

A REVIEW OF THE SOUTH AMER-  
ICAN SPIDERS OF THE FAMILY  
AGELENIDAE (ARACHNIDA,  
ARANEAE)

VINCENT D. ROTH

BULLETIN  
OF THE  
AMERICAN MUSEUM OF NATURAL HISTORY  
VOLUME 134 . ARTICLE 5      NEW YORK : 1967





A REVIEW OF THE SOUTH AMERICAN  
SPIDERS OF THE FAMILY AGELENIDAE  
(ARACHNIDA, ARANEAE)

VINCENT D. ROTH

*Resident Director, Southwestern Research Station of the  
American Museum of Natural History  
Portal, Arizona*

BULLETIN  
OF THE  
AMERICAN MUSEUM OF NATURAL HISTORY  
VOLUME 134 : ARTICLE 5                      NEW YORK : 1967

BULLETIN OF THE AMERICAN MUSEUM OF NATURAL HISTORY

Volume 134, article 5, pages 297–346, text figure 1, plates 50–53

*Issued January 9, 1967*

*Price: \$2.00 a copy*



## INTRODUCTION

NO COMPREHENSIVE STUDY has been made of the South American spiders of the family Agelenidae. The group is not strongly represented on the American continent, and references in the literature are widely scattered, mostly in European and South American journals. While attempting to identify South American Agelenidae from various collections, I soon encountered many difficulties in their placement. It became evident that a review was necessary in order to place the family on a more solid foundation for future workers. The present contribution is a preliminary study of the fauna on the basis of all the material that was available to me.

The area covered by this study includes continental South America and the adjacent islands. The agelenid fauna of this vast region, as expected, has proved to be largely a distinctive one. There has apparently been little exchange of species through the narrow Isthmus of Panama between the two continents. Only one genus, *Novalena*, which occurs in Trinidad and Guyana (former British Guiana), also has a wide range in Mexico and the western United States. Two of the species from South America placed in *Cybaeus* by Keyserling (1878, 1882) were not available for study, but *C. maculatus* Keyserling definitely does not belong in *Cybaeus*, and it is probable that *C. signatus* Keyserling also does not belong to this northern genus. Two species of *Tegenaria*, both now essentially cosmopolitan in range, occur sporadically in South America as introductions from Europe.

Only a few agelenids have been recorded from Central America and the West Indies. *Melpomene chiricana* Chamberlin and Ivie, *M. plesia* Chamberlin and Ivie, *M. panamana* (Petrunkevitch), and *Tegenaria domestica* (Clerck) occur in Panama. Two agelenids have been recorded from Cuba, *Yorima antillanum* (Bryant) and *Tegenaria insularis* Walckenaer, and both of these, known from single specimens, are of uncertain status. Simon (1898b, p. 256) suggested that the latter was not a member of the genus *Tegenaria* and might not belong to the family. The presence of a species of *Yorima* in Cuba seems most unusual, inasmuch as the genus is

otherwise exclusive to the coastal region of California and northern Baja California.

Several South American genera formerly placed in the family Agelenidae were found to belong to other families, as noted in a recent paper (Roth, 1965). The present disposition of these spiders, as well as species synonymized or formerly placed with the Agelenidae, is given at the end of this paper. The genus *Thaida* Karsch is tentatively included here. Its type locality has not been definitely determined, but it appears that the spider represented is a South or Central American species.

Only basic, pertinent, or previously unlisted bibliographic references are included in this paper. Essentially complete bibliographies are available in the catalogues of Bonnet (1945-1959) and Roewer (1954, pp. 35-99).

### ACKNOWLEDGMENTS

I wish to express my appreciation to the following people for their many aids and courtesies during the preparation of this paper: Dr. Willis J. Gertsch, the American Museum of Natural History, for reading the manuscript, loans of specimens, and for suggestions and encouragement; Mr. Wilton Ivie, the American Museum of Natural History, for the drawings represented as plate 50, figures 4, 6-10, and plate 51, figures 1, 15-17; Dr. Martin H. Muma, Citrus Experiment Station, Lake Alfred, Florida, for reading part of the manuscript; Mr. D. J. Clark, British Museum (Natural History), London, for illustrations and information on types; Dr. Harriet Exline Frizzell of Rolla, Missouri, for translations of descriptions and for suggestions on the manuscript; Dr. L. Forcart, Naturhistorisches Museum, Basel, for comparison of specimens; Dr. Herbert Levi, Museum of Comparative Zoology, Cambridge, Massachusetts, for loans of specimens and valuable suggestions; and to the following for loans of specimens: Dr. Edward S. Ross, the California Academy of Sciences, San Francisco; Prof. M. Vachon and J. F. Jezequel, Muséum National d'Histoire Naturelle, Paris; Drs. L. Brundin and Karl-

Johan Hedqvist, Swedish Museum of Natural History, Stockholm; Messrs. J. Prószyński and Wojciech Starega, Académie Polonaise des Sciences, Warsaw; Prof. G. C. Varley and Mr. Ernest Taylor, Hope Department of Zoology, University Museum, Oxford; and Prof. Rita D. Schiapelli and Mrs. Berta S. G. de Pikelin, Museo Argentino de Ciencias Naturales, Buenos Aires.

Special thanks are extended to my wife, Bobbie Ann, who supplied the interest, encouragement, and patience so necessary for research of this nature.

The study was supported by National Science Foundation Grant GB-102.

#### METHOD OF DESCRIPTION AND MEASUREMENT

The width of the carapace at the posterior lateral eyes is used as the head width. The eye-row width is the distance between the outer edges of the posterior lateral eyes. Measurements of the eyes, endites, labium, chelicerae, sternum, and abdomen are given as numerical comparisons, such as "basal segment almost twice as long as fang, (48/25)," or "ratio of eyes: AME/ALE/PME/PLE=5/8/7/8." The ratio indicates that the anterior median eye is five-eighths as large as the anterior lateral eye and five-sevenths as large as the posterior median eye. The relative distances between eyes are given as "separation ratios of eyes: AME-AME:10; AME-ALE:5" which indi-

cates that the anterior median eyes are separated twice as far from each other as from the anterior lateral eyes. Some measurements, especially those of the eyes, will show variations (including error by the person taking the measurement) of 10 to even 20 per cent, and this fact must be taken into consideration when a specimen is compared with the description.

A fractional description is proposed whereby the amount of curvature of the eye row is indicated by a fraction and the direction by the terms "procurved" and "recurved." The fraction indicates the portion of the eye, with the use of its longitudinal diameter, situated anterior or posterior to a transverse, imaginary line drawn through the center of the median eyes. Thus, "procurved 4/6" indicates that four-sixths of the lateral eye was situated forward of or below the imaginary line. "Recurved 9/6" indicates that the lateral eye was situated one and one-half times its diameter posterior to or above the imaginary line. A schematic sketch is provided (fig. 1) to illustrate this method of description.

The selection of six as the denominator was made after many trials. It is the most accurate and yet easily used division of the curvature of the eyes. Any larger number is difficult to use, and a smaller one would not provide sufficient accuracy. The consistent use of this method will allow for easier comparisons between species and genera.

The carapace of the spider must be in a

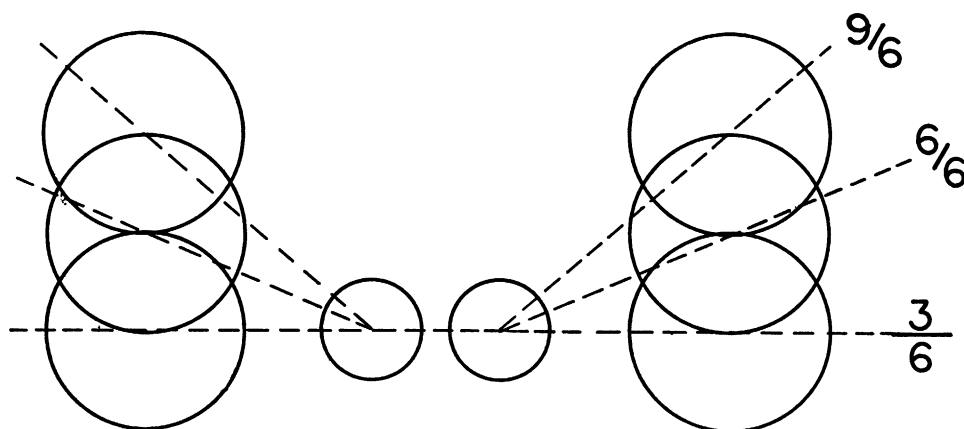


FIG. 1. Schematic sketch, showing method of measuring curvature of the eyes with a numerical system.



horizontal position for accurate measurements of the curvature of the posterior eyes. If not horizontal, an error of as much as two-sixths of the diameter of the eye is possible. The anterior eyes must be viewed at right angles for determination of the curvature. A cross-hair disk, net disk, or measuring scale in the eye piece of the microscope provides a straight line for accurate measurements. The unaided eye is not sufficiently accurate to make these measurements.

