metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.45. The tracheal system is simple, comprising four short, slender tubes limited to the abdomen. The palp has the tibia extended into a long apophysis (fig. 466), and the paracymbium is large (fig. 460). The suprategular apophysis is small and hooked. The embolic division has a small radical part, from which the long embolus runs in a semi-circle to the anterior of the organ (fig. 461). A separate lamellar sclerite is attached to the anterior of the radical part by a lightly sclerotized region; the slender end of the embolus rests on this sclerite, which is darkened anteriorly (fig. 461).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Chile.

TAXONOMIC POSITION: The palpal organ has a basic conformation similar to those of the western North American genus *Wubana* (species from other regions assigned to this genus, e.g., by Roewer, 1942: 710, are probably incorrectly placed). The palpal organ is also similar to those of the southern South American genera *Habreuresis*, new genus and *Microsphalma*, new genus, and *Epiwubana* must be grouped with these genera, all of which have a simple tracheal system. *Wu-*

bana, and probably *Epiwubana*, appear to be related to the Palearctic genus *Allomengea* Strand (van Helsdingen, 1974).

***Epiwubana jucunda*, new species**

Figures 460, 461, 466

TYPE: Male holotype from Las Palmas de Ocoa, Quillota, Valparaiso, Chile, trap in burned area, June 22, 1984 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning delightful.

DIAGNOSIS: The male palp has a long tibial apophysis (fig. 466), and a complex paracymbium (fig. 460); the embolic division (fig. 461) has a long embolus, curved into a semicircle. The female is not known.

MALE: Total length 1.8. Carapace length 0.9; orange-brown, with blackish margins. Abdomen glossy black, with faint paler markings dorsally. Sternum yellow, suffused with black. Legs orange-yellow; TmI ca. 0.45. Palp (figs. 460, 461, 466).

MATERIAL EXAMINED: CHILE: *Valparaiso*: the holotype. Same locality, July 19, 1985 (R. Calderón), 2 male paratypes (AMNH).

DISTRIBUTION: Known only from Chile.

HABREURESIS, NEW GENUS

TYPE SPECIES: *Habreuresis falcata*, new species.

ETYMOLOGY: From the Greek *habros*, elegant, and *euresis*, a discovery. Gender feminine.

DIAGNOSIS: No females are known. The males are diagnosed by the palp, in particular by the form of the embolic division, which has a long, curved embolus arising from a small radical part, with a separate sclerite attached to the anterior of the radical part (figs. 463, 465).

DESCRIPTION: The male carapace is unmodified, and the eyes are of moderate size. The chelicerae have a pointed boss anteriorly (weak in type species), and there are two pointed bosses on the maxillae. The abdomen is black, with white markings dorsally. The legs are moderately long, with tibia 1 1/d ca. 8. The tibiae have dorsal spines 2211; femoral and metatarsal spines are absent. Metatarsi 1-3 have a trichobothrium; TmI

ca. 0.3. The tracheal system is simple, comprising four short tubes restricted to the abdomen. The palpal tibia is extended into a long apophysis (figs. 467, 468); the paracymbium is well developed. The suprategular apophysis is small, hooked, or pointed. The embolic division comprises a small radical part, from which arises a long embolus which runs in a semicircle to the anterior of the organ (figs. 463, 465). Anterior to the radical part is a large sclerite, which is attached by a lightly sclerotized junction to both the radical part and the tegulum (figs. 463, 465).

INCLUDED SPECIES: *Habreuresis falcata*, new species, and *Habreuresis recta*, new species.

DISTRIBUTION: Known only from Chile.

TAXONOMIC POSITION: The palp has the same basic form as those of *Wubana*, *Epiwubana*, and *Microsphalma*; *Habreuresis* probably falls into this group of genera.

***Habreuresis falcata*, new species**

Figures 462, 463, 468

TYPE: Male holotype from Las Palmas de Ocoa, Parque Nacional La Campana, Valparaiso, Chile, trap on burned area, June 22, 1984 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning sickle-shaped, referring to the palpal tibial apophysis.

DIAGNOSIS: The male is diagnosed by the palp, particularly the long, curved, tibial apophysis (fig. 468), and the form of the embolic division (fig. 463). The female is unknown.

MALE: Total length 1.75. Carapace length 0.7; yellow-brown, with dusky markings and margins. Abdomen black, with dorsally two longitudinal rows of white blotches, coalescing posteriorly, and with ventrally a white spot. Sternum orange, suffused with black. Legs orange-brown; TmI ca. 0.3. Palp (figs. 462, 463, 468).

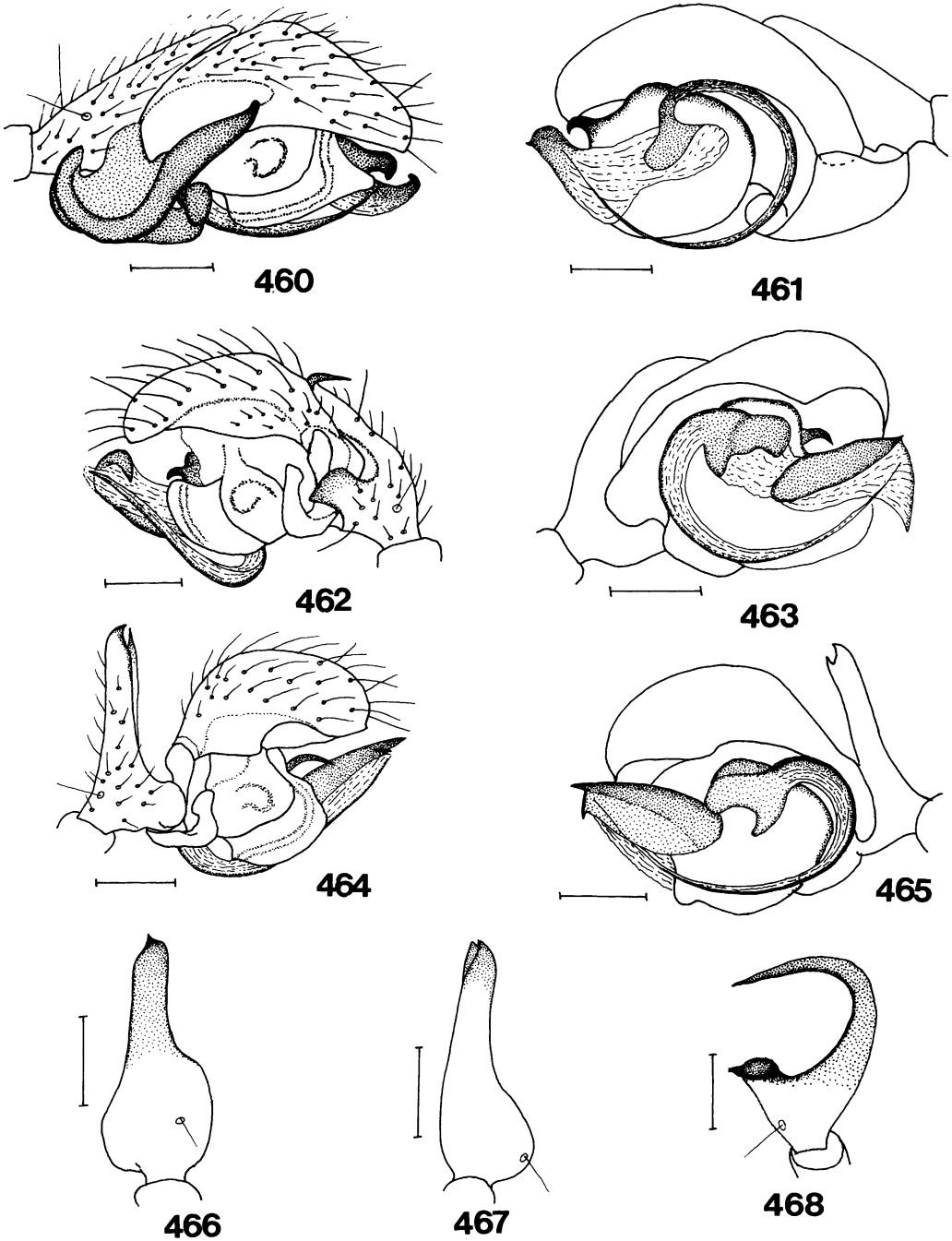
MATERIAL EXAMINED: CHILE: *Valparaiso*: the holotype. Same locality, July 9 and Sept. 27, 1985 (R. Calderón), 3 male paratypes.

DISTRIBUTION: Known only from Chile.

***Habreuresis recta*, new species**

Figures 464, 465, 467

TYPES: Male holotype, with two male paratypes, from Las Palmas de Ocoa, Parque Na-



Figs. 460–468. 460, 461, 466. *Epiwubana jucunda*. 462, 463, 468. *Hareuresis falcata*. 464, 465, 467. *H. recta*. 460, 464. Male palp, ectal. 462. Male palp, left, ectal. 461, 465. Male palp, mesal. 463. Male palp, left, mesal. 466, 467. Male palpal tibia, dorsal. 468. Male palpal tibia, left, dorsal. Scale lines 0.1 mm.

cional La Campana, Valparaiso, Chile, pitfall on unburned site, July 19, 1985 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning straight, referring to the palpal tibial apophysis.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the long tibial apophysis, which is slightly bifid distally (figs. 464, 467), and by the embolic division (fig. 465), which is close to that of *H. falcata* (fig. 463), but with small differences in the anterior sclerite. The female is unknown.

MALE: Total length 1.45. Carapace length 0.65; pale brown, with blackish markings and margins. Abdomen black, dorsally with two longitudinal rows of white spots, coalescing posteriorly. Sternum brown, suffused with black. Legs brown, most segments missing. Palp (figs. 464, 465, 467).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Chile. This species was taken on unburned sites in the same area where *H. falcata* was taken on burned sites.

ADELONETRIA, NEW GENUS

TYPE SPECIES: *Adelonetria dubiosa*, new species.

ETYMOLOGY: From the Greek *adelos*, obscure, and *netria*, the female agent of *nein*, to spin. Gender feminine.

DIAGNOSIS: The female epigynum (figs. 469, 470) is fairly distinctive. The male is not known.

DESCRIPTION: The single species has total length 1.7. The carapace is unmodified; the eyes are relatively small, with posteriors more than 1 d apart. The legs, some of which are missing in the single specimen, are long, with tibia 2 1/d ca. 10; spines missing. Metatarsus 4 without a trichobothrium; TmII ca. 0.4. The epigynum is a scape, narrowed distally (fig. 469); the openings appear to lie at the posterior of the scape, on the dorsal side, and the internal duct system (fig. 470) is relatively simple.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Chile.

TAXONOMIC POSITION: The epigynum bears

some similarities to those of *Wubana* and *Microspalma*, and it is possible that the type female may prove to belong in *Epiwubana* or *Habreuresis*, females of which are not known.

Adelonetria dubiosa, new species

Figures 469, 470

TYPE: Female holotype from hills south of Muicoipue, Osorno, Chile, in berlese sample from disturbed forest, 100 m, Jan. 30, 1985 (N. I. Platnick and O. F. Francke); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dubious.

DIAGNOSIS: The female epigynum (fig. 469) has the scape narrowed posteriorly to a rounded point which carries a small socket. Confirmation is given by the internal epigynal structure (fig. 470). The male is not known.

FEMALE: Total length 1.7. Carapace length 0.9; yellow. Abdomen black, with white patch and weak chevrons dorsally, and weak whitish markings ventrally. Sternum yellow, with gray margins. Legs yellow-brown, with tibiae and metatarsi weakly suffused with brown; TmII ca. 0.4. Epigynum (figs. 469, 470).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Chile.

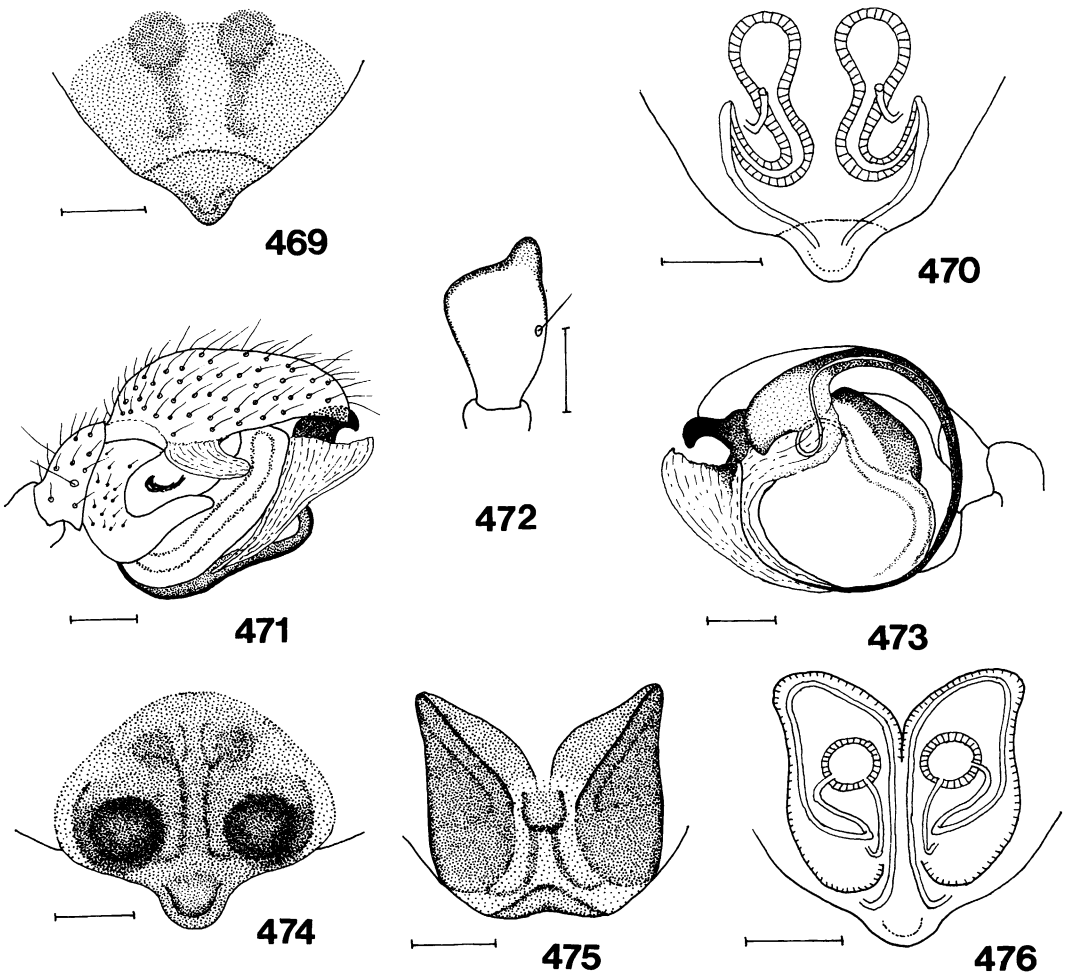
MICROSPHALMA, NEW GENUS

TYPE SPECIES: *Smermisia barbata* Tullgren.

ETYMOLOGY: From the Greek *mikros*, small, and *sphalma*, a mistake. Gender neuter.

DIAGNOSIS: The female is diagnosed by the epigynum (figs. 474, 475); the heavy sclerotization of the internal structure is distinctive. The male is diagnosed by the palp (figs. 471–473), particularly the embolic division and the thumblike ectal projection from the cymbium.

DESCRIPTION: The single known species has total length 1.8–2.2. The carapace is unmodified; the eyes are moderately large, with posteriors 1 d or less apart. The legs are fairly short and stout, with tibia 1 1/d 5–6 (female). Dorsal tibial spines are 2222, weak in the male, legs 1 of the male have numerous short, stout spines ventrally on femur and tibia, and to a lesser extent on metatarsus. Metatarsi 1–



Figs. 469–476. 469, 470. *Adelonetria dubiosa*. 471–476. *Microsphalma barbatum*. 469, 474. Epigynum, ventral. 470, 476. Epigynum, internal. 471. Male palp, ectal. 472. Male palpal tibia, dorsal. 473. Male palp, mesoventral. 475. Epigynum, dorsal. Scale lines 0.1 mm.

3 have a trichobothrium; TmI 0.45–0.5. Female palp clawless. The tracheal system comprises four simple tubes, limited to the abdomen. The epigynum (figs. 474, 475) has a small tongue distally, carrying a shallow pit; internally the duct runs (fig. 476) from the spermatheca, via a heavily sclerotized folded lamellar structure, to open into the shallow pit. The male palpal tibia has a short apophysis distally (fig. 472). The paracymbium is large but simple, and carries numerous short bristles; there is a lightly sclerotized thumb-like projection (integral paracymbium: Milledge 1988a) from the ectal margin of the cymbium (fig. 471), rather as in *Neomaso*.

The suprategular apophysis is hooked. The embolic division comprises a small radical section, from which the long embolus follows a circular path around the palpal organ (fig. 473). A translucent sclerite is attached to the radical part via a lightly sclerotized region; the long tail of this sclerite lies along the anterior margin of the tegulum, and the distal end of the embolus rests on this sclerite. The duct enters the embolic division via the lightly sclerotized region.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Southern Chile and southern Argentina.

TAXONOMIC POSITION: The form of the pal-

pal organ indicates a relationship with the North American genus *Wubana*, the palearctic genus *Allomengea*, and the South American genera *Epiwubana* and *Habreuresis*. The epigynum is rather similar to those of *Wubana* and *Allomengea*; the internal duct arrangement is generally similar to that present in these genera, but the strong sclerotization of the infrastructure results in a very different appearance.

Microsphalma barbatum (Tullgren),
new combination
Figures 471–476

Smermisia barbata Tullgren, 1901: 208 (male holotype from Sierra del Toro, Patagonia, Argentina, Mar. 19, 1893, in NHRM, examined).—Roewer, 1942: 536.—Bonnet, 1958: 4089.

Smermisia tullgreni Simon, 1903: 311 (female holotype from Tierra del Fuego, Argentina, in MNHN, examined).—Roewer, 1942: 536.—Bonnet, 1958: 4089. NEW SYNONYMY.

This species is not congeneric with *Smermisia caracasana* Simon, the type species of *Smermisia*. The description which follows is based on recent material, in which both sexes were taken together.

DIAGNOSIS: The female epigynum (fig. 474) has a short tongue posteriorly, carrying a socket; the dorsal aspect (fig. 475) is very characteristic. The male has numerous short, stout spines carried ventrally on femora 1 and tibiae 1; the cymbium (fig. 471) of the palp has a lightly sclerotized, thumblike projection ectally, and the embolic division (fig. 473) has a long, curved embolus and a long, translucent sclerite arising from the anterior of the radical part.

FEMALE: Total length 1.8–2.2. Carapace length 0.9–0.95; brown, with dusky markings and margins; ocular area black. Abdomen gray to black. Sternum brown, suffused with black. Legs yellow-brown to brown; TmI 0.45–0.5. Epigynum (figs. 474–476).

MALE: Total length 2.1. Carapace length 1.0. Color as female. Palp (figs. 471–473).

MATERIAL EXAMINED: ARGENTINA: *Patagonia*: the holotype. *Tierra del Fuego*: Ushiaia, Feb. 1961 (B. Malkin), 1 male (AMNH). CHILE. *Magallanes*: Lag. Azul, Ultima Esperanza, beech groves in grassy steppe, 300 m, Jan. 13, 1985 (S. and J. Peck), 4 females, 1 male (AMNH): Cueva del Milo-

don, ex humus, Apr. 19, 1962 (T. Cekalovic), 1 male (AMNH).

DISTRIBUTION: Southern Argentina and southern Chile.

SCOLECURA, NEW GENUS

TYPE SPECIES: *Scolecurea cognata*, new species.

ETYMOLOGY: From the Greek *skolos*, *skolekos*, a worm, and *oura*, a tail, referring to the tail of the embolic division. Gender feminine.

DIAGNOSIS: Females are diagnosed by the epigynum (figs. 483, 491, 493), which is fairly easily recognizable. The males are diagnosed by the palp (figs. 477, 486), the form of which readily distinguishes from other genera.

DESCRIPTION: The species have total length 1.8–2.55. The carapace is unmodified in both sexes. The eyes are moderately large, with posteriors 0.5 d or slightly more apart. The legs are fairly short and stout, with tibia 1 1/d (female) 6–7. Tibial spines are 2222; there are no metatarsal spines. Metatarsi 1–3 have a trichobothrium; TmI 0.3–0.35. The female palp is clawless. The tracheal system comprises four moderately stout tubes, long but restricted to the abdomen. The epigynum, which is very similar in all the species (figs. 483, 491, 493), is a lightly sclerotized scape, split into two short branches posteriorly; the scape may lie more or less flat, or erect. Internally the duct runs anteriorly from the spermathecae and then posteriorly to the openings (figs. 485, 490, 495), but the lack of pigmentation makes it impossible to trace the exact route of the duct. The genital openings appear to lie in the posterior branches of the scape. The male palpal tibia is produced anteriorly into short, stout apophyses (figs. 480, 489). The paracymbium is well developed, and the suprategular apophysis is large and complex (figs. 477, 479). The embolic division (figs. 479, 481) is rather complex in form, with a twisted tail; the embolus is long and whiplike (fig. 479), but is largely concealed in the unexpanded palp. The three species described are all very similar.

INCLUDED SPECIES: *Scolecurea cognata*, new species, *S. propinqua*, new species, and *S. parilis*, new species.

DISTRIBUTION: Colombia, Brazil, and Argentina.

TAXONOMIC POSITION: The tracheal form and the tibial spines indicate that this genus is not erigonine. The epigyna show some similarity to those of the North American genus *Wubana*, but the palpal form is quite different from that genus. At the present time, the taxonomic position of this genus in the Linyphiidae is obscure.

Scolecurea cognata, new species

Figures 477–485

TYPES: Male holotype, with 19 female and 13 male paratypes, from San Sebastian de Rabago, Sierra Nevada de Santa Marta, Magdalena, Colombia, beaten from dry banana foliage, and in ground litter, 2000 m, Apr. 1–14, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The female epigynum (fig. 483) is very similar to those of *S. propinqua* (fig. 491) and *S. parilis* (fig. 493), but the spermathecae are relatively larger and more circular (fig. 484; cf. figs. 492, 494). The lateral, knoblike tibial apophysis (fig. 480) of the male palp is rather more slender than in *S. propinqua* (fig. 489), and the suprategular apophysis (fig. 481) shows small differences from that of *S. propinqua*.

FEMALE: Total length 1.8–1.9. Carapace length 0.8; orange-brown, suffused to variable degree with dark brown or black. Abdomen gray to black, with dorsally two white patches (sometimes absent) and a small white spot near spinnerets. Sternum orange, suffused with black, to almost black. Legs orange-brown to orange; TmI 0.35. Epigynum (figs. 482–485).

MALE: Total length 1.55–1.65. Carapace length 0.7–0.75. Color as female. Palp (figs. 477–481).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Scolecurea propinqua, new species

Figures 486–492

TYPES: Male holotype, with one female paratype, from Termas de Reyes, Jujuy, Argentina, Dec. 27, 1971 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning closely related.

DIAGNOSIS: The female epigynum (fig. 491) is very similar to those of *S. cognata* (fig. 483) and *S. parilis* (fig. 493); the spermathecae (fig. 492) are smaller than those of *S. cognata* (fig. 484), and differently shaped from those of *S. parilis* (fig. 494). The male palp (figs. 486–489) is close to that of *S. cognata*, but the lateral tibial apophysis is somewhat stouter (fig. 489; cf. fig. 480), and there are small differences in the suprategular apophysis. The location of capture must also be taken into account.

FEMALE: Total length 2.0–2.5. Carapace length 0.85–1.0; orange-brown to brown, with gray markings and margins. Abdomen gray to black, with faint paler markings dorsally, and a white spot anterior to spinnerets. Sternum yellow to orange, suffused with black. Legs pale orange to orange; TmI 0.3. Epigynum (figs. 490–492).

MALE: Total length 1.8–2.1. Carapace length 0.85. Color as female except carapace orange, with narrow black margins. Abdomen dorsally white, ventrally black with large white patch and white lung covers. Palp (figs. 486–489).

MATERIAL EXAMINED: ARGENTINA: *Cordoba*: Cerro Colorado, Oct. 14, 1961 (O. de'Ferrariis), 1 female paratype (AMNH). *Jujuy*: the types above. *Tucumán*: Villa Nougues, 1350 m, Dec. 11, 1971 (L. Herman), 1 male paratype (AMNH).

DISTRIBUTION: Known only from Argentina.

Scolecurea parilis, new species

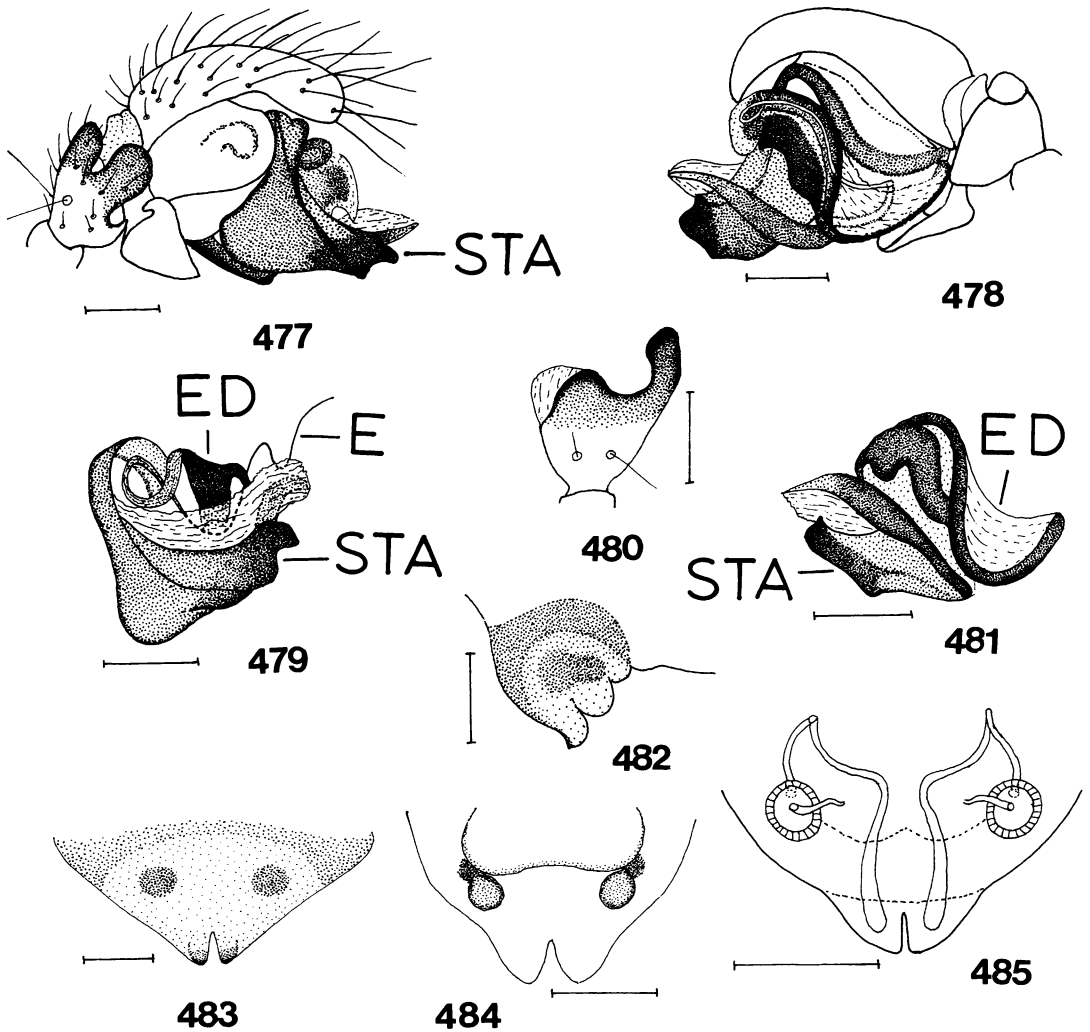
Figures 493–495

TYPE: Female holotype from Forest Reservation, São Paulo, Brazil, Jan. 16, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning similar, like.

DIAGNOSIS: The female epigynum (fig. 493) is similar to those of *S. cognata* (fig. 483) and *S. propinqua* (fig. 491), but the spermathecae are smaller than in *S. cognata* and differently shaped than in *S. propinqua* (fig. 494; cf. figs. 484, 492). The male is not known. *S. parilis* may prove to be identical with *S. propinqua*.

FEMALE: Total length 2.0–2.15. Carapace



Figs. 477–485. *Scolecurea cognata*. 477. Male palp, ectal. 478. Male palp, mesal. 479. Palpal bulb, expanded, ectal. 480. Male palpal tibia, dorsal. 481. Embolic division and suprategular apophysis, mesal. 482. Epigynum, lateral. 483. Epigynum, ventral. 484. Epigynum, dorsal. 485. Epigynum, internal. Abbreviations: E, embolus; ED, embolic division; STA, suprategular apophysis. Scale lines 0.1 mm.

length 0.95; orange-brown, darker anteriorly and on margins. Abdomen sometimes whitish gray, with black chevron dorsally and black around spinnerets; sometimes almost black, with white spot dorsally anterior to spinnerets. Sternum orange, suffused with gray or black. Legs orange-brown; TmI 0.35. Epigynum (figs. 493–495).

MATERIAL EXAMINED: BRAZIL: *São Paulo*: the holotype. *Rio de Janeiro*: Hotel Simon, Itatiaia National Park, 1200–1400 m, Apr.

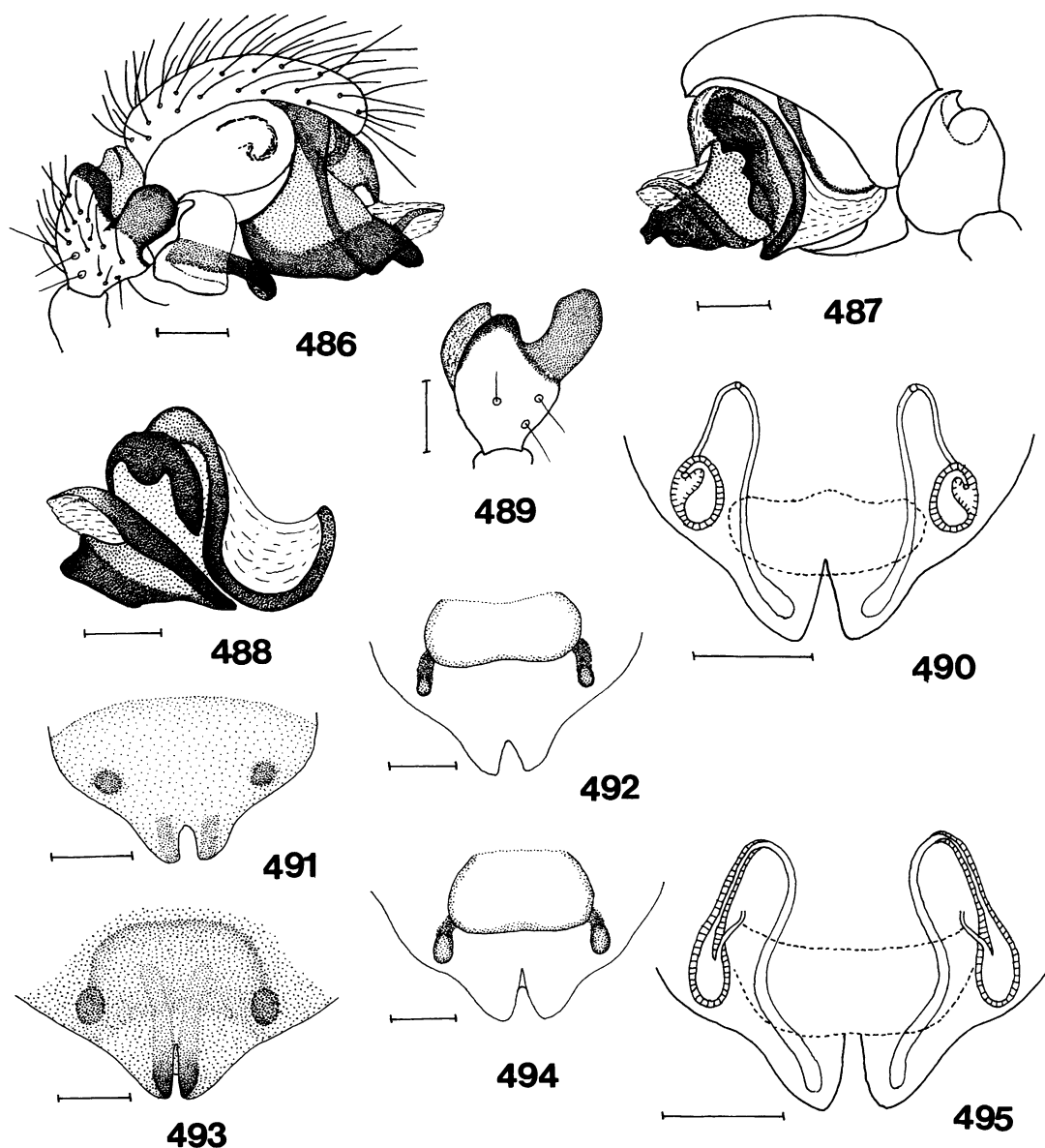
16, 1960 (B. Malkin), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Brazil.

BARYCARA, NEW GENUS

TYPE SPECIES: *Barycara comatum*, new species.

ETYMOLOGY: From the Greek *barys*, heavy, and *kara*, head, referring to the form of the male carapace. Gender neuter.



Figs. 486–495. 486–492. *Scolecurea propinqua*. 493–495. *S. parilis*. 486. Male palp, ectal. 487. Male palp, mesal. 488. Embolic division and suprategular apophysis, mesal. 489. Male palpal tibia, dorsal. 490, 495. Epigynum, internal. 491, 493. Epigynum, ventral. 492, 494. Epigynum, dorsal. Scale lines 0.1 mm.

DIAGNOSIS: Females are not known. The male is diagnosed by the palp (figs. 496–498), and the form of the carapace (fig. 499).

DESCRIPTION: The single known male has total length 2.5. The carapace is raised to give a broad, almost flat, cephalic area (fig. 499); shallow sulci run back from near the posterior

median eyes. The sulci, and the area between the sulci, carry numerous forward-directed, curved bristles. The sulci do not appear to have openings leading into glands. The eyes (male) are relatively small, with the posterior medians ca. 1 d apart and 2 d from the laterals. The chelicerae have a strong pointed

boss anteriorly; the maxillae also carry a pointed boss. The legs are moderately stout, with tibia 1 l/d 7. The dorsal tibial spines are 2222; femoral and metatarsal spines are absent. Metatarsi 1–4 have a trichobothrium; TmI 0.55. The tracheal form is not known. The male palpal patella is long, and the tibia carries distally two pointed apophyses (fig. 498). The paracymbium is moderately large, and there is a well-developed suprategular apophysis. The embolic division has a simple radical part, from which runs anteriorly a long, pointed embolus (fig. 497); a stout, curved, pointed apophysis arises from the ventral side of the radical part.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The palp shows some similarity to those of the palaearctic genera *Drepanotylus* Holm and *Hilaira* O.P.-Cambr. With no knowledge of the female sex, or of the tracheal form, it is not at present possible, however, to draw any conclusions on the taxonomic position of this genus.

Barycara comatum, new species

Figures 496–499

TYPE: Male holotype from Paramo de La Rusia, Boyacá, Colombia, 3600 m, Sept. 26–Oct. 16, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning hairy.

DIAGNOSIS: The male carapace (fig. 499) is raised anteriorly and bears numerous hairs and a sulcus on either side. The tibia (figs. 498, 496) of the palp has two pointed apophyses distally, and the simple embolic division has ventrally a curved, pointed, sclerotized apophysis (fig. 497). The female is not known.

MALE: Total length 2.5. Carapace length 1.45; deep brown, with cephalic area yellow (fig. 499). Abdomen black, with gray chevrons dorsally. Sternum deep brown. Legs brown; TmI 0.55. Palp (figs. 496–498).

MATERIAL EXAMINED: Only the holotype.

DESCRIPTION: Known only from Colombia.

CHAETOPHYMA, NEW GENUS

TYPE SPECIES: *Neriene coronata* Simon.

ETYMOLOGY: From the Greek *chaite*, long

hair, mane, and *phyma*, a tumor, referring to the male carapace form. Gender neuter.

DIAGNOSIS: Females are not known. The male is diagnosed by the palp (figs. 500–502), and by the bristly elevation on the carapace (fig. 503).

DESCRIPTION: The unique male has total length 2.0. The carapace (male) is elevated behind the eyes into a shallow lobe which carries numerous curved bristles on the posterior slope (fig. 503). The legs are moderately long; tibial spines are 1111, and there are no femoral or metatarsal spines. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.5. The tracheal form is not known. The male palpal tibia has short apophyses (figs. 500, 502). The paracymbium is well developed, and the suprategular apophysis is large. The embolic division comprises a large, complex plate with a narrow tail; the slender embolus arises from near the posterior of the plate, on the inner side, and curves round to the anterior of the organ (fig. 501).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Venezuela.

TAXONOMIC POSITION: The single species was previously placed in *Oedothorax* Bertkau, but the form of the palpal organ shows that this was incorrect. The taxonomic position of *Chaetophyma* in the Linyphiidae is at present obscure, and an assessment must await the capture of more specimens of both sexes.

Chaetophyma coronatum (Simon),

new combination

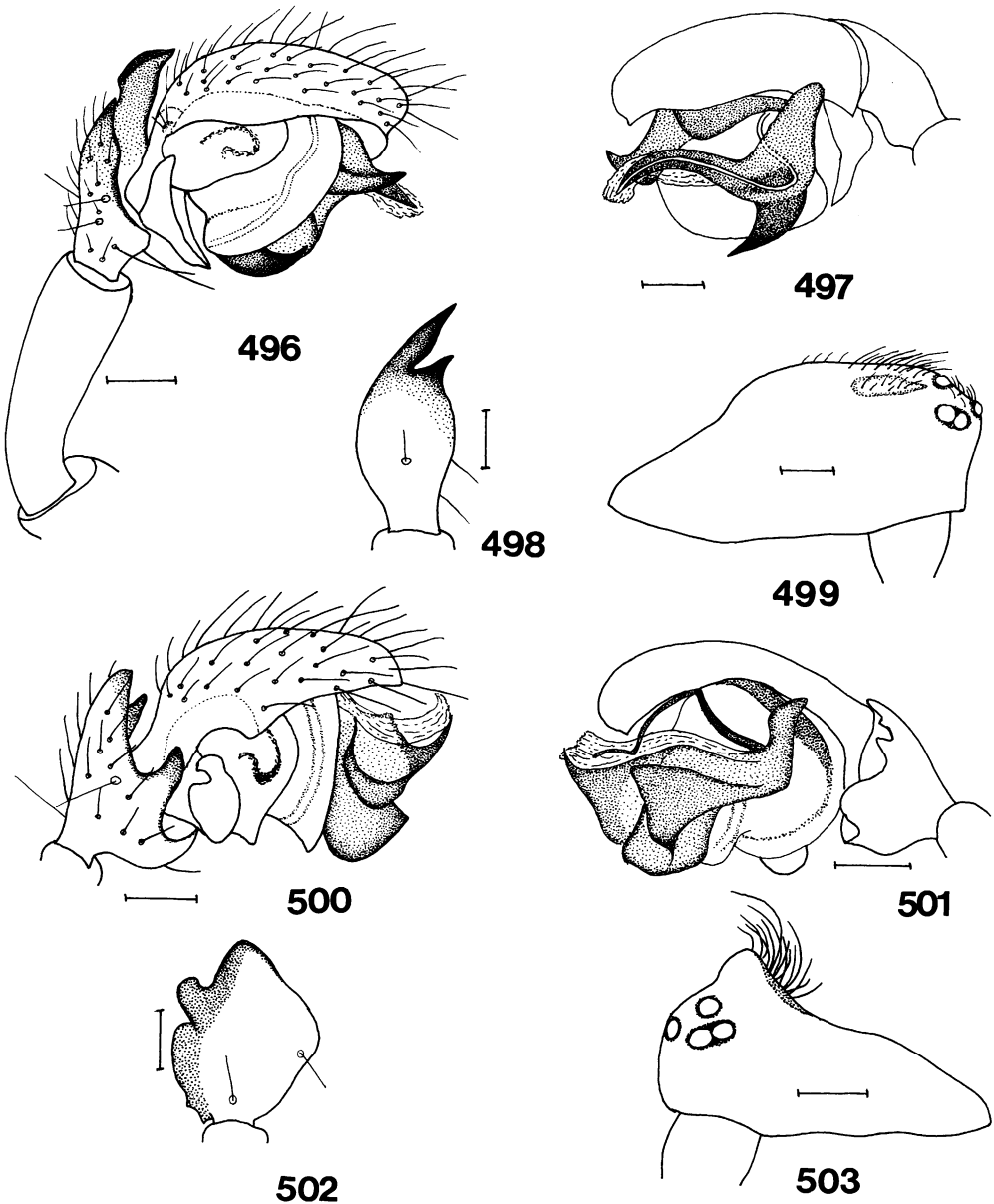
Figures 500–503

Neriene coronata Simon, 1894: 633 (male holotype, from Venezuela, in MNHN, examined).

Oedothorax coronatus: Roewer, 1942: 644.—Bonnet, 1958: 3144.

DIAGNOSIS: The female is not known. The male is diagnosed by the carapace lobe (fig. 503), which carries stout, curved bristles on the posterior slope, and by the palp; the embolic division is a complex plate with a narrow tail, with a fairly long, slender embolus (fig. 501).

MALE: Total length 2.0. Carapace length 0.8. The colors are somewhat faded. Carapace yellow, elevated behind eyes into a lobe



Figs. 496–503. 496–499. *Barycara comatum*. 500–503. *Chaetophyma coronatum*. 496, 500. Male palp, ectal. 497, 501. Male palp, mesal. 498, 502. Male palpal tibia, dorsal. 499, 503. Male carapace, lateral. Scale lines 0.1 mm, except 499, 503: 0.2 mm.

with bristles (fig. 503). Abdomen brown, with whitish blotches dorsally and ventrally. Sternum yellow, suffused with brown. Legs pale yellow; TmI 0.5. Palp (figs. 500–502).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

ANODORATION, NEW GENUS

TYPE SPECIES: *Anodoration claviferum*, new species.

ETYMOLOGY: From the Greek *ano*, upward, and *doration*, a short spear, referring to the long, pointed tibial apophysis. Gender neuter.