The terms "slightly, moderately, or strongly procurved or recurved" are still used when more accurate measurements are not available and in some generic descriptions.

The length of the chelicera is the distance from the clypeus to the articulation of the fang. The length of the fang is the distance from its base to its tip in a straight line. The fang consists of two parts, a basal section and a tip. The division, represented by a slight constriction, is usually visible under high power (100 $\times$ ) but occasionally is visible under low power. The basal section is stout, with a broad internal cavity. The tip is slender, tapering to a point through which the fine venom duct leads; externally the tip

is usually grooved and serrated for half to almost four-fifths of its length. Some North American species such as *Cybaeus cascadius* Roth and *Agelenopsis aperta* (Gertsch) lack the serrations.

The convergence of the endites is demonstrated by a numerical comparison. The distance between the endites at their base is compared with that at their tips and is given as a fraction, for example, "16/13." The numerator (16) is the width between the base of the endites; the denominator (13) is the width of the endites at their tip. The length of the endites is measured from the anterior edge of the sternum to the tip of an endite.

The spination is designated by the system proposed by Petrunkevitch (1925, pp. 57-58).

A ratio of the carapace to the tibia-patella, as (length of tibia-patella I  $\times$  100)/(length of carapace), as given by Chamberlin and Ivie (1940, pp. 3-4), is utilized in preference to the "tibial index" of Petrunkevitch (1929, p. 11). It portrays more clearly the length and relative stoutness of the legs in comparison with the carapace and does it with more accuracy by eliminating the difficult "width of the patella" measurement.

## FAMILY AGELENIDAE

EYES NONE, SIX, OR EIGHT in two rows. Carapace longer than wide; median furrow longitudinal. Chelicerae free at base; boss present, with fringe of hairs overlapping fang; both margins of chelicerae toothed or retro-margin with denticles (*Rubrius major* Simon). Labium not rebordered. Endites slightly to moderately convergent; serrula present. Legs usually moderately to heavily spined. Tarsi lacking scopulae, usually lacking spines on ventral surface, bearing single row of two to nine trichobothria (except *Mevianes* with one or none present) which increase in length toward tip. Three claws, toothed, in single or double row (*Mevianops*). No spurious claws or claw tufts. Palpal claw of female present (absent from *Lizarba*), with or without teeth. Trochanters either not notched or only third or fourth, or both, pairs notched. Tracheae limited to abdomen, spiracle near base of spinnerets (slightly advanced in *Mizaga*). Heart with three ostia. Colulus present, in some cases divided (absent from *Hina* and *Mizaga*). Cribellum and calamistrum absent. Anal tubercle one- or (apparently) two-segmented. Integument with plumose hair (group *Ageleneae*) or lacking it. Spinnerets six, anterior stoutest, median usually reduced, posterior shorter or longer.

The best-known members of the family make sheet webs, often funnel-like with a tubular retreat. The cryptic forms live in fragile and weak tubes in leaf mold and debris on the forest floor. Some species have been collected in debris with no web evident. One species lives in a marine habitat on the shores of the Mediterranean Sea.

### DISCUSSION OF FAMILY CHARACTERS

The family Agelenidae, as considered in this paper, includes the subfamily Ageleninae and the group Cybaeae of Simon (1898b, pp. 236-248). The recent placement of the Cybaeinae in the Argyronetidae by Yaginuma (1960, p. 77; 1962, p. 34) appears to be unwarranted. The family Argyronetidae differs from the Agelenidae (including the Cybaeinae) by several important internal and external characters mentioned by Petrunkevitch (1939, pp. 165-166, 186-187).

The two subfamilies Ageleninae and Cybaeinae are utilized in this paper but with some reservations. The key to the subfamilies provided by Simon (1898b, p. 224) is not adequate for some genera that seem to share characters of the subfamily Cybaeinae and the group Cryphoeae. The "presence or absence" of a colulus cannot be used in the narrow sense. It appears that most agelenids possess a colulus. Machado (1945, p. 18) noted in his studies of the colulus that, although the colulus was rudimentary in the Ageleninae, one could not say that it was non-existent as had Simon (1898b, p. 221) and Petrunkevitch (1939, p. 165). In some it is a vestige consisting of an insignificant elevation bearing a row of setae as in *Cybaeus* or two patches as noted by Montgomery (1909, p. 302) in *Agelena naevia* Walckenaer (now *Agelenopsis*) or, in others, it is a linguiform structure as in *Rubrius* and *Emmenomma*. The wide separation of the anterior spinnerets as used by Simon (1898b, p. 221) and Mello-Leitão (1940, pp. 21-23) is useful for *Cybaeus* and *Emmenomma*, both of which have the characteristic contiguous cybaeinid spinnerets, or *Tegenaria* with characteristic separated agelenid spinnerets, but is inadequate or misleading in an intermediate genus such as *Hicanodon*. A third character often used, the greater length of the terminal segment of the posterior spinnerets, is adequate for *Emmenomma* and *Neoporteria* or *Tegenaria* and *Neotegenaria* but again becomes uncertain with genera such as *Urepus* and *Olybrius*.

No other characters were discovered in this study that would make the separation of the subfamilies more precise. Therefore I accepted the commonly used characters plus the following criteria for judging the position of an uncertain genus: if the position of the spinnerets and the length of the terminal segment of the posterior spinneret are not sufficiently distinct to place the spider in one or the other subfamily, the presence or absence of a distinct colulus is used.

Two previous keys have been prepared for the genera of South American Agelenidae. Simon's (1898b, pp. 221, 224, 234, 243-244, 248, 257, 266-267) keys to the world genera



included several genera belonging in the Zodariidae and Linyphiidae (Erigoninae). Mello-Leitão (1940, pp. 21-23) published a key to South American Agelenidae but also included several other genera belonging to the Zodariidae and Pisauridae. These two published keys have provided a pattern from which the following key was built.