DIAGNOSIS: The female is diagnosed by the epigynum (figs. 507–509), which is a long scape, bearing two short projections distally. The male is diagnosed by the palp (figs. 504–506), particularly by the form of the embolic division.

DESCRIPTION: The single known species has total length 1.15–1.25. The carapace is unmodified; the eyes are large, with posteriors ca. 0.5 d apart. The legs are short and stout, with tibia I 1/d 4. The dorsal tibial spines are 1111; the femora and metatarsi are spineless. Metatarsi 1–3 have a trichobothrium; TmI 0.4. The female palp is clawless. The tracheal system comprises four simple tubes restricted to the abdomen. The epigynum is a long scape, narrowed posteriorly, with two short tubelike appendages distally (figs. 507, 508). The internal duct system is simple (fig. 509); the genital openings lie close to the posterior of the scape, on or near the two short appendages. The male palpal tibia has a short dorsal apophysis and a long pointed apophysis on the mesal side (figs. 504, 506). The paracymbium is relatively small; there appears to be no suprategular apophysis. The embolic division is simple, comprising a short radical section, from which runs anteriorly a long pointed section, the embolus (fig. 505); a large embolic membrane arises from the junction of the embolic division with the tegulum.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Brazil.

TAXONOMIC POSITION: The embolic division is of an unusual form, and the position of *Anodoration* in the Linyphiidae must at present be regarded as uncertain.

Anodoration claviferum, new species

Figures 504–509

TYPES: Male holotype, with four female paratypes, from Santa Teresa, Esperito Santo, Brazil, Jan. 26, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning carrying a spike, referring to the palpal organ.

DIAGNOSIS: The female epigynum (figs. 507, 508) is a long scape, broad anteriorly, narrow posteriorly, with two narrow appendages distally. The tibia of the male palp has a long, straight, pointed apophysis mesally (figs. 504–

506), and the embolic division is long and pointed anteriorly (fig. 505).

FEMALE: Total length 1.15–1.25. Carapace length 0.55–0.6; pale brown to orange-brown. Abdomen gray to black. Sternum orange, suffused to variable degree with black. Legs orange-brown, with tibiae, metatarsi, and tarsi suffused to variable extent with dark brown; TmI 0.4. Epigynum (figs. 507–509).

MALE: Total length 1.25. Carapace length 0.6. Color, etc. as female. Palp (figs. 504–506).

MATERIAL EXAMINED: BRAZIL. *Esperito Santo*: the types above. *São Paulo*: Forest Reservation, Jan. 16, 1959 (A. M. Nadler), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Brazil.

NOTIOTHAUMA, NEW GENUS

TYPE SPECIES: *Gongylidiellum aurantiacum* Simon.

ETYMOLOGY: From the Greek *notios*, southern, and *thauma*, a surprise. Gender neuter.

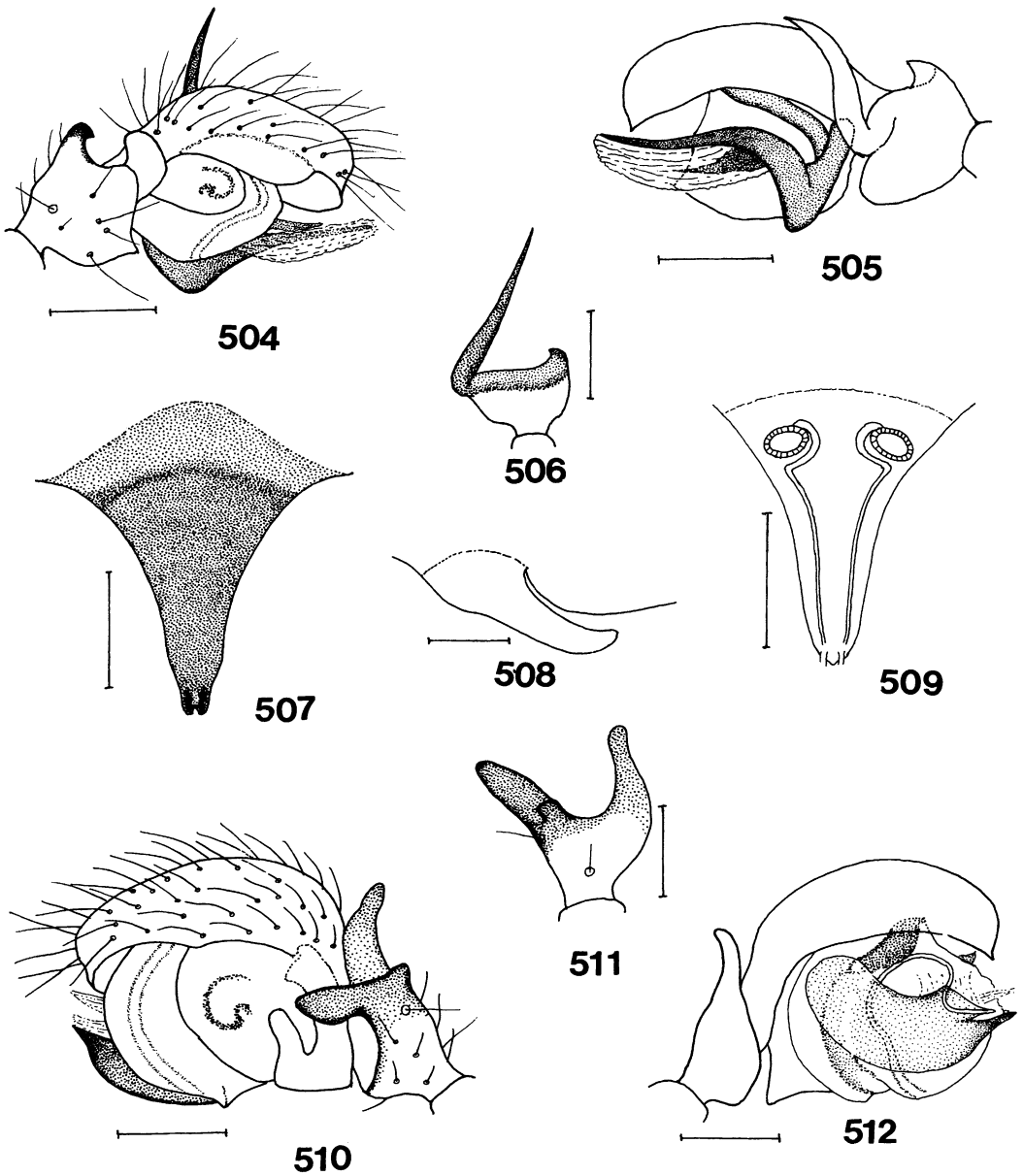
DIAGNOSIS: Females are not known. The male is diagnosed by the palp (figs. 510–512), which is described below. The palpal organ is somewhat similar in form to that of *Gongylidiellum latebricola* (O.P.-Cambr.), the type species of *Gongylidiellum* Simon, but there are significant differences in the embolic division and the suprategular apophysis.

DESCRIPTION: The single known male has total length 1.65. The carapace is unmodified; the eyes are of moderate size. The legs are relatively short and stout; dorsal tibial spines are 2211, metatarsi and femora are spineless. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.55. The tracheal form is not known. The palpal tibia has two stout apophyses (figs. 510, 511). The paracymbium is well developed, but the suprategular apophysis is tiny. The embolic division is a relatively simple plate, rounded posteriorly, and pointed anteriorly (fig. 512); the embolus is a short stub anteriorly.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Patagonia, Argentina.

TAXONOMIC POSITION: Uncertain; more material, including the female, is required before a worthwhile assessment can be made.



Figs. 504–512. 504–509. *Anodoration claviferum*. 510–512. *Notiothauma aurantiacum*. 504. Male palp, ectal. 505. Male palp, mesal. 506, 511. Male palpal tibia, dorsal. 507. Epigynum, ventral. 508. Epigynum, lateral. 509. Epigynum, internal. 510. Male palp, left, ectal. 512. Male palp, left, mesal. Scale lines 0.1 mm.

Notiothauma aurantiacum (Simon),
new combination
Figures 510–512

Gongyliellum aurantiacum Simon, 1905: 9 (male holotype from Santa Cruz, Patagonia; in MNHN, examined).—Roewer, 1942: 636.—Bonnet, 1957: 2041.

DIAGNOSIS: The tibia of the male palp has a fairly long, slightly curved dorsal apophysis, and a thumblike lateral apophysis (figs. 511, 510); the embolic division (fig. 512) is a simple plate, rounded posteriorly, pointed anteriorly. The female is not known.

MALE: Total length 1.65. Carapace length

0.7. Colors somewhat faded. Carapace pale yellow, with median black line and black margins. Abdomen black. Sternum pale yellow. Legs pale yellow; TmI ca. 0.55. Palp (figs. 510–512).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Patagonia, Argentina.

ONYCHEMBOLUS MILLIDGE

Onychembolus subalpinus Millidge

Figures 513–515

Onychembolus subalpinus Millidge, 1985: 61 (male only).

The female described here was taken in close proximity to the male described in 1985, and is provisionally regarded as the same species.

DIAGNOSIS: The female epigynum (figs. 513, 515) is dark in color and has a tiny scape, with socket, posteriorly; confirmation is given by the internal structure (fig. 514), which is fairly complex.

FAEMALE: Total length 2.1. Carapace length 0.9–1.0; pale brown, with dusky markings and blackish margins. Abdomen black, with faint traces of pale chevrons dorsally. Sternum pale brown, heavily suffused with black. Legs dusky brown; tibial spines 2222. Metatarsi 1–3 with trichobothrium; TmI 0.35–0.4. Epigynum (figs. 513–515) has a tiny scape posteriorly with socket, and the internal duct system is moderately complex.

MATERIAL EXAMINED: CHILE: *Llanquihue*: Lago Chapo, 13.5 km east Correntoso, valdivian rainforest, 310 m window trap, Dec. 16–27, 1982 (A. Newton and M. Thayer), 1 female (AMNH). *Osorno*: Volcán Casa Blanca, Parque Nacional Puyehue, pan traps near snowfield, 1370 m, Dec. 20–25, 1982 (close to type locality of male) (A. Newton and M. Thayer), 3 females (AMNH).

DISTRIBUTION: Known only from Chile.

Onychembolus anceps, new species

Figures 516–518

TYPE: Male holotype from 30 km north of Puyuhuapi, Aisén, Chile, from sifted moss on logs, 100 m, Jan. 29, 1985 (S. and J. Peck); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning uncertain.

DIAGNOSIS: This species is placed provisionally in *Onychembolus*, on the basis of the form of the palpal organ. The tibia of the male palp has a pointed, slightly curved, dorsal apophysis (figs. 516, 517), and the embolic division (fig. 518) comprises a large, almost square, plate, with a stout, pointed, sclerotized apophysis anteriorly, with the embolus a minute stub. *O. anceps* is readily distinguishable from *O. subalpinus* by the tibia and the embolic division. The female is not known.

MALE: Total length 1.45. Carapace length 0.65; yellow-brown to orange-brown. Abdomen gray, with faint darker markings dorsally. Sternum pale yellow to yellow. Legs pale orange-brown; TmI 0.3–0.35. Palp (figs. 516–518).

MATERIAL EXAMINED: CHILE: *Aisén*: the holotype. 15 km south of Las Juntas, 30 km north of Puyuhuapi, in *Nothofagus* forest, 100 m, Dec. 30, 1984–Jan 29, 1985 (S. and J. Peck), 1 male paratype (AMNH).

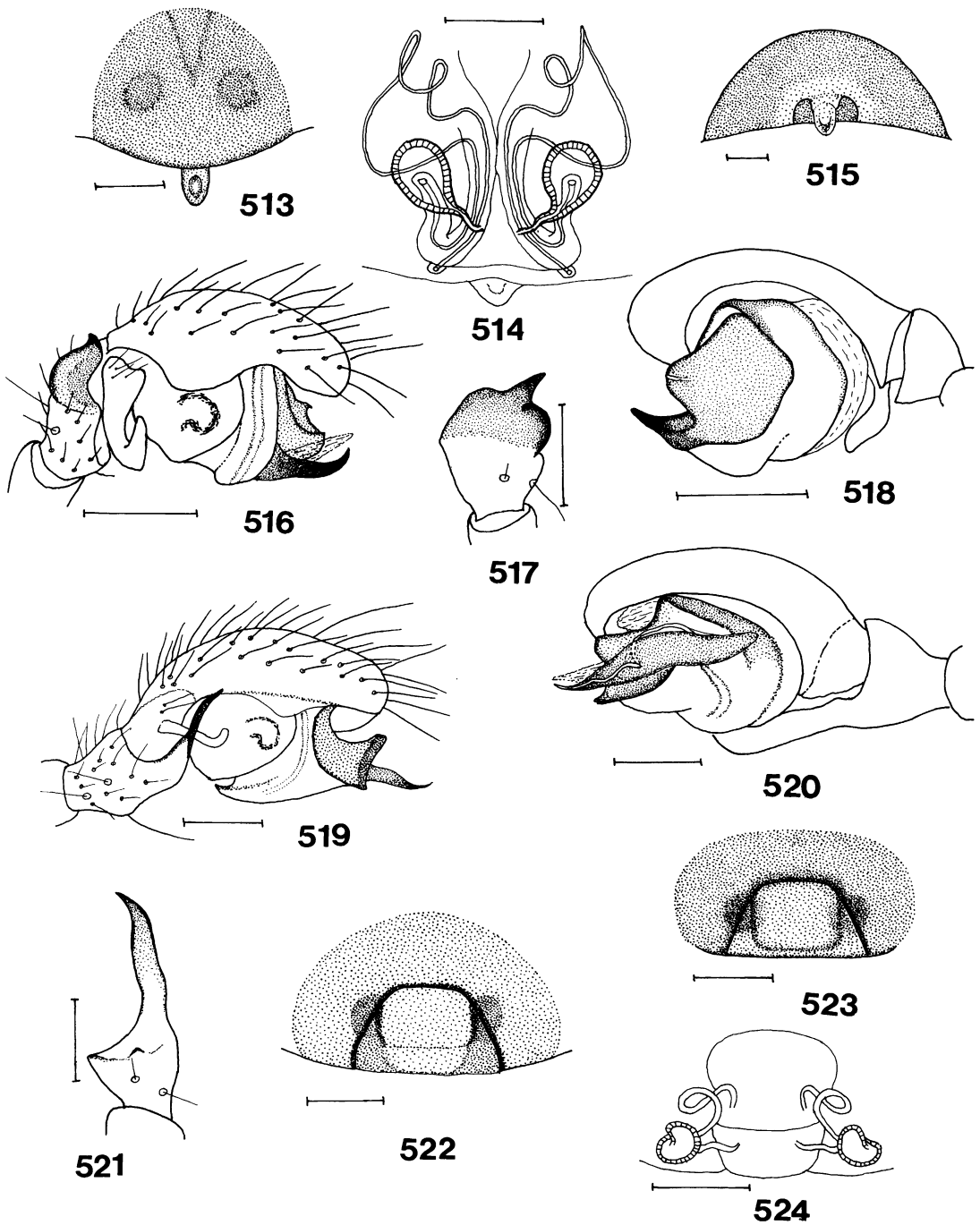
DISTRIBUTION: Known only from Chile.

NEOCAUTINELLA BAERT

Neocautinella Baert, 1990: 131; type species by original designation *Neocautinella ochoai* Baert, from Galapagos Islands.

DIAGNOSIS: The female is diagnosed by the chaetotaxy and the epigynum (figs. 522, 523). The epigynum is somewhat featureless, and is moreover rather variable in appearance; the internal structure (fig. 524) is perhaps a more reliable character. The male is diagnosed by the palp (figs. 519–521), particularly the embolic division, the suprategular apophysis, and the tibia.

DESCRIPTION: The single known species has total length 2.0–2.9; the largest examples are from the Galapagos Islands. The carapace is unmodified; the eyes are of moderate size, with posteriors 0.5–1 d apart. The male chelicerae have a pointed boss anteriorly. The legs are moderately stout, with tibia 1 1/d (female) 7–8. The dorsal tibial spines are 2222; femoral and metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.40–0.45. The female palp is clawless. The tracheal system comprises four simple tubes limited to the abdomen. The epigynum is of simple external form (figs. 522, 523); the anterior, rather rectangular, region is a shal-



Figs. 513–524. 513–515. *Onychembolus subalpinus*. 516–518. *O. anceps*. 519–524. *Neocautinella ochoai*. 513, 522, 523. Epigynum, ventral. 514, 524. Epigynum, internal. 515. Epigynum, caudal. 516, 519. Male palp, ectal. 517, 521. Male palpal tibia, dorsal. 518, 520. Male palp, mesal. Scale lines 0.1 mm.

low atrium which holds the genital openings. Internally, the spermathecae are U-shaped, and the duct runs to the openings via a short coil (fig. 524). The male palpal tibia has a long pointed apophysis on the ectal side (fig. 521); the paracymbium is rather small. Contrary to Baert's description (1990), the suprategular apophysis is large (fig. 519). The embolic division (fig. 520) is simple, comprising a long radical section which converts anteriorly into the pointed embolus.

DISTRIBUTION: Ecuador and Bolivia.

INCLUDED SPECIES: Only the type species.

TAXONOMIC POSITION: The genus has a simple tracheal system, and hence is not erigonine. There can be no close relationship with the genera *Sphecozone* O.P.-Camb. or *Ceratinopsis* Emerton, as suggested by Baert (1990), since these are typically erigonine. There appears to be no good reason to assume a close relationship with *Cautinella* Millidge, and for the present the taxonomic position of *Neocautinella* must be regarded as uncertain.

Neocautinella ochoai Baert

Figures 519–524

Neocautinella ochoai Baert, 1990: 131 (male holotype from Galapagos Islands, Ecuador, Mar. 10, 1982 (L. Baert), in IRSNB; male and female paratypes examined).

DIAGNOSIS: The female epigynum (figs. 522, 523) has a rather poorly defined, almost rectangular atrium, but is somewhat variable in appearance. The tibia of the male palp has a long, narrow, lateral apophysis, pointed and slightly curved distally (figs. 519, 521); the suprategular apophysis is prominent (fig. 519), and the embolic division is slender and pointed anteriorly (fig. 520).

FEMALE: Total length 2.1–2.45. Carapace length 1.0–1.1, orange, with sometimes narrow black margin. Abdomen cream to almost black, sometimes paler dorsally. Sternum orange, suffused with gray. Legs pale orange-yellow to orange. Epigynum (figs. 522–524).

MALE: Total length 2.0–2.4. Carapace length 0.9–1.1. Color as female. Palp (figs. 519–521).

MATERIAL EXAMINED: ECUADOR: Galapagos Islands: paratypes. *Balzapampa*: May–June, 1938 (W. Clarke-Macintyre), 1 male, 2

females (AMNH). 35 km northwest Santo Domingo de los Colorados, Dec. 22, 1958 (A.M. Nadler), 1 female (AMNH). BOLIVIA: *La Paz*: Coroico, June 8, 1960 (B. Malkin), 1 female (AMNH).

DISTRIBUTION: Ecuador and Bolivia.

TRIPLOGYNA, NEW GENUS

Type Species: Triplogyna major, new species.

ETYMOLOGY: From the Greek *triploous*, triple, and *gyne*, a female, referring to the tripartite form of the epigynum. Gender feminine.

DIAGNOSIS: Females are diagnosed by the form of the epigynum (figs. 525, 528). Males are not known.

DESCRIPTION: Based on the female only, the two known species have total length 2.3–2.8. The carapace is unmodified; the eyes are of moderate size, with posteriors 1–1.5 d apart. The legs are fairly short and stout, with tibia 1 1/d 6–7; tibial spines are 2222, and metatarsal spines are absent. Metatarsi 1–4 have a trichobothrium; TmI 0.5–0.55. The tracheal form is simple, comprising four short tubes restricted to the abdomen. The epigynum has a tripartite form (figs. 525, 526, 528); the central section projects slightly and carries a shallow lip (fig. 530). Internally, the duct system is moderately complex (figs. 527, 529).

INCLUDED SPECIES: *Triplogyna major*, new species, and *Triplogyna minor*, new species.

DISTRIBUTION: Colombia and Brazil.

TAXONOMIC POSITION: Externally, but not internally, the epigynum shows some resemblance to those of *Dubiaranea*. In the absence of the male, however, it is impossible to draw any conclusions on the taxonomic position of *Triplogyna*.

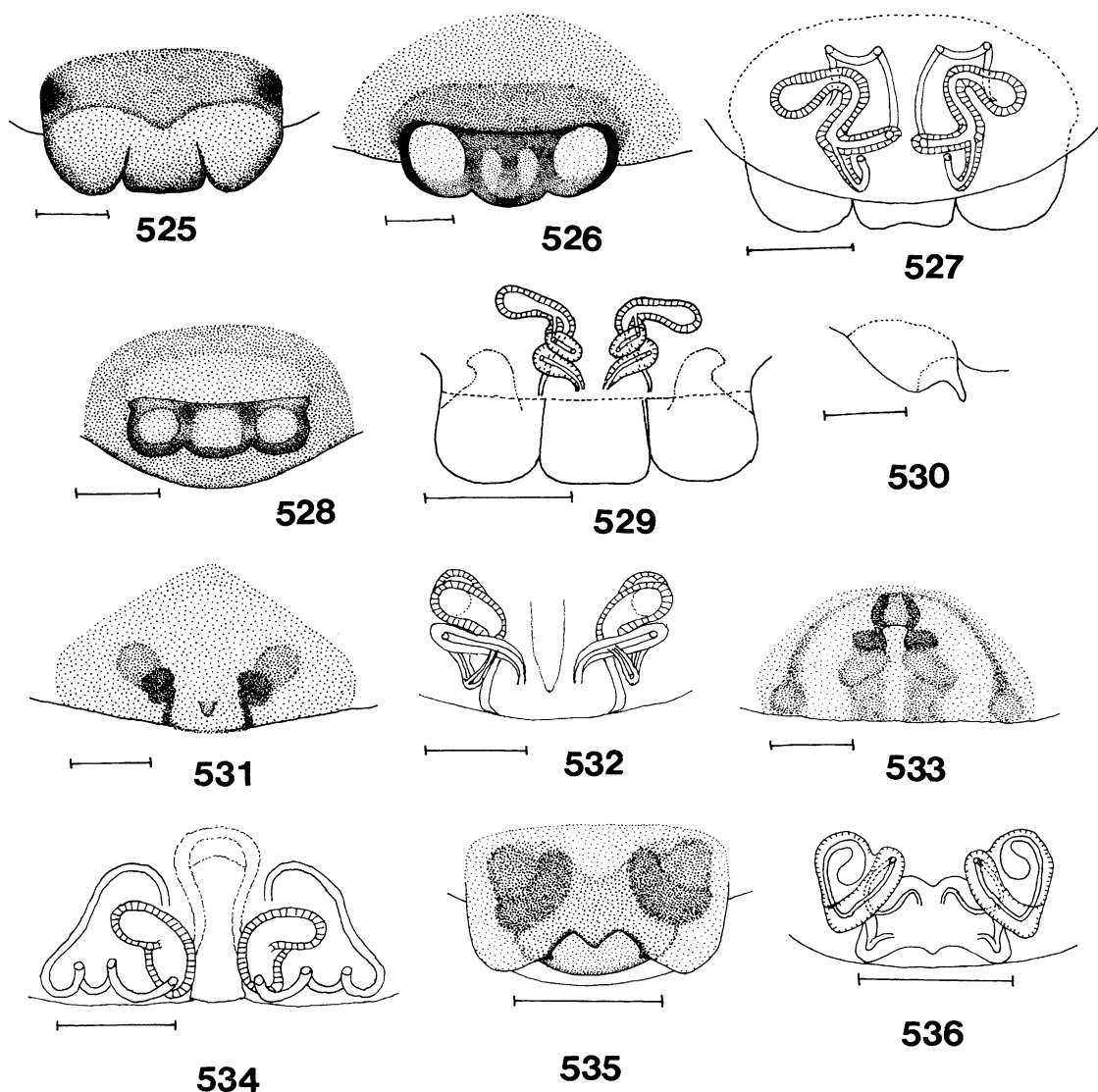
Triplogyna major, new species

Figures 525–527

TYPE: Female holotype from 18 km south of Usme, Cundinamarca, Colombia, grassy stream margin, 3350 m, Feb. 10, 1976 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective, meaning larger.

DIAGNOSIS: The female epigynum (figs. 525,



Figs. 525–536. 525–527. *Triplogyna major*. 528–530. *T. minor*. 531, 532. *Malkinia melanocephala*. 533, 534. *Gilvonanus lineatus*. 535, 536. *Malkinella insulanus*. 525, 528, 531, 533, 535. Epigynum, ventral. 526. Epigynum, slightly anterior. 530. Epigynum, lateral. 527, 529, 532, 534, 536. Epigynum, internal. Scale lines 0.1 mm.

526) is fairly close to that of *T. minor* (fig. 528), but in that species the lateral atria are smaller, and the internal structure is different (fig. 527; cf. fig. 529). The male is not known.

FEMALE: Total length 2.7–2.8. Carapace length 1.2; orange-brown to brown, with dusky markings and narrow dark margin. Abdomen black ventrally, dorsally whitish gray with variable black bars/chevrons. Ster-

num orange, suffused with black. Legs orange-brown to brown; TmI 0.5–0.55. Epigynum (figs. 525–527).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the holotype. *Boyacá*: Paramo de La Rusia, 3600 m, Sept. 26–Oct. 16, 1985 (H. Sturm), 2 female paratypes (MCZ).

DISTRIBUTION: Known only from Colombia.

Triplogyna minor, new species

Figures 528–530

TYPE: Female holotype from Ponte Nova, Minas Gerais, Brazil, Sept. 1945 (F. H. Pough); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning smaller.

DIAGNOSIS: The female epigynum (fig. 528) is fairly close to that of *T. major* (figs. 525, 526), but in that species the lateral atria are larger, and the internal structure is different (fig. 529; cf. fig. 527). The male is not known.

FEMALE: Total length 2.3. Carapace length 0.95. Carapace brown, with dusky markings and margins. Abdomen white dorsally, with blackish chevrons posteriorly; sides gray, ventrally gray with white patch anteriorly. Sternum yellow-brown, suffused with gray. Legs pale yellow-brown; TmI 0.5. Epigynum (figs. 528–530).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: KNOWN only from eastern Brazil.

MALKINIA, NEW GENUS

TYPE SPECIES: *Malkinia melanocephala*, new species.

ETYMOLOGY: A patronym in honor of B. Malkin, who collected the type species. Gender feminine.

DIAGNOSIS: The female of the only known species is diagnosed by the epigynum (fig. 531). Males are not known.

DESCRIPTION: This is based on the female only. The single known species has total length 3.0–3.1. The carapace is unmodified; the eyes are fairly large, with posterior medians 0.5 d apart. The legs are long and slender, with tibia 1 l/d 16–20. Several of the legs are missing in all the specimens, and the spinal armature is uncertain; the tibiae appear to have several spines, the metatarsi none. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.2. The tracheal form is simple, with four short tubes confined to the abdomen. The epigynum is simple (fig. 531); the central area carries a small, insignificant socket. Internally the spermathecae appear to have two sections, with the duct system relatively simple (fig. 532).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: KNOWN only from Juan Fernandez Islands, Chile.

TAXONOMIC POSITION: Externally, but not internally, the epigynum shows some similarity to that of *Dubiaranea insulanus*. The tracheal form shows that the genus is not erigonine, but in the absence of the male the taxonomic position of the genus cannot be further assessed.

Malkinia melanocephala, new species

Figures 531, 532

TYPES: Female holotype, with two female paratypes, from Quebrada Casa, Mas Afuera, Juan Fernandez Islands, Chile, Mar. 13–31, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a dark-colored head.

DIAGNOSIS: The female epigynum (fig. 531) has a tiny socket in the posterior area, and the internal organs are visible through the integument. Confirmation is given by the internal structure (fig. 532). The male is not known.

FEMALE: Total length 3.0–3.1. Carapace length 1.2–1.3; orange-brown, suffused with dark brown on head and sides. Abdomen brownish, with blackish folium and broken chevrons dorsally; and with bright white patches dorsally, ventrally, and on sides. Sternum orange-brown, suffused with black, and black margins. Legs yellow to pale brown, with dark brown annulations; TmI ca. 0.2. Epigynum (figs. 531, 532).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: KNOWN only from Juan Fernandez Islands, Chile.

GILVONANUS, NEW GENUS

TYPE SPECIES: *Gilvonanus lineatus*, new species.

ETYMOLOGY: From the Latin *gilvus*, pale yellow, and *nanus*, a dwarf. Gender masculine.

DIAGNOSIS: The female of the single species is diagnosed by the epigynum (figs. 533, 534), which is fairly distinctive. Males are not known.

DESCRIPTION: The female of the single species has total length 2.0. The carapace is unmodified; the eyes are small, with posteriors ca. 2 d apart. The legs are relatively short and stout, with tibia 1 l/d ca. 7; they appear to

be spineless. Metatarsi 1–3 have a trichobothrium; TmI 0.1–0.15. The tracheal form is not known. The epigynum is fairly distinctive (fig. 533); internally, the spermathecae are long, bent almost at right angles, and the duct system is moderately complex, comprising lateral coils followed by a long curved run to the openings (fig. 534).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Brazil.

TAXONOMIC POSITION: The epigynum appears to be rather primitive in form, but in the absence of information on the tracheal form and on the male, it is not possible to comment on the taxonomic position of this genus.

Gilvonanus lineatus, new species

Figures 533, 534

TYPE: Female holotype from Campo das Antas, Teresopolis, Brazil, Mar. 16, 1946 (H. Sick); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a stripe.

DIAGNOSIS: The female epigynum (fig. 533) is given a distinctive appearance by the outlines of the internal organs visible through the pale-colored integument. Confirmation is given by the internal structure. The male is not known.

FEMALE: Total length 2.0. Carapace length 0.75; pale orange; eyes relatively small, on black spots. Abdomen yellowish white, with a longitudinal gray stripe dorsally and on each side. Sternum orange. Legs pale orange; TmI 0.1–0.15. Epigynum (figs. 533, 534).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

MALKINELLA, NEW GENUS

TYPE SPECIES: *Malkinella insulanus*, new species

ETYMOLOGY: A patronym in honor of B. Malkin, who collected many species from the Juan Fernandez Islands. Gender feminine.

DIAGNOSIS: The female of the single known species is diagnosed by the epigynum (figs. 535, 536), which externally is not very distinctive. Males are not known.

DESCRIPTION: The female of the single species has total length 1.9. The carapace is unmodified; the eyes are moderately large, with posteriors less than 1 d apart. The legs are

fairly short and stout, with tibia 1 1/d ca. 6; tibial spines are 2221, and metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI 0.35–0.4. The tracheal form is not known. The epigynum (fig. 535) is not very distinctive; the openings appear to lie within a shallow atrium behind the M-shaped ridge. Internally the duct system is simple, but more or less encapsulated (fig. 536).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

TAXONOMIC POSITION: The absence of information on the tracheal form, and on the male, makes it impossible at present to comment on the taxonomic position of *Malkinella*.

Malkinella insulanus, new species

Figures 535, 536

TYPE: Female holotype from El Camote, Mas a Tierra, Juan Fernandez Islands, Chile, 600 m, Apr. 19, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin noun in apposition meaning an islander.

DIAGNOSIS: The female epigynum (fig. 535) has a shallow atrium posteriorly, and the outlines of the internal organs can be seen through the integument. Confirmation is given by the internal structure (fig. 536). The male is not known.

FEMALE: Total length 1.9. Carapace length 0.75; deep orange-brown, with blackish margins. Abdomen gray-black dorsally and on sides, with pale chevrons dorsally; yellow-white ventrally and around spinnerets. Sternum orange, suffused with black on margins. Legs orange; TmI 0.35–0.4. Epigynum (figs. 535, 536).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands.

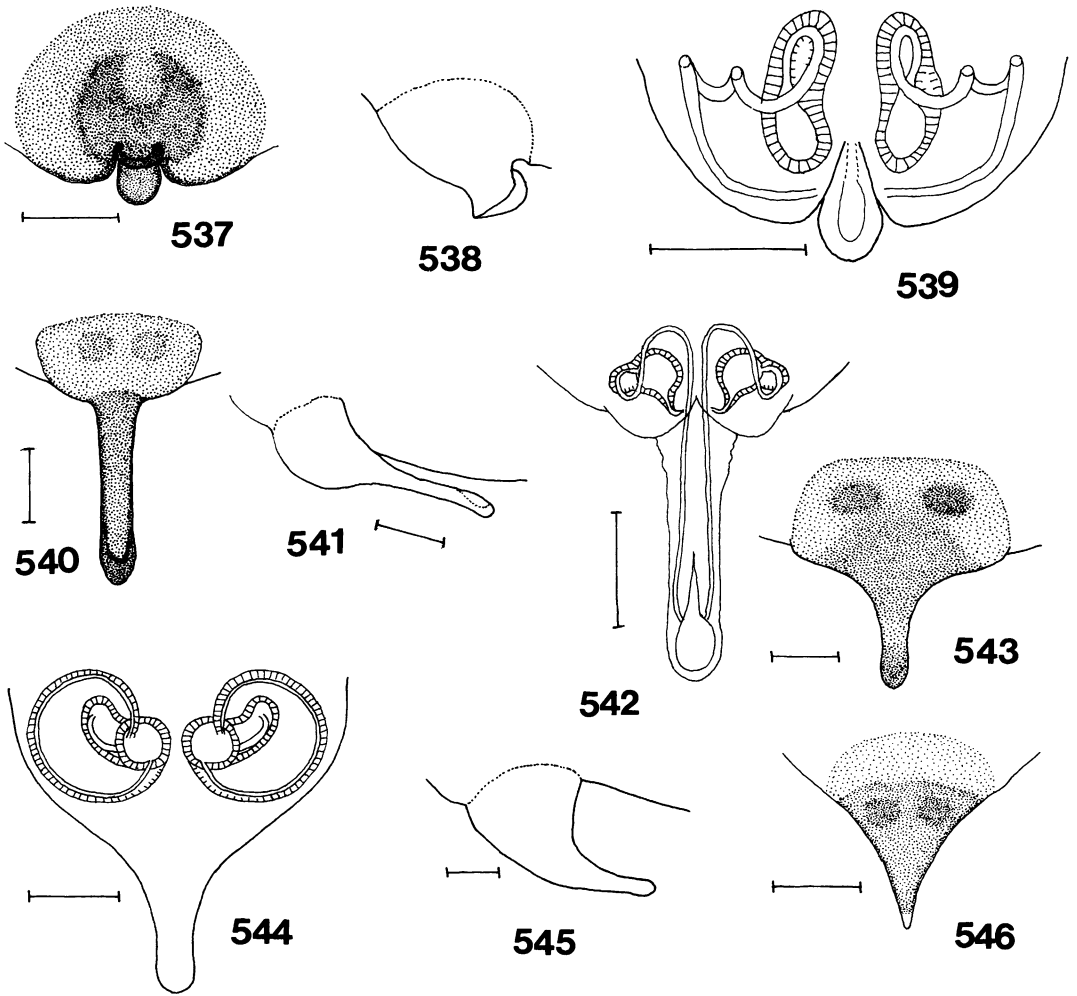
MICROCTEMA, NEW GENUS

TYPE SPECIES: *Microctema exiguum*, new species.

ETYMOLOGY: From the Greek *mikros*, small, and *ktema*, a treasure. Gender neuter.

DIAGNOSIS: The female of the single species is diagnosed by the epigynum (fig. 537), which is distinctive. No males are known.

DESCRIPTION: The female of the single spe-



Figs. 537–546. 537–539. *Microctema exiguum*. 530–542. *Bactrogyna prominens*. 543–545. *Turbinnella nigra*. 546. *T. tantilla*. 537, 540, 543, 546. Epigynum, ventral. 538, 541, 545. Epigynum, lateral. 539, 542, 544. Epigynum, internal. Scale lines 0.1 mm.

cies has total length 1.5. The carapace is unmodified; the posterior eyes are fairly large, less than 1 d apart, and the laterals are slightly separated from one another. The legs are rather short and stout, with tibia 1 l/d 6–7; tibial spines are 1111, and metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI ca. 0.4. The tracheal form is not known. The epigynum carries a short projecting scape (figs. 537, 538); internally the duct system is partially encapsulated, and lateral coils are present (fig. 539).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The absence of in-

formation on the tracheal form and on the male makes it impossible at present to comment on the taxonomic position of *Microctema*.

***Microctema exiguum*, new species**

Figures 537–539

TYPE: Female holotype from Paramo de Monserrate, Cundinamarca, Colombia, 3230 m, Oct. 14, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning small.

DIAGNOSIS: The female epigynum (figs. 537, 538) has a short projecting scape. Confir-

mation is given by the internal structure (fig. 539). The male is not known.

FEMALE: Total length 1.5. Carapace length 0.65; pale yellow, heavily suffused with black; ocular area black. Abdomen black, with weak white spot anterior to spinnerets. Sternum black. Legs pale yellow-brown; TmI 0.4. Epigynum (figs. 537–539).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

BACTROGYNA, NEW GENUS

TYPE SPECIES: *Bactrogya prominens*, new species.

ETYMOLOGY: From the Greek *baktron*, a stick, staff, and *gyne*, a female, referring to the form of the epigynum. Gender feminine.

DIAGNOSIS: The female of the single species is diagnosed by the epigynum (figs. 540, 541), which is distinctive. No males are known.

DESCRIPTION: The female of the single species has total length 1.95–2.2. The carapace is unmodified; the eyes are of moderate size, with posteriors 1 d or slightly less apart. The leg characters cannot be given, since most legs are missing on all specimens. The tracheal form is simple, comprising four short tubes restricted to the abdomen. The epigynum carries a long, rodlike scape (figs. 540, 541); the duct system is simple, with the ducts opening into a small pit on the dorsal side at the tip of the scape (fig. 542).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Chile.

TAXONOMIC POSITION: The tracheal form shows that the genus is not erigonine. In the absence of the male, the taxonomic position of *Bactrogya* cannot be determined.

Bactrogya prominens, new species

Figures 540–542

TYPES: Female holotype, with one female paratype, from Palmas de Ocoa, Parque Nacional La Campana, Quillota, Chile, pitfall in burned site, Sept. 27, 1985 (R. Calderón); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning projecting.

DIAGNOSIS: The female epigynum (figs. 540, 541) has a long, rodlike scape. The male is not known.

FEMALE: Total length 1.95–2.2. Carapace length 0.75–0.9; pale brown, with black mar-

gins. Abdomen black, with indistinct pale chevrons dorsally. Sternum orange-brown, suffused with black. Legs brown (most segments missing). Epigynum (figs. 540–542).

MATERIAL EXAMINED: CHILE: *Quillota*: the types above. *Coquimbo*: Parque Nacional Fray Jorge, pitfall in relict valdivian forest, Jan. 12, 1985 (R. Calderón), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Chile.

TURBINELLA, NEW GENUS

TYPE SPECIES: *Turbinella nigra*, new species.

ETYMOLOGY: A diminutive from the Latin *turbo*, a child's top, referring to the shape of the epigynum. Gender feminine.

DIAGNOSIS: Females are diagnosed by the distinctive shape of the epigynum (figs. 543, 546). Males are not known.

DESCRIPTION: Females of the two known species have total length 1.3–2.9. The carapace is unmodified; the eyes are moderately large, with posteriors less than 1 d apart. The legs are relatively long in the type species (tibia 1 1/d ca. 10), but fairly short and stout in the small species *T. tantilla* (tibia 1 1/d ca. 4). Tibial spines are 2211 in the type species, but appear to be absent in *T. tantilla*. Metatarsi 1–3 have a trichobothrium; TmI 0.35–0.4. The tracheal form is simple, comprising four short tubes limited to the abdomen. The epigynum is a scape, toplike in outline (figs. 543, 546); the internal structure appears somewhat primitive, with the spermathecae relatively complex (fig. 544).

INCLUDED SPECIES: *Turbinella nigra*, new species, and *T. tantilla*, new species.

DISTRIBUTION: Argentina and Brazil.

TAXONOMIC POSITION: The tracheal form shows that the genus is not erigonine, while the internal genitalic system appears to be rather primitive. In the absence of the male, however, no worthwhile assessment of the taxonomic position of *Turbinella* can be made.

Turbinella nigra, new species

Figures 543–545

TYPE: Female holotype from Norquincó, Rio Negro, Argentina, Aug. 27, 1962 (A. Kovacs); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective relating to the locality of capture.

DIAGNOSIS: The female epigynum (figs. 543, 545), has a scape, broad anteriorly, considerably narrowed posteriorly. The sides of the scape are much more concave than in *T. tantilla* (fig. 546), which is also a smaller species. The male is not known.

FEMALE: Total length 2.65–2.9. Carapace length 1.0–1.05; orange, lightly suffused with gray. Abdomen gray-black. Sternum orange, heavily suffused with black. Legs orange-brown; TmI 0.35–0.4. Epigynum (figs. 543–545).

MATERIAL EXAMINED: ARGENTINA: *Rio Negro*: the holotype. Same locality, July 3, 1966 (A. Kovacs), 2 female paratypes (AMNH).

DISTRIBUTION: Known only from Argentina.

Turbinella tantilla, new species

Figure 546

TYPE: Female holotype from Botanical Gardens, São Paulo, Brazil, Jan. 17, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning so small.

DIAGNOSIS: The female epigynum (fig. 546) has a scape narrowed almost to a point posteriorly, and sides only slightly concave. The almost triangular shape of the scape and the smaller size distinguish *T. tantilla* from *T. nigra*. The male is not known.

FEMALE: Total length 1.3. Carapace length 0.6; orange, with ocular area black. Abdomen brownish black. Sternum orange, suffused with gray. Legs orange; TmI 0.35. Epigynum (fig. 546).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from south Brazil.

ERIGONE AUDOUIN

Erigone Audouin, 1826: 115 (type species, by ICZN decision, *Erigone longipalpis* Sundevall).—Roewer, 1942: 719.—Bonnet, 1956: 1740.—Brignoli, 1983: 336, 692.—Platnick, 1989: 236.

A large number of *Erigone* species have been described from the Northern Hemisphere, but very few from south of the equator. The following species have been reported from South America (Roewer, 1942):

E. dentimandibulata Keyserling, 1886, male (Colombia, Peru)

E. edax Keyserling, 1886, female (Colombia)

E. nivina Chamberlin, 1916, female (Peru)
E. praepulchra Keyserling, 1886, male (Peru, Alaska!)

E. taibo Chamberlin, 1916, female (Peru)

E. venialis Keyserling, 1886, male (South Brazil)

E. atra (Bl.) and *E. miniata* Baert have recently been reported from the Galapagos Islands (Baert, 1990).

The figures of the epigyna given by Chamberlin show clearly that *E. nivina* and *E. taibo* do not belong in *Erigone*, and Keyserling's figure of the palp of *E. venialis* shows that this species is also wrongly placed. *E. dentimandibulata* is an *Eperigone*, and *E. edax* is probably the female of *E. dentimandibulata*; this species is redescribed in the present paper, under *Eperigone*.

Of the species given above, only *E. praepulchra*, *E. atra*, and *E. miniata* remain as true *Erigone* species. Comparison with authentic specimens has shown that the four new species described below are not identical with *E. miniata* or *E. atra*, and on the basis of the published figures they are also distinct from *E. praepulchra*.

Erigone palustris, new species

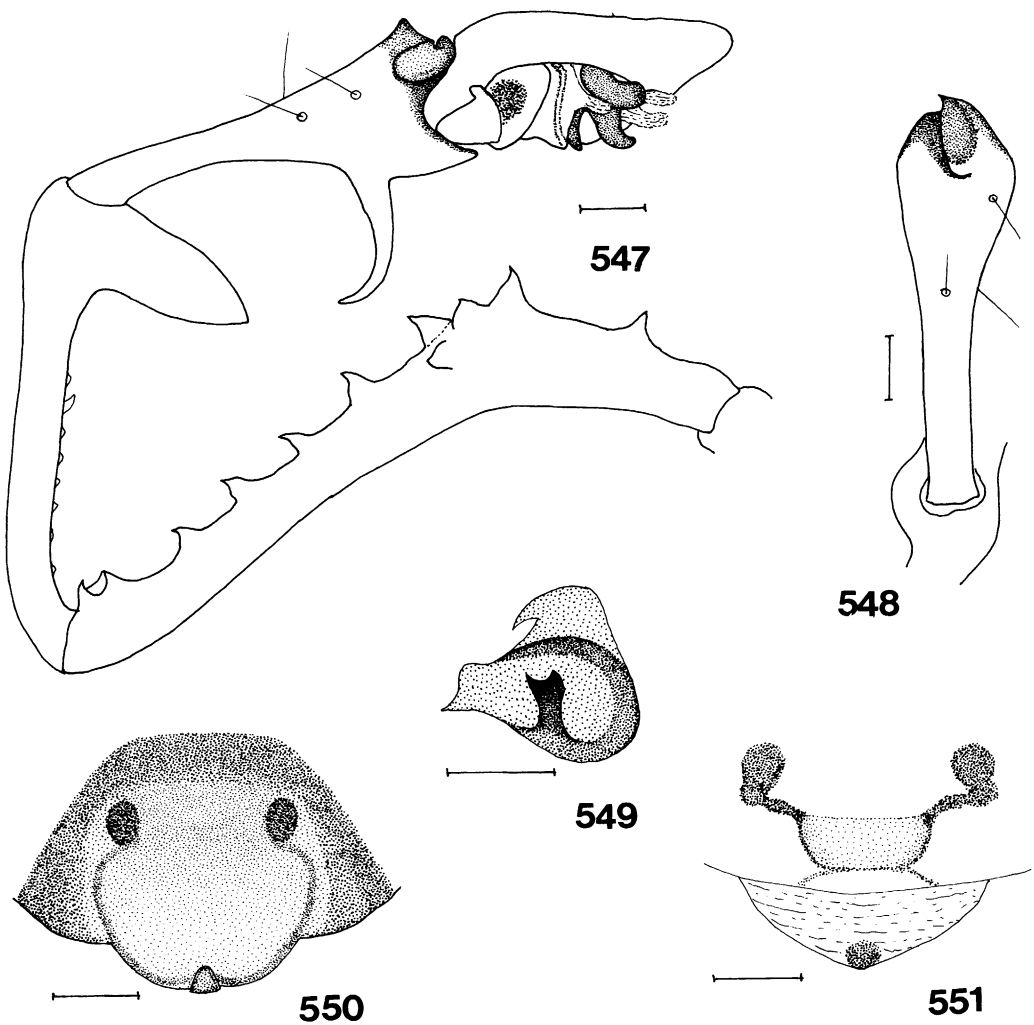
Figures 547–551

TYPES: Male holotype, with 13 female and two male paratypes, from Rio Santa, Monterrey, 5 km north of Huaraz, Ancash, Peru, in seepage area, 2810 m, Jan. 14, 1976 (R. T. and J. C. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning of a marsh.

DIAGNOSIS: The female epigynum (figs. 550, 551) is generally similar to those of other *Erigone* species, but distinguishable by the ventral and dorsal aspects from those of other known South American species (cf. figs. 554–557, 559, 560). The embolic division of the male palp is close to that of *E. clavipalpis* (fig. 549, cf. fig. 553), but the long tibia, with the curved ventral spur (figs. 547, 548) and the long patella (fig. 547) distinguish *E. palustris* from other *Erigone* species so far known from South America.

FEMALE: Total length 2.45–3.3. Carapace length 1.05–1.3; orange to deep chestnut-brown, slightly darker anteriorly; cephalic region slightly raised. Chelicerae with row of ca. 5 pointed bosses (variable in size) anterolaterally. Abdomen gray to black. Sternum orange-brown, suffused with gray, to almost black. Legs orange to orange-brown; TmI 0.5.



Figs. 547–551. *Erigone palustris*. 547. Male palp, ectal. 548. Male palpal tibia, dorsal. 549. Embolic division, mesal. 550. Epigynum, ventral. 551. Epigynum, dorsal. Scale lines 0.1 mm.

Epigynum (figs. 550, 551); rather small and weakly pigmented.

MALE: Total length 2.65–3.1. Carapace length 1.35–1.55. Color as female. Carapace distinctly raised anteriorly; strong marginal sulci present. Chelicerae large, projecting anteriorly; anterolaterally with basal boss and row of strong pointed bosses. Palp (figs. 547–549); tibia, patella, and femur long, but somewhat variable in length.

MATERIAL EXAMINED: PERU: *Ancash*: the types above. Between Huaraz and Punta Callan, in seepage area, 3440 m, Jan. 16, 1976 (R. T. and J. C. Schuh), 2 female paratypes (AMNH). Below Punta Callan, 3850 m, in seepage area, Jan. 16, 1976 (R. T. and J. C. Schuh), 1 male paratype (AMNH). 80 km

east of Casma, in seepage area, 2920 m, Jan. 13, 1976 (R. T. and J. C. Schuh), 1 female, 1 male paratype (AMNH). *Cajamarca*: 2 km west of Llacamora, sandy river margin, 2530 m, Jan. 19, 1976 (R. T. and J. C. Schuh), 1 female, 1 male paratype (AMNH). *Lima*: above Cauta, in seepage area, 3000 m, Jan. 28, 1976 (R. T. Schuh), numerous female and male paratypes (AMNH).

DISTRIBUTION: Known only from Peru.

Erigone clavipalpis, new species
Figures 552–555

TYPES: Male holotype, with 38 female and four male paratypes, from Pampa del Cuy, Parque Nacional Abiseo, San Martin, Peru,

3550 m, Mar. 16, 1988 (D. Silva et al.); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective, referring to the ventral spikelike tooth of the male palpal tibia.

DIAGNOSIS: The female epigynum (figs. 554, 555) is distinguishable from those of other South American *Erigone* species by the ventral and dorsal aspects. The epigynum is closest to that of *E. uliginosa* (figs. 556, 557), but that species lacks the deep brown coloration of the trochanters and femora. The embolic division (fig. 553) of the male palp is close to that of *E. palustris* (fig. 549), but *E. clavipalpis* is readily distinguishable from that species by the short patella and tibia, the latter with a stout ventral spur (fig. 552).

FEMALE: Total length 1.95–2.3. Carapace length 0.85–0.9; chestnut-brown to deep chestnut-brown; eyes relatively small, with posteriors ca. 1.5 d apart. Chelicerae with a few weak pointed bosses anterolaterally. Abdomen gray-black to black. Sternum deep chestnut-brown to black. Legs orange-brown to brown, with trochanters and femora deep brown; TmI ca. 0.5. Epigynum (figs. 554, 555); rather weakly sclerotized.

MALE: Total length 1.65–2.1. Carapace length 0.9–1.0. Color as female. Carapace not significantly raised anteriorly; with weak marginal sulcus. Chelicerae with row of pointed bosses anterolaterally. Palp (figs. 552, 553); tibia with stout pointed tooth ventrally.

MATERIAL EXAMINED: PERU: *San Martin*: the types above. Same locality, Mar. 2, 1988 (D. Silva et al.), 4 female paratypes (MHNSM).

DISTRIBUTION: Known only from Peru.

Erigone uliginosa, new species

Figures 556, 557

TYPE: Female holotype from above San Juan, on route to Cajamarca, Cajamarca, Peru, grassy seep area, 2620 m, Jan. 17, 1976 (R. T. and J. C. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning in a wet area.

DIAGNOSIS: The female epigynum (figs. 556, 557) is close to that of *E. clavipalpis*, but probably distinguishable by the dorsal aspect (fig. 557; cf. fig. 555). The leg coloration also separates these two species. The male is not known.

FEMALE: Total length 1.75. Carapace length

0.75. Carapace chestnut-brown; eyes relatively small, with posteriors ca. 1.5 d apart. Cheliceral bosses very weak. Abdomen gray-black. Sternum chestnut-brown. Legs uniform orange-brown; TmI 0.5. Epigynum (figs. 556, 557) rather weakly sclerotized.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Erigone fluminea, new species

Figures 558–560

TYPE: Female holotype from Tobogan, 40 km south of Puerto Ayacucho, Amazonas, Venezuela, seine of sunlit stream, Jan. 21, 1985 (P. J. Spengler et al.); deposited in USNM.

ETYMOLOGY: The specific name is a Latin adjective meaning of a stream.

DIAGNOSIS: The female epigynum (figs. 559, 560) is distinguishable from those of other known South American species by the ventral and dorsal aspects. The raised carapace (fig. 558) and the fairly large eyes also distinguish this species from other South American species. The male is not known.

FEMALE: Total length 1.9. Carapace length 0.8; orange-brown; cephalic region distinctly elevated (fig. 558). Eyes rather large, with posteriors less than 1 d apart. Chelicerae with two pointed bosses anterolaterally. Abdomen gray-black. Sternum orange-brown, suffused with black on margins. Legs orange, with femora slightly darker; TmI ca. 0.4. Palp with tibia and tarsus distinctly swollen. Epigynum (figs. 559, 560) weakly sclerotized.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

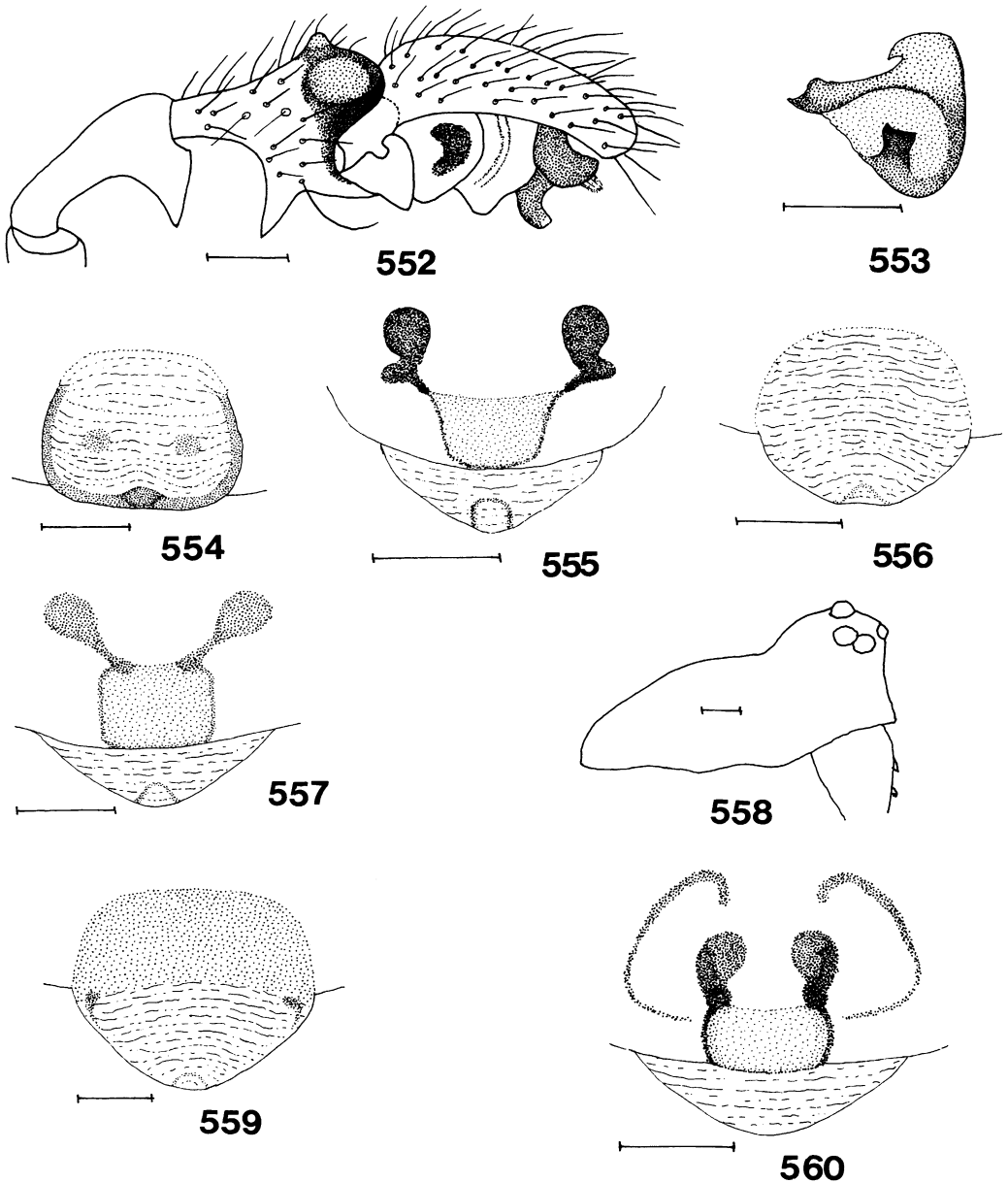
EPERIGONE CROSBY and BISHOP

Eperigone Crosby and Bishop, 1928: 46.—Roe-
wer, 1942: 716.—Bonnet, 1956: 1706.—Brig-
noli, 1983: 336.—Millidge, 1987: 1–75.

Several species of this North and Central American genus have been taken in northern South America.

Eperigone bryantae Ivie and Barrows. VENEZUELA: *Trujillo*: 10 mi east Bocono, 800 m, Sept. 15, 1957 (B. Malkin), 2 females. *Mérida*: Santa Rosa, 2000 m, May 13, 1981 (L. Masner), 1 male.

Eperigone caelebs Millidge. VENEZUELA: Rancho Arandi, Dec. 20, 1954 (A. M. Nadler), 1 female.



Figs. 552-560. 552-555. *Erigone clavipalpis*. 556, 557. *E. uliginosa*. 558-560. *E. fluminea*. 552. Male palp, ectal. 553. Embolic division, mesal. 554, 556, 559. Epigynum, ventral. 555, 557, 560. Epigynum, dorsal. 558. Female carapace, lateral. Scale lines 0.1 mm.

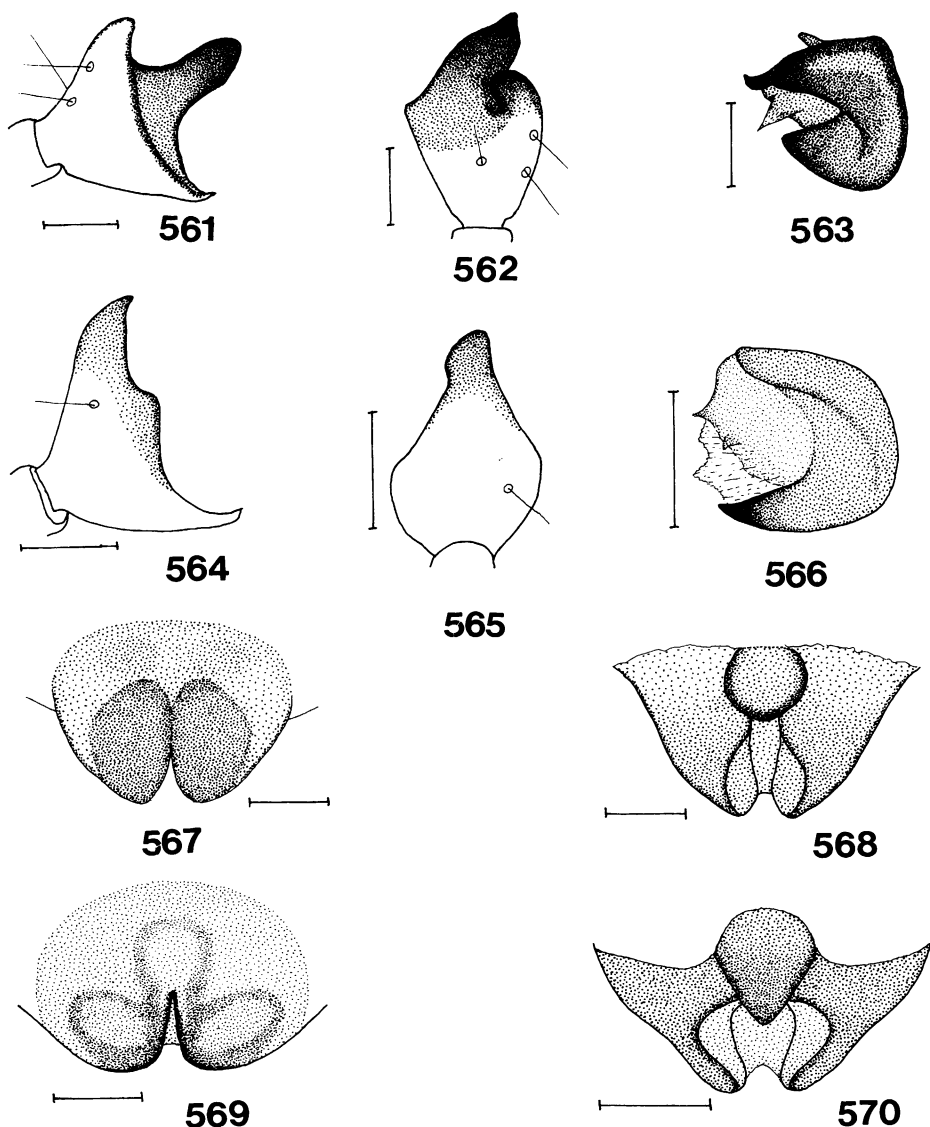
Eperigone eschatologica (Crosby). COLOMBIA: Magdalena: Gaira, 8 km south Santa Marta, Mar. 16, 1974 (L. and N. Herman), 1 female, 1 male.

Eperigone fradeorum (Berland). PERU: Arequipa: Rio Yauca, 80 m, Sept. 12, 1988 (R. Tegada), 1 female. Lima: La Tablada, Lurin, July 2, 1988 (G. Sosa), 3 female, 1 male. Iquitos, Nov. 1961 (J. Callan), 2 females.

***Eperigone hebes*, new species**
 Figures 561-563

TYPES: Male holotype, with one male paratype, from Santa Rosa, Mérida, Venezuela, 2000 m, May 4-13, 1981 (L. Masner); deposited in CNC.

ETYMOLOGY: The specific name is a Latin adjective meaning dull.



Figs. 561–570. 561–563. *Eperigone hebes*. 564–568. *E. obscura*. 569, 570. *E. nigra*. 561, 564. Male palpal tibia, ectal. 562, 565. Male palpal tibia, dorsal. 563, 566. Embolic division, mesal. 567, 569. Epigynum, ventral. 568, 570. Epigynum, dorsal. Scale lines 0.1 mm.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the forms of the tibia (figs. 561, 562) and of the embolic division (fig. 563). The palp of *E. fracta* Millidge (Costa Rica) is similar, but is distinguishable by the somewhat different tibial apophyses.

MALE: Total length 2.0 (abdomen shrunk-en). Carapace length 1.0; pale orange, with dusky margins. Chelicerae with pointed boss anteriorly. Abdomen gray. Sternum orange,

suffused with gray. Legs pale orange; TmI ca. 0.4. Palp (figs. 561–563).

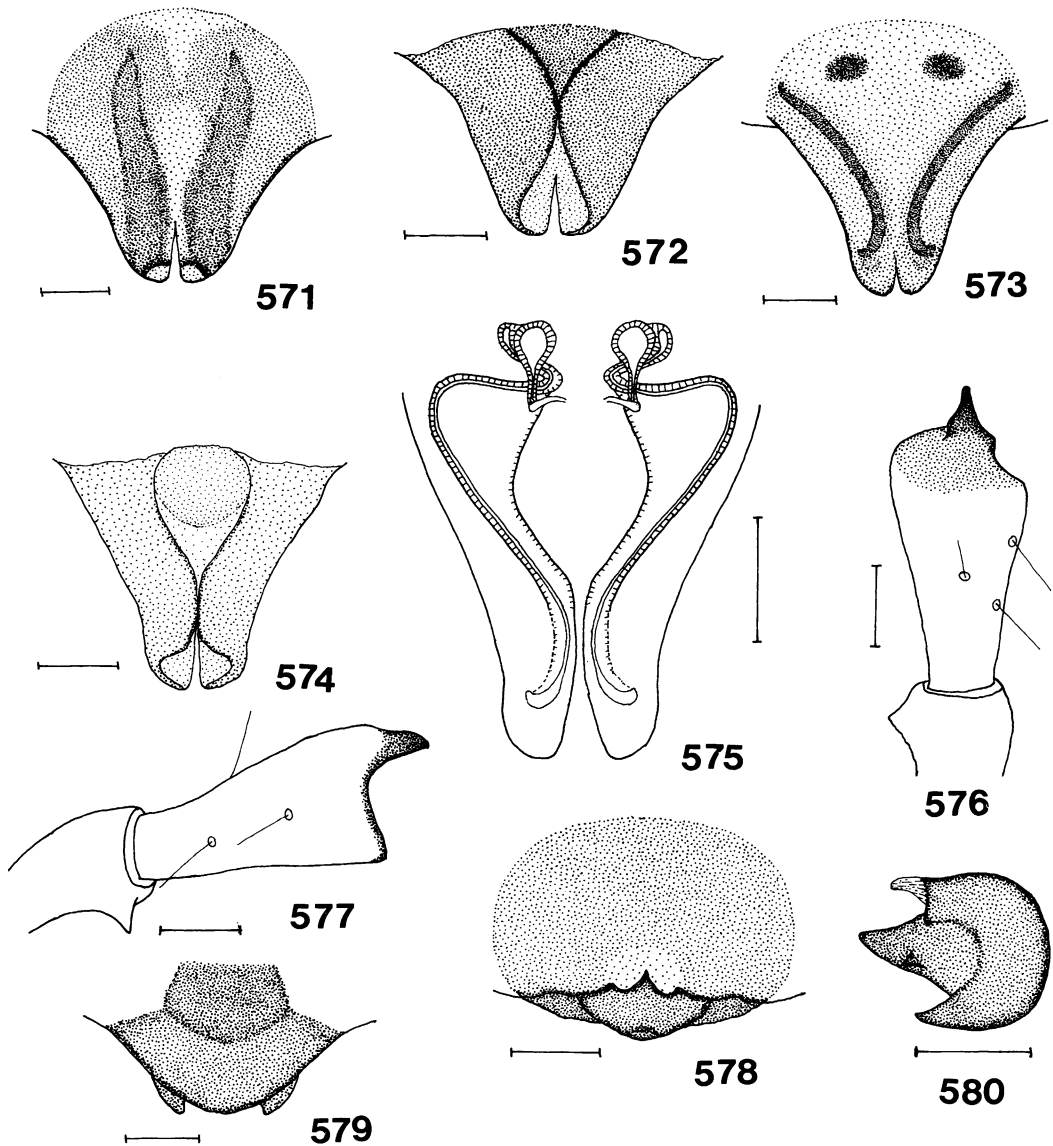
MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Venezuela.

Eperigone obscura, new species

Figures 564–568

TYPES: Male holotype, with two female and one male paratypes, from Rio San Juan,



Figs. 571-580. 571, 572. *Eperigone insulsa*. 573-575. *E. conjuncta*. 576-580. *E. dentimandibulata*. 571, 573, 578. Epigynum, ventral. 572, 574, 579. Epigynum, dorsal. 575. Epigynum, internal. 576. Male palpal tibia, dorsal. 577. Male palpal tibia, ectal. 580. Embolic division, mesal. Scale lines 0.1 mm.

Quebrada Docordo, between Cucurupi and Noanama, Choco, Colombia, in dead foliage, Jan. 1-5, 1969 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dull-colored.

DIAGNOSIS: The female epigynum (figs. 567, 568) is fairly close to that of *E. libana* Milledge (Mexico), but distinguishable by both

the ventral and dorsal aspects. The male palpal characters, particularly the forms of the tibia (figs. 564, 565) and the embolic division (fig. 566) distinguish *E. obscura* from all other known *Eperigone* species.

FEMALE: Total length 2.1. Carapace length 0.9-0.95; orange-brown, with faint gray markings. Abdomen gray to black. Sternum orange, suffused with gray or black. Legs or-

ange-brown; TmI 0.45–0.50. Epigynum (figs. 567, 568); plugged in one specimen.

MALE: Total length 1.65–1.8. Carapace length 0.85–0.9. Color as female. Chelicerae with pointed boss anteriorly. Palp (figs. 564–566).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Eperigone nigra, new species

Figures 569, 570

TYPE: Female holotype from near Saladito, Valle, Colombia, 1800 m, Apr. 1977 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning black.

DIAGNOSIS: The female epigynum (figs. 569, 570) is somewhat similar in form to that of *E. libana* (Mexico), but is distinguishable by the ventral and dorsal aspects. The male is not known.

FEMALE: Total length 2.2. Carapace length 1.05; orange-brown, with faint gray markings. Abdomen black. Sternum orange, suffused with black. Legs orange-brown; metatarsi 1 missing; TmII 0.45. Epigynum (figs. 569, 570).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Eperigone insulsa, new species

Figures 571, 572

TYPES: Female holotype, with three female paratypes, from Huacapistana, Junin, Peru, 1800 m, July 27–30, 1965 (P. and B. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning insipid.

DIAGNOSIS: The female epigynum (figs. 571, 572) is somewhat similar to those of *E. caelebs* Millidge (Panama) and *E. cognata* Millidge (Costa Rica, Mexico, Nicaragua), but is readily distinguishable by the ventral and dorsal aspects. The male is not known.

FEMALE: Total length 2.1–2.2. Carapace length 1.0–1.1; orange-brown, with faint dusky markings. Abdomen gray to black, with pale markings and chevrons dorsally. Ster-

num orange, suffused with black. Legs orange-brown; TmI 0.45–0.5. Epigynum (figs. 571, 572).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Eperigone conjuncta, new species

Figures 573–575

TYPE: Female holotype from 5 km east of Belem, Pará, Brazil, May 2, 1974 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The female epigynum (figs. 573, 574) is also fairly close to those of *E. caelebs* and *E. cognata*, but is readily distinguishable by the ventral and dorsal aspects. The male is not known.

FEMALE: Total length 1.8. Carapace length 0.8; brown, with dusky markings and margins; ocular area black. Abdomen gray-black. Sternum orange-brown, suffused with black. Legs orange-brown; TmI 0.5. Epigynum (figs. 573–575).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from northern Brazil.

Eperigone dentimandibulata (Keyserling),
new combination

Figures 576–580

Erigone dentimandibulata Keyserling, 1886:163 (two male syntypes, from Colombia, in BMNH, examined).—Roewer, 1942: 724.—Bonnet, 1956: 1760.

Erigone edax Keyserling, 1886: 175 (female holotype, from Colombia, in BMNH, examined). Roewer, 1942: 724.—Bonnet, 1956: 1763. NEW SYNONYMY. This female was probably taken in the same general locality as *E. dentimandibulata*; it resembles that species in size and in the presence of the trichobothrium on metatarsus 4, and the epigynum is of the form to be expected for the female of *E. dentimandibulata*.

DIAGNOSIS: This species is close to *E. fradeorum* and *E. eschatologica*. The female epigynum (fig. 578) may appear somewhat different in fresh specimens; the dorsal aspect (fig. 579) distinguishes this species from *E. fradeorum* and *E. eschatologica*. The male is diagnosed by the palp, and particularly by the tibia (figs. 576, 577); this is more elon-

gated than in *E. fradeorum* and *E. eschatologica*, and there are small differences in the apophyses. The embolic division of *E. dentimandibulata* is very close to those of *E. fradeorum* and *E. eschatologica*. Both sexes have a trichobothrium on metatarsus 4. Further study, with larger numbers of specimens, may possibly show that *E. fradeorum* and *E. eschatologica* are only variants of *E. dentimandibulata*.

FEMALE: Total length 4.05. Carapace length 1.4; orange-brown, with weak blackish markings and margins. Abdomen gray to black. Sternum orange to brown. Legs orange to brown; TmI ca. 0.55. Epigynum (figs. 578, 579).

MALE: Total length 2.9–3.45. Carapace length 1.4–1.65. Color and trichobothria as female. Chelicerae armed with pointed boss anteriorly, as in *E. fradeorum* and *E. eschatologica*, but longer than in those species. Palp (figs. 576, 577, 580).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Colombia and Peru (Peru specimen not seen).

PARALETES, NEW GENUS

TYPE SPECIES: *Paraletes timidus*, new species.

ETYMOLOGY: From the Greek *para*, near, beside, and *Aletes*, in Greek mythology the brother of *Erigone*. Gender masculine.

DIAGNOSIS: The female of the only known species is diagnosed by the epigynum (fig. 585), but this is virtually indistinguishable from an *Erigone* epigynum; the chaetotaxy (tibial spines 1111) separates from *Erigone*. The male is diagnosed by the palp (figs. 581–583), the large eyes (fig. 584), and the chaetotaxy.

DESCRIPTION: The single known species has total length ca. 1.3. The carapace is unmodified. The eyes are fairly large, with posterior medians ca. 1.5 d apart (female), 0.5 d apart (male); the ocular area projects over the clypeus, particularly in the male (fig. 584), but this is less pronounced than in *Exechopsis* (fig. 188). The male chelicerae have a minute pointed boss anteriorly. The legs are short, with tibia 1 1/d 4–5; dorsal tibial spines are

1111, short and weak. Metatarsi 1–3 have a trichobothrium; TmI 0.35–0.4. The tracheal form is erigonine. The epigynum is very lightly pigmented (fig. 585), and similar to those of the smaller species of *Erigone*. The male palpal tibia has two strongly sclerotized apophyses distally (figs. 581, 583), and the paracymbium is moderately large; the supratregular apophysis is well developed (fig. 581). The embolic division comprises a radical part which is complex in shape and strongly sclerotized; the embolus is a small stub which arises from near the middle of the radical part (fig. 582).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Brazil.

TAXONOMIC POSITION: The epigynum is more or less identical with those of the genus *Erigone*. The palp shows general similarities to those of some *Eperigone* species, particularly in the tibial apophyses, and in the forms of the supratregular apophysis and the embolic division. The tracheae are erigonine. *Paraletes* clearly belongs in the *Erigone* group of genera.

***Paraletes timidus*, new species**

Figures 581–585

TYPES: Male holotype, with two female paratypes, from 5 km east of Belem, Pará, Brazil, in soil litter layer of primary forest, Apr. 26, 1974 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning shy.

DIAGNOSIS: The female is diagnosed by a combination of the epigynum (fig. 585), which is closely similar to those of some *Erigone* species, and the chaetotaxy: the tibial spines (1111) distinguish from *Erigone*. The male is diagnosed by the palp (fig. 581), particularly by the tibial apophyses (figs. 581, 583) and the form of the embolic division (fig. 582), and by the large and somewhat projecting eyes (fig. 584).

FEMALE: Total length 1.35. Carapace length 0.55; yellow-brown to orange-brown, with dusky markings and margins. Abdomen gray, with faint paler chevrons dorsally. Sternum yellow to orange, with gray margins. Legs orange-brown; TmI 0.4. Epigynum (fig. 585).

MALE: Total length 1.3. Carapace length

0.65. Color as female. TmI 0.35. Palp (figs. 581–583).

MATERIAL EXAMINED: BRAZIL: *Pará*: the types above. Same locality, Apr. 18, 1974 (R. T. Schuh), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Brazil.

MICROPLANUS, NEW GENUS

TYPE SPECIES: *Microplanus mollis*, new species.

ETYMOLOGY: From the Greek *mikros*, small, and *planes*, a wanderer. Gender masculine.

DIAGNOSIS: The male palp (figs. 586–588) is fairly close to those of *Smermisia* and *Spanioplanus*, but sufficiently different to warrant a separate genus. Females are not known.

DESCRIPTION: The male of the single known species has total length 1.0–1.1. The carapace is unmodified; the eyes are fairly large, with the posteriors ca. 0.5 d apart. The legs are short and stout, with tibia 1 1/d 5. Dorsal tibial spines are 1111, very weak; metatarsi 1–3 have a trichobothrium; TmI 0.4. The tracheal system is erigonine. The male palpal tibia has only weak apophyses (fig. 587). The paracymbium is well developed (fig. 586), and the suprategular apophysis (fig. 586) is stout and prominent. The embolic division (fig. 588) comprises a rounded plate with pointed extensions dorsally and ventrally, and the embolus is a short stub at the anterior of the plate.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The palpal organ shows general similarities, in the forms of the suprategular apophysis and the embolic division, to those of a small species of *Eperigone*, but *Microplanus* is distinguished from *Eperigone* by the chaetotaxy and the larger eyes. *Microplanus* has a tracheal system of the erigonine form, and probably belongs in the *Erigone* group of genera, close to *Eperigone*.

Microplanus mollis, new species

Figures 586–588

TYPE: Male holotype from Paramo de Monserrate, Cundinamarca, Colombia, in

grassland, Oct. 13, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning tender.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the forms of the tibial apophyses (figs. 586, 587) and of the embolic division (fig. 588), and by the small size. The female is not known.

MALE: Total length 1.05–1.1. Carapace length 0.55; pale orange, slightly darker anteriorly. Abdomen black, with faint paler chevrons dorsally. Sternum orange, suffused with gray. Legs pale orange; TmI 0.4. Palp (figs. 586–588).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the holotype. Same locality, barber traps, 1968–1969 (H. Sturm), 2 male paratypes (AMNH); grassland, Sept. 10, 1986 (H. Sturm), 1 male paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

SPANIOPLANUS, NEW GENUS

TYPE SPECIES: *Spanioplanus mitis*, new species.

ETYMOLOGY: From the Greek *spanios*, rare, and *planes*, a wanderer. Gender masculine.

DIAGNOSIS: The male is diagnosed by the palp (figs. 589–591); this is fairly close to those of *Microplanus* and *Smermisia*, but sufficiently different to warrant a separate genus. Females are not known.

DESCRIPTION: The male of the single known species has total length 1.4. The carapace is unmodified; the eyes are moderately large, with the posteriors less than 0.5 d apart. The chelicerae (male) have a minute pointed boss anteriorly. The legs are short and stout, with tibia 1 1/d ca. 5. Dorsal tibial spines are 2211; metatarsi 1–3 have a trichobothrium; TmI 0.4. The tracheal system is not known. The male palpal tibia has only a weak apophysis (fig. 590). The paracymbium is well developed (fig. 589), and the suprategular apophysis is stout and prominent (fig. 589). The embolic division (fig. 591) comprises an irregular plate, and the embolus is a short stub anteriorly.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Peru.

TAXONOMIC POSITION: Like *Microplanus*,

this genus probably belongs in the *Erigone* group of genera, close to *Eperigone*.

***Spanioplanus mitis*, new species**

Figures 589–591

TYPE: Male holotype from Aguas Mellizas, Estancia Naranjal, San Ramon, Junin, Peru, 1500 m, July 23, 1965 (P. and G. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning mild, soft.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the forms of the tibial apophysis (figs. 589, 590) and of the embolic division (fig. 591). The female is not known.

MALE: Total length 1.4. Carapace length 0.65; pale orange. Abdomen gray. Sternum pale yellow. Legs pale orange; TmI 0.4. Palp (figs. 589–591).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

***FISSISCAPUS*, NEW GENUS**

TYPE SPECIES: *Fissiscapus pusillus*, new species.

ETYMOLOGY: From the Latin *fissus*, split, cloven, and *scapus*, a scape. Gender masculine.

DIAGNOSIS: The female epigynum (figs. 592, 594) has ventral aspects similar to those of some *Eperigone* species, but the dorsal plates (figs. 593, 595) are different. Males are not known.

DESCRIPTION: Females of the two known species have length 1.35–2.0. The carapace is unmodified; the eyes are moderate in size, with posteriors 1–1.5 d apart. The legs (of the type species) are moderately short and stout, with tibia 1 l/d 4–5. Tibial spines are 2211, and metatarsal spines are absent. Metatarsi 1–4 (of the type species) have a trichobothrium; TmI 0.45. The tracheal form is erigonine. The epigynum is a scape with a long median fissure (figs. 592, 594); internally the duct system is simple (fig. 595).

INCLUDED SPECIES: *Fissiscapus pusillus*, new species, and *Fissiscapus fractus*, new species.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: The tracheal form is erigonine, and the epigyna are close to those of *Eperigone*. It seems probable that *Fissiscapus* lies in the *Erigone* group of genera.

***Fissiscapus pusillus*, new species**

Figures 592, 593

TYPES: Female holotype, with one female paratype, from Paramo de Chingaza, Cundinamarca, Colombia, in moist thin soil, 3550 m, Aug. 22, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning tiny.

DIAGNOSIS: The female epigynum (figs. 592, 593) is a long scape, split longitudinally into two fairly straight arms. The male is not known.

FEMALE: Total length 1.35–1.55. Carapace length 0.7–0.75; orange-brown, with dusky markings and margins. Abdomen gray, speckled dorsally with white. Sternum orange, suffused with gray. Legs orange; TmI 0.45. Epigynum (figs. 592, 593).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the types above. Same locality, in grassland, Sept. 24, 1986 (H. Sturm), 1 female paratype (MCZ). Paramo de Chisaca, in thin soil and humus on sand, 3720 m, Aug. 26, 1985 (H. Sturm), 1 female paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

***Fissiscapus fractus*, new species**

Figures 594, 595

TYPE: Female holotype from Paramo de Monserrate, Cundinamarca, Colombia, in barber traps, 3230 m, 1968–1969 (H. Sturm); deposited in AMNH.

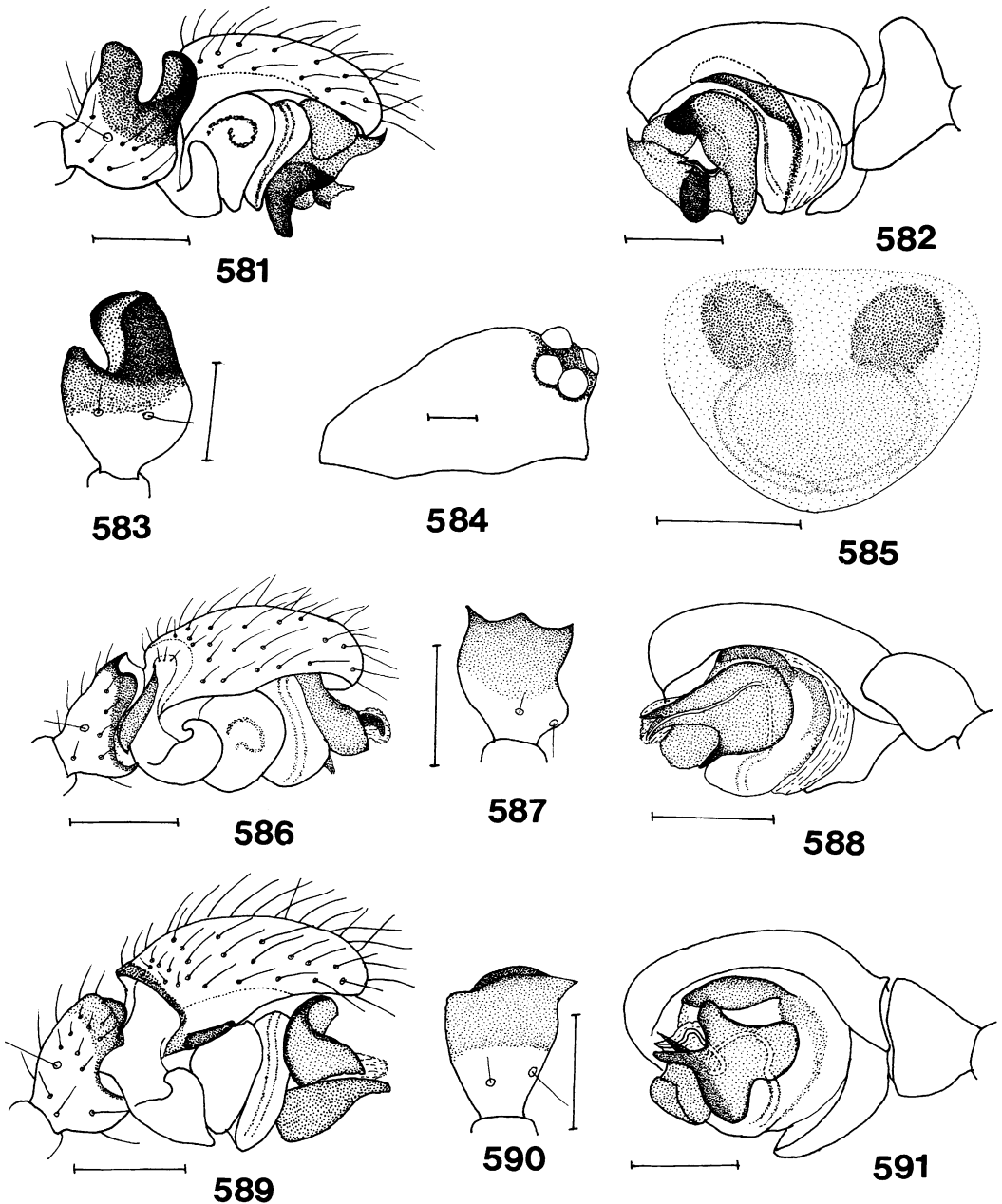
ETYMOLOGY: The specific name is a Latin adjective meaning broken.