KEY TO THE GENERA OF SOUTH  
AMERICAN AGELENIDAE

1. Anterior spinnerets separated (except in *Hicanodon*). Posterior spinnerets longer than anterior and more widely separated. Terminal segment of posterior pair prominent, usually at least one-fourth as long as basal segment. Colulus indistinct, represented by a few setae, not projecting. Plumose hair present on or absent from thorax and abdomen . . . . . (Ageleninae) 13
- Anterior spinnerets contiguous. Posterior spinnerets smaller, usually shorter, not separated more than anterior pair. Terminal segment minute, less than one-fourth of length of basal segment, represented by narrow ring or absent. Colulus usually distinct, linguiform, in some cases represented by a few setae. Plumose hair absent. (Also see *Thaïda*.) . . . . . (Cybaeinae) 2
2. Eyes eight . . . . . 3  
Eyes six. Length, 3 mm. Distribution: Venezuela . . . . . *Symposia* Simon
3. Anterior lateral eyes not greatly enlarged. Posterior eye row slightly recurved, straight, or slightly procurved . . . . . 4  
Anterior lateral eyes greatly enlarged, almost twice diameter of posterior lateral eye. Posterior eye row strongly recurved. Length, 6.3 mm. to 11.6 mm. Distribution: Southern tip of South America . . . . . *Emmenomma* Simon
4. Metatarsi I with ventral spines . . . . . 5  
Metatarsi I lacking ventral spines. Both eye rows slightly procurved, compact. Anterior eyes equal. Length, 2.5 mm. Distribution: Southern tip of Chile . . . *Cybaeolus* Simon
5. Trochanters I-IV not notched . . . . . 8  
Trochanters III and IV, or IV only, notched . . . . . 6
6. Tibia I with three to five pairs of spines. Retromargin of chelicera with six or seven teeth, including denticles . . . . . 7  
Tibia I with one or two pairs of ventral spines. Retromargin of chelicera with two teeth. Length, 4.4 mm. to 5.6 mm. Distribution: Southern Chile . . . . . *Porteria* Simon
7. Tibia I with three pairs of spines. Retromargin of chelicera with three teeth, four denticles. Tarsal claws short. Length, 4.8 mm. to 5.8 mm. Distribution: Peru . . . . . *Naevius*, new genus
- Tibia I with five pairs of ventral spines. Retromargin of chelicera with six teeth. Paired claws of fourth tarsus long and slender. Length, 6.7 mm. Distribution: Southern Argentina . . . . . *Olybrius*, new genus
8. Tibia-patella about as long as or slightly longer than carapace, up to 1.20 times as long . . . . . 9  
Tibia-patella of male 1.68 to 1.70 times as long as carapace, of female 1.32 times. Length, 4.5 mm. to 5.0 mm. Distribution: Central Chile . . . *Neoporteria* Mello-Leitão
9. Ventral spines of tibia and metatarsus I not noticeably stout, less than one-third of length of segment . . . . . 10  
Ventral spines of tibia and metatarsus I stout, half to two-thirds as long as segments. Promargin of chelicera with four teeth, retromargin with two teeth and three denticles. Length, 4.6 mm. Distribution: Central Chile . . . . . *Livius*, new genus
10. Tibia I with two or three pairs of ventral spines, third pair at tip. Metatarsus I with three pairs, third pair at tip . . . . . 12  
Tibia I with three pairs of ventral spines, distal pair somewhat lateral, none at tip. Metatarsus I with three pairs, none at tip . . . . . 11
11. Nine trichobothria on fourth tarsus. Retromargin of chelicera with three to five teeth and two or three denticles. Length, 10.8 mm. to 11.6 mm. Distribution: Peru . . . . . *Urepus*, new genus  
Four trichobothria on fourth tarsus. Retromargin of chelicera with six teeth, no denticles. Length, 3.7 mm. Distribution: Ecuador . . . . . *Virgilus*, new genus
12. Length, 4.7 mm. to 4.8 mm. Distribution: Colombia and Peru . . . . . *"Cybaeus"* C. L. Koch  
Length, 7.3 mm. to 15.0 mm. (*R. scottae* Mello Leitão, 5.0 mm.). Distribution: Chile and Argentina . . . . . *Rubrius* Simon
13. Sternum produced to a point behind, coxae narrowly separated . . . . . 15  
Sternum truncate, coxae widely separated . 14
14. Posterior eye row recurved or straight. Clypeus slightly wider than anterior lateral eye. Posterior spinnerets close together, no more separated than anterior spinnerets. Distal segment of posterior spinnerets less than third as long as basal segment, incurved. Anterior spinnerets separated by less than their diameter. Length, 2.0 mm.

- to 3.4 mm. Distribution: Southern half of Chile . . . . . *Mevianes* Simon
- Posterior eye row procurved. Clypeus twice diameter of anterior lateral eye. Posterior spinnerets widely separated, exposed to side of anterior spinnerets. Distal segment of posterior spinnerets three-fourths as long as basal segment. Anterior spinnerets separated by more than their diameter. Length, 2.7 mm. Distribution: Brazil . . . . . *Lizarba*, new genus
15. Posterior eye row straight or procurved . . 17  
Posterior eye row recurved . . . . . 16
16. Promargin of chelicera with five teeth, retromargin with five or six. Tarsi lacking scopula. Single row of teeth on paired claws. Length, 7.9 mm. Distribution: Guyana . . . . . *Neotegenaria*, new genus
- Promargin of chelicera with three teeth, retromargin with four. Tarsi with scopula. Double row of teeth on paired claws. Length, 10 mm. Distribution: Colombia . . . . . *Mevianops* Mello-Leitão
17. Anterior eye row procurved or straight . . 18  
Anterior eye row recurved. Tibia I with two pairs of ventral spines. Terminal segment of posterior spinnerets as long as basal. Length, 6.2 mm. Distribution: Brazil . . . . . *Coreidum* Mello-Leitão
18. Anterior eye row straight, posterior straight or procurved . . . . . 19  
Both anterior and posterior eye rows procurved . . . . . 20
19. Anterior and posterior eye rows straight. Distal segment of posterior spinnerets as long as basal. Retromargin of chelicera with four teeth. Tibia and metatarsus I with two pairs of ventral spines. Length, 6 mm. Distribution: Eastern part of central Argentina . . . . . *Philoicoides* Mello-Leitão
- Anterior eye row straight, posterior slightly procurved. Distal segment of posterior spinnerets short. Retromargin of chelicera with three teeth and four denticles. Tibia and metatarsus I with three pairs of ventral spines. Length, 3.3 mm. Distribution: Southern Argentina . . *Hicanodon* Tullgren
20. Anterior and posterior eye rows strongly procurved. Promargin and retromargin of chelicera with three stout teeth. Length, 12 mm. Distribution: Trinidad . . . . .  
. . . . . *Novalena* Chamberlin and Ivie
- Anterior and posterior eye rows slightly procurved, almost straight. Promargin of chelicera with three or four teeth; retromargin with three to five teeth; both margins in few cases with three teeth. Length, 5.3 mm. to

10.1 mm. Distribution: Cosmopolitan . .  
. . . . . *Tegenaria* Latreille

#### SUBFAMILY AGELENINAE

Eyes eight. Plumose hair present on or absent from carapace and legs. Clypeus often much wider than anterior lateral eye. Colulus usually inconspicuous, divided. Posterior spinnerets longer than anterior, distal segment usually half to twice as long as basal segment, occasionally as short as one-third of length of basal segment. Anterior spinnerets separated.

#### GENUS COREIDUM MELLO-LEITÃO

*Coreidon* MELLO-LEITÃO, 1917, pp. 14-15.

*Coreidum*: BONNET, 1956 (1945-1959, vol. 2), p. 1203 (emendation).

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of male holotype, 6.2 mm. Head narrow. Posterior eye row slightly procurved; anterior eye row recurved. Anterior median eyes larger than anterior lateral eyes. Clypeus not so wide as anterior median eye. Chelicera slightly geniculate; promargin armed with three teeth; retromargin armed with two stout teeth. Labium longer than wide. Endites parallel. Sternum pointed between hind coxae.

Tibia I with 2-2 ventral spines. Anterior spinnerets subcontiguous, slender; distal segment small. Posterior spinnerets widely separated; distal segment as long as basal.

DISTRIBUTION: Southeastern Brazil.

TYPE SPECIES: *Coreidon tropicum* Mello-Leitão.

DIAGNOSIS: The long distal segment of the posterior spinnerets places this genus near *Tegenaria*, *Novalena*, and *Philocoides*. The recurvature of the anterior eye row and the presence of large anterior median eyes, these being larger than the lateral eyes, easily separate *Coreidum* from these other genera.

#### *Coreidum tropicum* Mello-Leitão

*Coreidon tropicum* MELLO-LEITÃO, 1917, pp. 15-16.

*Coreidum tropicum*: BONNET, 1956 (1945-1959, vol. 2), p. 1203.

TYPE DATA: The male holotype is from Pinheiro, Rio de Janeiro, Brazil, latitude 2° 31' S., longitude 45° 05' W. The location



of the type is uncertain, but it is probably in the Museu Nacional, Rio de Janeiro, where most of Mello-Leitão's types are deposited.

GENUS **HICANODON** TULLGREN

*Hicanodon* TULLGREN, 1901, p. 252.

**DESCRIPTION:** Length, 3.3 mm. Carapace without plumose hair. Posterior eye row slightly procurved; anterior eye row straight. Clypeus not so wide as anterior side eye. Chelicera geniculate; promargin with three separate teeth; retromargin with three very small, separated teeth and four contiguous denticles. Labium wider than long. Endites slightly convergent. Sternum slightly longer than wide.

Carapace/tibia-patella ratio, 98. Spination: Tibia I, ventral 2-2-2-0, metatarsus I, ventral 2-2-2. Paired claws of fourth tarsus stout, with six teeth, third claw with two teeth. Four trichobothria in single row on fourth tarsus. Trochanters not notched.

Anterior spinnerets contiguous, stout, with convex distal segment. Posterior spinnerets slightly longer, separated more than anterior, visible on sides from below; distal segment about as long as wide. Colulus minute, bearing two setae.

**DISTRIBUTION:** Southern Argentina.

**TYPE SPECIES:** *Hicanodon cinerea* Tullgren.

**DIAGNOSIS:** This is one of the smaller species of the South American Ageleninae. It can be separated from other genera of its size in the subfamily by the sternum, which is pointed behind, or from the larger species by the presence of denticles on the retromargin of the chelicera and by the contiguous anterior spinnerets.