DIAGNOSIS: The unique specimen, which is considerably damaged, is placed provisionally in this genus. The female is diagnosed by the epigynum (figs. 594, 595), which has a moderately long scape, split longitudinally into two curved arms. The male is not known.

FEMALE: Total length 2.0. Carapace length 1.0; brown, with dusky markings and margins. Abdomen black, with paler chevrons dorsally. Sternum orange, strongly suffused with black. Legs missing. Epigynum (figs. 594, 595).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.



Figs. 581–591. 581–585. *Paraletes timidus*. 586–588. *Microplanus mollis*. 589–591. *Spanioplanus mitus*. 581, 586, 589. Male palp, ectal. 582, 588, 591. Male palp, mesal. 583, 587, 590. Male palpal tibia, dorsal. 584. Male carapace/eyes, lateral. 585. Epigynum, ventral. Scale lines 0.1 mm.

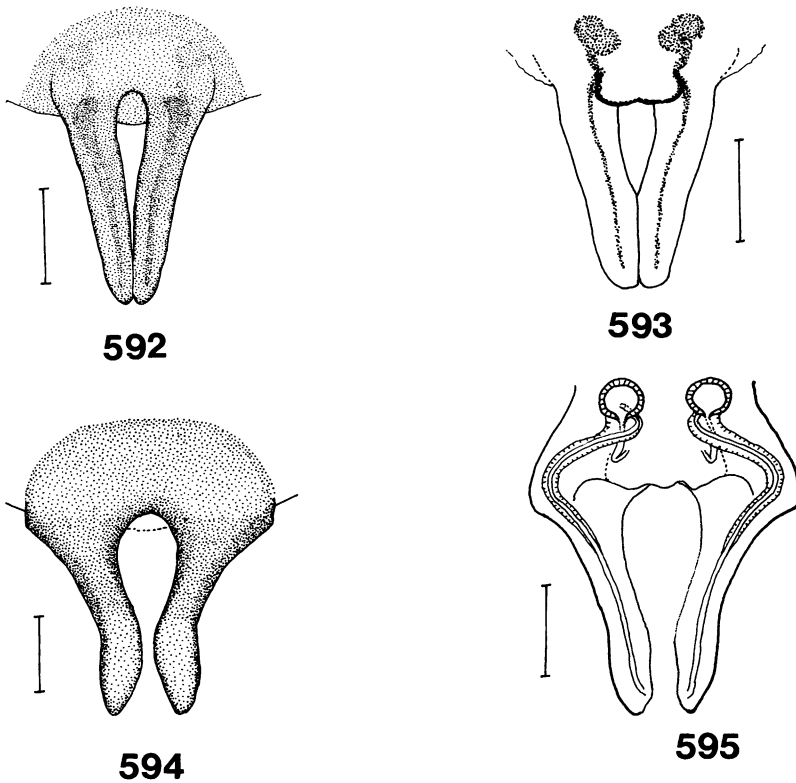
LABICYMBIUM, NEW GENUS

TYPE SPECIES: *Labcymbium sturmi*, new species.

ETYMOLOGY: From the Greek *labe*, a handle, and *cymbium*, referring to the protuber-

ance on the ectal side of the cymbium of the male palp. Gender neuter.

DIAGNOSIS: Females are diagnosed by the epigynum, which is distinctive (e.g., figs. 601, 652); there can be, however, a superficial resemblance in some cases to the epigyna of



Figs. 592–595. 592, 593. *Fissiscapus pusillus*. 594, 595. *F. fractus*. **592, 594.** Epigynum, ventral. **593.** Epigynum, dorsal. **595.** Epigynum, internal. Scale lines 0.1 mm.

some *Meioneta* species. The chaetotaxy is a confirmatory character. Males are diagnosed by the palp, particularly by the cymbial shape (e.g., figs. 599, 625) and by the embolic division, which has the embolus as a small hooklike sclerite (e.g., figs. 597, 614).

DESCRIPTION: The members of the genus have total length 1.3–3.2. The carapace is unmodified in both sexes, though in one female (*L. major*) there is a clear marginal sulcus, similar to that in *Erigone* (Millidge, 1988a). The eyes are moderately large, with the posteriors all 0.5–1 d apart. The chelicerae have long teeth in the anterior row; in six species the male has a tiny pointed boss anteriorly. The legs are relatively stout, with tibia 1 1/d 5–8. The dorsal tibial spines are 2211, with no laterals; the metatarsi and femora are spineless. Metatarsi 1–3 have a trichobothrium, and in four species there is also a trichobothrium on metatarsus 4; TmI 0.45–0.55. The female palp is clawless. The tracheal system is erigonine. The epigynum is a

broad scape, which often lies flat, but is sometimes erected; the scape comprises a central part and two clawlike lateral projections (e.g., figs. 601, 652). The genital openings lie at the posterior ends of the “claws,” on the dorsal side, and internally the ducts follow a relatively simple pathway from the spermathecae to the openings (e.g., fig. 648). Most of the epigyna are rather similar in appearance from the ventral aspect, and are more readily distinguishable from the dorsal aspect. The male palpal tibiae have short apophyses (e.g., fig. 598). The cymbium has a hooklike projection at the base, on the ectal side (e.g., figs. 612, 619), and a second projection more anteriorly; these projections vary in size, and in one species both are reduced to almost nothing. The cymbium in some species has 2–3 stout spines distally on the mesal side (fig. 614). The paracymbium is stout. The sclerotized tegular margin on the mesal side of the palpal organ has a break (e.g., fig. 609); the suprategular apophysis can be quite large or

fairly small and insignificant. The embolic division, which is often only lightly sclerotized, is a simple plate which is sometimes beaklike anteriorly (e.g., fig. 630), and the tail is variable in shape. The embolus is a small hooklike sclerite which arises from the mesal side of the plate. A broad membrane ("embolic membrane") arises from the stalk of the embolic division.

INCLUDED SPECIES: The type species, and 16 new species described below.

DISTRIBUTION: Colombia, Peru, Ecuador and Venezuela, at altitudes of ca. 2000 m upwards.

TAXONOMIC POSITION: On the basis of the tracheal system, *Labicymbium* is in the Eriogoninae. The female epigynum is basically similar, both externally and internally, to those of some *Eperigone* species. The male palpal organ shares with *Erigone* the broken sclerotized tegular margin, but the shape of the embolic division is altogether simpler. As in *Erigone* and *Eperigone*, the embolus is a short stublike sclerite, but in *Labicymbium* the stub is hooked. It seems probable that *Labicymbium* must be regarded as yet another member of the *Erigone* complex of genera.

***Labicymbium sturmi*, new species**

Figures 596–602

TYPE: Male holotype from Paramo de La Rusia, Boyacá, Colombia, in moss and higher plants, 3600 m, Sept. 27, 1987 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a patronym in honor of Prof. H. Sturm.

DIAGNOSIS: The female epigynum has a broad, rather truncated median scape (figs. 600, 601); this is fairly close to that of *L. cordiforme* (fig. 640), but the dorsal aspects separate these two species (fig. 602; cf. fig. 641). The male palp (figs. 596–599) has a cymbial shape (fig. 599) fairly close to that of *L. opacum* (fig. 604), but *L. sturmi* differs from that species by the absence both of the trichobothrium on metatarsus 4 and of the small cheliceral boss.

FEMALE: Total length 2.1–2.45. Carapace length 1.0–1.1; brown to dark brown, with darker markings and margins. Abdomen gray to black. Sternum yellow to brown, suffused with variable amounts of black. Legs pale

yellow to orange-brown; TmI 0.45–0.55. Epigynum (figs. 600–602); shape slightly variable.

MALE: Total length 2.0–2.3. Carapace length 1.0–1.1. Color and chaetotaxy as female. Palp (figs. 596–599).

MATERIAL EXAMINED: COLOMBIA: *Boyacá*: the holotype. Same locality, Sept. 24, 1985 and Sept. 25–Oct. 15, 1985 (H. Sturm), 18 female, 12 male paratypes (MCZ); and Sept. 24, 1987 (H. Sturm), 1 female paratype (MCZ). *Cundinamarca*: Paramo de Chingaza, 3550 m, Sept. 14, 1985 (H. Sturm), 2 female paratypes (MCZ). Paramo de Chisaca, in grass in woods, 3720 m, Sept. 8 and 17, 1985 (H. Sturm), 2 female, 1 male paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

***Labicymbium opacum*, new species**

Figures 603–605

TYPES: Male holotype, with three female paratypes, from Paramo de Chisaca, Cundinamarca, Colombia, in woods, 3720 m, Sept. 18, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The female epigynum (figs. 603, 605) has a relatively narrow median scape; the epigynum is very close to that of *L. sublestum* (figs. 606, 607), but that species lacks the trichobothrium on metatarsus 4 which is present in *L. opacum*. In the male palp (fig. 604), both the cymbial shape and the embolic division are rather close to those of *L. sturmi*, but that species differs from *L. opacum* in the absence of the trichobothrium on metatarsus 4 and of the small boss on the chelicerae.

FEMALE: Total length 2.45–2.5. Carapace length 1.0; brown, with darker markings and margins. Abdomen gray to black. Sternum brown suffused with black, to almost black. Legs orange-brown; metatarsus 4 with trichobothrium: TmI 0.45–0.5. Epigynum (figs. 603, 605).

MALE: Total length 1.85. Carapace length 0.9. Color and chaetotaxy as female. Chelicerae with tiny pointed boss anteriorly. Palp (fig. 604).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the types above. Same locality,

near Laguna Negra, in woods, Sept. 8, 1985 (H. Sturm), 1 female paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

Labicymbium sublestum, new species

Figures 606, 607

TYPE: Female holotype from Paramo de Chisaca, Cundinamarca, Colombia, in grassland, Sept. 18, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning slight.

DIAGNOSIS: The female epigynum (figs. 606, 607) is similar to that of *L. opacum* (figs. 603, 605), from which *L. sublestum* is distinguished by the absence of a trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 1.6–2.0. Carapace length 0.75–0.9; brown to dark brown. Abdomen gray to black. Sternum orange to brown, heavily suffused with black. Legs brown, orange-brown, or deep brown; TmI 0.5. Epigynum (figs. 606, 607).

MATERIAL EXAMINED: COLOMBIA: *Bogotá*: Paramo de Monserrate, barber traps 1968–1969 (H. Sturm), 4 female paratypes (AMNH). *Boyacá*: Paramo Alto Belen, Sept. 22, 1985 (H. Sturm), 1 female paratype (MCZ). *Cundinamarca*: the holotype. EC-UADOR: *Napo*: 10 km east of Papillecta, on margin of roadside rivulet, 2620 m, Feb. 5, 1976 (R. T. Schuh), 2 female paratypes (AMNH).

DISTRIBUTION: Colombia and Ecuador.

Labicymbium jucundum, new species

Figures 608–610

TYPE: Male holotype from Paramo de La Rusia, Boyacá, Colombia, 3600 m, Sept. 26–Oct. 16, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning pleasant.

DIAGNOSIS: The male is diagnosed by the palp (fig. 608), particularly by the form of the cymbium (figs. 608, 610) and of the embolic division (fig. 609), and by the presence of a trichobothrium on metatarsus 4. The female is not known.

MALE: Total length 1.95. Carapace length 1.0; yellow-brown, with dusky markings and

margins. Chelicerae with minute boss anteriorly. Abdomen black. Sternum yellow, suffused with black. Legs yellow-brown; metatarsus 4 with trichobothrium: TmI 0.5. Palp (figs. 608–610).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Labicymbium fuscum, new species

Figures 611–614

TYPE: Male holotype from roadside between Sibate and Fusagasuga, Cundinamarca, Colombia, 2400 m, Aug. 31, 1969 (P. and B. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the cymbial shape (figs. 612, 613) and the forms of the tibia (fig. 611) and the embolic division (fig. 614). The female is not known.

MALE: Total length 1.75. Carapace length 0.9; brown, somewhat darker anteriorly, with darker markings and margins. Chelicerae with small pointed boss anteriorly. Abdomen black, with faint pale chevrons dorsally. Sternum orange, heavily suffused with black. Legs yellow-brown; TmI 0.5. Palp (figs. 611–614).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Labicymbium auctum, new species

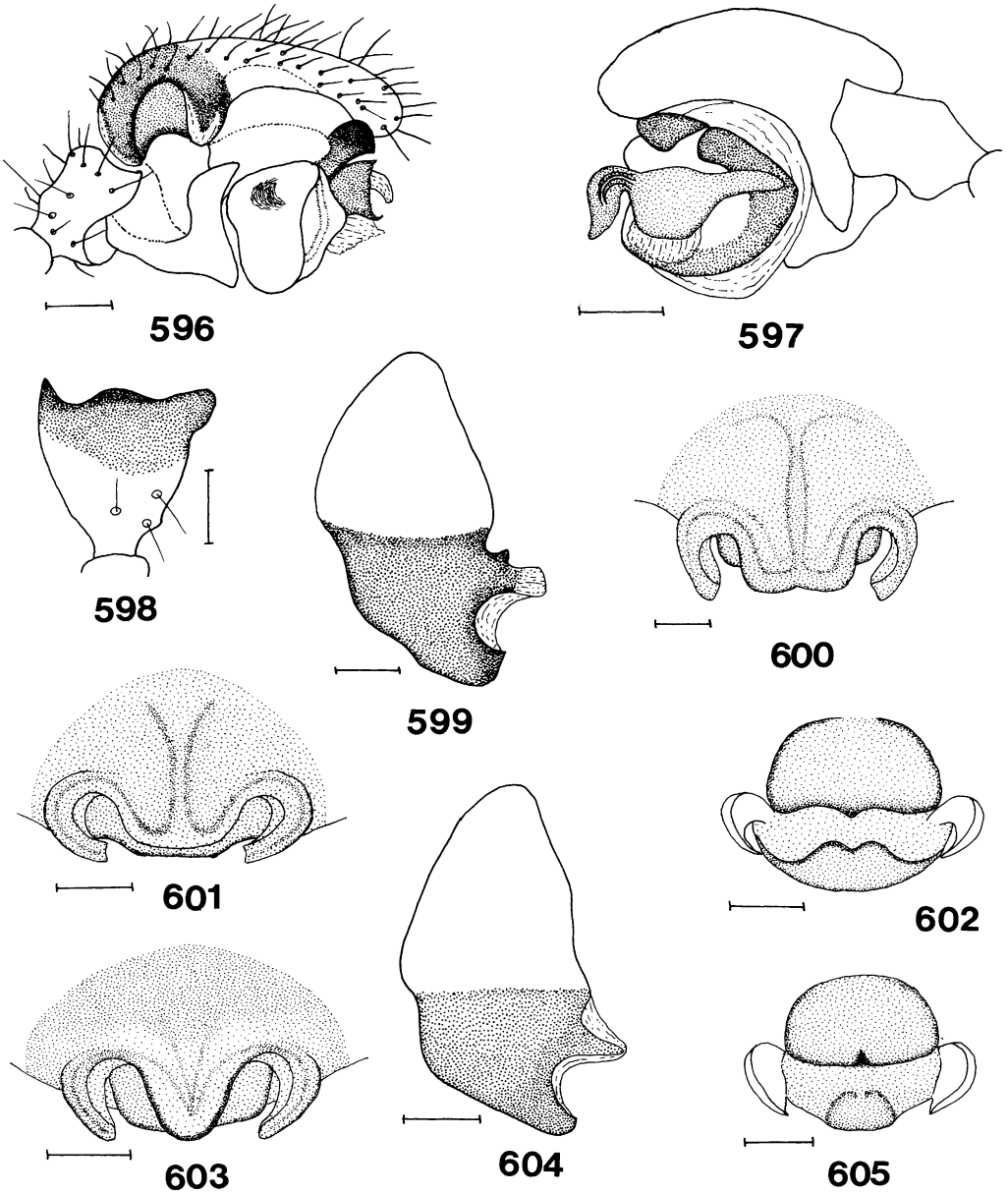
Figures 615–618

TYPE: Male holotype from Paramo Purace, Cauca, Colombia, beaten from foliage, 3000 m, Oct. 20, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning exaggerated, referring to the form of the palp.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the cymbial shape (figs. 615, 618), and the forms of the tibia (fig. 617) and of the embolic division (fig. 616), which distinguish *L. auctum* from all other species of the genus. The female is not known.

MALE: Total length 1.9. Carapace length 0.95; deep brown, with darker markings and



Figs. 596–605. 596–602. *Labicymbium sturmi*. 603–605. *L. opacum*. 596. Male palp, ectal. 597. Male palp, mesal. 598. Male palpal tibia, dorsal. 599, 604. Male cymbium, dorsal. 600, 601, 603. Epigynum, ventral. 602, 605. Epigynum, dorsal. Scale lines 0.1 mm.

margins. Abdomen gray-black. Sternum orange, suffused with gray. Legs orange; TmI 0.5. Palp (figs. 615–618).

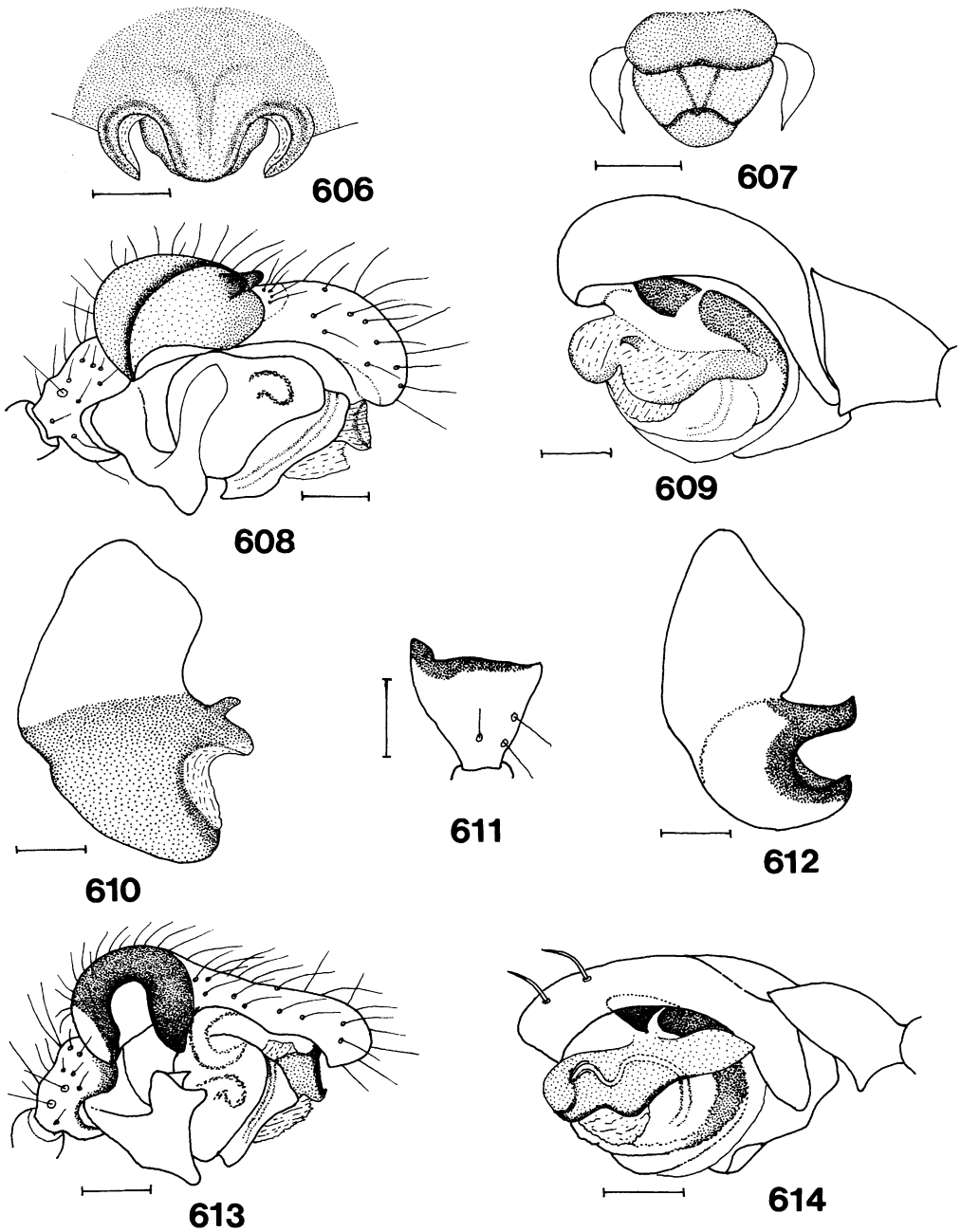
MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Labicymbium nigrum*, new species**

Figures 619–622

TYPE: Male holotype from Aguadita, Cundinamarca, Colombia, March 10, 1974 (L. and N. Herman); deposited in AMNH.

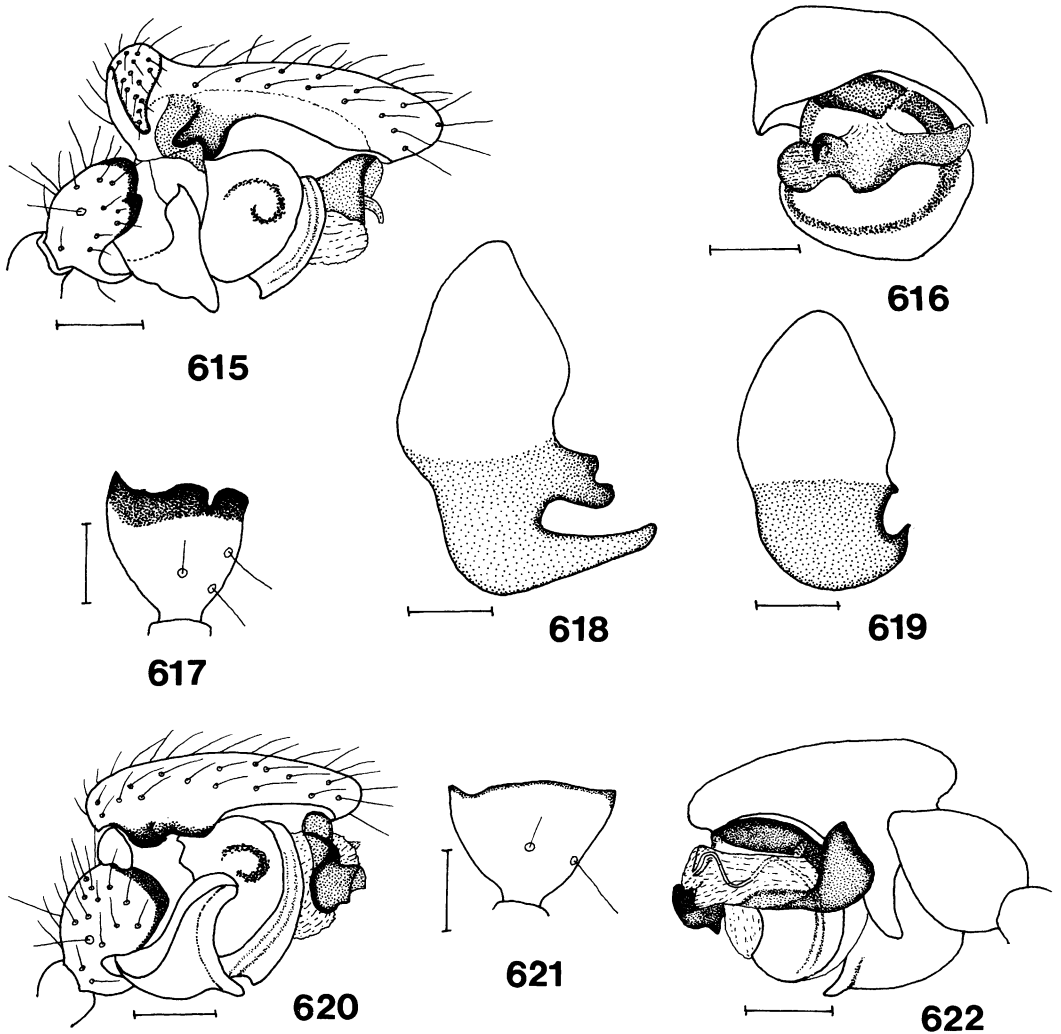


Figs. 606-614. 606, 607. *Labicymbium sublestum*. 608-610. *L. jucundum*. 611-614. *L. fuscum*. 606. Epigynum, ventral. 607. Epigynum, dorsal. 608, 613. Male palp, ectal. 609, 614. Male palp, mesal. 610, 612, Male cymbium, dorsal. 611. Male palpal tibia, dorsal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The male palp has the basal

projection on the cymbium (figs. 619, 620) small, even smaller than that in the somewhat similar species *L. brevis* (fig. 625); the



Figs. 615–622. 615–618. *Labicymbium auctum*. 619–622. *L. nigrum*. 615, 620. Male palp, ectal. 616, 622. Male palp, mesal. 617, 621. Male palpal tibia, dorsal. 618, 619. Male cymbium, dorsal. Scale lines 0.1 mm.

forms of the palpal tibia (fig. 621) and of the embolic division (fig. 622) separate *L. nigrum* and *L. brevis*. The female is not known.

MALE: Total length 1.4. Carapace length 0.65; deep brown, with black markings and margins. Chelicerae with small pointed boss anteriorly. Abdomen black. Sternum brown, suffused with black. Legs brown; TmI 0.45. Palp (figs. 619–622).

MATERIAL EXAMINED: COLOMBIA: *Bogotá*: Paramo de Monserrate, barber traps,

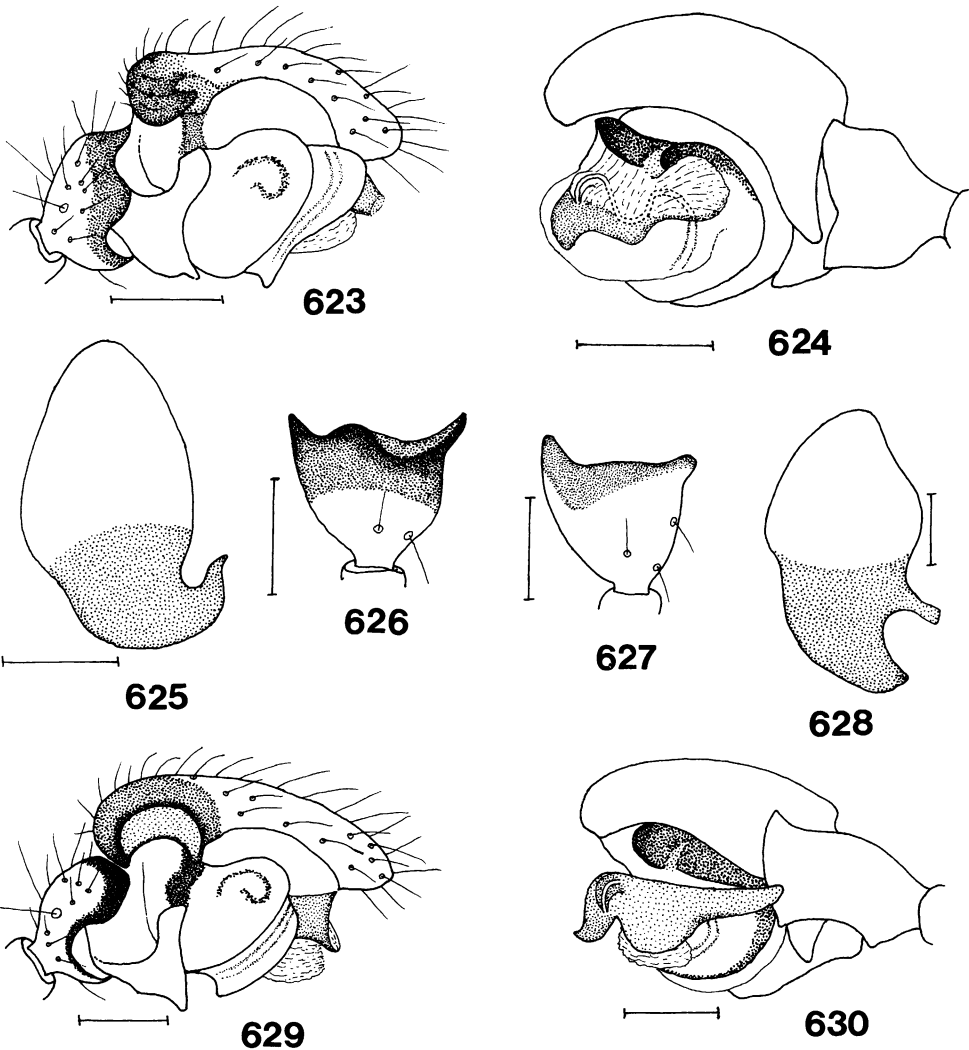
1968–69 (H. Sturm), 2 male paratypes (AMNH); *Cundinamarca*: the holotype.

DISTRIBUTION: Known only from Colombia.

***Labicymbium breve*, new species**

Figures 623–626

TYPE: Male holotype from Pichinde, Valle, Colombia, 1700 m, Aug. 28, 1967 (P. and B. Wygodzinsky); deposited in AMNH.



Figs. 623–630. 623–626. *Labicymbium breve*. 627–630. *L. exiguum*. 623, 629. Male palp, ectal. 624, 630. Male palp, mesal. 625, 628. Male cymbium, dorsal. 626, 627. Male palpal tibia, dorsal. Scale lines 0.1 mm.

ETYMOLOGY: The specific name is a Latin adjective meaning short.

DIAGNOSIS: The male palp has the basal projection on the cymbium small (figs. 625, 623), but larger than in *L. nigrum* (fig. 619); the forms of the palpal tibia (fig. 626) and of the embolic division (fig. 624) separate *L. breve* and *L. nigrum*. The female is not known.

MALE: Total length 1.35. Carapace length 0.65; deep brown, with blackish markings and margins. Abdomen black. Sternum orange, heavily suffused with black. Legs orange-brown; TmI 0.45. Palp (figs. 623–626).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Labicymbium exiguum, new species
Figures 627–630

TYPE: Male holotype from Paramo de Sumampaz, Espec, Colombia, 3800 m, June 30, 1965 (P. and B. Wygodzinsky); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning small.

DIAGNOSIS: The cymbial shape (figs. 628,

629) coupled with the form of the embolic division (fig. 630) of the male palp distinguish this species from others in the genus. The female is not known.

MALE: Total length 1.55. Carapace length 0.75; brown, with dusky markings and margins. Abdomen gray-black. Sternum brown, suffused with gray. Legs pale orange; TmI 0.5. Palp (figs. 627–630).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: Paramo de Monserrate, barber traps, 1968–69 (H. Sturm), 1 male paratype (AMNH); *Espec*: the holotype.

DISTRIBUTION: Known only from Colombia.

***Labicymbium ambiguum*, new species**

Figures 631–633

TYPE: Male holotype from Paramo de Chisaca, Cundinamarca, Colombia, in thin soil and humus on sand, 3720 m, Aug. 26, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning uncertain.

DIAGNOSIS: The male is diagnosed by the presence of a trichobothrium on metatarsus 4, and by the palp; cymbial apophyses are very weakly developed (fig. 631), and the embolic division (fig. 632) is somewhat abnormal in shape, with a long, narrow tail. These characters distinguish *L. ambiguum* from other *Labicymbium* species. The female is not known.

MALE: Total length 1.4. Carapace length 0.75; yellow. Abdomen gray. Sternum yellow, suffused with gray. Legs yellow; metatarsus 4 with trichobothrium; TmI 0.45. Palp (figs. 631–633).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Labicymbium major*, new species**

Figures 634, 635

TYPES: Female holotype, with four female paratypes, from paramo near Sierra Nevada de Santa Marta, Santa Marta, Colombia, 2300 m, Dec. 1974–Jan. 1975 (C. W. Gibson and R. J. Robins); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning larger.

DIAGNOSIS: The female epigynum has two lateral projections rounded (fig. 634), while

the dorsal aspect is very characteristic (fig. 635); these characters distinguish *L. major* from other *Labicymbium* species. The male is not known.

FEMALE: Total length 3.1–3.2. Carapace length 1.3; orange-brown, slightly darker on margins; a clear sulcus is present near the margin, between chelicera and coxa 1. Abdomen gray. Sternum orange, suffused with gray. Legs orange-brown; TmI 0.5–0.55. Epigynum (figs. 634, 635).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

***Labicymbium cordiforme*, new species**

Figures 640, 641

TYPE: Female holotype from Paramo Alto Belen, Boyacá, Colombia, 3600 m, Sept. 24, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning heart-shaped, referring to the dorsal plate of the epigynum.

DIAGNOSIS: The female epigynum has a short, broad median scape (fig. 640); this is fairly close to that of *L. sturmi* (figs. 600, 601), but the dorsal aspects separate these two species (fig. 641 cf. fig. 602). The male is not known.

FEMALE: Total length 2.05. Carapace length 1.0; brown, with blackish margins. Abdomen black. Sternum brown, heavily suffused with black. Legs brown; metatarsi 4 missing, TmI 0.5. Epigynum (figs. 640, 641).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

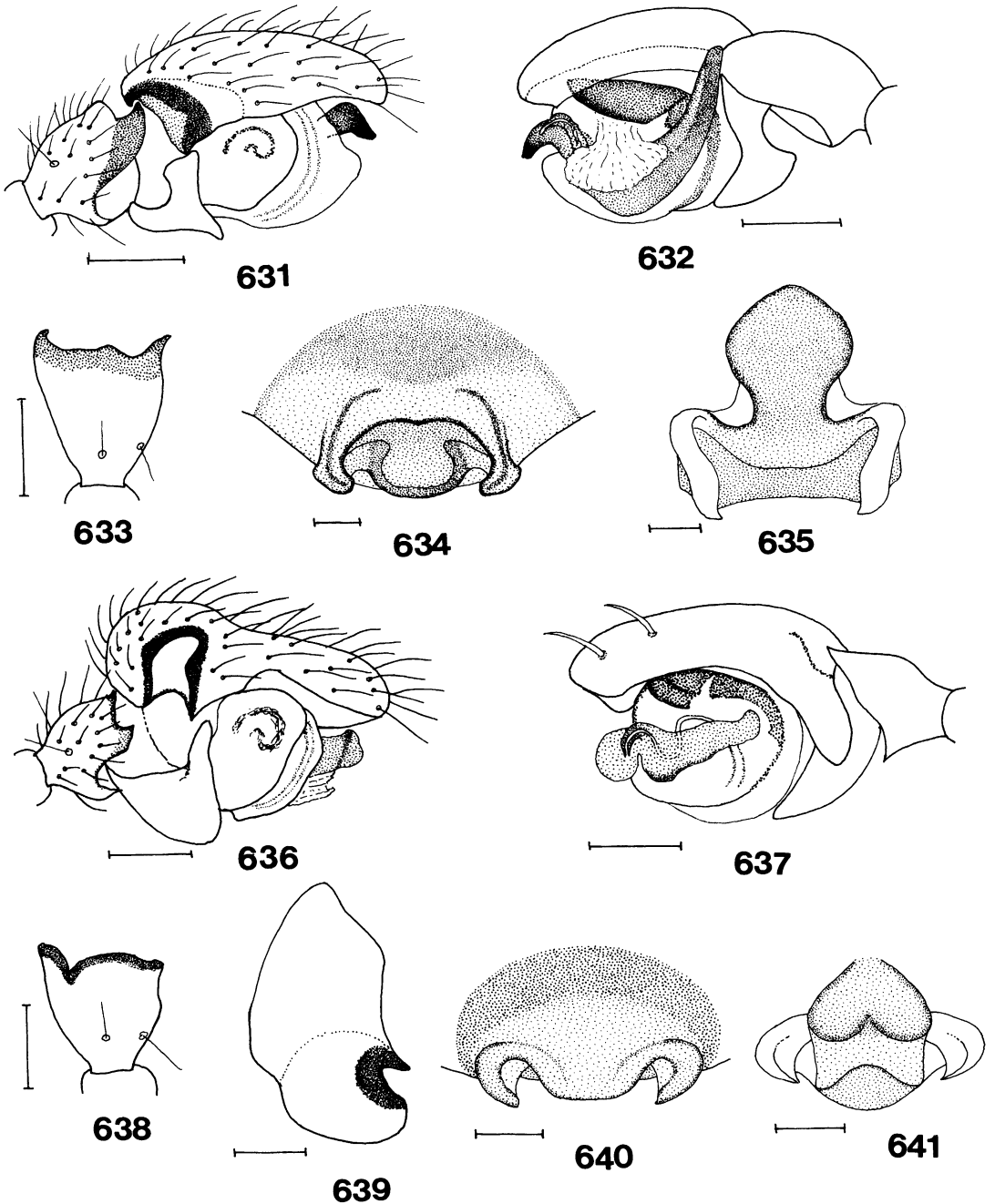
***Labicymbium cognatum*, new species**

Figures 636–639

TYPE: Male holotype from Torentoy Canyon, base of Machu Picchu, Cuzco, Peru, 2000–2200 m, June 19–23, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning related.

DIAGNOSIS: The male is diagnosed by the presence of a trichobothrium on metatarsus 4, and by the palp, particularly by the cymbium (figs. 636, 639), which has only small apophyses, and by the forms of the tibia (fig. 638) and the embolic division (fig. 637). These

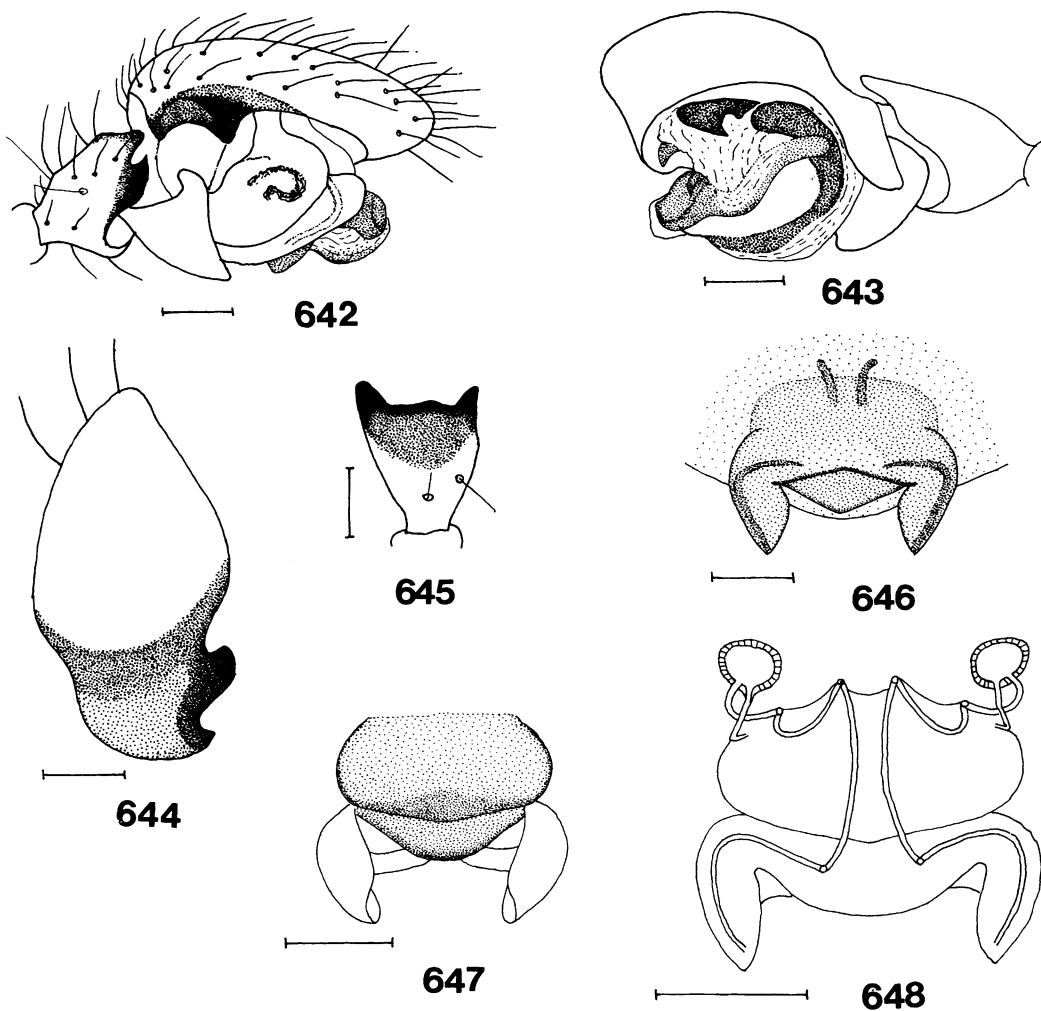


Figs. 631–641. 631–633. *Labicymbium ambiguum*. 634, 635. *L. major*. 636–639. *L. cognatum*. 640, 641. *L. cordiforme*. 631, 636. Male palp, ectal. 632, 637. Male palp, mesal. 633, 638. Male palpal tibia, dorsal. 634, 640. Epigynum, ventral. 635, 641. Epigynum, dorsal. 639. Male cymbium, dorsal. Scale lines 0.1 mm.

characters distinguish *L. cognatum* from other *Labicymbium* species. The female is not known.

MALE: Total length 1.6. Carapace length

0.8; brown, with slightly darker markings and margins. Chelicerae with tiny pointed boss anteriorly. Abdomen gray-black, with faint paler markings dorsally. Sternum pale or-



Figs. 642–648. *Labicymbium dentichele*. 642. Male palp, ectal. 643. Male palp, mesal. 644. Male cymbium, dorsal. 645. Male palpal tibia, dorsal. 646. Epigynum, ventral. 647. Epigynum, dorsal. 648. Epigynum, internal. Scale lines 0.1 mm.

ange, suffused with black. Legs orange-brown; metatarsus 4 with trichobothrium: TmI 0.5. Palp (figs. 636–639).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

***Labicymbium dentichele*, new species**

Figures 642–648

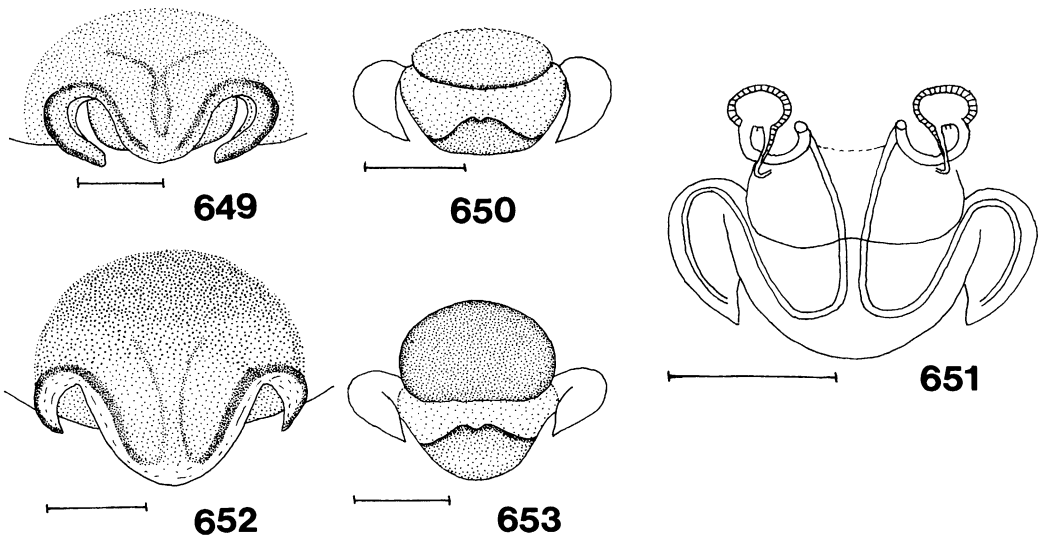
TYPES: Male holotype, with two female paratypes, from Rio Abiseo National Park, San Martin, Peru, Aug. 9, 1986 (Roth); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning with toothed chelicerae.

DIAGNOSIS: The female epigynum has no

median scape, but large lateral projections (fig. 646), and a distinctive dorsal aspect (fig. 647). The male is diagnosed by the palp, particularly by the cymbium (figs. 644, 642), which has relatively small apophyses, and by the forms of the tibia (fig. 645) and the embolic division (fig. 643). These characters distinguish *L. dentichelis* from other *Labicymbium* species.

FEMALE: Total length 2.2–2.35. Carapace length 0.9–1.0; pale brown to brown. Abdomen gray to black. Sternum brown, suffused with gray. Legs brown to orange-brown, suffused with deeper brown; TmI ca. 0.45. Epigynum (figs. 646–648).



Figs. 649–653. Epigyna. 649–651. *Labicymbium avium*. 652, 653. *L. montanum*. 649, 652. Ventral. 650, 653. Dorsal. 651. Internal. Scale lines 0.1 mm.

MALE: Total length 1.8. Carapace length 1.05. Color and chaetotaxy as female. Chelicerae with two small pointed bosses, one anterolateral, one anterior. Palp (figs. 642–645).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

***Labicymbium avium*, new species**

Figures 649–651

TYPE: Female holotype from 21 km south of Quito, Pichincha, Ecuador, wet area along roadside, 2700 m, Feb. 1, 1976 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning out of the way, remote.

DIAGNOSIS: The female epigynum (fig. 649) is close to that of *L. sublestum* (fig. 606), and despite the differences in the ventral aspects (fig. 650; cf. fig. 607), *L. avium* may prove to be identical with *L. sublestum*. The male is not known.

FEMALE: Total length 2.0. Carapace length 0.8; orange-brown, somewhat darker anteriorly and on margins. Abdomen gray. Sternum orange-brown, suffused with gray. Legs orange-brown; TmI 0.55. Epigynum (figs. 649–651).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

***Labicymbium montanum*, new species**

Figures 652, 653

TYPE: Female holotype from La Aguada cable car station, Mérida, Venezuela, 3452 m, Feb. 23–25, 1968 (P. and B. Wygodzinsky and M. Cormons); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning of mountains.

DIAGNOSIS: The female epigynum (figs. 652, 653) has a broad, rounded scape and small lateral projections; these characters distinguish *L. montanum* from other *Labicymbium* females. The male is not known.

FEMALE: Total length 1.6. Carapace length 0.8; orange-brown, with blackish markings and margins. Abdomen black. Sternum orange, heavily suffused with black. Legs orange-brown; TmI 0.5. Epigynum (figs. 652, 653).

MATERIAL EXAMINED: Only the holotype.

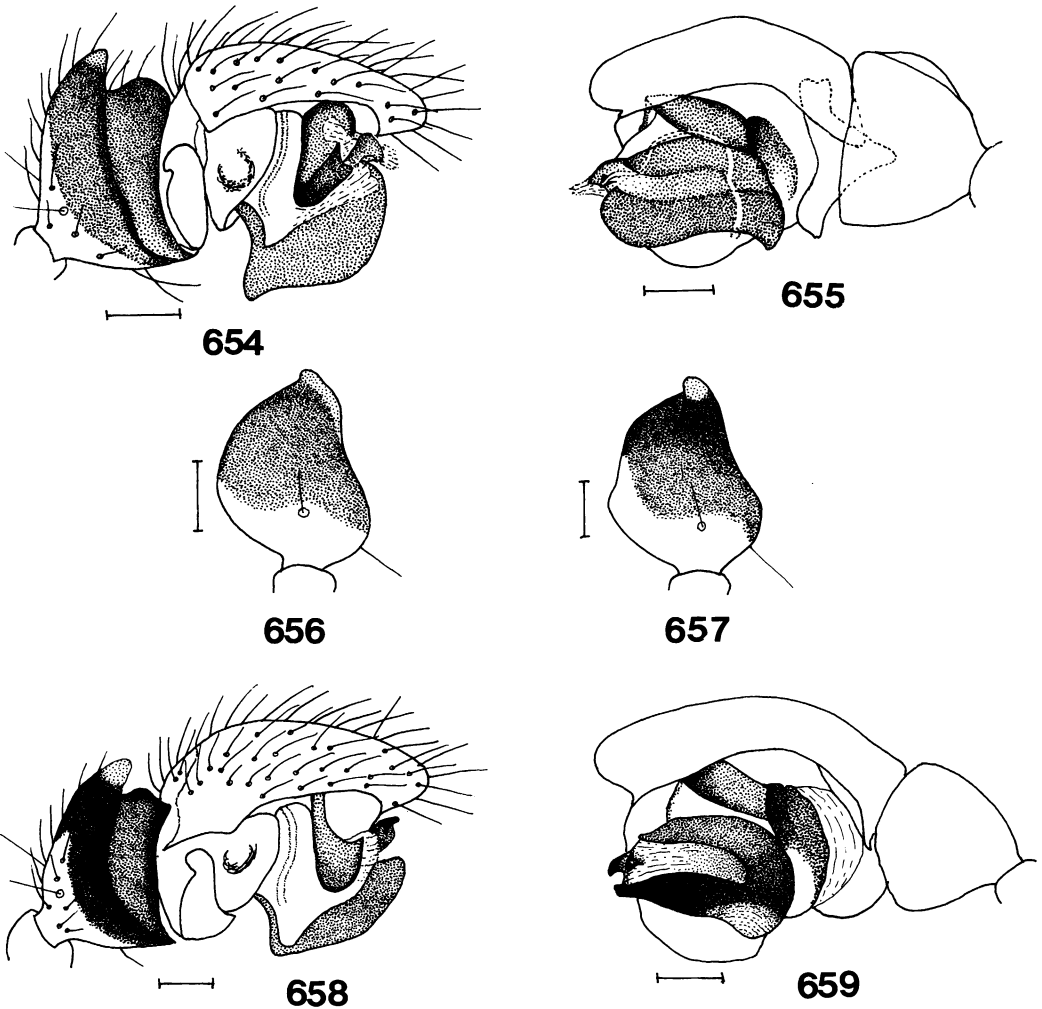
DISTRIBUTION: Known only from Venezuela.

***GRAVIPALPUS*, NEW GENUS**

TYPE SPECIES: *Gravipalpus callosus*, new species.

ETYMOLOGY: From the Latin *gravis*, heavy, and *palpus*, referring to the appearance of the palp. Gender masculine.

DIAGNOSIS: Males are diagnosed by the palp



Figs. 654–659. 654–656. *Gravipalpus callosus*. 657–659. *G. crassus*. 654, 658. Male palp, ectal. 655, 659. Male palp, mesal. 656, 657. Male palpal tibia, dorsal. Scale lines 0.1 mm.

(figs. 654–659), and particularly by the form of the embolic division. Females are not known.

DESCRIPTION: Male total length 1.75–2.3. The carapace is unmodified. The eyes are of moderate size, with posteriors less than 1 d apart. The chelicerae (male) have a pointed boss anteriorly. The legs are relatively short and stout, with tibia 1 l/d 7–8. Dorsal tibial spines are 2211; the femora and metatarsi are spineless. Metatarsi 1–3 have a trichobothrium; TmI 0.35–0.4. The tracheal form is not known. The palp has a massive tibia, which is lightly sclerotized distally (figs. 656, 657); the paracymbium is large. The tegulum

has a lightly sclerotized extension anteriorly; the suprategular apophysis is a tongue rather similar to those of *Erigone* and *Eperigone*. The embolic division is a stout irregular plate, pointed or slightly hooked anteriorly, with the embolus a small stub near the anterior of the plate (figs. 655, 659).

INCLUDED SPECIES: *Gravipalpus callosus*, n. sp., and *Gravipalpus crassus*, n. sp.

DISTRIBUTION: Peru and eastern Brazil.

TAXONOMIC POSITION: The palpal organs are basically similar in form to those of *Erigone* and *Eperigone*; hence *Gravipalpus* is placed provisionally in the *Erigone* group of genera.

***Gravipalpus callosus*, new species**

Figures 654–656

TYPE: Male holotype from 5 km east of Belem, Pará, Brazil, May 2, 1974 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning hard, solid.

DIAGNOSIS: The female is not known. The male palp (figs. 654–656) is similar to that of *G. crassus*, but has small differences in the tibial apophysis (figs. 654, 656; cf. figs. 658, 657), and in the embolic division (fig. 655; cf. fig. 659). *G. callosus* is also somewhat smaller in size than *G. crassus*.

MALE: Total length 1.74. Carapace length 0.95; brown. Abdomen blackish ventrally, mottled pale yellow dorsally. Sternum orange, suffused with black. Legs pale brown; many segments missing. TmII 0.35–0.4. Palp (figs. 654–656).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from eastern Brazil.

***Gravipalpus crassus*, new species**

Figures 657–659

TYPE: Male holotype from Rio Abiseo National Park, San Martin, Peru, Aug. 9, 1986 (Roth); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning thick, solid.

DIAGNOSIS: The male palp (figs. 657–659) is similar to that of *G. callosus*, but there are small differences in the tibial apophysis and the embolic division. *G. crassus* is also somewhat larger in size than *G. callosus*. The female is not known.

MALE: Total length 2.3. Carapace length 1.1; brown, with dusky markings. Abdomen gray, with dorsally narrow white chevrons posteriorly. Sternum orange, heavily suffused with black. Legs orange-brown; TmI 0.4. Palp (figs. 657–659).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

SMERMISIA SIMON

Smermisia Simon, 1894:703 (type species by original designation *Smermisia caracasana* Simon, from Venezuela).—Roewer 1942: 536.—Bonnet 1958: 4089.

Four species have been assigned to this genus (Roewer, 1942); reexamination has shown that the genus must be restricted to the type species.

DIAGNOSIS: No females are known. The male palp (figs. 660–662) has a relatively simple embolic division; this is of similar general form to those of *Microplanus*, *Spanioplanus*, and *Paraletes*.

DESCRIPTION: The single known species has length 1.5 (male). The carapace is unmodified; the lateral and posterior median eyes are large, with posteriors less than 0.5 d apart. The male chelicerae have a pointed boss anteriorly. The legs are short and stout; some segments are absent, and no spines are visible, but metatarsus 4 lacks a trichobothrium. The tracheal form is not known. The male palpal tibia has no distinct apophysis. The suprategular apophysis is rather similar to those of *Erigone* and *Eperigone*, and the embolic division is a relatively simple plate (fig. 661).

INCLUDED SPECIES: Only the type species.

EXCLUDED SPECIES: *Smermisia barbata* Tullgren, *S. nigrocapitata* Tullgren, and *S. tullgreni* Simon, which are transferred to *Micropsalma*.

TAXONOMIC POSITION: The palpal organ is of similar general form to those of some small species of *Eperigone*, and to those of *Microplanus*, *Spanioplanus*, and *Paraletes*. As in the latter three genera, the eyes are large. If the tracheal system proves to be erigonine in form, *Smermisia* must be placed in the *Erigone* group of genera, probably close to *Eperigone*.

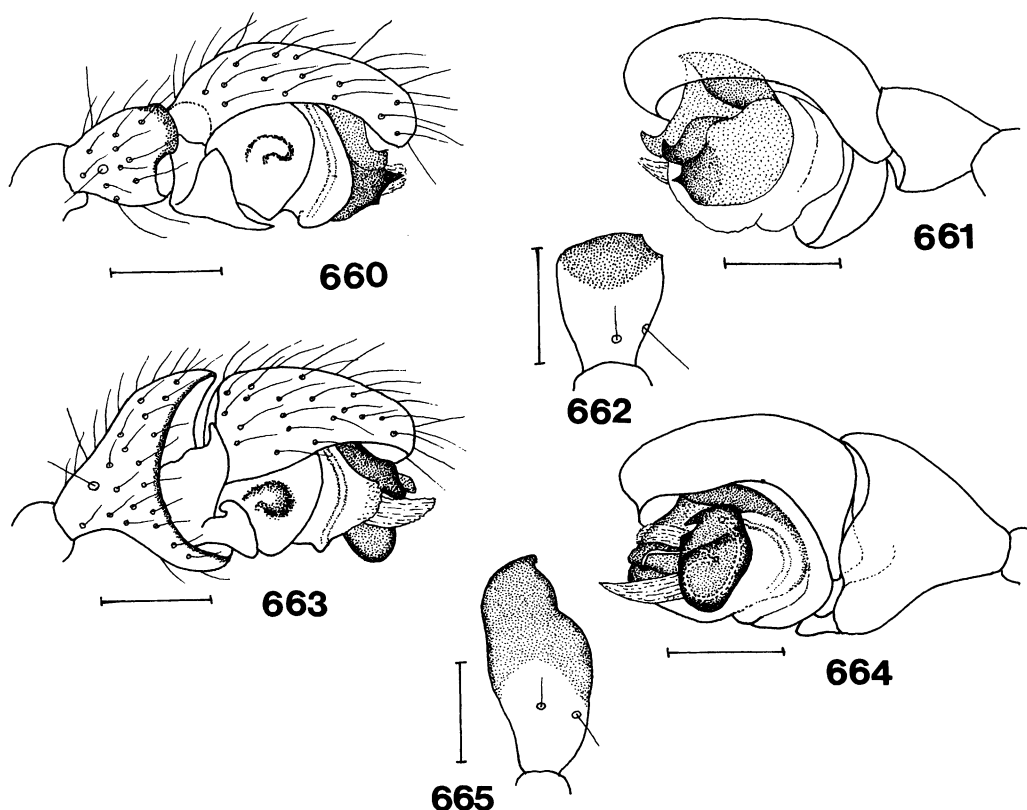
***Smermisia caracasana* Simon**

Figures 660–662

Smermisia caracasana Simon, 1894: 703 (male holotype from Caracas, Venezuela, in MHNH, examined).—Roewer, 1942: 536.—Bonnet, 1958: 4089.

DIAGNOSIS: The male palp (figs. 660–662) has no distinct tibial apophysis; the embolic division is shown in fig. 661. The female is not known.

MALE: Total length 1.5. Carapace length 0.7. The color of the unique specimen is faded, with all parts pale yellow to pale orange.



Figs. 660–665. 660–662. *Smermisia caracasana*. 663–665. *Myrmecoxenus pulcher*. 660, 663. Male palp, ectal. 661, 664. Male palp, mesal. 662, 665. Male palpal tibia, dorsal. Scale lines 0.1 mm.

Other characters as in generic description. Palp (figs. 660–662).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Venezuela.

MYRMECOXENUS, NEW GENUS

TYPE SPECIES: *Myrmecoxenus pulcher*, new species.

ETYMOLOGY: From the Greek *myrmex*, *myrmekos*, an ant, and *xenos*, a guest. Gender masculine.

DIAGNOSIS: Females are not known. The male is diagnosed by the palp (figs. 663–665), which has the characters given below, and by its small size.

DESCRIPTION: The male of the single known species has total length 1.2. The carapace is unmodified; the eyes are of moderate size, with posteriors ca. 1 d apart. The abdomen

is glistening black. The legs are fairly short and stout, with tibia 1 1/d 5–6. Tibial spines are 2211, short, and weak; metatarsal spines are absent. Metatarsi 1–3 have a trichobothrium; TmI 0.35–0.4. The male palpal tibia is lengthened anteriorly (fig. 665); the paracymbium is well developed (fig. 663). The suprategular apophysis is fairly stout (fig. 663). The embolic division is an irregular-shaped plate, with a small pointed projection on the dorsal margin, and the embolus appears to be a short stub arising from near the anterior of the plate (fig. 664). The species has been taken among ants.

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Ecuador and Peru.

TAXONOMIC POSITION: The palpal organ shows some general similarities, in the forms of the suprategular apophysis and embolic division, to those of *Erigone* and *Eperigone*.

In the absence of females, and with no knowledge of the tracheal form, the genus can be placed provisionally in the *Erigone* group of genera.

Myrmecoxenus pulcher, new species

Figures 663–665

TYPE: Male holotype from Rio Palanque, Ecuador, from a raiding column of the ant *Eciton hamatum* (Fabr.), Dec. 28, 1975 (A. C. and A. H. Kistner); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning beautiful.

DIAGNOSIS: The male is diagnosed by the small size, the glistening appearance, and the palp; the distally extended tibia (fig. 665) and the embolic division (fig. 664) are characteristic.

MALE: Total length 1.2. Carapace length 0.6; brown to chestnut brown. Abdomen glistening black. Sternum almost black. Legs pale brown to orange-brown, glistening; TmI 0.35–0.4. Palp (figs. 663–665). The female is not known.

MATERIAL EXAMINED: ECUADOR: the holotype. PERU: *La Libertad*: 29 km southwest of Huamachaco, small pond margin, 3740 m (R. T. and J. C. Schuh), 1 male paratype (AMNH).

DISTRIBUTION: Ecuador and Peru.

TUTAIBO R. CHAMBERLIN

Tutaibo R. Chamberlin, 1916: 257 (type species by monotypy *Tutaibo debilipes* Chamberlin).—Roewer, 1942: 710.—Bonnet, 1959: 4738. It is assumed that the gender is masculine.

DIAGNOSIS: Both sexes have genitalia which are characteristic of the group of genera which include *Ceratinella* and *Ceratinopsis*. Females are diagnosed by the internal structure of the epigynum, by the coiling of the duct as it leaves the spermatheca (e.g., figs. 671, 694). Males are diagnosed by the large sclerotized apophysis projecting from the anterior of the tegulum (e.g., figs. 666, 693), and by the long embolus.

DESCRIPTION: The genus comprises small spiders, total length 2.1–3.55 (female) and 2.05–2.65 (male). The species are usually dark in color, but in nature may be reddish or purplish. The male carapace has no lobe, but is raised anteriorly (e.g., fig. 669). The eyes

are rather small, with posteriors 2–3 d apart. The legs are fairly long and slender, with tibia 1 l/d (female) 11–12. Dorsal tibial spines are 1111, weak in the female and sometimes absent in the male. Metatarsi 1–3 have a trichobothrium; TmI 0.25–0.4. The tracheal system is erigonine. The epigyna are variable in external appearance. The internal duct structure is distinctive; the duct, as it leaves the spermatheca, forms a small coil, or double coil, of one or more turns, supported within the extended wall of the spermatheca, before running through the usual form of infrastructure to the opening (e.g., figs. 671, 694). The tibia of the male palp has apophyses, different in each species. The paracymbium differs in shape from that in other genera of the *Ceratinella* group. The tegulum carries a large, usually well-sclerotized apophysis anteriorly (e.g., fig. 666). The embolic division is of the *Ceratinopsis* form, with the long embolus coming off the radical part at a break near the anterior tip (e.g., fig. 667).

INCLUDED SPECIES: *Tutaibo debilipes* Chamb., *T. pullus*, new species, *T. niger* (O.P.-Cambridge), new combination, *T. tristis*, new species, *T. phoeniceus* (O.P.-Cambridge), new combination, *T. rubescens*, new species, *T. formosus*, new species, and *T. anglicanus* (Hentz), new combination.

DISTRIBUTION: Known only from southern U.S.A., Guatemala, Peru, and Brazil, but no doubt species will be present throughout Central America and the more northern parts of South America.

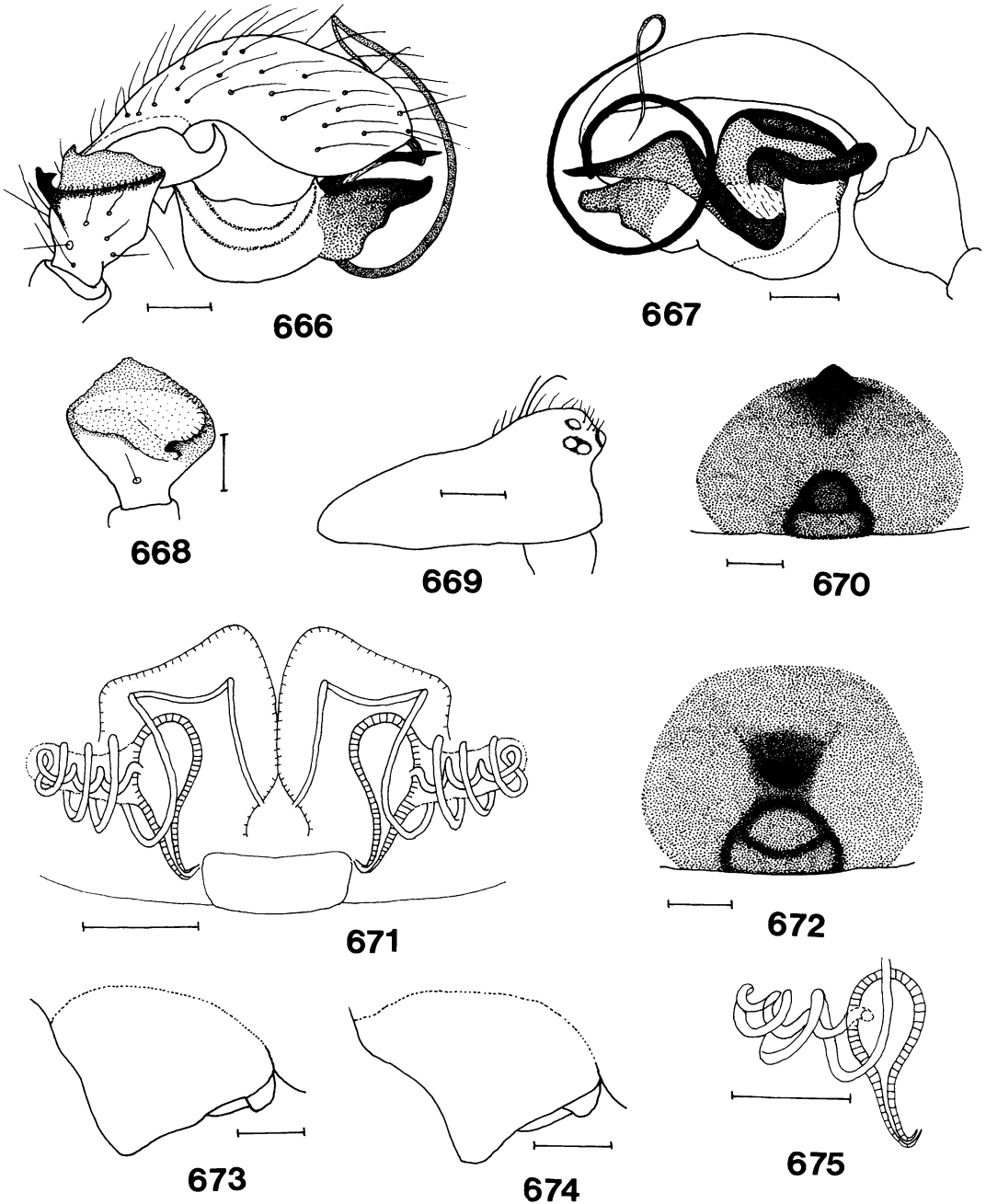
TAXONOMIC POSITION: *Tutaibo* is closely related to *Ceratinopsis*.

Tutaibo debilipes Chamberlin

Figures 666–671, 673

Tutaibo debilipes R. Chamberlin, 1916: 237 (holotype male, with male and female paratypes, from Huadquina, Peru, 5000 ft, July 1911, Yale Peruvian Expedition, in MCZ, examined).—Bishop and Crosby, 1930: 31.—Roewer, 1942: 710.—Bonnet, 1959: 4738.

DIAGNOSIS: The female epigynum (figs. 670, 673) is fairly close to that of *T. pullus* (figs. 672, 674), but the dark-colored, conical projection is further from the atrium in *T. debilipes* than in *T. pullus*, and the coiled duct (fig. 671) appears to have one coil more in *T. debilipes* than in *T. pullus* (fig. 675). The male



Figs. 666–675. 666–671, 673. *Tutaibo debilipes*. 672, 674, 675. *T. pullus*. 666. Male palp, ectal. 667. Male palp, mesal. 668. Male palpal tibia, dorsal. 669. Male carapace, lateral. 670, 672. Epigynum, ventral. 671, 675. Epigynum, internal. 673, 674. Epigynum, lateral. Scale lines 0.1 mm, except 669: 0.2 mm.

is diagnosed by the palp; the tibia has a row of minute bristles along the lateral margin (figs. 666, 668), and the prominent tegular apophysis is slightly upturned distally (fig.

666). The embolus (fig. 667) is longer than in the other species, except *T. niger* (fig. 677).

FEMALE: Total length 2.1–2.6. Carapace length 0.9–1.0; brown to deep brown, with

darker markings. Abdomen brown, suffused faintly with pink, reddish brown, blackish brown, or black. Sternum brown, suffused with deep brown. Legs deep brown, suffused with black; TmI ca. 0.25. Epigynum (figs. 670, 671, 673).

MALE: Total length 2.3–2.4. Carapace length 0.9–0.95. Color as female. Carapace raised anteriorly (fig. 669), with curved bristles. Palp (figs. 666–668).

MATERIAL EXAMINED: PERU: Huadquina, the types above. *Cuzco*: Torentoy Canyon, base of Machu Picchu, 2000–2200 m, June 16–17 and 19–23, 1964 (B. Malkin), 5 males, 4 females (AMNH).

DISTRIBUTION: Known only from Peru.

Tutaibo pullus, new species

Figures 672, 674, 675

TYPES: Female holotype, with two female paratypes, from Finca Chenevo, 20 km south of El Porvenir, Meta, Colombia, 170 m, 1978 (W. Eberhard); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning dark-colored.

DIAGNOSIS: The female epigynum (figs. 672, 674) is close to that of *T. debilipes* (see *T. debilipes* diagnosis). The male is not known, but it is possible that *T. pullus* is the female of *T. niger*.

FEMALE: Total length 2.1–2.45. Carapace length 0.9; deep chestnut-brown, with blackish markings and margins. Abdomen glossy black. Sternum chestnut-brown, suffused with black. Legs brown to dark brown, with femora 3 and 4 paler; TmI 0.3–0.35. Epigynum (figs. 672, 674, 675).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Tutaibo niger (O. P.-Cambridge),
new combination

Figures 676–678

Sphecozone nigra O.P.-Cambridge, 1882: 428 (three male syntypes, from Amazonas, Brazil, in HDO, examined).—Roewer, 1942: 710.—Bonnet, 1958: 4118.

DIAGNOSIS: The tibia of the male palp has as short dorsal apophysis (fig. 676) and the lateral margin lacks the row of short bristles

present in *T. debilipes*; the stout tegular apophysis is downturned distally (fig. 676). The embolus is very long (fig. 677), as in *T. debilipes*. The female is not known, but may prove to be *T. pullus* (above).

MALE: Total length 2.05–2.2. Carapace length 0.8–0.9. The colors of the type material are faded. Carapace orange-brown, suffused anteriorly with black; numerous stout bristles anteriorly (fig. 678). Abdomen gray. Sternum orange. Legs yellow-brown; TmI ca. 0.3. Palp (figs. 676, 677).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

Tutaibo tristis, new species

Figures 679, 680

TYPES: Female holotype, with one female paratype, from S. Jose Bericero, S. Bocaina, São Paulo, Brazil, 1960 m, Oct. 1968 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning sad, gloomy.

DIAGNOSIS: The female epigynum (figs. 679, 680) is distinctive within the genus by the presence of a small socket anteriorly. The male is not known.

FEMALE: Total length 2.65. Carapace length 0.95–1.0; brown, with blackish markings and margins; suffused with black anteriorly. Abdomen whitish gray, black around spinnerets. Sternum brown, heavily suffused with black. Legs brown to dark brown, with femora yellow-brown basally; TmI 0.35. Epigynum (figs. 679, 680); duct from spermatheca tightly coiled as in *T. debilis*.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

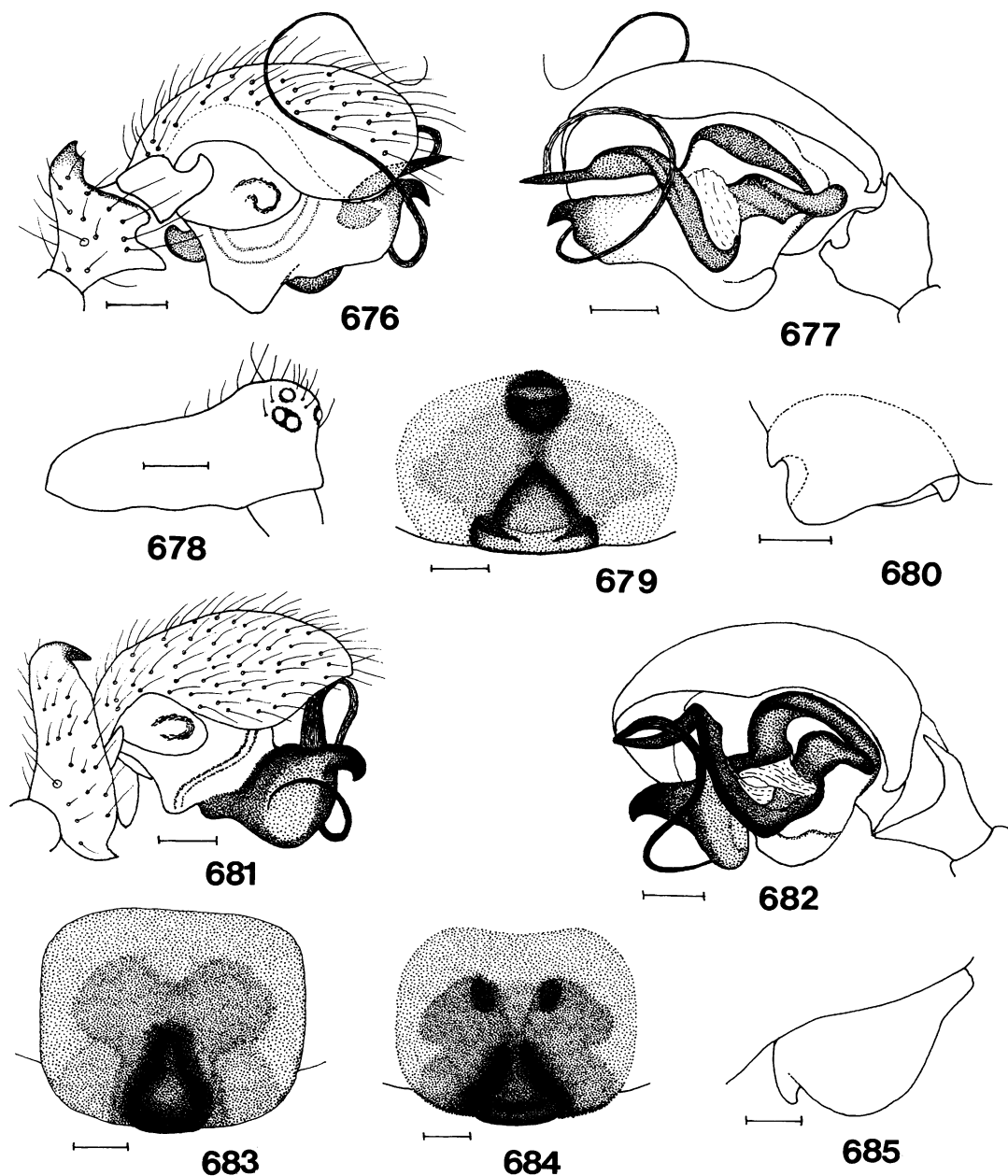
Tutaibo phoeniceus (O.P.-Cambr.),
new combination

Figures 681–685

Frontina phoenicea O.P.-Cambridge, 1894: 144 (one female and three male syntypes, from Guatemala, in HDO, examined).

Sthelota phoenicea: F.O.P.-Cambridge, 1902: 416.—Roewer, 1942: 523.—Bonnet, 1958: 4168.

Frontina phoenicea does not appear to be congeneric with *Linyphia albinotata* Keyserling, the type species of *Sthelota* Simon.

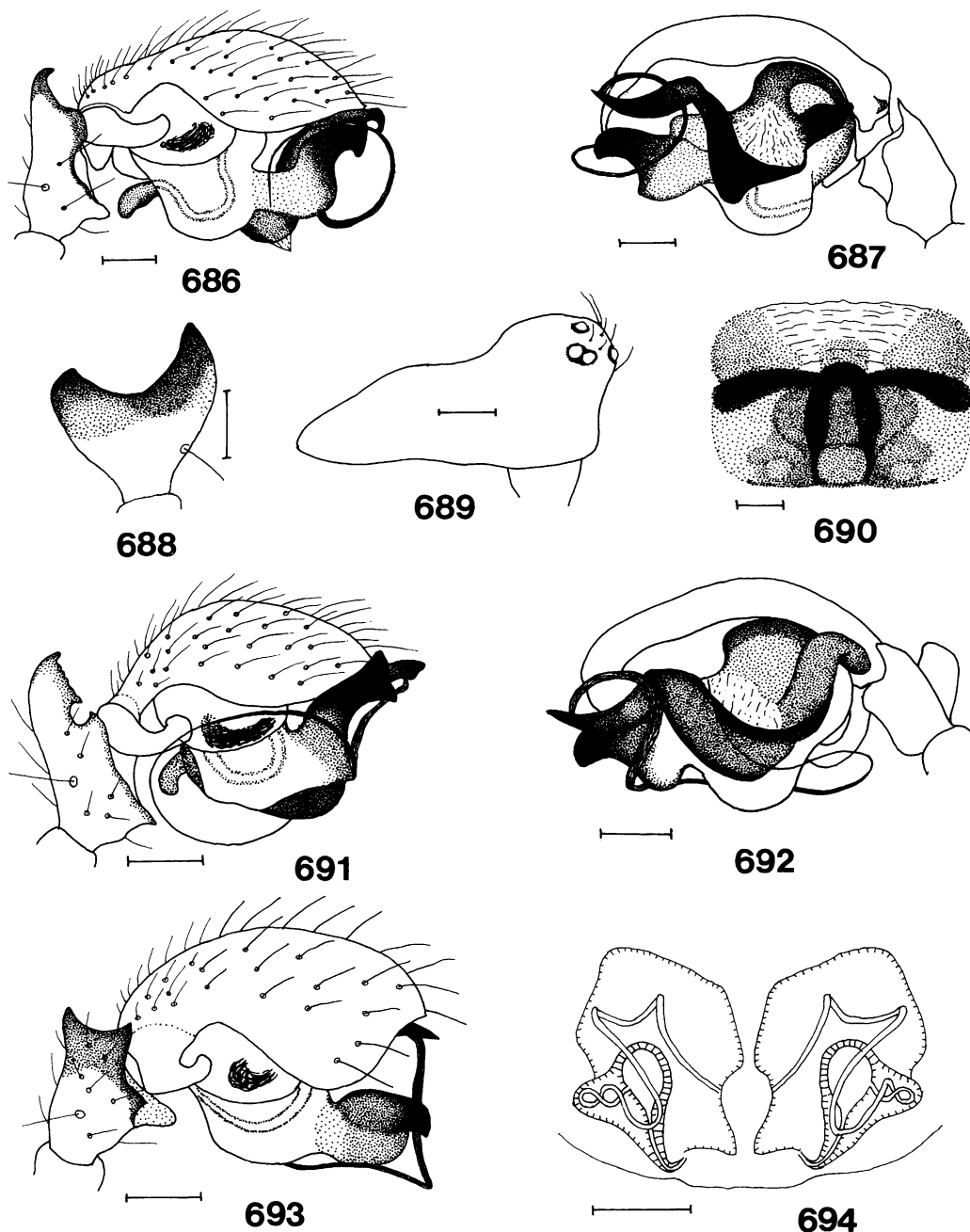


Figs. 676–685. 676–678. *Tutaibo niger*. 679, 680. *T. tristis*. 681–685. *T. phoeniceus*. 676, 681. Male palp, ectal. 677, 682. Male palp, mesal. 678. Male carapace, lateral. 679, 683, 684. Epigynum, ventral. 680, 685. Epigynum, lateral. Scale lines 0.1 mm, except 678: 0.2 mm.

DIAGNOSIS: The female epigynum (figs. 683–685) although somewhat variable in appearance, is readily distinguishable from those of the other *Tutaibo* species. The palp has the tibia extended distally, terminating in a small

hook (fig. 681), and the tegular apophysis carries a stout, downturned hook distally (figs. 681, 682). The embolus (fig. 682) is shorter than in *T. debilipes*.

FEMALE: Total length 2.9. Carapace length



Figs. 686–694. 686–690. *Tutaibo rubescens*. 691, 692. *T. formosus*. 693, 694. *T. anglicanus*. 686, 691, 693. Male palp, ectal. 687, 692. Male palp, mesal. 688. Male palpal tibia, dorsal. 689. Male carapace, lateral. 690. Epigynum, ventral. 694. Epigynum, internal. Scale lines 0.1 mm, except 689: 0.2 mm.

1.35; deep chestnut brown. Abdomen pale pinkish brown, darker around spinnerets. Sternum brown, heavily suffused with black.

Legs brown to dark brown; TmI 0.35–0.4. Epigynum (figs. 683–685).

MALE: Total length 2.55–2.65. Carapace

length 1.15–1.35. Color as female. Carapace raised anteriorly, bearing stout bristles. Palp (figs. 681, 682).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Guatemala, but described here since it may possibly extend into northern South America.

Tutaibo rubescens, new species

Figures 686–690

TYPES: Male holotype, with 11 female and 8 male paratypes, from Paramo Alto Belén, Boyacá, Colombia, wooded area, 3600 m, Sept. 22, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning reddish.

DIAGNOSIS: The female is diagnosed by the reddish color, and by the epigynum (fig. 690), the black lateral markings of which are very distinctive. The male is diagnosed by the color, and by the palp, particularly by the tibial apophyses (figs. 686, 688) and by the tegular apophysis, which distally curves upward to a terminal hook (fig. 686). The embolus (fig. 687) is relatively short.

FEMALE: Total length 2.75–3.55. Carapace length 1.1–1.25; orange to orange-red. Abdomen pink to red. Sternum orange-red. Legs brown, suffused with black; TmI 0.3–0.35. Epigynum (fig. 690); the coiled duct from the spermatheca has few turns, as in *T. anglicanus* (fig. 694).

MALE: Total length 2.65. Carapace length 1.15–1.35. Color as female. Carapace raised anteriorly, with long bristles (fig. 689). Palp (figs. 686–688).

MATERIAL EXAMINED: COLOMBIA: *Boyacá*: the types above; same locality, border of forest, Oct. 1, 1986 (H. Sturm), 1 male, 2 female paratypes (MCZ).

DISTRIBUTION: Known only from Colombia.

Tutaibo formosus, new species

Figures 691, 692

TYPE: Male holotype from Zona Reservada Tambopata, Madre de Dios, Peru, 290 m, July 30, 1987 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning beautiful.

DIAGNOSIS: The palp has the lateral margin of the dorsal tibial apophysis weakly serrated (fig. 691), and the tegular apophysis somewhat broadened and truncated anteriorly (fig. 691). The embolus (figs. 691, 692) is moderately long. The female is not known.

MALE: Total length 2.15. Carapace length 0.80; orange-brown, suffused with chestnut-brown. Abdomen glossy black. Sternum deep chestnut-brown. Legs yellow-brown, suffused with dark brown; TmI ca. 0.4. Palp (figs. 691, 692).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Tutaibo anglicanus (Hentz),

new combination

Figures 693, 694

Theridion anglicanum Hentz, 1850: 275.

Ceratinopsis anglicana: Bishop and Crosby, 1930: 15.—Roewer, 1942: 707.—Bonnet, 1956: 1017.

This species, from southern U.S.A., is not described here, but is figured to confirm its generic position.