**REMARKS:** The exact position of this genus is uncertain. The contiguous anterior spinnerets indicate a relationship with the Cybaeinae, whereas the long posterior spinnerets indicate that it is close to the Ageleninae, in which it is tentatively placed.

***Hicanodon cinerea* Tullgren**

Plate 50, figure 1

*Hicanodon cinerea* TULLGREN, 1901, p. 253, pl. 19, figs. 9a-9b (female epigynum).

**DESCRIPTION OF FEMALE HOLOTYPE:** Color in alcohol: Carapace, mouth parts and legs

light yellowish orange; sternum and labium lightly dusky. Legs ringed with faint dusky markings, incomplete above; two rings on femora III and IV and all tibiae and metatarsi. Abdomen gray above except for two light lines flanking heart, white behind; sides of abdomen mottled gray; venter dusky.

Total length, 3.3 mm. Carapace length, 1.46 mm., width, 1.05 mm., head width, 0.70 mm., eye-row width, 0.46 mm. Carapace smooth and polished. Posterior eye row procurved (4-5/6). Ratio of eyes: AME/ALE/-PME/PLE=5/7/6/7. Separation ratio of eyes: AME-AME:1; AME-ALE:1.5; AME-PME:9; ALE-PLE:5; PME-PME:4; PME-PLE:4. Clypeus not so wide as anterior lateral eye (7/5), with few setae. Chelicera with distinct boss. Fang of chelicera shorter than basal segment (45/30); serrated over two-thirds of tip. Labium wider than long (22/17). Endites somewhat convergent (22/12). Sternum slightly longer than wide (62/60).

Carapace/tibia-patella ratio, 98. Lengths of tibiae-patellae I and IV, 1.43 mm. and 1.50 mm. Spination: Femora I-IV, dorsal 0-1-0. Patellae I-IV, dorsal 0-1. Tibiae I, ventral 2-2-2-0; II, ventral 1r(or 0)-2-2, prolateral 1; III, ventral 1p-1p-1p(or 2), prolateral 0-1-1, retrolateral 0-1-1; IV, ventral 1p-0-1p-0, prolateral 1-0(or 1), retrolateral 1-1-1. Metatarsi I, ventral 2-2-2; II, ventral 2(or 3)-2, prolateral 1-1; III, dorsal 1(or 2)-2, ventral 2-0-0, prolateral 1-1, retrolateral 1-1; IV, dorsal 1-2-1(or 0), ventral 2-1r-1, prolateral 1-1, retrolateral 0-1. Palpal claw with two teeth.

Abdomen longer than wide (48/33), covered sparsely with small setae.

Epigynum (pl. 50, fig. 1) sclerotized only at posterior edge, with two kidney-shaped spermathecae visible through integument. Openings of epigynum at anterior mesial edge of sclerotized rectangular plate.

**TYPE DATA:** Female holotype from Rio Tres Pasos, Patagonia, Argentina, 1899 (Erland Nordenskiöld), in the Swedish Museum of Natural History.

**LIZARBA, NEW GENUS**

**DESCRIPTION:** Length, 2.7 mm. Carapace without plumose hair. Posterior and anterior eye rows procurved (5/6). Chelicera slightly

geniculate; promargin with three teeth, middle one largest; retromargin with four separate teeth, two nearest base of fang largest. Clypeus almost twice as wide as anterior lateral eye. Labium wider than long. Endites slightly wider than long. Sternum wider than long, truncate behind.

Carapace/tibia-patella ratio, 95. Tibia I with one or two spines ventrally; II, none. Metatarsi unspined. Paired tarsal claws with 13 to 14 teeth, third claw with three teeth. Fourth tarsus with two trichobothria. Tarsal claw of female palpus absent. Trochanters not notched.

Anterior spinnerets widely separated. Posterior spinnerets separated more than anterior; terminal segment three-fourths as long as basal. Colulus divided.

DISTRIBUTION: Eastern Brazil.

TYPE SPECIES: *Lizarba separata*, new species.

DIAGNOSIS: *Lizarba* and *Mevianes* are the only two genera of the Ageleninae with truncated sterna and widely separated hind coxae. The posterior eye row of *Lizarba* is procurved but is recurved to straight in *Mevianes*. The posterior spinnerets of *Lizarba* are exposed to the side of the anterior pair but are almost contiguous in *Mevianes*.

***Lizarba separata*, new species**

Plate 50, figures 2, 3

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Head and chelicerae orange-brown; endites, labium, and sternum dark brown. Thorax, legs, and abdomen light tan. Tibiae and metatarsi with two light brown rings; femora with three dark rings. Abdomen lightly mottled above with black; posterior half with five chevrons; venter paler. Colulus, anterior and median spinnerets dark brown, posterior spinnerets white. Black area in front of middle spinnerets.

Total length, 2.7 mm. Carapace length, 1.26 mm., width, 1.02 mm., head width, 0.65 mm., eye-row width, 0.39 mm. Carapace slightly longer than wide (35/29), glabrous. Ratio of eyes: AME/ALE/PME/PLE = 4/6/7/7. Separation ratio of eyes: AME-AME:3; AME-ALE:1; AME-PME:5; ALE-PLE:1; PME-PLE:3; PME-PME:4. Clypeus almost twice diameter of anterior lateral eye (11/6). Clypeal border slightly

narrowed over chelicerae, widened opposite median eyes. Chelicera with distinct boss. Labium much wider than long (12/18). Endites longer than wide (10/8), convergent (18/9). Sternum wider than long (60/53), truncate between widely spaced coxae.

Carapace/tibia-patella ratio, 95. Length of tibiae-patellae I and IV, 1.2 mm. Spination: Legs with few spines. Femora I, dorsal 0-0-1, ventral 0-0-1p; II, dorsal 0-1(or 0)-1(or 0); III-IV none. Patellae I-IV, none. Tibiae I, ventral 0-1(or 0)-1; II, prolateral 0-0-1(or 0); III, ventral 0-1(or 0)-1(or 0); IV, ventral 0-1-0. Metatarsi I, II, and IV, no spines; III, 3 or 4 distal.

Abdomen longer than broad (15/12), sparsely covered with dark-colored, simple setae plus some narrowly spatulate white setae. Anterior spinnerets (pl. 50, fig. 2) more widely separated than diameter of basal segment (15/12.5); terminal segment hemispherical. Median spinnerets conspicuously visible between anterior spinnerets. Posterior spinnerets slender; terminal segment shorter than basal (20/15), oblique at tip; basal segment slender. Colulus consisting of a low swelling with scattered setae.

Epigynum (pl. 50, fig. 3) convex, with circular anterior opening; paired connecting canals visible through integument.

TYPE DATA: Female holotype from Teresopolis, Rio de Janeiro, Brazil, latitude 22° 27' S., longitude 42° 59' W., March 16, 1946, 1600 to 1800 meters in elevation (H. Sick), in the American Museum of Natural History.

**GENUS MEVIANES SIMON**

*Mevianes* SIMON, 1904, pp. 110-111.

DESCRIPTION: Length, males, 2.0 mm. to 3.6 mm.; females, 2.4 mm. to 3.4 mm. Carapace without plumose hair. Posterior eye row straight to slightly recurved; anterior eye row slightly procurved. Clypeus slightly wider than anterior lateral eye. Chelicera nearly straight; rastellum present or absent; promargin and retromargin with three teeth. Labium wider than long. Endites almost as wide as long, sharply angled on outer edge at base. Sternum as wide as or wider than long, truncate behind. Coxae widely separated.

Carapace/tibia-patella ratio of males, 117 to 125; of females, 103 to 109. Tibiae and



metatarsi I and II unspined below. Paired claws of fourth tarsus with 14 to 17 teeth, third claw with one long slender tooth. Fourth tarsus with either one trichobothrium or none. Trochanters not notched. Anterior spinnerets short, stout, separated by at least half of their width. Posterior spinnerets more slender; distal segment as wide as long. Colulus divided, each half consisting of wider than long swelling with five to eight setae.

DISTRIBUTION: Central Chile, Chubut, and Rio Negro, Argentina.

TYPE SPECIES: *Mevianes delfini* Simon.

DIAGNOSIS: *Mevianes* Simon is characterized by the truncate sternum, widely separated hind coxae, and recurved posterior eye row. It is related to *Lizarba*, new genus, but has compactly arranged spinnerets, and the distal segment of the posterior spinnerets is one-third as long as the basal segment, rather than three-fourths as long as in *Lizarba*. The genitalia and general appearance are very similar to those of *Hahnia* of the Hahniidae, but the spinnerets are not in a straight line and the tracheal spiracle is at the base of the spinnerets rather than at a distance from them.