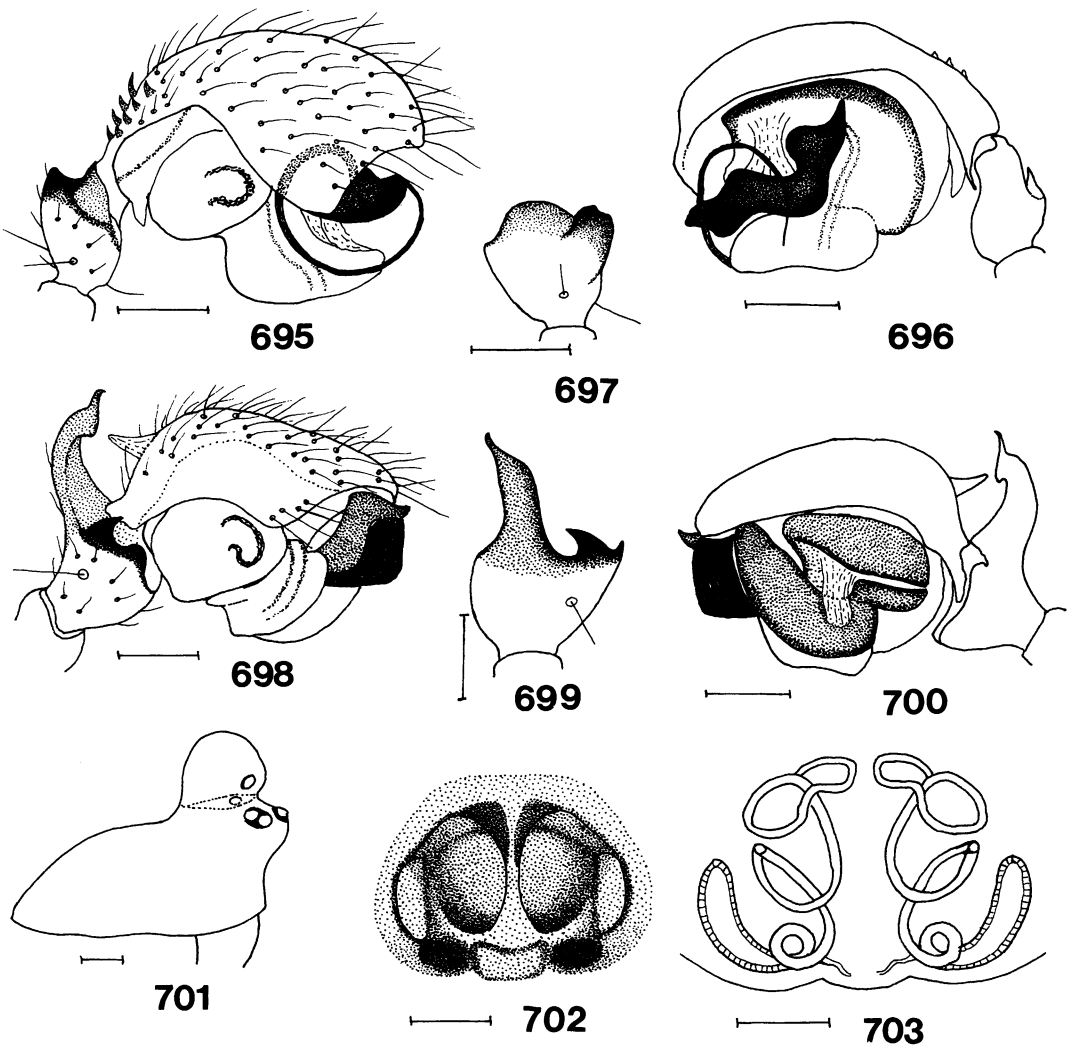
SPHECOZONE O.P.-CAMBRIDGE

Sphecozone O.P.-Cambridge, 1870: 733 (type species *Sphecozone rubescens* O.P.-Cambridge by monotypy).—Roewer, 1942: 710.—Bonnet, 1958: 4118.—van Helsdingen, 1979: 410.—Wunderlich, 1987: 170.—Platnick, 1989: 283.

Wunderlich (1987) synonymized *Ceratinella* and *Ceratinopsis* with *Sphecozone*, but this is unacceptable because of the significant differences in both the male and female genitalia.

The present paper gives descriptions of 20 new species of *Sphecozone*; it is probable that many more species remain to be discovered. Most of the species are described on limited material, and some are not completely typical of the genus. When more material becomes available, some revision of the genus may become necessary.

Diagnoses are based largely on the genitalia, but because of the relatively large number of species known, the first important character in diagnosis is the locality of cap-



Figs. 695–703. 695–697. *Sphecozone corniculans*. 698–703. *S. alticeps*. 695, 698. Male palp, ectal. 696, 700. Male palp, mesal. 697, 699. Male palpal tibia, dorsal. 701. Male carapace, lateral. 702. Epigynum, ventral. 703. Epigynum, internal. Scale lines 0.1 mm.

ture. The species are described in order of the country of origin, as in *Dubiaranea*.

***Sphecozone corniculans*, new species**
 Figures 695–697

TYPE: Male holotype from Paramo de Sumapaz, Espec, Colombia, 3600–4000 m, Oct. 4–14, 1978 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning with small horns.

DIAGNOSIS: The male palp (figs. 695–697) has the tibial apophysis of the same general

form as in *S. crinita* (figs. 704, 707) (Ecuador), *S. cristata* (figs. 729, 736) (Brazil), and *S. cornuta* (figs. 761, 763) (Argentina), but the short, hornlike cymbial spines (fig. 695) and the form of the embolic division (fig. 696) separate *S. corniculans* from each of these species. *S. cornuta* is also distinguished by the tegular horn. The female is not known.

MALE: Total length 1.45. Carapace length 0.65; orange, with weak median black stripe. Eyes small, with posteriors ca. 2 d apart. Abdomen white, with dorsally a narrow black stripe; black on sides and around spinnerets.

Sternum yellow, with blackish margins. Legs yellow-brown; TmI ca. 0.4. Palp (figs. 695–697); the cymbium has several short hornlike spines posteriorly.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

Sphecozone alticeps, new species

Figures 698–703

TYPES: Male holotype, with seven female paratypes, from Paramo Purace, Cauca, Colombia, beating foliage, 3000 m, Oct. 20, 1968 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with an elevated head.

DIAGNOSIS: The female has a trichobothrium on metatarsus 4, and the epigynum (fig. 702) is clearly distinct from those of other known *Sphecozone* species. The male has the trichobothrium on metatarsus 4, and a large lobe on the carapace (fig. 701); the palpal tibia has two distinctive apophyses (figs. 698, 699), and the embolic division (fig. 700) has a short, broad embolus.

FEMALE: Total length 1.85–2.0. Carapace length 0.65–0.75; brown to dark brown, with dusky striae and margins; slightly raised anteriorly. Eyes rather small, with posteriors 2 d or more apart. Abdomen gray to black, with pale hairs. Sternum brown, often suffused with black, with black margins. Legs pale brown to brown; metatarsi 1–4 with trichobothrium; TmI ca. 0.6. Epigynum (figs. 702, 703).

MALE: Total length 1.6. Carapace length 0.75. Color and trichobothria as female. Carapace raised anteriorly into large lobe carrying posterior median eyes, and lateral sulci (fig. 701). Palp (figs. 698–700).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

Sphecozone crinita, new species

Figures 704–707

TYPES: Male holotype, with one female and one male paratype, from Breza, Napo, Ecuador, from trunks of (?) *Aechmea* sp., 1900 m, Feb. 4, 1976 (R. T. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning hairy.

DIAGNOSIS: The female epigynum (fig. 706) distinguishes *S. crinita* from all other known *Sphecozone* species. The male is diagnosed by the palp, particularly by the tibial apophysis (figs. 704, 707) and the embolic division (fig. 705), which has an unusually long embolus. The tibial apophysis is of the same general form as those of *S. corniculans*, *S. cristata*, and *S. cornuta* (see *S. corniculans* diagnosis).

FEMALE: Total length 1.85. Carapace length 0.8; yellow to orange. Eyes large, with posteriors less than 1 d apart. Abdomen gray dorsally, black ventrally and around spinnerets. Sternum orange, suffused with black, particularly on margins. Legs orange to orange-brown; TmI 0.3–0.35. Epigynum (fig. 706).

MALE: Total length 1.8. Carapace length 0.8. Color and trichobothria as female. Carapace gently raised anteriorly, with numerous bristly hairs in and behind ocular area. Palp (figs. 704, 705, 707).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Ecuador.

Sphecozone nitens, new species

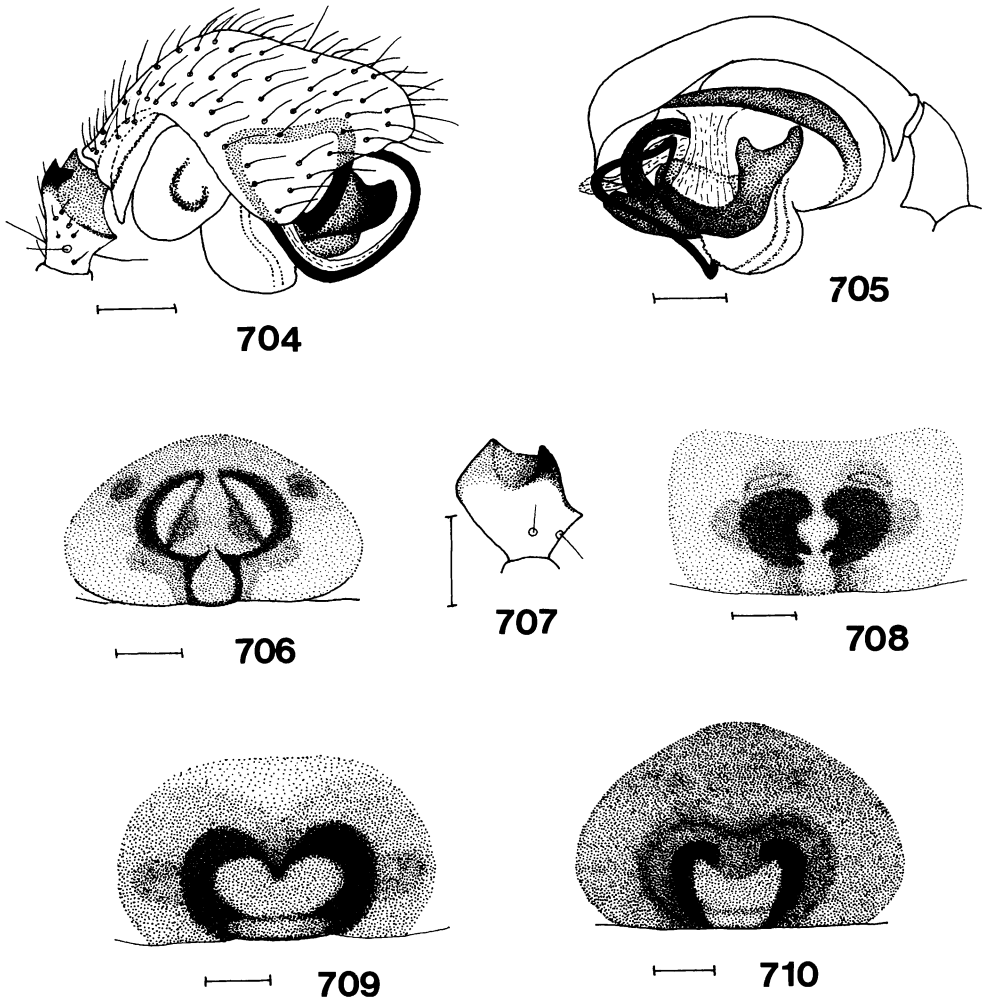
Figure 708

TYPES: Female holotype, with one female paratype, from Abra Asirrodiro, Oxapampa, Pasco, Peru, 2400 m, June 21, 1986 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning bright.

DIAGNOSIS: The female has a trichobothrium on metatarsus 4 and the epigynum (fig. 708) is somewhat similar to that of *S. fuscipes* (fig. 725), but *S. nitens* lacks the two small pits anterolaterally. The male is not known.

FEMALE: Total length 2.2–2.45. Carapace length 1.0–1.05; orange, ocular area faintly suffused with black. Eyes fairly small, with posteriors 1.5 d apart. Abdomen white, with spinnerets dark brown. Sternum orange. Legs with coxae, trochanters, and basal parts of femora bright orange, remainder suffused with dark brown; tibiae 1 with dorsal hairs on minute tubercles. Metatarsi 1–4 with trichobothrium; TmI 0.35. Epigynum (fig. 708); in-



Figs. 704–710. 704–707. *Sphecozone crinita*. 708. *S. nitens*. 709. *S. varia*. 710. *S. pulchra*. 704. Male palp, ectal. 705. Male palp, mesal. 706, 708, 709, 710. Epigynum, ventral. 707. Male palpal tibia, dorsal. Scale lines 0.1 mm.

ternal genitalia show this species to be a *Sphecozone*.

MATERIAL EXAMINED: PERU: *Madre de Dios*: Zona Reservada de Manu, Puerto de Vigil, Pakitza, at night, Oct. 1, 1987 (D. Silva and J. Coddington), 4 female paratypes (USNM). *Pasco*: the types above.

DISTRIBUTION: Known only from Peru.

Sphecozone varia, new species

Figure 709

TYPE: Female holotype from Machu Picchu, Cuzco, Peru, beaten from vegetation,

2600–2800 m, July 1–5, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning variegated.

DIAGNOSIS: The female epigynum (fig. 709) is of the same general form as those of *S. affinis* (Tullgren) (Chile) and *S. ardens* Milledge (Chile), but the atrium is relatively broader, and *S. varia* lacks the trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 2.45. Carapace length 1.0. Carapace orange, ocular area black. Eyes small, with posterior medians ca. 3 d apart and 1.5 d from laterals. Abdomen gray-black,

with short pale hairs. Sternum orange-brown, with blackish margins. Legs with femora orange, shading to deep brown distally, remaining segments deep brown; TmI 0.35. Palp deep brown. Epigynum (fig. 709).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Sphecozone pulchra, new species

Figure 710

TYPE: Female holotype from Laguna Manochogui, Pataz, La Libertad, Peru, July 28–29, 1987 (B. Leon); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning beautiful.

DIAGNOSIS: The female epigynum (fig. 710) is close to that of *S. ardens* Millidge (Chile). *S. varia* has a somewhat similar epigynum (fig. 709), but the atrial shape is different, and *S. varia* lacks a trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 3.1. Carapace length 1.3; orange, lightly suffused anteriorly with gray. Eyes small, with posteriors 2 d apart. Abdomen black, with paler hairs. Sternum orange. Legs deep brown to black; metatarsi 1–4 with trichobothrium: TmI 0.4. Epigynum (fig. 710).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Peru.

Sphecozone capitata, new species

Figures 711–715

TYPES: Male holotype, with female paratype, from Lambayeque, Huacraruco, Peru, 2400–2700, Mar. 22–27, 1958; deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective referring to the elevation of the male carapace.

DIAGNOSIS: The female epigynum (fig. 715) is fairly similar to that of *S. pulchra* (fig. 710) and pale specimens of *S. modesta* (Nicolet), but both of those species have a trichobothrium on metatarsus 4. The male is diagnosed by the lobed carapace (fig. 713) and the palp; the palpal tibia has well-developed apophyses (figs. 711, 714), and the embolic division (fig. 712) is relatively simple, with a short embolus.

FEMALE: Total length 3.6. Carapace length 1.35; orange. Eyes rather small, with poste-

riors ca. 2 d apart. Abdomen gray-black. Sternum orange. Legs deep brown; TmI 0.4. Epigynum (fig. 715).

MALE: Total length 2.9. Carapace length 1.3. Color and trichobothria as female. Carapace raised into large lobe (fig. 713). Palp (figs. 711, 712, 714).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Sphecozone nigripes, new species

Figures 716–719

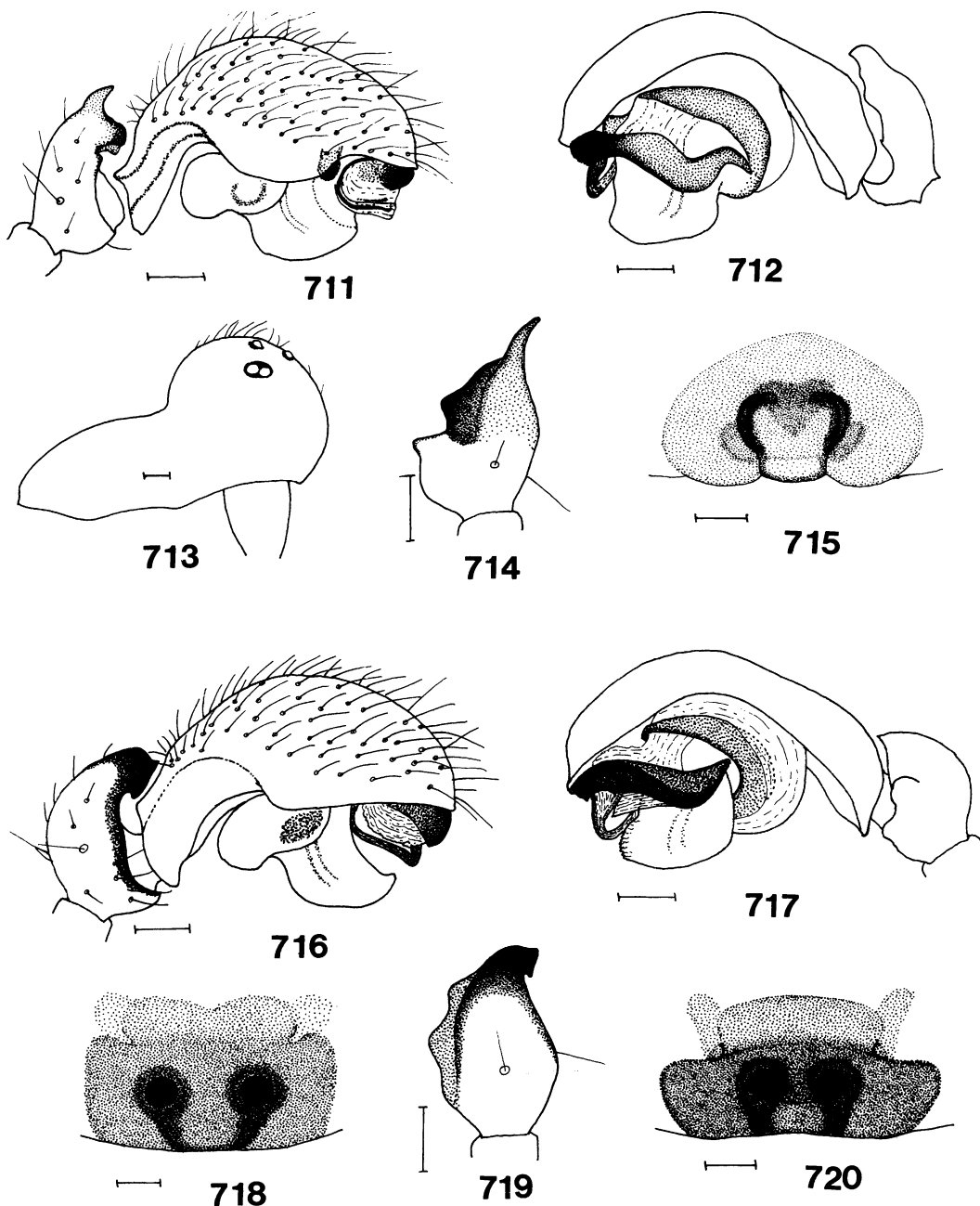
TYPE: Male holotype from 11 km south of Cajabamba, Cajamarca, Peru, in roadside ditch with moss and algal cover, 2850 m, Jan. 20, 1976 (R. T. and J. C. Schuh); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with black feet.

DIAGNOSIS: The female epigynum (fig. 718) has two small cuspidate pits anterolaterally. The epigynum is generally similar to that of *S. aurantia* (fig. 720), but that species lacks a trichobothrium on metatarsus 4, and has the epigynum relatively broader. Similar small pits are present in the epigynum of *S. fuscipes* (fig. 725), but that species has a well-defined, characteristically shaped atrium. The male palp has the tibia drawn out into an apophysis which is truncated distally (figs. 716, 719), and the embolic division (fig. 717) simple, with a short, lightly sclerotized embolus. The palp is fairly close to that of *S. fuscipes*, but that species has the tibial apophysis differently shaped, and the carapace is raised into a shallow lobe (fig. 723).

FEMALE: This was not taken with the male, but the epigynum and other characters indicate that it is probably the female of *S. nigripes*. Total length 3.0–3.2. Carapace length 1.35; bright orange. Abdomen brown to black, clothed with pale hairs. Sternum orange. Legs dark brown, with coxae and trochanters orange; metatarsi 1–4 with trichobothrium: TmI ca. 0.35. Palp dark brown. Epigynum (fig. 718).

MALE: Total length 2.9. Carapace length 1.1. Color and trichobothria as female, except carapace raised into shallow lobe anteriorly. Legs black, shading to deep brown distally. Palp (figs. 716, 717, 719); deep brown to black.



Figs. 711–720. 711–715. *Sphecozone capitata*. 716–719. *S. nigripes*. 720. *S. aurantia*. 711, 716. Male palp, ectal. 712, 717. Male palp, mesal. 713. Male carapace, lateral. 714, 719. Male palpal tibia, dorsal. 715, 718, 720. Epigynum, ventral. Scale lines 0.1 mm.

MATERIAL EXAMINED: PERU: *Cajamarca*: the holotype. *La Libertad*: 30 km south of Cajabamba, in seep area on hillside, 3120 m,

Jan. 20, 1976 (R. T. and J. C. Schuh), 1 male paratype (AMNH). *Lima*: Bosquede Zarate, Pampa Zarate, 3000 m, Dec. 10, 1977 (I.

Franke and N. Valencia), 2 female paratypes (MHNSM).

DISTRIBUTION: Known only from Peru.

Sphecozone aurantia, new species

Figure 720

TYPES: Female holotype, with two female paratypes, from Camino al Illimani, La Paz, Bolivia, Dec. 25, 1975 (L. E. Pëna); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning orange-yellow.

DIAGNOSIS: The female epigynum (fig. 720) has two small cuspidate pits anterolaterally. The epigynum of *S. nigripes* (fig. 718) is similar, but narrower, and *S. nigripes* has a trichobothrium on metatarsus 4. The male is not known.

FEMALE: Total length 3.0–4.2. Carapace length 1.2–1.3; orange. Chelicerae dark brown. Abdomen shiny black. Sternum orange. Legs black or dark brown, with coxae, trochanters, and bases of femora orange; TmI 0.4. Palp dark brown. Epigynum (fig. 720).

MATERIAL EXAMINED: BOLIVIA: *La Paz*: the types above. Milluni, 16,000 ft, July 1959 (R. Walsh), 2 female paratypes (AMNH). *Oruro*: La Pas, 3900 m, Jan. 24, 1976 (N. Chlamar), 2 female paratypes (AMNH). Campero, Feb. 13–19, 1954 (Schindler and Forster), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Bolivia.

Sphecozone fuscipes, new species

Figures 721–725

TYPES: Male holotype, with six female paratypes, from Puquio, Ayacucho, Peru, 3440 m, Nov. 1, 1985 (D. Silva); deposited in MHNSM.

ETYMOLOGY: The specific name is a Latin adjective meaning with dark feet.

DIAGNOSIS: The female epigynum (fig. 725) has two small cuspidate pits anterolaterally. Similar small pits are present in *S. nigripes* (fig. 718) and *S. aurantia* (fig. 720), but *S. fuscipes* is readily distinguishable from those two species by its characteristically shaped atrium. The epigynal atrium is somewhat similarly shaped in *S. nitens* (fig. 708), but that species lacks the two pits. The male is diagnosed by the carapace lobe (fig. 723) and

the palp; the palpal tibia is drawn out distally into an apophysis which is pointed (dorsal aspect) (fig. 724) or clawlike (lateral aspect) (fig. 721). The palp is somewhat similar to that of *S. nigripes*, but in that species the tibial apophysis is truncated distally (figs. 716, 719).

FEMALE: Total length 2.65–3.0. Carapace length 1.2–1.35; deep orange, black anteriorly. Eyes small, with posteriors 2–3 d apart. Abdomen pale yellow to gray, black around spinnerets. Sternum orange. Legs with coxae and trochanters orange, remaining segments deep brown; metatarsi 1–4 with trichobothrium: TmI 0.3–0.35. Palp black. Epigynum (fig. 725).

MALE: Total length 2.55. Carapace length 1.15. Color and trichobothria as female. Carapace raised into shallow lobe anteriorly (fig. 723). Palp (figs. 721, 722, 724); heavily suffused with black.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

Sphecozone rubescens O.P.-Cambridge

Figures 726–728

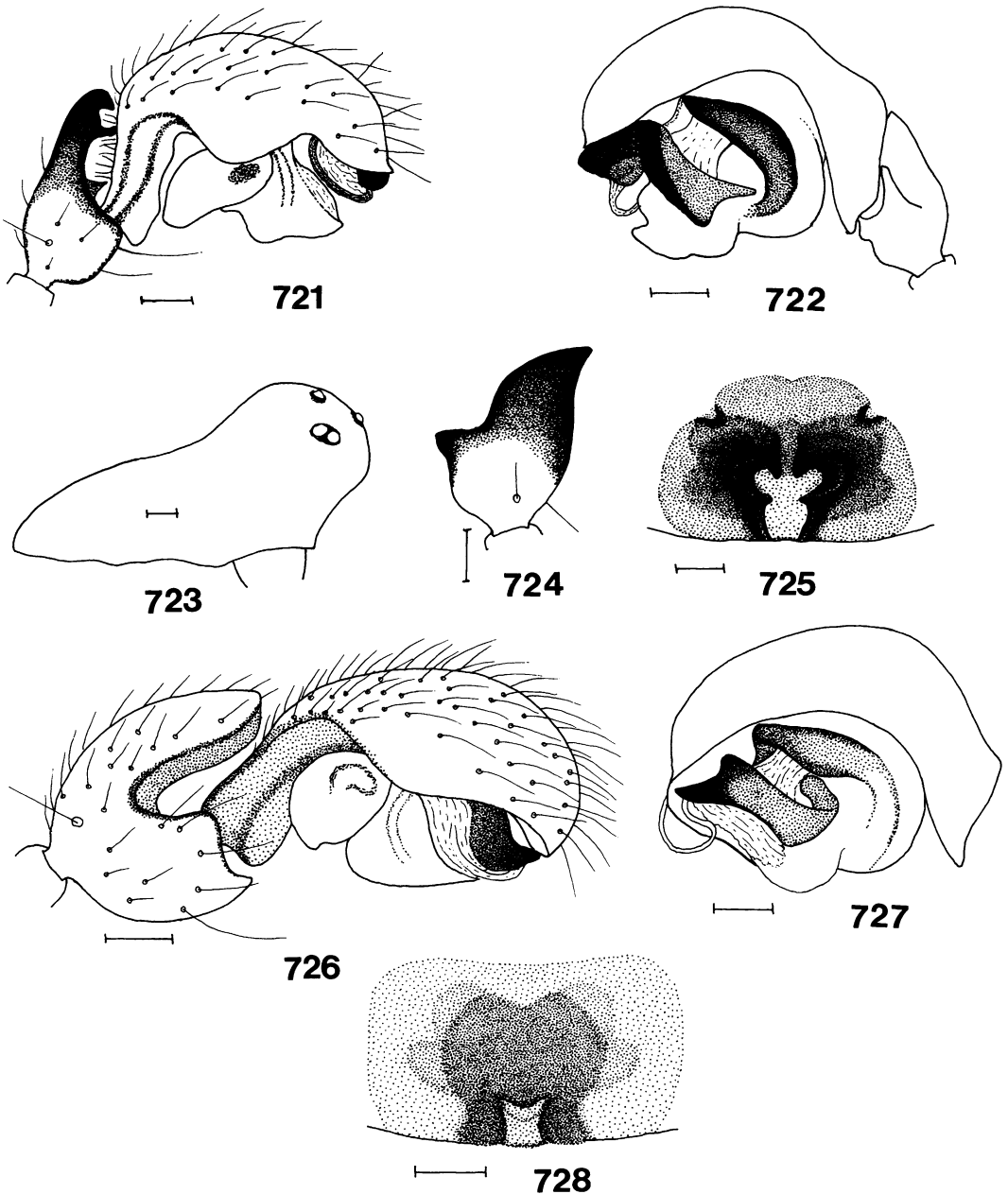
Sphecozone rubescens O.P.-Cambridge, 1870: 733.—Millidge, 1985: 68.

This species is redescribed on the basis of fresh specimens.

DIAGNOSIS: The female epigynum (fig. 728) has a relatively small atrium. The male palp was the tibia extended distally into a broad apophysis (fig. 726, and figs. 260, 261 of Millidge, 1985), and the embolic division is rather simple (fig. 727), with a short, almost transparent, embolus.

FEMALE: Total length 3.1–3.3. Carapace length 1.2–1.3; orange, suffused with black, or wholly black, anteriorly. Chelicerae and palp dark brown to black. Abdomen cream, black around spinnerets. Sternum orange. Legs orange-yellow, suffused with dark brown; TmI ca. 0.3. In females which were probably recently molted, and paler in color, more of the internal structure of the epigynum was visible. The specimens examined were less obviously red in color than indicated by Pickard-Cambridge.

MALE: Total length 2.75. Carapace length



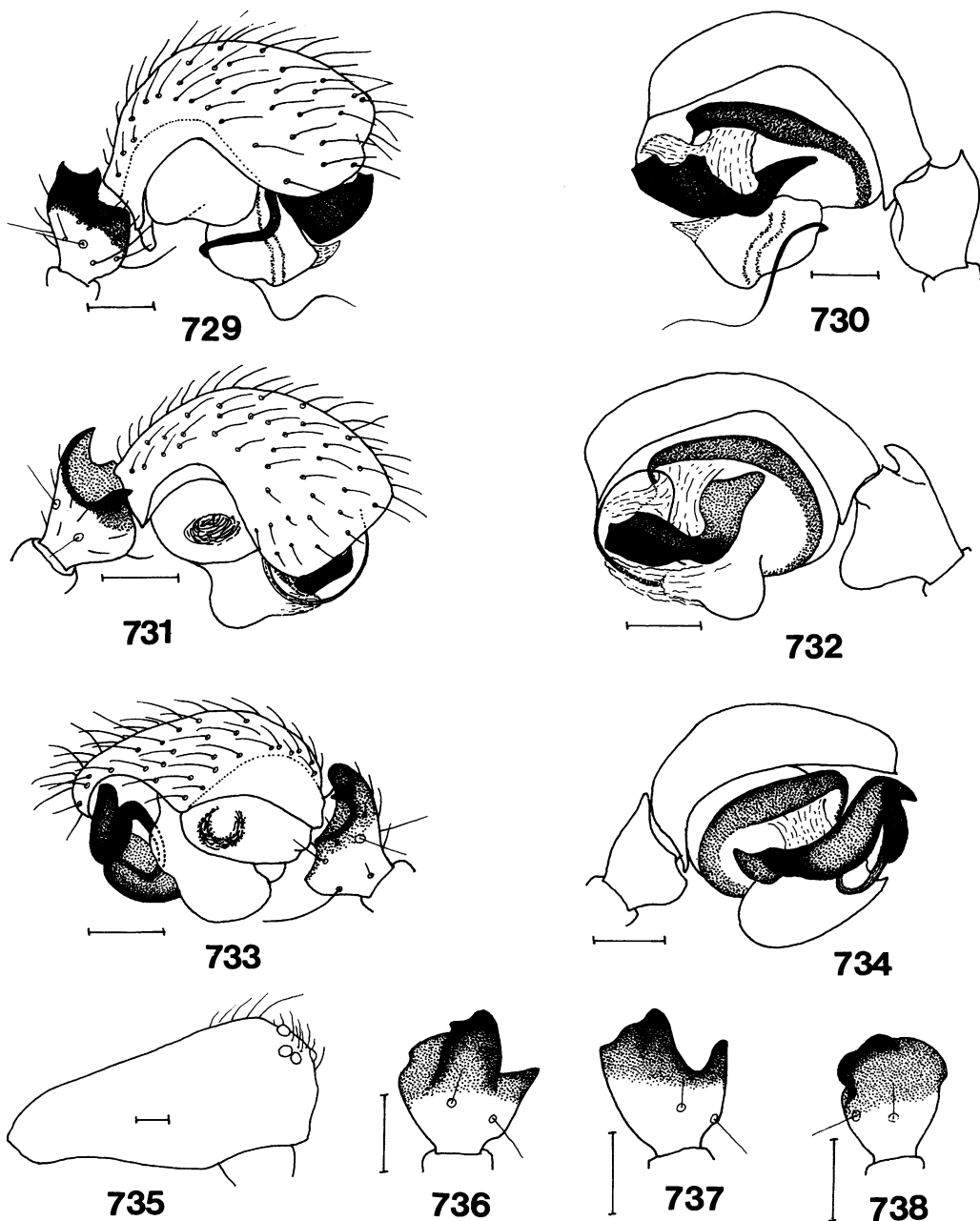
Figs. 721–728. 721–725. *Sphecozone fuscipes*. 726–728. *S. rubescens*. 721, 726. Male palp, ectal. 722, 727. Male palp, mesal. 723. Male carapace, lateral. 724. Male palpal tibia, dorsal. 725, 728. Epigynum, ventral. Scale lines 0.1 mm.

1.1. Color and trichobothria as female, except carapace orange, not blackened anteriorly. Palp (figs. 726, 727); black.

MATERIAL EXAMINED: BRAZIL: *Rio de Janeiro*: Guanabara, June 1971 (T. McGrath), 5 females, 2 males (MCZ). ARGENTINA:

Tucumán: 4 km southwest of San Pedro de Colalao, Dec. 16, 1971 (L. Herman), 1 female (AMNH); Rio Sali, 15 km north of Tucumán, Dec. 21, 1971 (L. Herman), 1 female, 2 males (AMNH).

DISTRIBUTION: Brazil and Argentina.



Figs. 729-738. 729, 730, 735, 736. *Sphecozone cristata*. 731, 732, 737. *S. tincta*. 733, 734, 738. *S. nigriceps*. 729, 731, 733. Male palp, ectal. 730, 732, 734. Male palp, mesal. 735. Male carapace, lateral. 736-738. Male palpal tibia, dorsal. Scale lines 0.1 mm.

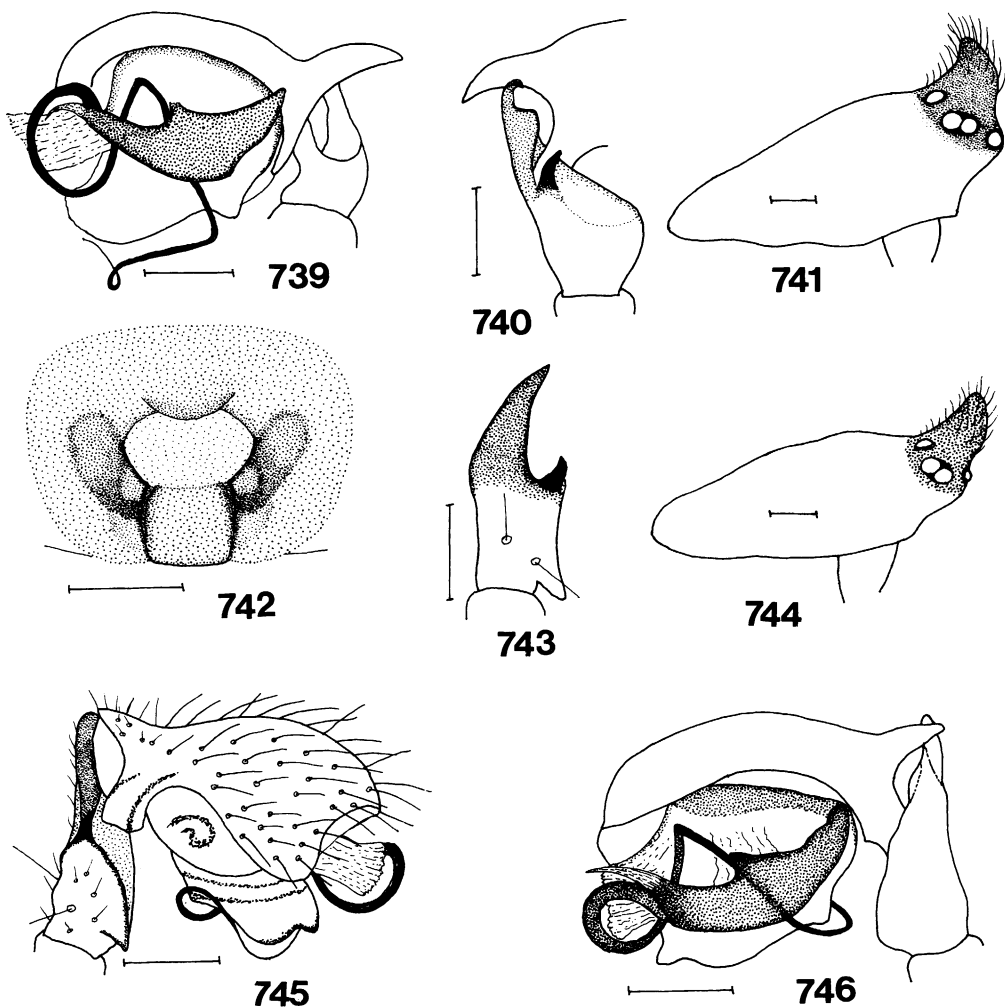
***Sphecozone cristata*, new species**

Figures 729, 730, 735, 736

TYPE: Male holotype from Itu, São Paulo, Brazil, Jan. 14, 1959 (A. M. Nadler); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a crest.

DIAGNOSIS: The male palp (figs. 729, 730, 736) has the tibial apophyses of the same general form as in *S. corniculans*, *S. crinita*,



Figs. 739–746. 739–742. *Sphecozone personata*. 743–746. *S. rostrata*. 739, 746. Male palp, mesal. 740. Male palpal tibia, ectal. 741, 744. Male carapace, lateral. 742. Epigynum, ventral. 743. Male palpal tibia, dorsal. 745. Male palp, ectal. Scale lines 0.1 mm.

and *S. cornuta* (see *S. corniculans* diagnosis), but the apophyses are readily distinguishable, and those species are also separable from *S. cristata* by the forms of the embolic division, by the lack of a trichobothrium on metatarsus 4, and by the carapace form. The female is not known.

MALE: Total length 2.3. Carapace length 1.0; orange-brown, suffused with black anteriorly; gently raised anteriorly, with numerous curved bristles in ocular area and behind eyes (fig. 735). Abdomen dorsally whitish, shading to black at spinnerets; gray ventrally and on sides. Sternum brown, with blackish margins. Legs brown; metatarsi 1–

4 with trichobothrium: TmI 0.3. Palp (figs. 729, 730, 736).

MATERIAL EXAMINED: BRAZIL: *São Paulo*: the holotype. *Rio de Janeiro*: S. Maria Madalena, July 1960 (M. Alvarenga), 2 male paratypes (AMNH).

DISTRIBUTION: Known only from Brazil.

***Sphecozone tincta*, new species**

Figures 731, 732, 737

TYPE: Male holotype from Pelotas, Rio Grande do Sul, Brazil, Nov. 1960 (C. Bie-zanko); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning tinged, colored.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the tibia, which has two short apophyses distally (figs. 731, 737), and by the embolic division (fig. 732), which has a relatively short, slender embolus. The male carapace is similar to that of *S. cristata*. It is not known whether *S. tincta* has a trichobothrium on metatarsus 4. The female is not known.

MALE: Total length 2.1. Carapace length 1.1; orange, suffused anteriorly with black. Posterior eyes 1.5–2 d apart. Abdomen whitish gray, suffused with black ventrally and around spinnerets. Sternum orange, with blackish margins. Legs orange-brown; both metatarsi 4 missing: TmI 0.35. Palp (figs. 731, 732, 737); cymbium suffused with black.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

Sphecozone nigriceps, new species

Figures 733, 734, 738

TYPE: Male holotype from Jardim Botânico, Agua Funda, São Paulo, Brazil, in wooded area, July 7, 1962 (A. F. Archer); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a black head.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the tibial apophysis (fig. 738), which from the ectal aspect is pointed (fig. 733), and by the embolic division (fig. 734), which has the embolus stout basally but narrow and translucent distally. The female is not known.

MALE: Total length 2.0. Carapace length 1.1; orange, black anteriorly. Posterior eyes 2–2.5 d apart. Abdomen whitish, black around spinnerets. Sternum black. Legs brown, with tibiae suffused with black: TmI 0.45. Palp (figs. 733, 734, 738); cymbium dark brown to black.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

Sphecozone personata (Simon),
new combination

Figures 739–742

Typhistes personatus Simon, 1894: 672 (one male and one female syntype from south Brazil, in MNHN, examined).—Roewer, 1942: 710.—Bonnet, 1959: 4742.

This species is included provisionally in

Sphecozone. It is improbable that *T. personatus* is congeneric with the type species of *Typhistes*, namely *T. comatus* Simon from Sri Lanka; unfortunately the type of *T. comatus* has not been located. If *T. personatus* is later thought not to fit into *Sphecozone*, then a new genus will probably be required for this species and *T. rostrata*; possibly *T. personatus* is closer to *Brattia* than to *Sphecozone*.

DIAGNOSIS: The female epigynum (fig. 742) has a fairly distinct atrium, anterior to which is a rounded protuberance. The male is diagnosed by the cephalic horn (fig. 741), and by the palp; the cymbium is drawn out posteriorly into a hornlike extension (fig. 739), the tibia has two pointed apophyses (fig. 740), and the embolic division (fig. 739) is rather simple, with a long, slender embolus. The cephalic horn and the palp are very similar to those of *S. rostratus* (figs. 743–746), but there are small differences, and *S. rostratus* has a trichobothrium on metatarsus 4, which is absent in *S. personata*.

FEMALE: Total length 1.55. Carapace length 0.65; yellow-brown, with ocular area black. Posterior median eyes ca. 2 d apart. Abdomen whitish, suffused with brown around spinnerets. Sternum pale yellow. Legs pale brown, with tibiae and metatarsi suffused with darker brown; TmI 0.4. Epigynum (fig. 742).

MALE: Total length 1.55. Carapace length 0.8; pale yellow, drawn out to horn anteriorly (fig. 741); horn suffused with brown to black. Posterior median eyes ca. 3 d apart. Other characters as female. Palp (figs. 739, 740).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Brazil.

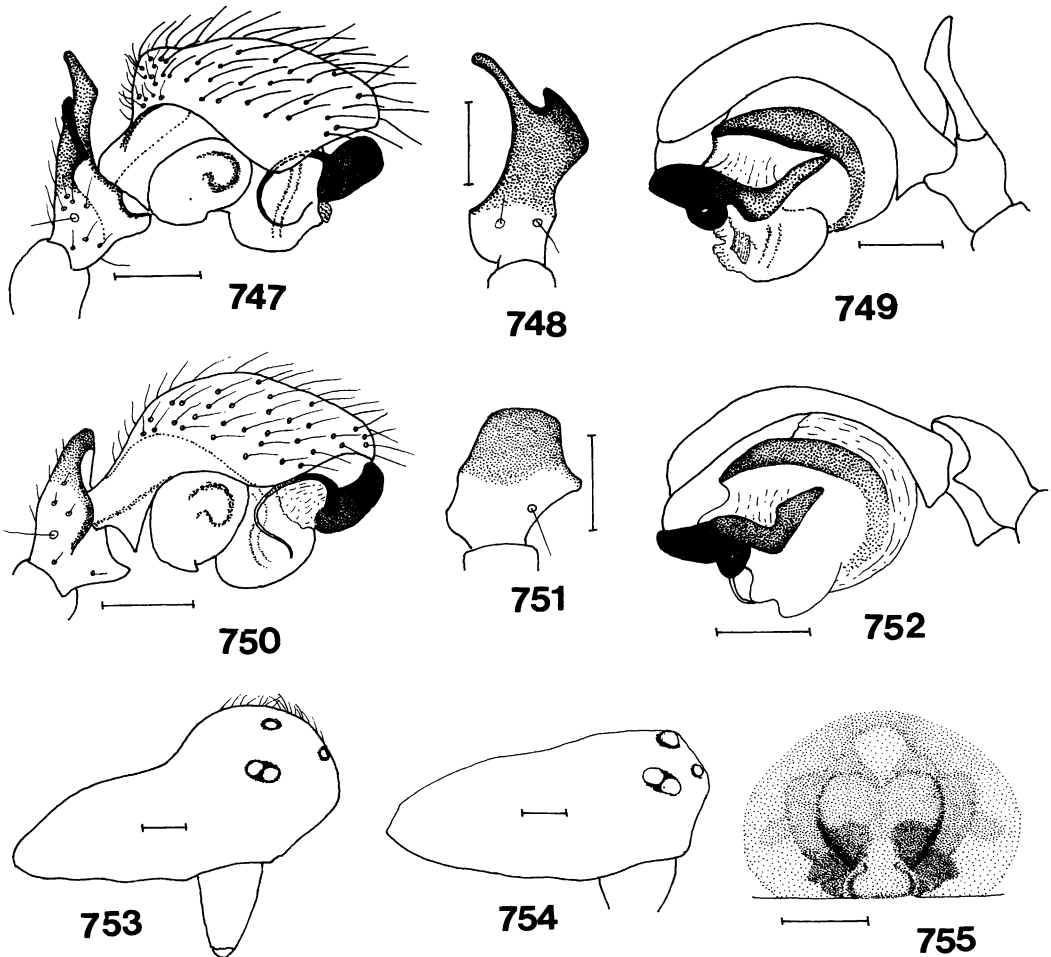
Sphecozone rostrata, new species

Figures 743–746

TYPE: Male holotype from Enerigilhada, Bahia, Brazil, 960 m, Nov. 1973 (M. Alva-renga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a snout.

DIAGNOSIS: The male is diagnosed by the cephalic horn (fig. 744) and the palp (figs. 743, 745, 746), both of which are close to those of *S. personata*; the character which distinguishes these two species is the presence in *S. rostrata* of a trichobothrium on metatarsus 4. The female is not known.



Figs. 747–755. 747–749, 753. *Sphecozone lobata*. 750–752, 754, 755. *S. modica*. 747, 750. Male palp, ectal. 748, 751. Male palpal tibia, dorsal. 749, 752. Male palp, mesal. 753, 754. Male carapace, lateral. 755. Epigynum, ventral. Scale lines 0.1 mm.

MALE: Total length 1.45. Carapace length 0.75; dark brown, produced anteriorly into a horn (fig. 744). Posterior eyes fairly large, with medians 1.5 d apart. Abdomen shiny black, clothed with pale-colored hairs. Sternum brown, with blackish margins. Legs brown, suffused with black; metatarsi 1–4 with trichobothrium: TmI 0.3. Palp (figs. 743, 745, 746).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

Sphecozone lobata, new species

Figures 747–749, 753

TYPE: Male holotype from Plazoleto de Yunque, Valle Anson, Mas a Tierra, Juan

Fernandez Islands, Chile, 200–250 m, Apr. 1–28, 1962 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a lobe.

DIAGNOSIS: The male is diagnosed by the rounded cephalic lobe (fig. 753), and by the palp, the tibia of which is extended into two apophyses (figs. 747, 748); the embolic division (fig. 749) is simple, with a short embolus. The female is not known.

MALE: Total length 1.45. Carapace length 0.75; brown; darkened and raised into round lobe anteriorly (fig. 753). Eyes small, with posteriors 3–4 d apart. Abdomen gray. Sternum pale brown, with darker margins. Legs pale yellow: TmI 0.4. Palp (figs. 747–749).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Juan Fernandez Islands, Chile.

Sphecozone modica, new species

Figures 750–752, 754, 755

TYPES: Male holotype, with one female paratype, from 5 km east of Chilecito, La Rioja, Argentina, 1500 m, Nov. 30, 1971 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning ordinary.

DIAGNOSIS: The female epigynum (fig. 755) is rather lightly sclerotized; the epigynal form readily distinguishes from other *Sphecozone* species. The male is diagnosed by the palp; the tibia is drawn out into a short, broad apophysis (fig. 751), and the embolic division (fig. 752) is simple, with a short embolus.

FEMALE: Total length 1.55. Carapace length 0.7; orange, suffused with black anteriorly. Posterior eyes 1.5 d apart. Abdomen gray. Sternum orange, margins suffused with gray; slightly rugose. Legs orange-brown; TmI 0.35. Epigynum (fig. 755).

MALE: Total length 1.45. Carapace length 0.7. Color and trichobothria as female. Carapace raised anteriorly, with ocular area projecting slightly over clypeus (fig. 754). Palp (figs. 750–752).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Argentina.

Sphecozone araeoncisformis (Simon),
new combination
Figures 756–760

Ceratinopsis araeoncisformis Simon, 1895: 170 (male and female syntypes from Tierra del Fuego, Argentina; male in MNHN, examined).—Roewer, 1942: 706.—Bonnet, 1956: 1018.

DIAGNOSIS: No female specimens were located. The male is diagnosed by the *Araeoncus*-like carapace (figs. 758, 759), and by the palp; the cymbium has a small horn posteriorly, and the embolic division (fig. 757), which is somewhat abnormally shaped, has a long, slender embolus which is transparent basally. Possibly *S. araeoncisformis* is closer to *Brattia* than to *Sphecozone*.

MALE: Total length 1.5. Carapace length 0.7; pale orange, with narrow black margins;

raised into an *Araeoncus*-like form, with small, widely spaced eyes (figs. 758, 759). Abdomen whitish, with dorsally a narrow black stripe; sides blackish. Sternum pale yellow with blackish margins. Legs pale yellow-brown; TmI ca. 0.45. Palp (figs. 756, 757, 760). Colors almost certainly faded.

MATERIAL EXAMINED: Only the male type.

DISTRIBUTION: Known only from Tierra del Fuego, Argentina.

Sphecozone cornuta, new species
Figures 761–764

TYPE: Male holotype from Isla Don Segismundo, Rio Abra Vieja, Buenos Aires, Argentina, in mosses, Jan. 6, 1962 (O. de'Ferrariis); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning horned.

DIAGNOSIS: The male is diagnosed by the carapace lobe with bristles (fig. 764), and by the palp, particularly by the presence of the sclerotized horn on the anterior of the tegulum (figs. 761, 762). The tibial apophysis (figs. 761, 763) is of the same general form as in *S. corniculans* and some other species (see *S. corniculans* diagnosis). The female is not known.

MALE: Total length 1.95. Carapace length 0.85; brown, with dark striae and margins; anteriorly with lobe (fig. 764) which bears strong bristles. Posterior eyes ca. 1.5 d apart. Abdomen glossy black. Sternum brown, heavily suffused with black. Legs brown; TmI 0.3. Palp (figs. 761–763); cymbium suffused with black, and tegulum with sclerotized horn anteriorly.

MATERIAL EXAMINED: Only the holotype.

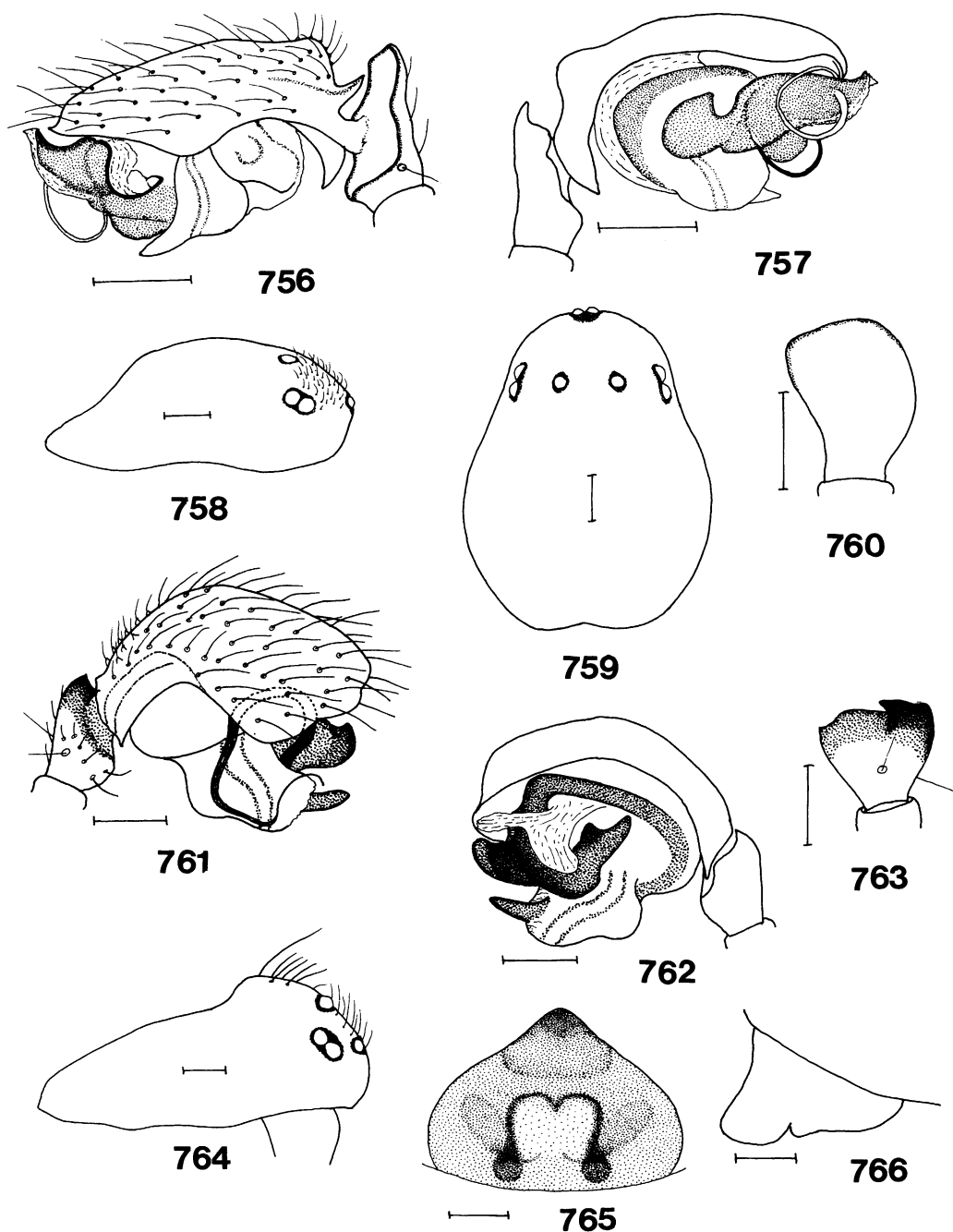
DISTRIBUTION: Known only from Argentina.

Sphecozone rugosa, new species
Figures 765, 766

TYPE: Female holotype from Punta Lara, Buenos Aires, Argentina, Feb. 23, 1972 (L. Herman); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning roughened, rugose.

DIAGNOSIS: The female epigynum (fig. 765) projects as a rounded point anteriorly (fig. 766), and sternum and carapace are rugose. The epigynum is somewhat similar to that of



Figs. 756–766. 756–760. *Sphecozone araeonciformis*. 761–764. *S. cornuta*. 765, 766. *S. rugosa*. 756. Male palp, left, ectal. 757. Male palp, left, mesal. 758, 764. Male carapace, lateral. 759. Male carapace, dorsal. 760. Male palpal tibia, left, dorsal. 761. Male palp, ectal. 762. Male palp, mesal. 763. Male palpal tibia, dorsal. 765. Epigynum, ventral. 766. Epigynum, lateral. Scale lines 0.1 mm.

Styloctetor antarctica (Simon) (Millidge, 1985: figs. 283, 285). The male is not known.

FEMALE: Total length 2.0. Carapace length 0.75; deep orange-brown, slightly rugose. Abdomen pale pinkish gray, suffused with brown ventrally and around spinnerets. Sternum reddish brown, darker on margins; rugose. Legs orange-brown; TmI 0.25–0.3. Epigynum (figs. 765, 766); the internal duct structure indicates that this species is a *Sphecozone*, not a *Styloctetor*. This female was taken in the same general area as *S. cornuta* male, but the rugose sternum and carapace suggest that it is not the male of *S. cornuta*.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Argentina.

BRATTIA SIMON

Brattia Simon, 1894: 673 (type species by original designation *Brattia spadicaria* Simon).—Roewer, 1942: 705.—Bonnet, 1955: 914.—Baert, 1987: 261.—Platnick, 1989: 222.

DIAGNOSIS: The female epigynum (figs. 770, 773, 778), has elongated spermathecae (fig. 771) and a rather obscure internal duct system. The male palp has no paracymbium (figs. 767, 776); the embolic division is close to that of *Sphecozone*.

DESCRIPTION: See Baert, 1987.

INCLUDED SPECIES: *Brattia spadicaria* Simon, *Brattia novaetetoniae* Baert, *Brattia castanea*, n. sp. and *Brattia melanocephala*, n. sp. It is unlikely that the African and Philippine species listed by Roewer (1942) and Bonnet (1955) are congeneric.

DISTRIBUTION: Venezuela, Brazil.

TAXONOMIC POSITION: *Brattia* is very close to *Sphecozone*.

Brattia spadicaria Simon

Figures 767–772

Brattia spadicaria Simon, 1894: 674 (syntypes from Caracas, Venezuela, in MNHN, examined).—Roewer, 1942: 705.—Bonnet, 1955: 914.—Baert, 1987: 262.

DIAGNOSIS: The female epigynum (figs. 770, 772), is readily distinguishable from that of *B. melanocephala* (figs. 773, 775), and distinguishable from those of *B. castanea* and

B. novaetetoniae, particularly by the lateral aspect (fig. 772; cf. figs. 782, 783). The male is diagnosed by the palp; the tibial apophysis (figs. 767, 769) is shorter and differently shaped than in *B. castanea* (figs. 776, 777, 780) and *B. novaetetoniae* (fig. 784), and the embolic division is differently shaped, with a longer embolus, than in *B. castanea* or *B. novaetetoniae* (figs. 779, 781).

FEMALE: Total length 1.65–2.1. Carapace length 0.8–0.9; yellow to orange. Posterior eyes ca. 1 d apart. Abdomen dorsally yellow-white to yellow-gray, darker ventrally and around spinnerets. Sternum yellow to orange, sometimes suffused with dark brown. Legs pale yellow to brown, with femora and tibiae sometimes suffused with black; TmI ca. 0.25. Epigynum (figs. 770–772).

MALE: Total length 1.6–2.1. Carapace length 0.8–1.0. Color as female. Palp (figs. 767–769).

MATERIAL EXAMINED: VENEZUELA: Caracas: the types. Mérida: El Vigia, Road La Victoria, 1100 m, Feb. 22, 1968 (P. and B. Wygodzinsky), 2 female, 1 male (AMNH).

DISTRIBUTION: Known only from Venezuela.

Brattia melanocephala, new species

Figures 773–775

TYPE: Female holotype from Teresopolis, Rio de Janeiro, Brazil, 1800–2000 m, Mar. 16, 1946 (H. Sick); deposited in AMNH.

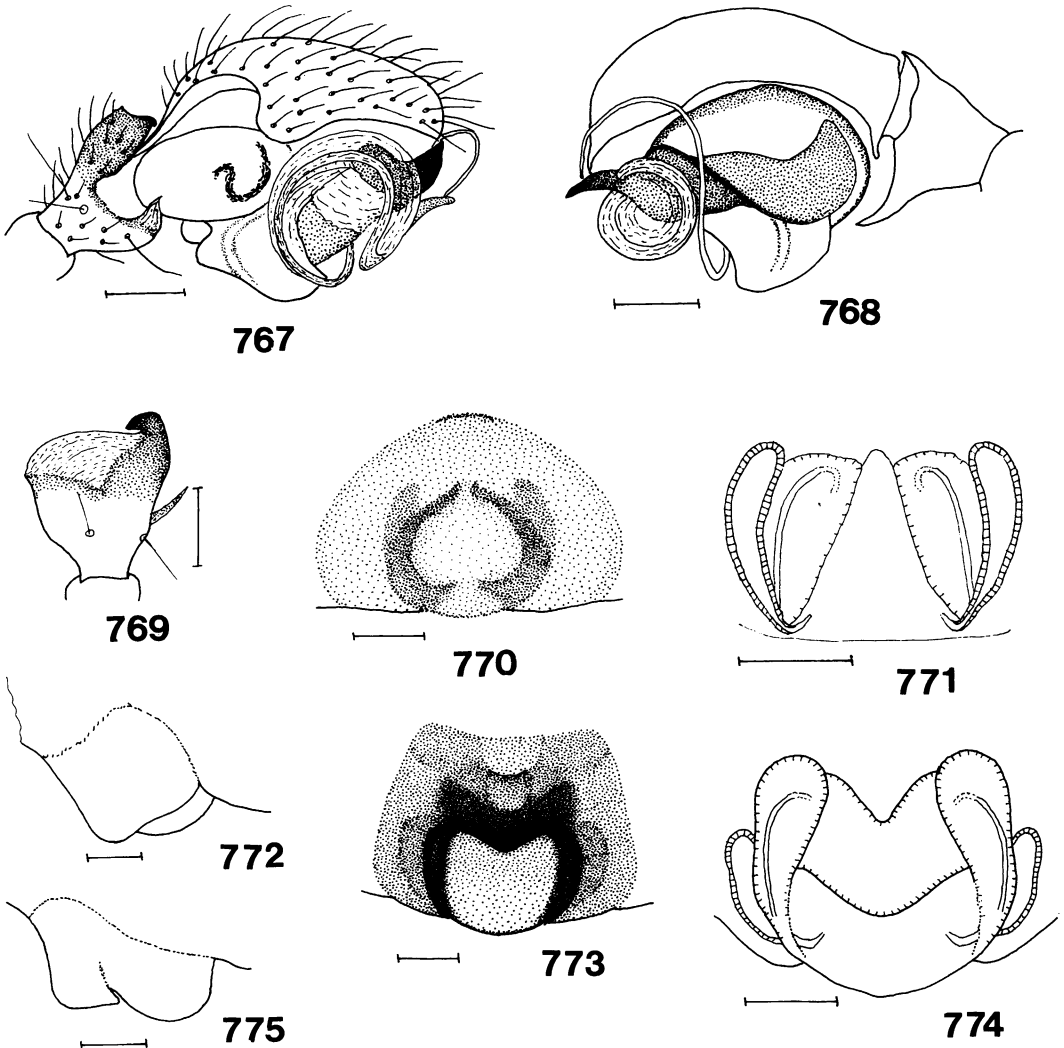
ETYMOLOGY: The specific name is a Latin adjective meaning with a black head.

DIAGNOSIS: The female epigynum is clearly distinguishable from those of the other *Brattia* species by both the ventral (fig. 773) and lateral (fig. 775) aspects. The male is not known.

FEMALE: Total length 2.0. Carapace length 0.85; dark orange-brown, ocular area black. Eyes small, with posterior medians 2 d apart, and 3 d from laterals. Abdomen gray-black. Sternum orange-brown, margins suffused with black. Legs dark brown, with tarsi orange-brown; TmI 0.4. Epigynum (figs. 773–775); profile is different from those of the other species, but internal structure is close to that of *B. spadicaria*.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.



Figs. 767–775. 767–772. *Brattia spadicaria*. 773–775. *B. melanocephala*. 767. Male palp, ectal. 768. Male palp, mesal. 769. Male palpal tibia, dorsal. 770, 773. Epigynum, ventral. 771, 774. Epigynum, internal. 772, 775. Epigynum, lateral. Scale lines 0.1 mm.

***Brattia castanea*, new species**

Figures 776–780, 782

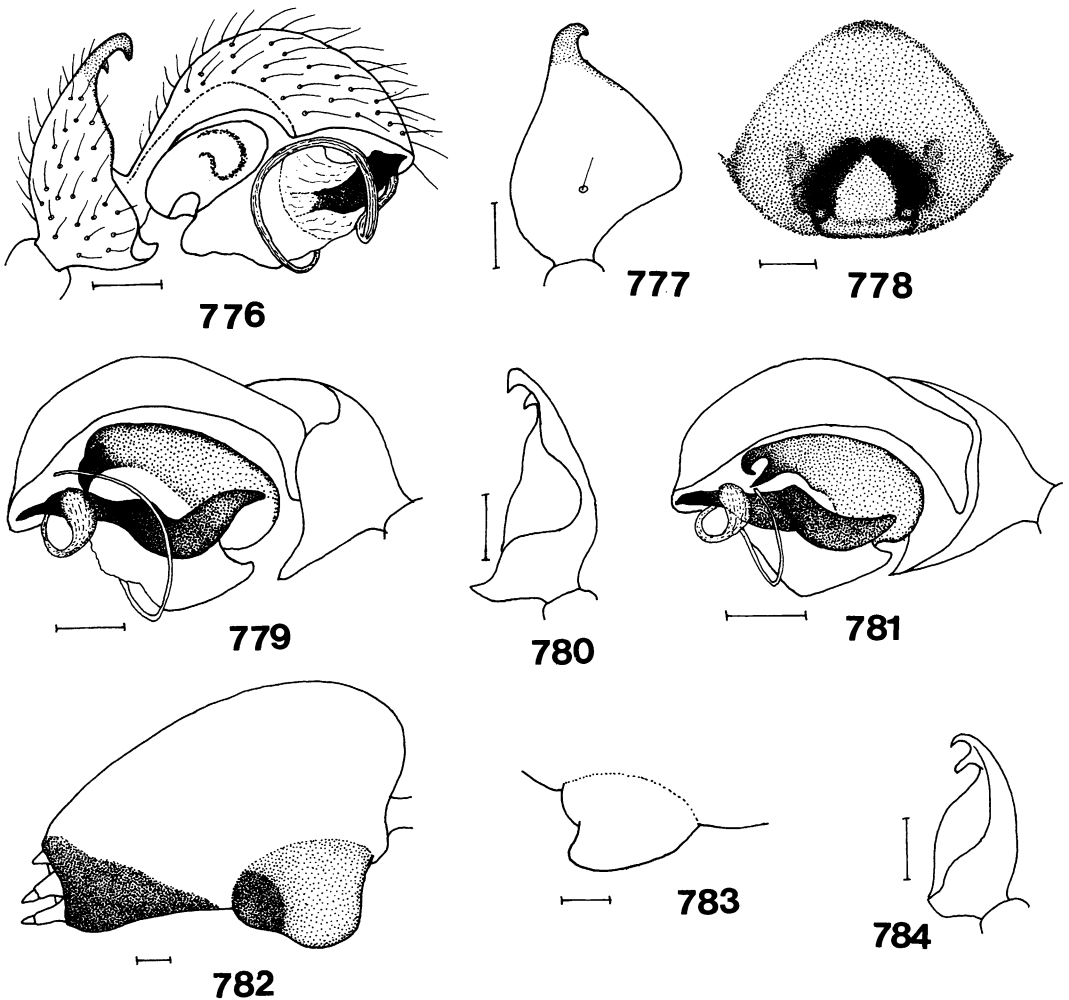
TYPES: Male holotype, with two female and three male paratypes, from University City Garden, São Paulo, Brazil (no information given on collector or date); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning chestnut-brown.

DIAGNOSIS: The female epigynum (fig. 778) is close to that of *B. novaeteutoniae*, but more protruding (fig. 782; cf. fig. 783). The male is diagnosed by the palp; this is close to that of

B. novaeteutoniae, but that species has the suprategular apophysis clawlike distally (fig. 781), whereas in *B. castanea* the suprategular apophysis is distally simpler (fig. 779). There are also small differences in the palpal tibiae (fig. 780; cf. fig. 784).

FEMALE: Total length 1.9–2.1. Carapace length 0.8–0.9; chestnut-brown, suffused anteriorly with black or deep brown. Posterior eyes 1–1.5 d apart. Abdomen gray, black around spinnerets. Sternum deep brown to black. Legs orange-brown; TmI 0.3. Epigynum (figs. 778, 782).



Figs. 776–784. 776–782. *Brattia castanea*. 781, 783, 784. *B. novaeteutoniae*. 776. Male palp, ectal. 777. Male palpal tibia, dorsal. 778. Epigynum, ventral. 779, 781. Male palp, mesal. 780, 784. Male palpal tibia, mesal. 782, 783. Epigynum, lateral. Scale lines 0.1 mm.

MALE: Total length 1.8. Carapace length 0.8–0.9. Color as female. Palp (figs. 776, 777, 779, 780).

MATERIAL EXAMINED: BRAZIL: *São Paulo*: the types above. Bosque, Cidade Universitaria, Mar. 17, 1962 (A. F. Archer), 1 female paratype (AMNH).

DISTRIBUTION: Known only from Brazil.

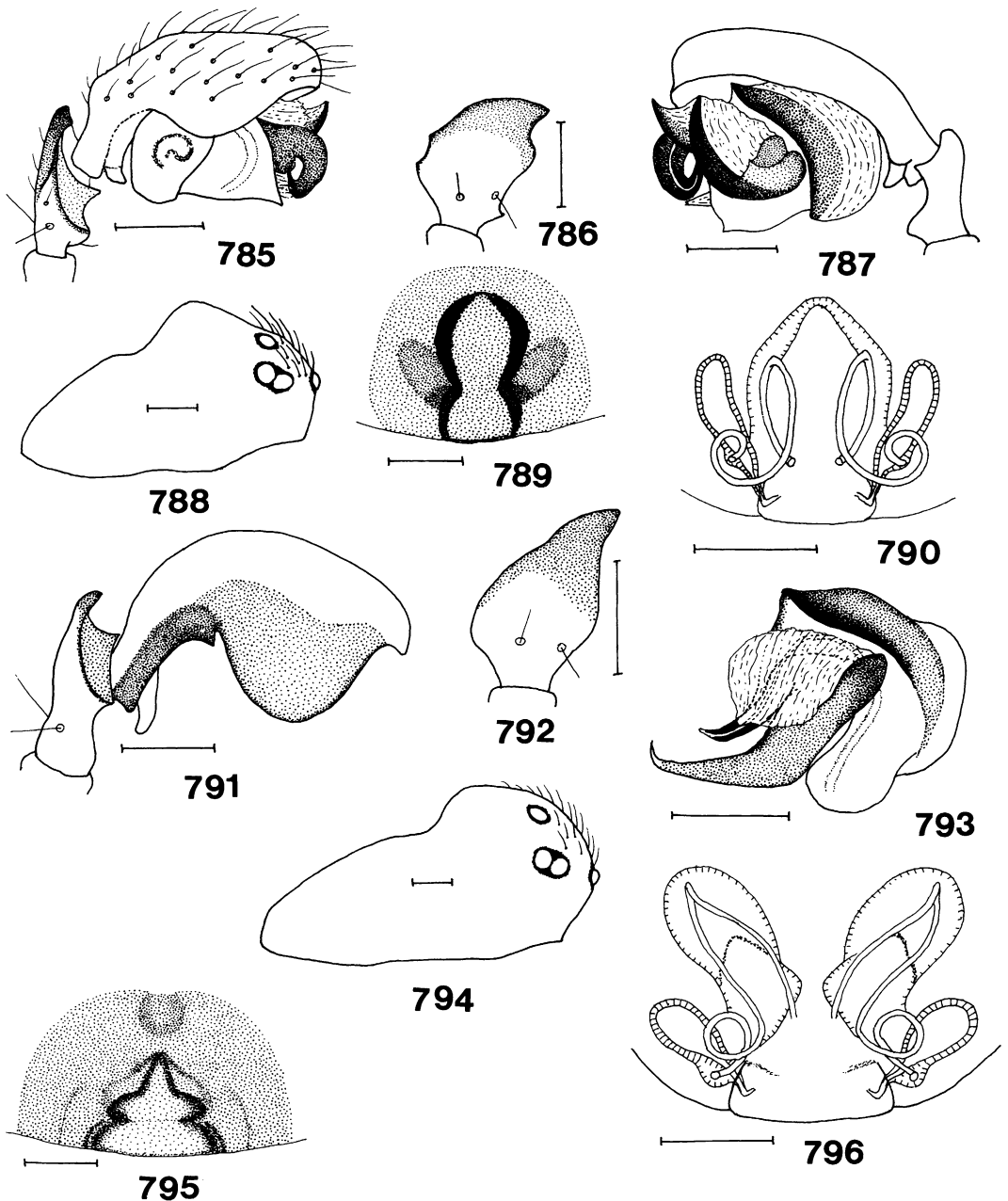
PSILOCYMBIUM, NEW GENUS

TYPE SPECIES: *Psilocymbium tuberosum*, new species.

ETYMOLOGY: From the Greek *psilos*, bare,

and *cymbium*, referring to the absence of a paracymbium. Gender neuter.

DIAGNOSIS: The females may not be diagnosable with certainty unless taken with the male. The external epigyna (figs. 789, 795) are not sufficiently different from those of some other genera to be regarded as characteristic, but internally the looped duct adjacent to the somewhat elongated spermatheca (figs. 790, 796) may be diagnostic for the genus. The males are diagnosed by the palp (figs. 785, 787, 793), which lacks a paracymbium, and by the carapace form (figs. 788, 794).



Figs. 785-796. 785-790. *Psilocymbium tuberosum*. 791-794. *P. pilifrons*. 795, 796. *P. incertum*. 785. Male palp, ectal. 786, 792. Male palpal tibia, dorsal. 787. Male palp, mesal. 791. Male palp, ectal, bulb omitted. 788, 794. Male carapace, lateral. 789, 795. Epigynum, ventral. 790, 796. Epigynum, internal. 793. Male palpal organ, mesal. Scale lines 0.1 mm.

DESCRIPTION: The three known members of the genus have total length 1.2-1.9. The female carapace is unmodified; the male carapace is raised behind the eyes into a shallow

lobe which carries numerous hairs anteriorly (figs. 788, 794). The posterior eyes are widely separated in the male. The legs are moderately stout, with tibia 1 $1/d$ (female) 5-7. Dor-

sal tibial spines are 1111 in the female, absent in the male; there are rows of fairly long hairs ventrally on tibiae 1 and 2 in the male. Metatarsi 1–3 have a trichobothrium; TmI 0.50–0.55. The female palp is clawless. The tracheal form is not known, but almost certainly erigonine. The epigyna are of the *Ceratinopsis* type; the spermathecae are somewhat elongated, and the duct forms a loop before entering the usual infrastructure on its way to the opening (figs. 790, 796). The male palp (figs. 785, 791) has the cymbium drawn out and hollowed basally, as in *Sphecozone*, and there is no paracymbium. The embolic division has a rounded radical part, enclosing a mass of lightly sclerotized material (figs. 787, 793); the stout embolus arises from this region.

INCLUDED SPECIES: *Psilocymbium tuberosum*, new species, *Psilocymbium pilifrons*, new species, and *Psilocymbium incertum*, new species.

DISTRIBUTION: Colombia, Brazil.

TAXONOMIC POSITION: The female epigynum is typical of the *Ceratinella* group of genera. The form of the male cymbium, and the absence of a paracymbium, links the genus with *Sphecozone*, but the embolic division is very different from those of *Sphecozone*. *Psilocymbium* must be regarded, provisionally, as an aberrant member of the *Ceratinella/Sphecozone* group of genera.

***Psilocymbium tuberosum*, new species**

Figures 785–790

TYPES: Male holotype, with female paratype, from Encruzilhada, Bahia, Brazil, 980 m, Nov. 1975 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning with a swelling.

DIAGNOSIS: The female epigynum (fig. 789) is readily distinguished from that of the other known female (*P. incertum*: fig. 795). The male is diagnosed by the palp; the tibia (fig. 786) is less extended distally than in *P. pilifrons* (fig. 792), and the embolic division (fig. 787) appears to be significantly different from that of *P. pilifrons* (fig. 793), though the difference may be less pronounced in an unexpanded palp. The form of the carapace lobe (fig. 788) is somewhat less rounded than in *P. pilifrons* (fig. 794).

FEMALE: Total length 1.45. Carapace length 0.6; deep orange. Abdomen white, with median black stripe dorsally, and black around spinnerets. Sternum deep orange. Legs orange; TmI 0.55. Epigynum (figs. 789, 790).

MALE: Total length 1.2 (abdomen shrunk-en). Carapace length 0.65. Color and chaetotaxy as female. Carapace lobe (fig. 788). Palp (figs. 785–787).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from eastern Brazil.

***Psilocymbium pilifrons*, new species**

Figures 791–794

TYPE: Male holotype from Paramo de Monserrate, Cundinamarca, Colombia, 2230 m, Oct. 14, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning with a hairy forehead.

DIAGNOSIS: The female is not known. The male is diagnosed by the palp; the tibia (fig. 792) is more extended distally than in *P. tuberosum* (fig. 786), and the embolic division (fig. 793) is significantly different from that of *P. tuberosum* (fig. 787). There are also small differences in the carapace lobes (fig. 792; cf. fig. 788).

MALE: Total length 1.75. Carapace length 0.8; orange, with narrow dark margins, raised into shallow lobe (fig. 794). Abdomen white, with median black stripe dorsally, black around spinnerets, and with black speckling on sides. Sternum orange, with narrow dark margin. Legs orange; TmI 0.45. Palp (figs. 791–793); both palps are expanded, and this may exaggerate the apparent differences from *P. tuberosum*.

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.

***Psilocymbium incertum*, new species**

Figures 795, 796

TYPES: Female holotype, with two female paratypes, from Paramo de Chingaza, Cundinamarca, Colombia, in woods, 3550 m, Sept. 13, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning uncertain.

DIAGNOSIS: The female epigynum (figs. 795, 796) is readily distinguished from that of *P. tuberosum* (fig. 789). The male is not known, but this species may prove to be the female of *D. pilifrons*.

FEMALE: Total length 1.9. Carapace length 0.7–0.8; brown to deep brown, with blackish markings and margins. Abdomen black. Sternum dark brown to almost black. Legs brown; TmI ca. 0.5. Epigynum (figs. 795, 796).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

GYMNOCYMBIUM, NEW GENUS

TYPE SPECIES: *Gymnocymbium grave*, new species.

ETYMOLOGY: From the Greek *gymnos*, naked, and *cymbium*, referring to the absence of a paracymbium. Gender neuter.

DIAGNOSIS: The females described have not been taken with males, and their allocation to this genus is provisional. Females are diagnosed by the epigynum (figs. 803, 804). Males are diagnosed by the palp (figs. 797, 798, 800, 802), which has a heavy, complex embolic division and no paracymbium.

DESCRIPTION: All the specimens are in rather poor condition, and hence the generic description is incomplete. Total length 1.65–2.35. The carapace is unmodified; the eyes are small to medium in size, with posteriors 1–2 d apart. The legs are relatively long and slender, with tibia 1 l/d (male) 9–14; spinal armature indeterminable. Metatarsi 1–3 have a trichobothrium; TmI 0.25–0.3. The tracheal form is not known, but is probably erigonine. The epigynum (figs. 803, 804) is of the *Ceratinella/Ceratinopsis* form; the internal structure (fig. 806) is close to that of *Ceratinella*. The palpal tibia is extended distally into a dark-colored apophysis; there is no paracymbium (figs. 797, 800), but the cymbium is not drawn out and hollowed basally as in *Sphecozone*. No supratergular apophysis is visible. The embolic division (figs. 798, 802) is of the *Sphecozone* type, but there are heavy sclerotized apophyses arising from the radical part. The embolus, which is long in *G. grave*, but shorter in *G. crassum*, branches

off a short distance from the anterior end of the radical part.

INCLUDED SPECIES: *Gymnocymbium grave*, new species, *Gymnocymbium crassum*, new species, *Gymnocymbium formosum*, new species, and *Gymnocymbium propinquum*, new species.

DISTRIBUTION: Ecuador, Bolivia, and Brazil.

TAXONOMIC POSITION: *Gymnocymbium* appears to be a somewhat anomalous genus in the *Ceratinella/Sphecozone* group.

***Gymnocymbium grave*, new species**

Figures 797–799

TYPE: Male holotype from Bio Pilcomayo, Crevaux, Chuquisaca, Bolivia, Aug. 5–15, 1964 (B. Malkin); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning heavy.

DIAGNOSIS: The male palp has the tibial apophysis curved and pointed distally (figs. 797, 799), and the rather complex embolic division (fig. 798) has a long, relatively slender, lightly sclerotized embolus. In *G. crassum*, these palpal characters are different. The female is not known.

MALE: Abdomen missing. Carapace length 0.95; chestnut-brown, shading to almost black anteriorly. Eyes moderately sized, with posteriors ca. 1 d apart. Sternum dark brown, suffused with black. Legs orange-brown; TmI 0.25. Palp (figs. 797–799).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Bolivia.

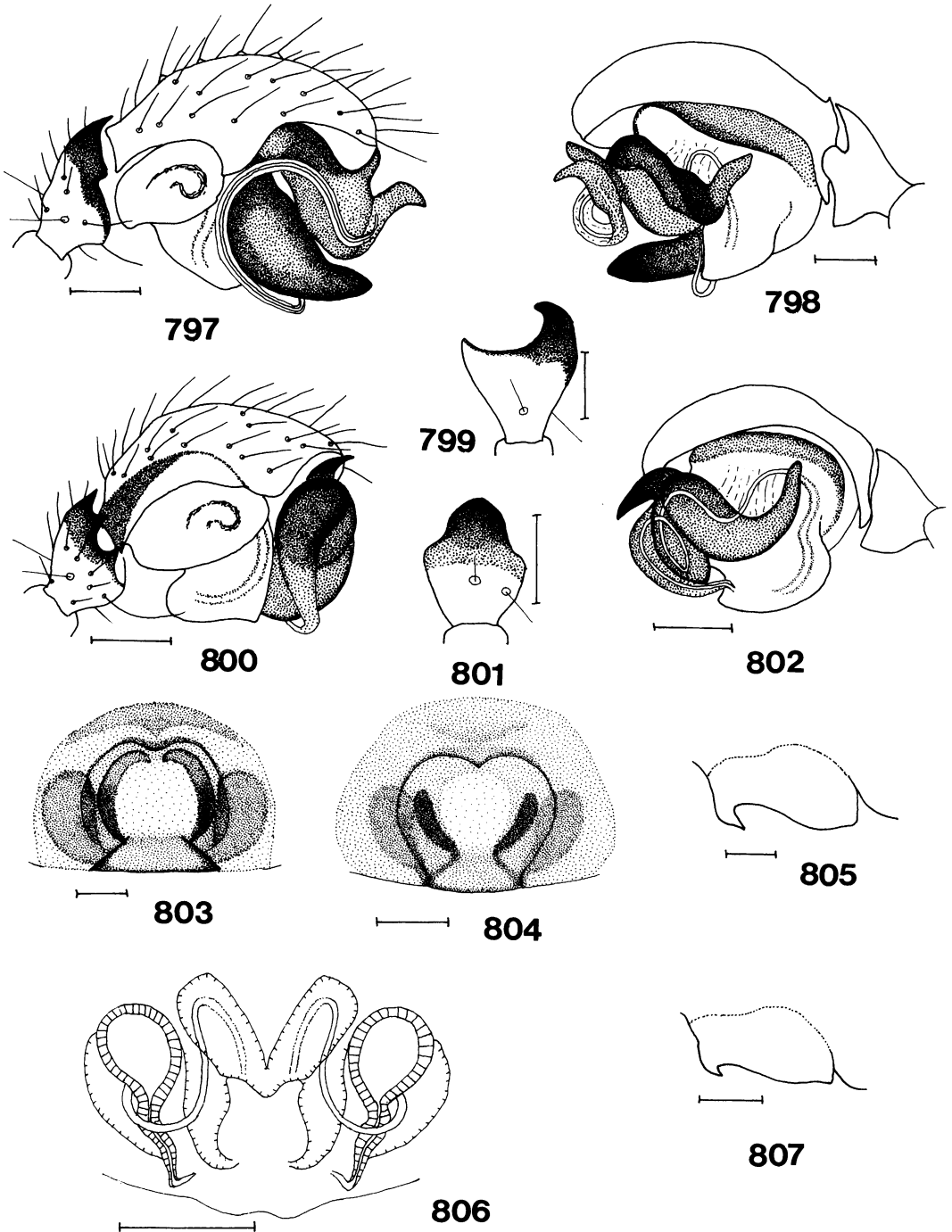
***Gymnocymbium crassum*, new species**

Figures 800–802

TYPE: Male holotype from Sinop, Matto Grosso, Brazil, Oct. 1975 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning heavy.

DIAGNOSIS: The male palp has the tibial apophysis short and blunt (dorsal aspect, fig. 801), with two points (lateral aspect, fig. 800), and the embolic division relatively simple (fig. 802), with the embolus stout basally, and relatively short. These palpal characters distinguish *G. crassum* from *G. grave*. The female is not known.



Figs. 797–807. 797–799. *Gymnocymbium grave*. 800–802. *G. crassum*. 803, 805, 806. *G. formosum*. 804, 807. *G. propinquum*. 797, 800. Male palp, ectal. 798, 802. Male palp, mesal. 799, 801. Male palpal tibia, dorsal. 803, 804. Epigynum, ventral. 805, 807. Epigynum, lateral. 806. Epigynum, internal. Scale lines 0.1 mm.

MALE: Total length 1.65. Carapace length 0.7; deep brown, shading to black anteriorly. Eyes moderately small, with posteriors 1.5–2 d apart. Abdomen shiny black, clothed with pale hairs. Sternum almost black. Legs dark brown; TmI ca. 0.3. Palp (figs. 800–802).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

Gymnocymbium formosum, new species

Figures 803, 805, 806

TYPE: Female holotype from Banos, Ecuador, 2000 m, May 2, 1939 (W. Clarke-Macintyre); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning handsome.

DIAGNOSIS: The female epigynum (fig. 803) is of a similar form to that of *G. propinquum* (fig. 804), but is significantly larger, with the markings within the atrium differently shaped. The male is not known.

FEMALE: Total length 2.35. Carapace length 1.0; chestnut-brown, blackened anteriorly; slightly raised behind eyes. Eyes small, with posteriors ca. 2 d apart. Abdomen whitish gray, black around spinnerets. Sternum orange, suffused with black. Legs with femora yellow basally, shading to dark brown distally, patellae brown, remaining segments missing. Epigynum (figs. 803, 805, 806).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Ecuador.

Gymnocymbium propinquum, new species

Figures 804, 807

TYPE: Female holotype from Jacazeacanga, Pará, Brazil, Oct. 1959 (M. Alvarenga); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning closely related.

DIAGNOSIS: The female epigynum (fig. 804) is similar to that of *G. formosum* (fig. 803), but significantly smaller, with the markings within the atrium differently shaped. The male is not known.