*Mevianes* may be synonymous with *Cybaeolus* Simon for reasons that are discussed in the diagnosis of the latter genus.

#### KEY TO THE SPECIES OF *Mevianes* SIMON

1. Males (male of *delfini* Simon unknown) . . . 2  
Females . . . . . 3
2. Tip of apophysis of male patella with two teeth. Anterior femora rarely unmarked, typically ringed distally with ventral blotch near middle. Blotch occasionally absent. Length, 2.8 mm. to 3.6 mm. . . . .  
. . . . . *rastellus*, new species  
Tip of apophysis of male patella with three or four teeth. Anterior femur occasionally unmarked, typically dusky distally without ventral blotch. Length, 2.0 mm. to 2.8 mm. . . . .  
. . . . . *wilsoni* Simon
3. Rastellum present (pl. 50, fig. 5) . . . . . 4  
Rastellum absent. Coxae I and II without ventral markings. Anterior femora occasionally unmarked, typically dusky distally, without ventral blotch. Length, 2.4 mm. to 3.2 mm . . . . . *wilsoni* Simon
4. Coxae I and II with ventral black markings. Anterior femora with three rings, two nearest base obsolete above. Length, 2.2 mm. to 2.6 mm. . . . . *delfini* Simon

Coxae I and II without ventral black markings. Anterior femora rarely unmarked, typically ringed distally with ventral blotch near middle. Blotch occasionally absent. Length, 3.1 mm. to 3.4 mm. . . . .

. . . . . *rastellus*, new species

#### *Mevianes delfini* Simon

Plate 50, figures 4-6

*Mevianes delfini* SIMON, 1904, p. 111. PORTER, 1920a, p. 58; 1920b, p. 28.

DESCRIPTION: Female from Bosques de Ramuncho, Concepción, Chile. Color in alcohol pale yellow, carapace and sternum darker. Thorax rimmed with black, dusky above, with dark gray patch over thoracic furrow; five black lines extending to eyes; one median line, with two lateral lines on each side converging just behind anterior lateral eyes. Sternum dusky along edges, lighter toward center. Labium dusky across base, white at tip. Endites dusky laterally, lighter distally, with light oval disk near base. Chelicerae dusky except for two oval patches on upper part in front, and broad light streak along promargin. Legs and palpus ringed. Two basal segments of palpus unmarked; distal two segments with one ring each. Coxae I and II with black ventral markings at tip. Femora with one distal ring and one ventral blotch in middle; I and II with additional ventral basal blotch. Patellae dusky. Tibiae with basal and distal ring. Metatarsi with distal and basal ring, latter incomplete on metatarsi I and II. Abdomen white below, with mottled gray markings above and on sides. Anterior spinnerets dusky on outer side; posterior spinnerets white. Two patches of dark gray at base of anterior spinnerets.

Total length, 2.2 mm. Carapace length, 0.90 mm.; width, 0.60 mm., head width, 0.44 mm.; eye-row width, 0.41 mm. Posterior eye row slightly recurved (4/6); anterior eye row slightly procurved (5/6). Ratio of eyes: AME/ALE/PME/PLE=4/5/5/6. Separation ratio of eyes: AME-PLE:3; AME-ALE:-2; AME-PME:5; ALE-PLE:1; PME-PME:-8; PME-PLE:5. Clypeus wider than diameter of anterior lateral eye (8/6), slightly projecting, unarmed. Chelicera swollen on front near base, inserted more deeply into carapace than normally in agelenids; apex with row of five stout setae (pl. 50, fig. 5), basal one

almost as long as fang and light colored, lighter toward tip, other four much shorter and stout, forming rastellum. Labium wider than long (15/10). Endites almost as wide as long (17/16). Base of endite with swollen oval spot almost half of width of endite. Sternum much wider than long (42/33), broadly truncate behind.

Carapace/tibia-patella ratio, 110. Lengths of tibiae-patellae I, 0.99 mm., IV, 0.95 mm. Legs: spination very sparse; majority of spines rubbed off. Spination of female in same collection as follows: Femora I, prolateral, 0-0-1; II, III, and IV unspined. Patellae I-IV, dorsal 1-1. Tibiae I and II, unspined ventrally; dorsal 1-1-0; III and IV, ventral 0-1-0, dorsal 1-1-0, prolateral 0-0-1, retrolateral 0-0-1. Metatarsi I and II, unspined; III and IV, ventral 0-1-3, prolateral 0-1-0. Paired claws of fourth tarsus with 14 teeth. No trichobothria present on fourth tarsus, but one visible on tarsus of other specimens.

Abdomen longer than wide (46/34). Anterior spinnerets short, stout, widely spaced, separated by at least their own diameter; distal segment short, convex. Posterior spinnerets slender, more separated than anterior, slightly longer; distal segment as long as wide, slightly incurved. Colulus divided, each half of colulus covered with six or eight long setae, half as long as anterior spinnerets.

Epigynum (pl. 50, fig. 4) about twice as wide as long, with paired openings in center; connecting canals extending anteriorly from openings and looping back to posterior edge of spermathecae. A female from 10 kilometers east of Puyehue, Osorno, Chile, about latitude 41° S., longitude 72° W., collected by Ross and Michelbacher on January 24, 1951, and deposited in the California Academy of Sciences is tentatively included here. The epigynum (pl. 50, fig. 6) is very similar to that of *M. delfini* Simon, but without additional material it is not deemed advisable to describe it as new.

**FEMALE HOLOTYPE:** Length, 2.7 mm. Markings on thorax lighter; ground color of legs darker. Sternum concolorous. Venter of abdomen darker.

**TYPE DATA:** Female holotype from Punta Arenas, Magallanes, Chile, about latitude 53° S., longitude 71° W. (Dr. Delfin, B. Wilson), in the Muséum National d'Histoire

Naturelle, Paris. The vial containing the holotype bears two almost illegible labels with the numbers "22jg7" or "22197."

**ADDITIONAL RECORDS:** *Chile:* Concepción: Bosques de Ramuncho, October 14-16, 1961 (A. F. Archer), in the American Museum of Natural History, female. *Argentina:* Chubut: Lago Escondido, November 19, 1961 (Andor Kovács), in the American Museum of Natural History, female; Rio Negro: El Bolson March 13, 1961 (A. Kovács), in the American Museum of Natural History, female.

**DIAGNOSIS:** The female of this species can be separated from that of *M. wilsoni* by the presence of a rastellum on the chelicera and from that of *M. rastellus* by its much smaller size, less than 2.7 mm. long, and by the presence of ventral black markings on coxae I and II. The epigynum is also distinctly different.

***Mevianes rastellus*, new species**

Plate 50, figures 7, 8

**DESCRIPTION OF MALE HOLOTYPE:** Color in alcohol: Carapace, chelicerae, and endites medium brown; labium and sternum dark brown; legs light brown. Head slightly dusky, rimmed in black; two short diverging lines extending anteriorly from thoracic furrow, becoming bifid distally. Legs lightly ringed; femora with three rings, basal two incomplete above, patellae with one, tibiae with two, metatarsi with two wide basal rings on metatarsi III and IV; anterior two tarsi dusky except for light ring at base. Palpus with femur and patella bright yellow; tibia marked with gray, cymbium dark brown. Abdomen pale gray, with four dark purplish gray chevrons, posterior fifth of abdomen purplish gray; sides mottled gray; venter almost white, with two dusky bands extending from epigastric furrow to spinnerets; bar of dark gray surrounding spinnerets. Anterior spinnerets dusky, posterior white. Colulus area dark gray.

Total length, 2.8 mm. Carapace length, 1.09 mm., width, 0.95 mm., head width, 0.61 mm., eye-row width, 0.48 mm. Carapace smooth, with few setae on thorax. Posterior eye row straight; anterior eye row procurved (5/6). Ratio of eyes: AME/ALE/PME/PLE = 5/8/7/8. Separation ratio of eyes AME-

AME:3; AME-ALE:4; AME-PME:4; ALE-  
PLE:1; PME-PME:7; PME-PLE:7. Clypeus slightly projecting, with few converging setae, slightly narrower than anterior lateral eye (8/6). Boss of chelicera covered by sides of carapace. Base of chelicera produced forward into low tubercle visible from side or below. Fang slightly more than half as long as chelicera (19/10). Promargin with three contiguous teeth, middle tooth largest; retromargin with three equal teeth, two mesial teeth rather close together. Labium wider than long (18/15). Endites in shape of parallelogram, longer than wide (26/17), slightly convergent (17/11), distinctly produced to 60-degree angle on posterior lateral corner. Serrula not situated at right angle to body. Sternum slightly wider than long (51/50), roundly truncate between hind coxae, which are separated by almost their length.

Carapace/tibia-patella ratio, 125. Lengths of tibia-patella I and IV, 1.36 mm. and 1.12 mm. Legs sparsely spined. Femora I, dorsal 0-1(or 0)-0, prolateral 0-1-1-0; II, dorsal 0-1-0, prolateral 0-1-1-0; III, dorsal 0-1-0, prolateral 0-0-1; IV, dorsal 0-1(or 0)-0. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1r-1-0; II, dorsal 1r-1-0, prolateral 0-0-1; III, dorsal 1r-1-0, prolateral 0-0-1, ventral 0-1p-1p; IV, dorsal 1-1-0, ventral 0-1p-1p. Metatarsi I and II, none; III, ventral 0-0-3, prolateral 0-1-1, retrolateral 0-0-1; IV, ventral 0-1p-3, prolateral 0-1 (or 0)-1, retrolateral 0-0-1. Paired claws of fourth tarsus with 16 to 17 teeth. No trichobothria visible on tarsus.

Abdomen more than twice as long as wide (18/8), with only few setae near base. Anterior spinnerets separated by their diameter; basal segment longer than wide (15/10), cylindrical, distal segment very short, convex. Posterior spinnerets longer than anterior, very slender, somewhat exposed to side of anterior spinnerets; terminal segment tapered, about as wide as long. Anal tubercle distinctly two-segmented. Colulus divided, each half consisting of wider than long swelling covered with six to eight setae.

Palpus (pl. 50, fig. 7) almost identical to that of *M. wilsoni* Simon (pl. 50, fig. 9). Apophysis of patella with two teeth instead of three; pointed process of tibia not bent down toward tubercle which bears longer setae.

FEMALE: Color in alcohol: Legs, thorax, and sternum orange-brown; head, endites, and labium darker brown. Thoracic pattern similar to that of male, but reticulations extending from thoracic furrow to lateral eyes. Chelicera with vertical dusky line extending halfway to fang. Sternum slightly darker on sides. Femur and patella of palpus light yellow; tibia and tarsus orange-brown.

All femora dusky distally. Tibiae I and II dusky at base and tip; tibiae III and IV dusky at tip only. Metatarsi I-III dusky at base and tip, IV dusky distally.

Abdomen mottled light reddish purple, black mark over heart with lateral wings in middle, followed by narrow purple band ending in black.

Total length, 3.4 mm. Carapace length, 1.20 mm., width 0.90 mm., head width, 0.61 mm., eye-row width, 0.51 mm. Structure same as that of male except as indicated. Carapace concave along posterior edges. Base of chelicera lacking tubercle. Rastellum overlapping fang and consisting of six or seven stout black setae, basal one nearest fang twice as long as others, white at tip. Promargin and retromargin with three teeth; basal tooth of retromargin much larger, curved mesially. Basal tooth of one paratype very large, incurved, with two mesial teeth on its sloping base. Endites almost square, longer than wide (24/20); serrula situated at right angle to body axis.

Carapace/tibia-patella ratio, 105. Legs: lengths of tibia-patella I and IV, 1.26 mm. and 1.22 mm. Palpus with claw.

Abdomen more globular than that of male, longer than wide (70/40).

Epigynum (pl. 50, fig. 8) lightly sclerotized, transparent; connecting canals visible through integument, making two loops, one inside other; openings anterior, more widely separated than in *M. wilsoni* Simon.

TYPE DATA: Male holotype, two male and five female paratypes from Isla Calbuco, Llanquihue, Chile, about latitude 42° S., longitude 73° 30' W., in a shell pile behind the beach, dense coastal jungle, partly swamp, February 21-28, 1963 (H. J. McMillin and A. Archer), in the American Museum of Natural History.

DIAGNOSIS: The male of *M. rastellus*, new species, differs from the male of *M. wilsoni*

Simon by the presence of two teeth on the patellar apophysis rather than three or four. The female *M. rastellus* differs from that of *M. wilsoni* by the presence of a rastellum on the chelicera and from that of *M. delfini* Simon by its greater length, 3.1 mm. to 3.4 mm. rather than 2.2 mm. to 2.6 mm. The epigyna of the three species are distinct (pl. 50, figs. 4, 8, and 10).

***Mevianes wilsoni* Simon**

Plate 50, figures 9, 10

*Mevianes wilsoni* SIMON, 1904, pp. 111-112.

DESCRIPTION: Male from Isla Calbuco, Llanquihue, Chile. Color in alcohol: Ground color of legs pale yellow, of carapace, mouth parts, and sternum orange-brown. Distal half of femora I and II and distal third of femora III and IV dusky above; femora II, III, and IV with ventral bar about one-third of distance from base. Patellae, tibiae, metatarsi, and tarsi dusky except for light ring at base of tibiae. Palpus light yellow; cymbium gray. Thorax mottled gray, narrowly rimmed in black; head with reticulated pattern from thoracic furrow toward posterior lateral eyes; darkened rectangular spot anterior to thoracic furrow, pointed behind, anterior corners blending into two lines extending forward. Labium dusky in middle. Sternum dusky, slightly darker on sides and behind. Abdomen white above, with reddish brown mark above heart, followed by two chevrons; posterior fifth of abdomen solid reddish brown; sides dark gray, extending ventrally around edge of spinnerets, dark line reaching base of median spinnerets; venter white, broad gray band extending from epigastric furrow to spinnerets. Anterior spinnerets dusky, posterior white.

Total length, 2.2 mm. Carapace length, 1.02 mm., width, 0.85 mm., head width, 0.48 mm., eye-row width, 0.41 mm. Carapace smooth, lacking setae. Posterior eye row straight, anterior eye row procurved (5/6). Ratio of eyes: AME/ALE/PME/PLE = 5/7/6/6. Separation ratio of eyes: AME-AME:2; AME-ALE:1; AME-PME:4; ALE-PLE:1.5; PME-PME:5; PME-PLE:5. Clypeus slightly wider than anterior lateral eye (8/7), slightly projecting, armed with one upturned seta below anterior median eyes

and one convergent seta below each anterior lateral eye. Chelicera deeply inserted into carapace, boss covered. Base of chelicera bearing low broad tubercle on front, visible only from below. Poison glands extending into thorax a distance almost as long as chelicera. Fang half as long as chelicera, promargin with three teeth, middle one largest; retromargin with three teeth, one nearest base larger, separated from other two. Labium wider than long (17/13). Endites almost as wide as long (20/17), slightly convergent (17/10), produced to 90-degree angle at posterior-lateral corner; serrula situated at right angle to body axis. Sternum as wide as long, truncate behind, widely separating posterior coxae; separation almost as wide as length of coxae.

Carapace/tibia-patella ratio, 116. Lengths of tibiae-patellae I and IV, 1.19 mm. and 0.99 mm. Spination: Legs lightly spined. Femur I, dorsal 0-1(or 0)-0, prolateral 0-0-1. Patellae I-IV, dorsal 0-1. Tibiae I, dorsal 1(or 0)-1(or 0); II, dorsal 1-1, prolateral 0-0-1; III, dorsal 1-1, ventral 0-1p-1p, prolateral 0-0-1; IV, dorsal 1-0-1, ventral 0-0-1p(or 0), prolateral 0-0-1p(or 0). Metatarsi III, dorsal 0-0-1, ventral 0-1p-3; IV, ventral 0-0-3, prolateral 1-0. Paired claws of fourth tarsus with 16 teeth. Third claw slightly curved except at base with one long, slender, curved tooth. No trichobothria visible on tarsus.

Abdomen longer than wide (37/25), without setae or fine hairs above, few near spinnerets. Terminal segment of anterior spinnerets much shorter than wide, with about 15 spinning tubes. Median spinnerets with eight spinning tubes, two having stout distal tubes. Posterior spinnerets slightly longer than anterior, much more slender, hidden behind anterior spinnerets; distal segment more slender than basal, as wide as long, with six spinning tubes. Colulus divided, each half consisting of wider than long, low swelling with five setae. Tracheal opening near base of spinnerets, dividing internally as in *Chorizomma subterraneum* Simon (*C. lucifugum* of Lamy, 1902, fig. 64).