FEMALE: Total length 1.75. Carapace length 0.65; chestnut-brown, suffused anteriorly with black. Eyes moderate in size, with posteriors 1–1.5 d apart. Abdomen black. Sternum chestnut-brown. Legs missing. Epigynum (figs. 804, 807).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Brazil.

GONATORAPHIS, NEW GENUS

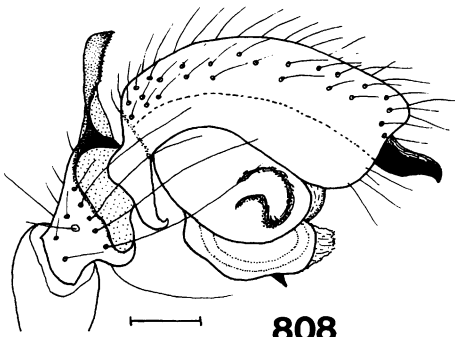
TYPE SPECIES: *Gonatoraphis lobata*, new species.

ETYMOLOGY: From the Greek *gony*, *gonatos*, knee, and *raphis*, needle, referring to the stout pointed spine on the male patella 1. Gender feminine.

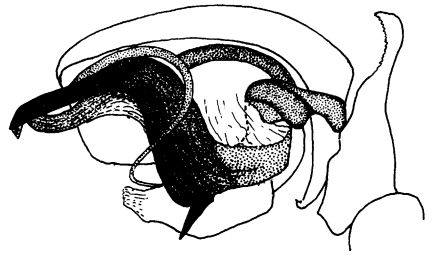
DIAGNOSIS: Female epigyna (figs. 812, 813, 816) show a general similarity to others in the *Ceratinella* group, but differ by the U-shape of the spermathecae. Males are diagnosed by the presence of the strong spine on the patellae of legs 1 (fig. 814), by the absence of a paracymbium, and by the form of the embolic division (described below).

DESCRIPTION: The two known species of the genus have total length 1.65–2.0. The female carapace is somewhat raised behind the eyes (particularly in the type species), but is otherwise unmodified. The male carapace of the type species is raised into a lobe anteriorly, and there is a hole and sulcus below the lobe (fig. 810); the lobe and hole are absent in *G. aenea*. The legs are relatively short and stout, with tibia 1 l/d (female) ca. 6. The dorsal tibial spines are 1111 in female, absent in male; femora and metatarsi spineless. Patellae 1 of males have a stout pointed spine (fig. 814), a character probably unique in the Linyphiidae. Metatarsi 1–3 have a trichobothrium; TmI 0.6–0.7. The tracheal system is erigonine. The epigyna (figs. 812, 813, 816) have the spermathecae U-shaped; the long sperm duct runs to the opening via a relatively complex lamellar infrastructure, as in *Ceratinella*, *Ceratinopsis*, etc. The tibia of the male palp is produced distally into a long apophysis (figs. 808, 815). The cymbium is extended basally, and there is no paracymbium. The embolic division is of the same general form as in *Ceratinopsis*, but instead of a single break between the embolus proper and the anterior of the radical part of the embolic division, there are two breaks (fig. 811); this character also appears to be unique to this genus.

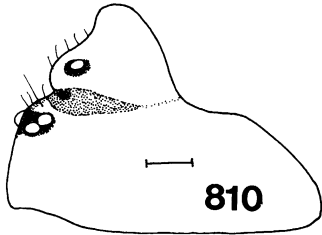
INCLUDED SPECIES: *Gonatoraphis lobata*, n. sp. and *Gonatoraphis aenea*, n. sp.



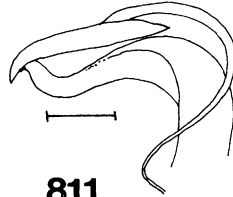
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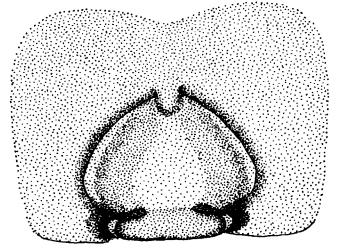
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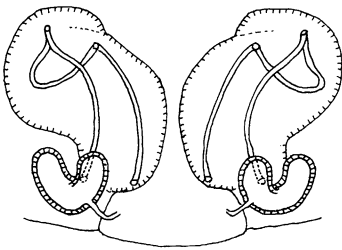
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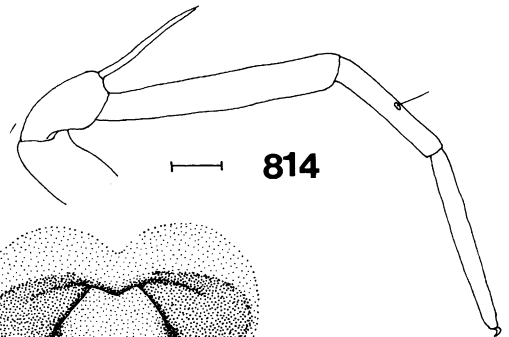
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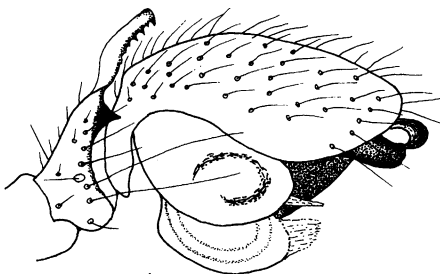
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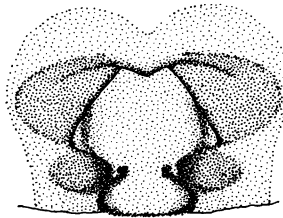
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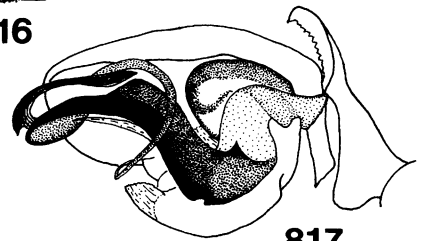
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815



816



817

Figs. 808–817. 808–813. *Gonatoraphis lobata*. 814–817. *G. aenea*. 808, 815. Male palp, ectal. 809, 817. Male palp, mesal. 810. Male carapace, lateral. 811. Embolic division, anterior end, to show the two “breaks.” 812, 816. Epigynum, ventral. 813. Epigynum, internal. 814. Leg 1, male. Scale lines 0.1 mm.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: *Gonatoraphis* appears to lie in the *Ceratinella/Sphecozone* group of genera.

***Gonatoraphis lobata*, new species**

Figures 808–813

TYPES: Male holotype, with five female and three male paratypes, from Paramo de Monserrate, Cundinamarca, Colombia, wooded area, 3230 m, Oct. 14, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning lobed.

DIAGNOSIS: The female epigynum (fig. 812) is of the same general form as that of *G. aenea* (fig. 816), but the atrium is broader and the markings are different. The male is diagnosed by the lobed carapace (fig. 810), and by the palp, the embolic division of which carries a sclerotized, needle like apophysis ventrally (fig. 809). *G. aenea* lacks the carapace lobe, and the ventral apophysis of the embolic division is very small (fig. 817).

FEMALE: Total length 1.8–1.9. Carapace length 0.75–0.8; pale brown to deep brown, with blackish margins; distinctly raised behind eyes. Eyes small, with posterior medians 3–4 d apart and 2 d from laterals. Abdomen deep gray to black. Sternum yellow to brown, suffused with black. Legs yellow to orange-brown; TmI 0.65–0.7. Epigynum (figs. 812, 813).

MALE: Total length 1.7–1.8. Carapace length 0.75–0.8. Color and chaetaxy as female. Carapace raised into large lobe (fig. 810). Palp (figs. 808, 809, 811) has a pointed tooth projecting from the base of the embolic division.

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Colombia.

***Gonatoraphis aenea*, new species**

Figures 814–817

TYPES: Male holotype, with six female and three male paratypes, from near Laguna Negra, Paramo de Chisaca, Cundinamarca, Colombia, 3720 m, Sept. 7, 1985 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning bronze-colored.

DIAGNOSIS: The female epigynum (fig. 816) is similar to that of *G. lobata* (fig. 812), but the atrium is narrower and the markings are different. The male palp has the embolic division with a small tooth ventrally, but lacking the needlelike apophysis present in *G. lobata* (fig. 817; cf. fig. 809); the carapace has no lobe.

FEMALE: Total length 1.9–2.0. Carapace length 0.75–0.85; orange with weak black margins. Eyes of moderate size, with posteriors ca. 1 d apart and less than 1 d from laterals. Abdomen gray to black. Sternum orange, suffused on margins with brown. Legs orange; TmI 0.6. Epigynum (fig. 816).

MALE: Total length 1.65. Carapace length 0.75–0.8. Color as female. Carapace slightly raised behind eyes, but with no lobe or sulci. TmI 0.5. Palp (figs. 815, 817).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the types above. Type locality, Sept. 8, 1985 and Sept. 17–18, 1986 (H. Sturm), 4 female, 1 male paratypes (MCZ).

DISTRIBUTION: Known only from Colombia.

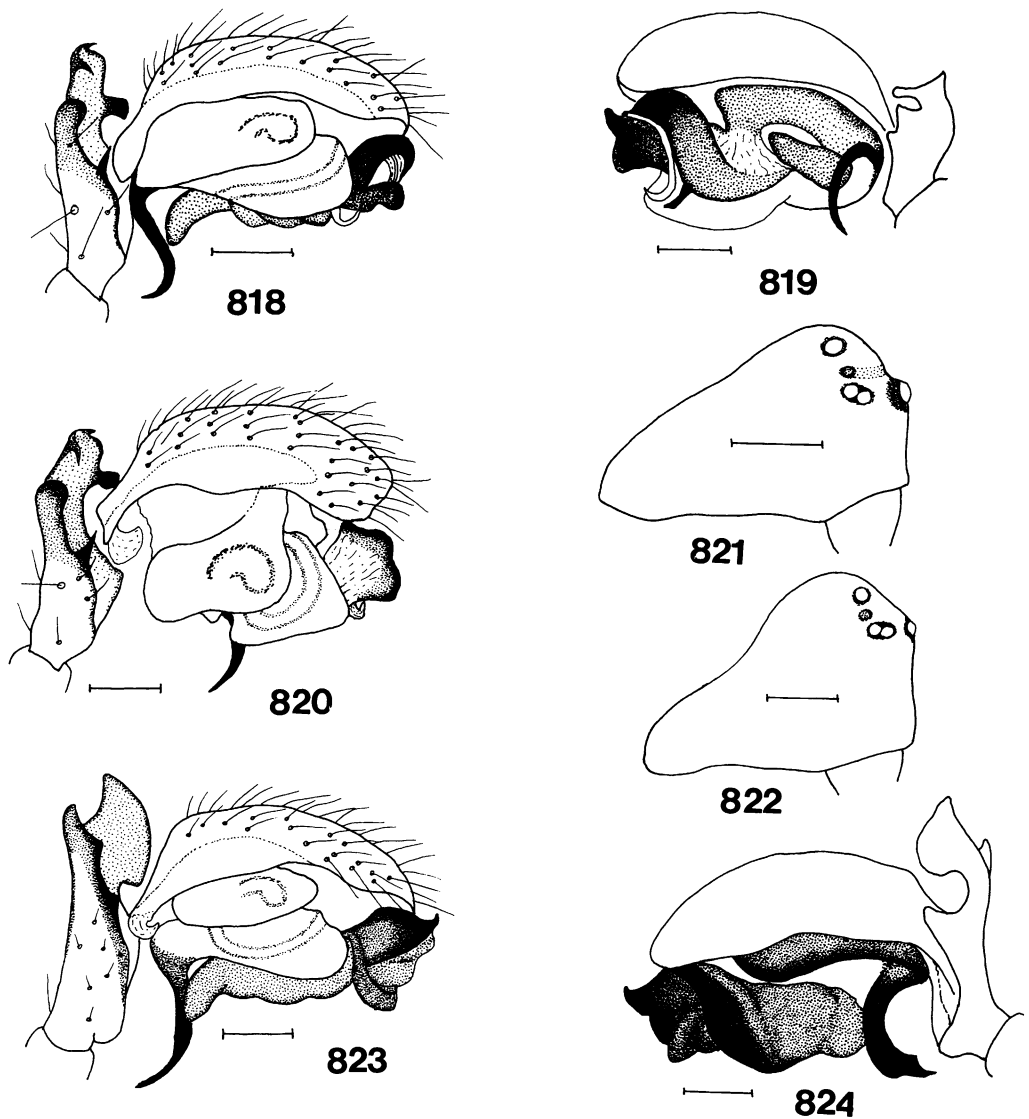
***DOLABRITOR*, NEW GENUS**

TYPE SPECIES: *Dolabritor spineus*, new species.

ETYMOLOGY: From the Latin *dolabra*, a pickaxe, *dolabritor*, one who uses/carries a pickaxe, referring to the spike which protrudes from the male palp. Gender masculine.

DIAGNOSIS: Males are diagnosed by the palp (figs. 818, 819, 823, 824), and particularly by the curved spike which arises from the tegulum, and by the absence of a paracymbium. Females are not known.

DESCRIPTION: Males have total length 1.65–2.0. The carapace is steeply raised anteriorly, and has a hole between the posterior median and lateral eyes (figs. 821, 822); the posterior median eyes are widely separated. The legs are relatively short and stout, with tibia 1 l/d (male) ca. 8. The dorsal tibial spines are 1111, but weak; metatarsi 1–4 have a trichobothrium, with TmI 0.55–0.65. Tracheal form not known, but probably erigonine. The male palp has the tibia produced distally into a long,



Figs. 818–824. 818–821. *Dolabritor spineus*. 822–824. *D. ascifer*. 818, 823. Male palp, ectal. 819, 824. Male palp, mesal. 820. Male palp, slightly expanded, to show posterior cymbial “hook.” 821, 822. Male carapace, lateral. Scale lines 0.1 mm, except 821, 822: 0.2 mm.

complex apophysis (figs. 818, 823). There is no true paracymbium, but the extended proximal end of the cymbium carries a small membrane hook (fig. 820). The palpal organ is of the same form as in *Sphecozone*, but has the probably unique character of a stout curved spike arising from the posterior sclerotized margin of the tegulum (figs. 818, 823).

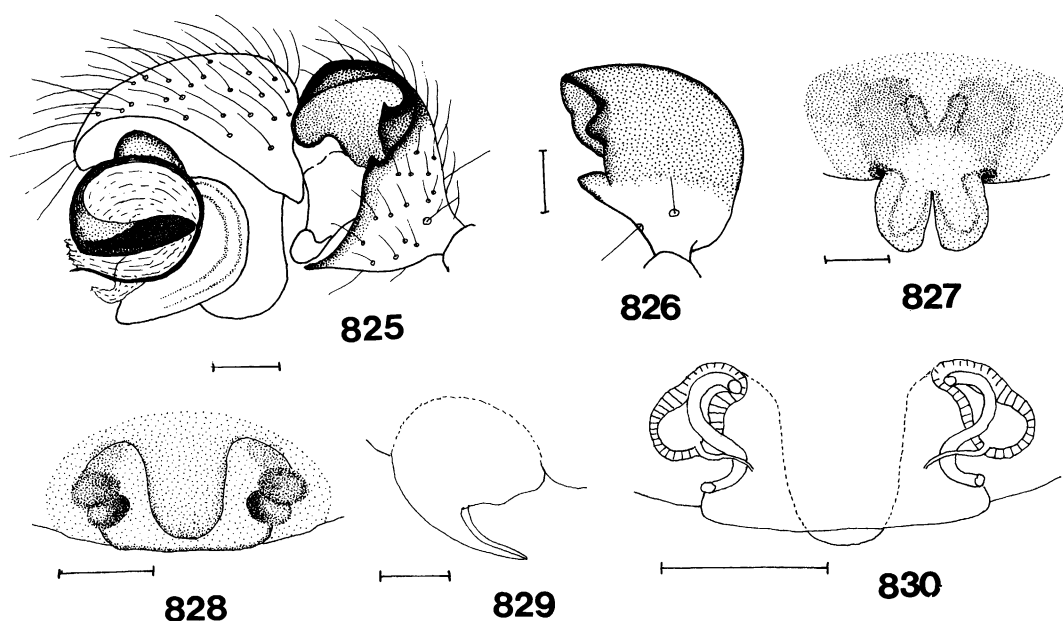
INCLUDED SPECIES: *Dolabritor spineus*, n. sp. and *D. ascifer*, n. sp.

DISTRIBUTION: Known only from Colombia.

TAXONOMIC POSITION: *Dolabritor* appears to lie in the *Ceratinella/Sphecozone* group of genera.

***Dolabritor spineus*, new species**
Figures 818–821

TYPE: Male holotype from Paramo de Monserrate, Cundinamarca, Colombia, bor-



Figs. 825–830. 825–827. *Walckenaeria praestans*. 828–830. *Ochronetria pallida*. 825. Male palp, left, ectal. 826. Male palpal tibia, left, dorsal. 827, 828. Epigynum, ventral. 829. Epigynum, lateral. 830. Epigynum, internal. Scale lines 0.1 mm.

der of woods, 3230 m, Sept. 13, 1986 (H. Sturm); deposited in MCZ.

ETYMOLOGY: The specific name is a Latin adjective meaning thorny, referring to the several small pointed apophyses on the palpal tibia.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the form of the tegular spike (figs. 818, 819), by the lateral aspect of the tibia (fig. 818), and by the form of the embolic division (fig. 819). The tegular spike in *D. ascifer* (figs. 823, 824) is stouter and differently shaped, and the lateral aspect of the tibia is quite different (fig. 823). The female is unknown.

MALE: Total length 1.8–2.0. Carapace length 0.75–0.9; brown to orange (fig. 821). Abdomen white to gray, blackish around spinnerets. Sternum yellow to orange, suffused with brown. Legs yellow: TmI 0.65. Palp (figs. 818–820).

MATERIAL EXAMINED: COLOMBIA: *Cundinamarca*: the holotype. Type locality, Oct. 14, 1985 (H. Sturm), 1 male paratype (MCZ).

DISTRIBUTION: Known only from Colombia.

***Dolabritor ascifer*, new species**

Figures 822–824

TYPE: Male holotype from Manizales, Caldes, Colombia, 2300 m, July 1977 (W. Eberhard); deposited in AMNH.

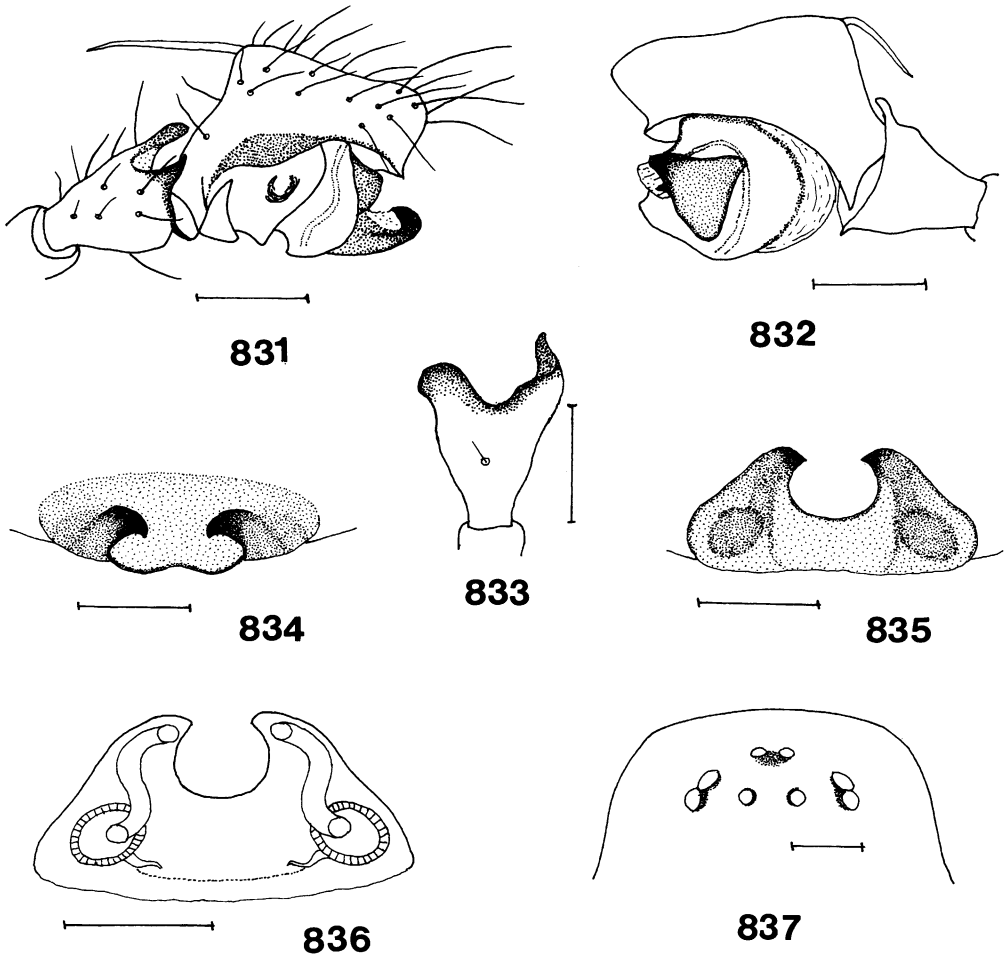
ETYMOLOGY: The specific name is a Latin adjective meaning carrying an axe, referring to the shape of the palpal tibia.

DIAGNOSIS: The male is diagnosed by the palp, particularly by the form of the tegular spike (figs 823, 824), by the lateral aspect of the tibia (fig. 823), and by the form of the embolic division (fig. 824). These palpal characters distinguish *D. ascifer* from *D. spinus*. The female is not known.

MALE: Total length 1.65. Carapace length 0.8; orange (fig. 822). Abdomen white, blackish around spinnerets. Sternum orange, suffused with brown on margins. Legs orange, suffused with brown; TmI 0.55. Palp (figs. 823, 824).

MATERIAL EXAMINED: Only the holotype.

DISTRIBUTION: Known only from Colombia.



Figs. 831–837. *Antronetes pallidus*. 831. Male palp, ectal. 832. Male palp, mesal. 833. Male palpal tibia, dorsal. 834. Epigynum, ventral. 835. Epigynum, caudal. 836. Epigynum, internal, dorsal. 837. Female eyes, dorsal. Scale lines 0.1 mm.

WALCKENAERIA BLACKWELL

This genus (s. lat.) has large numbers of species in the Northern Hemisphere. The new species described below appears to be the first genuine member of the genus to be found in South America.

***Walckenaeria praestans*, new species**

Figures 825–827

TYPES: Male holotype, with one female and one male paratype, from Paramo de Monserrate, Bogotá, Colombia, barber traps 1968–69 (H. Sturm); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning distinguished.

DIAGNOSIS: The female epigynum (fig. 827) has a bifurcated scape, which distinguishes *W. praestans* from all other known *Walckenaeria* species. The male palp has a tibial form (figs. 825, 826) which distinguishes the species.

FEMALE: Total length 2.65. Carapace length 1.05; yellow-brown. Eyes large, with posteriors 0.5 d or less apart. Abdomen gray. Sternum orange, lightly suffused with black, particularly on margins. Legs orange-brown, with coxae and trochanters pale yellow; TmI 0.5–0.55. Epigynum (fig. 827).

MALE: Total length 2.35–2.45. Carapace length 1.0. Color and trichobothria as female. Carapace with no cephalic lobe. Palp (figs. 825, 826); palps on both specimens partly or badly expanded.

MATERIAL EXAMINED: Only the types

DISTRIBUTION: Known only from Colombia.

OCHRONETRIA, NEW GENUS

TYPE SPECIES: *Ochronetria pallida*, new species.

ETYMOLOGY: From the Greek *ochros*, pale, and *netria*, a female spinner. Gender feminine.

DIAGNOSIS: The female of the single known species is diagnosed by the epigynum (figs. 828–830), which is described below. Males are not known.

DESCRIPTION: The female of the single species has total length 1.65–2.0. The carapace is unmodified; the eyes are rather small, with posteriors 1.5–2 d apart. The legs are fairly stout, with tibia 1 l/d 7; tibial spines are 1111, and metatarsal spines are absent. Metatarsi 1–4 have a trichobothrium; TmI ca. 0.25. The tracheal form is erigonine. The epigynum has a broad scape projecting over the shallow atrium (figs. 828, 829); internally the duct system is simple (fig. 830).

INCLUDED SPECIES: Only the type species.

DISTRIBUTION: Known only from Peru.

Ochronetria pallida, new species

Figures 828–830

TYPES: Female holotype, with one female paratype, from Sariapamp, Huanuco, Peru, 3600 m (no date) (F. Woytkowski); deposited in AMNH.

ETYMOLOGY: The specific name is a Latin adjective meaning pale.

DIAGNOSIS: The female epigynum (figs. 828, 829) carries a short scape, rounded from the ventral aspect, slender from the lateral aspect. The male is not known.

FEMALE: Total length 1.65–2.0. Carapace length 0.7. Carapace orange. Eyes on black spots. Abdomen whitish, with spinnerets brown. Sternum orange, with brown margins. Legs brown; TmI 0.25. Epigynum (figs. 828–830).

MATERIAL EXAMINED: Only the types above.

DISTRIBUTION: Known only from Peru.

INTRODUCED SPECIES

The three following species almost certainly arrived in South America within the past few centuries, introduced by European settlers or seamen, probably in animal fodder and bedding. Similar introductions were made into New Zealand (Millidge, 1988).

Lepthyphantes leprosus (Ohlert): CHILE: *Magellanes*: Punta Arenas, Sept. 17, 1965 (T. Ceka-lovic), 1 female.

Lepthyphantes tenuis (Blackwall): CHILE: *Llanquihue*: Ensenada, Mar. 16, 1965 (H. Levi), 1 female. *Malleco*: 3 km west of Victoria, mixed *Nothofagus* forest, 100 m, Dec. 12, 1984–Feb. 12, 1985 (S. and J. Peck), 1 female. *Osorno*: Termas de Puyehue, Mar. 14, 1965 (H. Levi), 4 females, 2 males. *Talca*: Alto de Vilches, 70 km east of Talca, *Nothofagus* forest, 1300 m, Dec. 5, 1984–Feb. 20, 1985 (S. and J. Peck), 1 male. ARGENTINA: *Rio Negro*: El Bolson, June 3, 1962 (A. Kovacs), 3 females.

Microctenonyx subitaneus (O. P.-Cambridge): CHILE: *Nublé*: 60 km southeast of Chillan, Termas Road, beech forest, 1300 m, Dec. 7, 1984–Feb. 19, 1985 (S. and J. Peck), 1 male. *Quillota*: Olmue, La Campana National Park, leaf litter, hygrophilous forest, Dec. 2, 1984 (S. and J. Peck), 1 male. *Valparaíso*: Quintero, pitfalls in relict forest, Oct. 2, 1968 (R. Calderón), 3 females, 3 males.

DISCUSSION

Our steadily increasing knowledge of the spider fauna of South America shows that the endemic linyphiid genera differ significantly from those of the Northern Hemisphere. The common, well-known genera *Lepthyphantes*, *Bathyphantes*, *Linyphia*, *Erigone*, and *Wal-*

ckenaeria, which comprise numerous species occupying practically every conceivable habitat in northern latitudes, are absent in South America; the only exceptions to this are a few probable immigrants from Central America, which are present in the more northern parts

of South America, and a few obvious importations.

In the Northern Hemisphere, *Lepthyphantes* is probably the largest and most widely distributed linyphiid genus; in South America, this distinction is claimed by the genus *Dubiaranea*. However, whereas the speciation of *Lepthyphantes* has probably been most vigorous in the cooler regions, the speciation of *Dubiaranea* appears to have been most pronounced in the warmer areas. It seems to be generally true that linyphiid species are less numerous in the cooler parts of South America than in the warmer northern areas.

An interesting feature of the South American linyphiid fauna is the presence of a number of tiny, erigonine-like species which differ from the true erigonines of the Northern Hemisphere by the presence of a simple tracheal system restricted to the abdomen. One of these species (*Diechomma pretiosum*) has the lateral eyes well separated, a most unusual character in the Linyphiidae. One *Meioneta* species from South America also has the lateral eyes separated, but less so than in *Diechomma*. This separation of the lateral eyes is frequently present in other families, and is regarded as a primitive character in the Linyphiidae.

The males of these erigonine-like species rarely have the carapace elevated anteriorly; they appear to lack the character—so common amongst the true erigonines—of a carapace lobe which carries the posterior median eyes and has lateral sulci with holes leading to internal glands. These small South American linyphiids also show little evidence of the wide diversification into numerous species which is so characteristic of many genera of the true erigonines. It seems very probable that the true erigonines, with the complex tracheal system, must represent an entirely separate development from that of the tiny South American linyphiids. The great preponderance of the erigonines in the northern latitudes suggests that this linyphiid group originated in Laurasia. Whether this was so or not, it is clear that only in the Northern Hemisphere has the explosive development of this group taken place.

In company with the thousand or so species of true erigonines of the Northern Hemi-

sphere there are a very small number of tiny erigonine-like linyphiids which have the simple tracheal system (Millidge, 1984): for example, *Caviphantes* Oi, *Mioxena* Simon, *Eulaira* Chamberlin and Ivie, *Sisicus* Bishop and Crosby, *Wiehlea* Braun. These genera do not fit comfortably into the major subfamilies so far proposed for the northern linyphiid fauna (Millidge, 1984), and it is perhaps possible that these small species are the few remaining members of a larger population of tiny non-erigonine linyphiids which were at one time as widespread in Laurasia as they are now in South America, and which were later almost eliminated in the Northern Hemisphere by competition from the probably more recent true erigonines and other small linyphiid species, which were more aggressive and adaptable.

The present study discloses the presence in South America of a number of true erigonine genera; these appear to be almost wholly related to either the *Ceratinopsis* or the *Erigone* groups of the genera. The genera *Ceratinopsis* and *Erigone* themselves are widespread in the Northern Hemisphere, but are absent from South America. It is remarkable that so prolific and adaptable a genus as *Erigone* should be virtually absent from South America; the apparent absence of the commonest erigonine genera of the north is all the more surprising in view of the well-known aeronautic ability of many erigonines.

The presence in the endemic erigonine fauna of South America of essentially only relatives of the *Ceratinopsis* and *Erigone* groups of genera suggests that these two erigonine conglomerates may represent two of the more primitive branches of the erigonines. The significance of the fact that most of these *Ceratinopsis* relatives lack a paracymbium is not known.

Among the genera examined in the present work, two (*Caleurema* and *Asemonetes*) were of particular interest because of the form of the male palp, in which the embolic division is attached to the tegulum by a broad junction, and the duct to the embolus follows a serpentine course within the embolic division. Both of these characters are atypical of the family, and are regarded as primitive for the Linyphiidae; they are reminiscent of the palpal form of some agelenids.

It is worth noting that enlarged eyes occur in a number of South America linyphiids, both erigonine and nonerigonine, particularly in species from the warmer regions.

The examination of large amounts of linyphiid material from many areas of South America has not so far revealed any members of the subfamily Mynogleninae, and it is becoming increasingly certain that this subfamily is not present in South America. The present climate of southern South America should probably be as suitable for members of this subfamily as that of New Zealand, and if the Mynogleninae are currently not to be found in South America it seems probable that the subfamily has never been present in this continent.

It is also apparent that none of the typical South American linyphiid genera are present

in, or have close relatives in, New Zealand, and that none of the New Zealand genera (Millidge, 1988b) are present in, or have obvious relatives in, South America. This complete incongruence of the linyphiid fauna of South America and New Zealand, and particularly the absence of the Mynogleninae from South America, suggests that New Zealand cannot have been immediately adjacent to South America in Gondwanaland. The Mynogleninae are currently known from three areas, New Zealand, the mountains of East Africa, and caves in New Guinea (Brignoli, 1982); this somewhat limited evidence may suggest, as an interim hypothesis, that the Mynogleninae were in fact restricted to the northern or eastern fringes of Gondwanaland.

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INDEX OF GENERA AND SPECIES

- Adelonetria*, new genus, 117
 dubiosa, new species, 117
Anodoration, new genus, 124
 claviferum, new species, 125
Antronetes, new genus, 110
 pallidus, new species, 110
Asemonetes, new genus, 62
 arcanus, new species, 63
Bactrogyna, new genus, 134
 prominens, new species, 134
Barycara, new genus, 121
 comatum, new species, 123
Brattia Simon, 179
 castanea, new species, 180
 melanocephala, new species, 179
 novaetentoniae Baert, 181
 spadicaria Simon, 179
Caleurema, new genus, 60
 involutum, new species, 62
Chaetophyma, new genus, 123
 coronatum (Simon), new combination, 123
Cryptolinyphia, new genus, 63
 sola, new species, 63
Diechomma, new genus, 112
 pretiosum, new species, 114
Diplothyron, new genus, 66
 fuscus, new species, 67
Dolabritor, new genus, 188
 ascifer, new species, 190
 spineus, new species, 189
Dubiaranea Mello-Leitão, 5
 abjecta, new species, 33
 abundans, new species, 34
 affinis, new species, 24
 albodorsata, new species, 11
 albolineata, new species, 44
 amoena, new species, 43
 argentata, new species, 46
 atra, new species, 48
 atriceps, new species, 39
 atripalpis, new species, 7
 atrolineata, new species, 16
 aureola, new species, 37
 bacata, new species, 34
 brevis, new species, 46
 caeca, new species, 7
 caledonica (Millidge), 6
 castanea, new species, 41
 chacama (Millidge), 6
 colombiana, new species, 15
 concors, new species, 15
 congruens, new species, 24
 crebra, new species, 9
 decora, new species, 36
 decurtata, new species, 46
 difficilis (Mello-Leitão), new combination, 52
 discolor, new species, 11
 distracta, new species, 18
 elegans, new species, 29
 fagicola, new species, 51
 fruticola, new species, 28
 fulgens (Millidge), 6
 fulvolineata, new species, 27
 furva, new species, 43
 fusca, new species, 43
 gilva, new species, 17
 gloriosa, new species, 16
 grandicula, new species, 32
 gregalis, new species, 27
 habilis, new species, 21
 insignita, new species, 45
 insulanus, new species, 49
 insulsa, new species, 26
 lepida, new species, 41
 levii, new species, 49
 longa, new species, 37
 longiscapa (Millidge), 6
 luctuosa, new species, 35
 lugubris, new species, 21
 margaritata, new species 7
 media, new species 9
 mediocris, new species, 27
 melanocephala, new species, 39
 melica, new species, 41
 mirabilis, new species, 21
 modica, new species, 26
 morata, new species, 26
 nitida (Millidge), 6
 nivea, new species, 46
 opaca, new species, 41
 orba, new species, 24
 ornata, new species, 13
 persimilis, new species, 23
 procera, new species, 29
 propria, new species, 14
 proxima, new species, 24
 pulchra, new species, 9
 pullata, new species, 39
 remota, new species, 52
 rufula, new species, 31
 saucia, new species, 49
 setigera, new species, 13
 signifera, new species, 45
 silvae, new species, 29
 silvestris (Millidge), 6
 silvicola, new species, 16
 similis, new species, 52
 solita, new species, 19
 speciosa, new species, 38
 teres, new species, 22
 tristis, new species, 37
 truncata, new species, 32

- usitata*, new species, 15
varia, new species, 43
variegata, new species, 16
versicolor, new species, 20
veterana, new species, 26
vetusta, new species, 21
Eperigone Crosby and Bishop, 137
bryantae Ivie and Barrows, 137
caelebs Millidge, 137
conjuncta, new species, 141
dentimandibulata (Keys.), new combination, 141
eschatologica (Crosby), 138
fradeorum (Berl.), 138
hebes, new species, 138
insulsa, new species, 141
nigra, new species, 141
obscura, new species, 139
Epiwubana, new genus, 114
jucunda, new species, 115
Erigone Audouin, 135
clavipalpis, new species, 136
dentimandibulata Keys., 135
edax Keys., 135
fluminea, new species, 137
palustris, new species, 135
uliginosa, new species, 137
Eurycolon, new genus, 70
insigne, new species, 72
nobile, new species, 72
Exechopsis, new genus, 56
conspicua, new species, 56
versicolor, new species, 56
Exocora, new genus, 58
pallida, new species, 58
proba, new species, 58
Fissiscapus, new genus, 144
fractus, new species, 144
pusillus, new species, 144
Gilvonanus, new genus, 131
lineatus, new species, 132
Gonatoraphis, new genus, 186
aenea, new species, 188
lobata, new species, 188
Gravipalpus, new genus, 156
callosus, new species, 158
crassus, new species, 158
Gymnocymbium, new genus, 184
crassum, new species, 184
formosum, new species, 186
grave, new species, 184
propinquum, new species, 186
Habreuresis, new genus, 115
falcata, new species, 115
recta, new species, 115
Hormembolus Millidge, 5
Hypselocara, new genus, 111
altissimum (Simon), new combination, 111
Jalapyphantes Gertsch and Davis, 70
obscurus, new species, 70
Labicymbium, new genus, 145
ambiguum, new species, 153
auctum, new species, 148
avium, new species, 156
breve, new species, 151
cognatum, new species, 153
cordiforme, new species, 153
dentichele, new species, 155
exiguum, new species, 152
fuscum, new species, 148
jucundum, new species, 148
major, new species, 153
montanum, new species, 156
nigrum, new species, 149
opacum, new species, 147
sturmi, new species, 147
sublestum, new species, 148
Laminacauda Millidge, 72
aluminensis, new species, 85
ansoni, new species, 78
argentiniensis Millidge, 85
boliviensis Millidge, 86
cognata, new species, 84
dentichelis Millidge, 72, 74
diffusa Millidge, 81
expers, new species, 75
gigas, new species, 77
grata, new species, 72
ignobilis, new species, 85
magna, new species, 78
malkini, new species, 82
nana, new species, 84
nigriceps, new species, 75
orina (Chamberlin), new combination, 72
palustris, new species, 73
peruensis Millidge, 76
propinqua, new species, 82
rubens, new species, 81
sacra, new species, 76
salsa, new species, 84
suavis, new species, 73
sublimis, new species, 75
tuberosa, new species, 78
tucumani, new species, 87
villagra, new species, 82
Lepthyphantes Menge, 192
leprosus (Ohlert), 192
tenuis (Bl.), 192
Lygarina Simon, 106
caracasana Simon, 106
finitima, new species, 109
nitida Simon, 106
silvicola, new species, 108
Malkinella new genus, 132
insulanus, new species, 132
Malkinia, new genus, 131
melanocephala, new species, 131
Meioneta Hull, 94
adami, new species, 105

- albinotata*, new species, 100
atra, new species, 95
brevis, new species, 104
castanea, new species, 105
cincta, new species, 98
collina, new species, 97
discolor, new species, 101
disjuncta, new species, 98
frigida, new species, 101
fusca, new species, 105
lauta, new species, 105
luctuosa, new species, 94
mediocris, new species, 99
mendoza, new species, 97
montana, new species, 102
montivaga, new species, 94
oculata, new species, 103
opaca, new species, 101
prima, new species, 95
propinqua, new species, 102
propria, new species, 101
proxima, new species, 97
silvae, new species, 102
straminicola, new species, 98
Microctema, new genus, 132
exiguum, new species, 133
Microctenonyx Dahl, 192
subitaneus (O.P.-Cambr.), 192
Microplanus, new genus, 143
mollis, new species, 143
Microsphalma, new genus, 117
barbatum (Tullgren), new combination, 119
Myrmecoxenus, new genus, 159
pulcher, new species, 160
Neocautinella Baert, 127
ochoai Baert, 129
Neomaso Forster, 87
abnormis, new species, 91
aequabilis, new species, 91
articeps, new species, 89
arundicola, new species, 87
bidentatus, new species, 91
bilobatus (Tullgren), 87
cavus Millidge, 87
fluminensis, new species, 89
gibber Millidge, 87
insperatus, new species, 92
insulanus, new species, 88
patagonicus (Tullgren), 87
setiger, new species, 89
tridentatus, new species, 93
tullgreni Millidge, 87
vicinus, new species, 91
Notiohyphantes Millidge, 53
laudatus, new species, 53
Notiothauma, new genus, 125
aurantiacum (Simon), new combination, 126
Novafrontina, new genus, 63
bipunctata (Keys.), new combination, 65
patens, new species, 66
uncata (F.O.P.-Cambr.), new combination, 66
Ochronetria, new genus, 192
pallida, new species, 192
Onychembolus Millidge, 127
anceps, new species, 127
subalpinus Millidge, 127
Paraletes, new genus, 142
timidus, new species, 142
Paranesticus Mello-Leitão, 5
Psilocymbium, new genus, 181
incertum, new species, 183
pilifrons, new species, 183
tuberosum, new species, 183
Schistogyna, new genus, 68
arcana, new species, 70
Scolecurea, new genus, 119
cognata, new species, 120
parilis, new species, 120
propinqua, new species, 120
Smermisia Simon, 158
barbata Tullgren, 119, 158
caracasana Simon, 158
nigrocapitata Tullgren, 158
tullgreni Simon, 119, 158
Spanioplanus, new genus, 143
mitis, new species, 144
Sphecozone O.P.-Cambr., 165
alticeps, new species, 167
araeoniciformis (Simon), new combination, 177
aurantia, new species, 171
capitata, new species, 169
corniculans, new species, 166
cornuta, new species, 177
crinita, new species, 167
cristata, new species, 173
fuscipes, new species, 171
lobata, new species, 176
modica, new species, 177
nigriceps, new species, 175
nigripes, new species, 169
nitens, new species, 167
personata (Simon), new combination, 175
pulchra, new species, 169
rostrata, new species, 175
rubescens O.P.-Cambr., 171
rugosa, new species, 177
tincta, new species, 174
varia, new species, 168
Stictonanus, new genus, 59
exiguus, new species, 60
paucus, new species, 60
Totua Keyserling, 55
gracilipes Keys., 55
Triplogyna, new genus, 129

- major*, new species, 129
minor, new species, 131
Turbinella, new genus, 134
nigra, new species, 134
tantilla, new species, 135
Tutaibo Chamberlin, 160
anglicanus (Hentz), new combination, 165
debilipes Chamb., 160
formosus, new species, 165
niger (O.P.-Cambr.), new combination, 162
- phoeniceus* (O.P.-Cambr.), new combination,
162
pullus, new species, 162
rubescens, new species, 165
tristis, new species, 162
Vesicapalpus, new genus, 55
simplex, new species, 56
Walckenaeria Bl., 191
praestans, new species, 191

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