Palpus (pl. 50, fig. 9) very short, stout, curved downward. Patella with basal-ectal apophysis projecting outward past base, terminated by three stout, short teeth (four on left patella of type); oblique row of six



setae situated ventrally at base of apophysis. Tibia as wide as long, entire side projecting ventrally, tapering, forming large recurved spur; tubercle covered with about 10 stout setae at base of spur. Cymbium circular, with no tip, almost as wide as long. Embolus slender, tapering to fine point, arising ectally near base, following outer edge of bulb, making almost complete circle.

**FEMALE, SAME COLLECTION AS MALE:** Similar to male but color of legs darker, more yellow-orange; dusky markings on distal fourth of femora I and II, and distal fifth of femora III and IV; markings faint on tibiae, none on metatarsi. Sternum orange-brown, gradually becoming darker on sides. Thoracic pattern more distinct than that of male. Abdomen purplish, with darker mark over heart, white markings on each side, two dark chevrons behind terminated by solid purple; sides purple, with color extending ventrally around base of spinnerets; venter white, with broad purple band, light in center, darker on sides.

Total length, 3.2 mm. Carapace length, 1.09 mm., width, 0.95 mm., head width, 0.54 mm., eye row width, 0.44 mm. Structure like that of male except as indicated. Chelicera lacking swelling at base. Endites angular but not produced at posterior-lateral corner.

Carapace/tibia-patella ratio, 103. Lengths of tibiae-patellae I and IV, 1.12 mm. and 1.02 mm. Spination sparse, variable but similar to that of male.

Abdomen less elongate than that of male, longer than wide (65/48).

Epigynum (pl. 50, fig. 10) lightly sclerotized; paired openings anteriorly, narrowly separated; connecting canal very slender, looping mesially and outward to lateral spermatheca near epigastric furrow.

**TYPE DATA:** Female holotype from Bahia Allen Gardiner, Magallanes, Chile, latitude 55° 24' S., longitude 68° 18' W. (B. Wilson), in the Muséum National d'Histoire Naturelle, Paris. The holotype is labeled "22122 *Mevianes Wilsoni* E S Reg. fuegiana." The type locality in the original description is given as "Allen Gardiner" which is in "Reg. fuegiana" or Tierra del Fuego.

**OTHER RECORDS:** Chile: No specific locality, probably Osorno (Ross and Michelbacher), in the California Academy of

Sciences, male and five females; Osorno: 10 kilometers east of Puyehue, January 24, 1951 (Ross and Michelbacher), in the California Academy of Sciences, three males, two females. Llanquihue: Isla Calbuco, about latitude 42° S., longitude 73° 30' W., under wood fragments and stones on the ground, dense coastal jungle, partly swamp, February 21-27, 1962 (H. J. McMillin and A. Archer), in the American Museum of Natural History, four males, 18 females; Puerto Varas, Parque Philippi, about latitude 41° 15' S., longitude 73° 30' W., March 2, 1962 (A. F. Archer and H. McMillin), in the American Museum of Natural History, six males, 18 females, and three immatures.

**DIAGNOSIS:** The male of *M. wilsoni* Simon differs from that of *M. rastellus*, new species, by its smaller size, 2.8 mm. or less, the absence of a ventral blotch on the anterior femora, and by the presence of three or four teeth on the patellar apophysis. The female differs from that of *M. delfini* Simon and that of *M. rastellus* by the absence of a rastellum on the chelicera and from that of *M. delfini* by lacking ventral markings on coxae I and II.

**REMARKS:** There is a considerable color variation in this species, ranging from pale yellow with no markings (found among some of the specimens from Osorno) to almost black. The abdomens of females varied from dark gray, with a streak of reddish purple, to all purple or having a white broad band with reddish purple chevrons. The sternum varies from yellow to orange-brown to almost black with a light central streak.

The holotype differs from the described female in being slightly smaller, 2.8 mm. long, and having the carapace, legs, and sternum orange and the abdomen light yellow to almost white. The epigynum is identical to that of the described female.

Males range in length from 2.0 mm. to 2.6 mm. and average 2.3 mm. Females range in length from 2.4 mm. to 3.2 mm., averaging about 2.8 mm.

The spines were more visible on some Osorno specimens, and the following is typical: Femur I, prolateral 0-0-1. Patellae I-IV, dorsal 1-1. Tibiae I-IV, dorsal 1-0-1-0, ventral 0-1(or 0)-1, prolateral 0-0-1. Metatarsi I-II, none, III-IV, dorsal 0-0-1, ventral 0-1-3, prolateral 0-1-0.

GENUS *MEVIANOPS* MELLO-LEITÃO*Mevianops* MELLO-LEITÃO, 1941b, pp. 118-119.

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of female holotype, 10 mm. Posterior eye row slightly recurved; anterior eye row straight. Chelicera robust; promargin armed with three teeth; retromargin, with four. Labium longer than wide. Endites almost parallel. Sternum pointed behind, terminating between hind coxae. Anterior tibia and metatarsus armed ventrally with six spines, not forming pairs. Tarsi with small scopulae apically; paired claws with double row of teeth. Anterior spinnerets separated. Posterior spinnerets more widely separated; distal segment folded inward, more than half as long as basal segment.

DISTRIBUTION: Colombia.

TYPE SPECIES: *Mevianops fragilis* Mello-Leitão.

DIAGNOSIS: The presence of a double row of teeth on the paired claws and of a scopula on the tarsi separates *Mevianops* from all other genera of the Ageleninae. It also raises the possibility that it belongs to the Zodariidae.

*Mevianops fragilis* Mello-Leitão

Plate 50, figure 11

*Mevianops fragilis* MELLO-LEITÃO, 1941b, pp. 119-120, figs. 3 (dorsal view of abdomen), 4 (epigynum).

TYPE DATA: Female holotype from near Bogotá, Colombia, about latitude 5° S., longitude 74° W. (Irmão Nicefuro Maria). Location of type unknown.

## NEOTEGENARIA, NEW GENUS

DESCRIPTION: Length of female holotype, 7.9 mm. Carapace without plumose hair. Eyes subequal in size. Posterior eye row strongly recurved; anterior eye row straight. Ocular quadrangle almost square, slightly wider behind. Clypeus almost as wide as anterior lateral eye, slightly excavated along anterior border. Chelicera strongly geniculate; promargin with five equally spaced teeth; retromargin with five or six large, equally spaced teeth. Labium wider than long. Endites moderately convergent. Sternum longer than wide, pointed posteriorly.

Carapace/tibia-patella ratio, 111. Spination: Tibia I, ventral 2-2-1p. Metatarsus I,

ventral 2-2-3. Paired claws of fourth tarsus with 13 teeth, third claw with five teeth. Trochanters slightly indented.

Anterior spinnerets cylindrical, widely spaced; distal segment minute, indicated by narrow ring. Posterior spinnerets positioned behind anterior spinnerets, about same length and thickness as anterior spinnerets; distal segment short, oblique distally, terminated by long, two-sectioned spinning tubes. Colulus divided, represented by two groups of three short setae.

DISTRIBUTION: Guyana.

TYPE SPECIES: *Neotegenaria agelenoides*, new species.

DIAGNOSIS: This genus is similar in size and shape to *Tegenaria* and differs by having recurved posterior eyes. The only other agelenid with similar eye arrangement is *Mevianes*, which ranges from 2.0 mm. to 3.4 mm. in length and has a truncated sternum.

*Neotegenaria agelenoides*, new species

Plate 51, figure 1

DESCRIPTION OF FEMALE HOLOTYPE: In poor condition; several legs and abdomen separated from thorax. Color in alcohol: Orange-brown, with dusky radiating markings on thorax. Legs unmarked. Abdomen mottled gray above, with light streak above heart followed by several indistinct chevrons; sides mottled gray; venter light gray.

Total length, 7.9 mm. Carapace length, 3.6 mm., width, 2.3 mm., head width, 1.4 mm., eye-row width, 1.0 mm. Carapace with few scattered setae. Posterior eye row strongly recurved (6/6). Ratio of eyes: AME/ALE/-PME/PLE = 8/13/13/12. Separation ratio of eyes: AME-AME:8; AME-ALE:3; AME-PME:10; ALE-PLE:4; PME-PME:10; PME-PLE:10. Clypeus almost as wide as anterior lateral eye (13/12). Chelicera with distinct boss. Labium wider than long (18/16). Endites longer than wide (29/20), convergent (16/7). Sternum longer than wide (50/45), pointed behind.

Lengths of tibiae-patellae I and IV, 4.2 mm. and 4.0 mm.

Abdomen longer than broad, covered with fine, simple setae.

Epigynum (pl. 51, fig. 1) large, conspicuous; stabilizing pits forming anterior notch

on each side of median line; paired, circular, deeply excavated openings in center of epigynum; pair of small spermathecae along posterior edge, visible through integument, separated by pair of longitudinal oval markings, possibly tubes.

TYPE DATA: Female holotype from Guyana "C. No. 11," in the Museum of Comparative Zoology.

GENUS *NOVALENA* CHAMBERLIN AND IVIE

*Novalena* CHAMBERLIN AND IVIE, 1942, pp. 224-225.

DESCRIPTION: Length, 7.1 mm. to 11.5 mm. Plumose hair present on carapace, abdomen, and legs. Posterior eye row strongly procurved; anterior eye row more strongly procurved. Clypeus wider than anterior lateral eye. Chelicera strongly geniculate; promargin with three contiguous teeth, middle tooth largest; retromargin with three separated equal teeth. Labium as wide as long. Endites almost parallel. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 104. Spination: Tibia I, ventral 2-2-2. Metatarsus I, ventral 2-2-3. Paired claws of fourth tarsus with 12 teeth; third claw with four long teeth. Five trichobothria on fourth tarsus. Trochanters not notched.

Anterior spinnerets stout, separated. Posterior spinnerets slender, more widely separated; distal segment slightly longer than basal segment. Colulus divided, each half consisting of patch of eight setae.

DISTRIBUTION: Northwestern United States south through Mexico and Central America, Trinidad, and French Guiana.

TYPE SPECIES: *Agelena intermedia* Chamberlin and Gertsch.

DIAGNOSIS: The presence of plumose hair on the carapace and the procurvature of both eye rows separate this genus from other spiders in this subfamily. *Tegenaria* is similar, but the eyes are not strongly procurved and the chelicera usually has four or more teeth on one of the margins, rather than three teeth on both margins.

*Novalena bipunctata*, new species

Plate 51, figure 2

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Ground color orange-brown;

chelicerae, endites, labium, and sternum chestnut-brown; legs unmarked. Carapace with broad, light, median band and light lateral bands along edge of head. Abdomen purplish brown, with light dorsal stripe changing to chevrons near middle; venter lighter, blending into dark sides.

Total length, 11.5 mm. Carapace length, 5.0 mm., width, 3.6 mm., head width, 1.9 mm., eye-row width, 1.1 mm. Posterior eye row strongly procurved (6/6), anterior eye row strongly procurved (8/6). Ratio of eyes: AME/ALE/PME/PLE = 17/16/14/15. Separation ratio of eyes: AME-AME:7; AME-ALE:13; AME-PME:10; ALE-ALE:13; PME-PME:12; PME-PLE:11. Clypeus wider than anterior lateral eye (20/16), provided in middle of border with six setae. Chelicera with distinct boss. Fang stout, shorter than basal segment of chelicera (17/8). Endites almost parallel (20/18), longer than wide (35/20). Sternum longer than wide (67/52).

Carapace/tibia-patella ratio, 104. Lengths of tibiae-patellae I and IV, 5.2 mm. and 5.5 mm. Spination: Femora I, dorsal 1-1-1, prolateral 1-1, retrolateral 0-0-1; II, dorsal 1-3-3; III, dorsal 1-3-3; IV, dorsal 1-1-2. Patellae I-IV, dorsal 1-1. Tibiae I, ventral 2-2-2, prolateral 1-1; II, ventral 1p-2-2, prolateral 1-1; III and IV, dorsal 1-1, ventral 1p-2-2, prolateral 1-1, retrolateral 1-1. Metatarsi I, ventral 2-2-3 irregular; II, ventral 2-2-3, prolateral 0-1-0, retrolateral 0-1-0; III, dorsal 2-2-3, ventral 2-2-2; IV, dorsal 3-2-2, ventral 2-1-2-2.

Abdomen longer than wide (67/35), anterior spinnerets almost as long as width of basal segment; distal segment minute, subhemispherical. Basal segment of hind spinnerets twice as long as wide, as long as basal segment of anterior spinnerets; distal segment longer than basal segment (17/15), tapered at tip.

Epigynum (pl. 51, fig. 2) conspicuous, broader than long; two large spermathecae visible under integument, with stabilizing pits visible laterally; posterior half separated by rim, with two projecting points in middle; posterior half glabrous, divided by light longitudinal line in center, with inconspicuous openings to spermathecae on each side.

TYPE DATA: Female holotype from St.

Ann's, Trinidad, about latitude 10° N., longitude 61° W., August 13, 1958 (M. Nieves), in the American Museum of Natural History.

DIAGNOSIS: This species differs from all others in the genus by the close-set spurs at the anterior border of the epigynum. *Novalena intermedia* (Chamberlin and Gertsch) from North America is similar, but the epigynal area is narrower.

**Novalena sp.**

One immature specimen with three teeth on the promargin of the chelicera and three and four on the retromargin is in the Academie PolonaisedesSciences, Warsaw, Poland. It was collected at Cayenne, French Guiana. There is a good possibility that this represents an undescribed species.

GENUS **PHILOICIDES** MELLO-LEITÃO

*Philoicides* MELLO-LEITÃO, 1944, p. 335.

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of female holotype, 6.0 mm. Head much narrower than thorax. Posterior and anterior eye rows straight. Promargin of chelicera armed with three teeth; retromargin with four. Labium as wide as long. Tibiae and metatarsi armed with two pairs of ventral spines. Posterior spinnerets with distal segment as long as basal.

DISTRIBUTION: Eastern-central Argentina.

TYPE SPECIES: *Philoicides pallidus* Mello-Leitão.

DIAGNOSIS: *Philoicides* differs from other agelenines by having both anterior and posterior eye rows straight and tibia I with two pairs of ventral spines.

**Philoicides pallidus** Mello-Leitão

Plate 51, figure 3

*Philoicides pallidus* MELLO-LEITÃO, 1944, p. 335, fig. 21 (epigynum).

TYPE DATA: Female holotype number 15.990 from La Plata, Buenos Aires, Argentina, latitude 34° 55' S., longitude 57° 58' W., in the Museo de La Plata.

GENUS **TEGENARIA** LATREILLE

*Tegenaria* LATREILLE, 1804, p. 134.

DESCRIPTION: Length, 5.3 mm. to 10.1 mm. Carapace longer than wide, covered with plumose hair. Eyes eight; posterior eye row slightly procurved (4/6); anterior eye row procurved (4/6 to 5/6). Clypeus dis-

tinctly wider than anterior lateral eye. Chelicera slender; promargin with three or four teeth; retromargin with three to five teeth. Labium longer than wide. Endites almost parallel. Sternum slightly longer than wide, produced to a point behind.

Carapace/tibia-patella ratio of males 132-157, of females 126-135. Tibia I with two or three pairs of spines. Trochanters not notched.

Anterior spinnerets moderately separated by about one-fourth to one-half of their diameter. Posterior spinnerets more widely separated; distal segment as long as or slightly shorter than basal segment. Colulus divided, consisting of two patches of setae.

DISTRIBUTION: Cosmopolitan.

TYPE SPECIES: *Araneus domesticus* Clerck.

DIAGNOSIS: *Tegenaria* can be separated from other South American agelenine spiders by the presence of plumose hair on the thorax and abdomen and by having both eye rows slightly procurved. *Novalena* is closely related but has both eye rows strongly procurved.

REMARKS: The two species of *Tegenaria* known from South America have probably been introduced from Europe, as have most of the North American species (Roth, 1956). These species are often found in houses, basements, and sheds in broad, sheetlike webs. Some are found in caves.

KEY TO THE SOUTH AMERICAN  
SPECIES OF *Tegenaria*

- Promargin of chelicera with four teeth; retromargin with three to five teeth. Sternum with median light band, trifurcated behind. No spurs on epigynum. Embolus long, threadlike, forming two-thirds of a circle . . . *pagana* C. L. Koch
- Promargin of chelicera with three teeth; retromargin with four, occasionally three. Sternum lacking markings or with pale median line flanked with two or three spots. Spur at each posterior corner of epigynum. Embolus short, stout, forming one-third of a circle . . . . .  
. . . . . *domestica* (Clerck)

**Tegenaria domestica** (Clerck)

Plate 51, figures 4, 5

*Araneus domesticus* CLERCK, 1957, pp. 76-79, pl. 2, table 9, fig. 2 (in part).

*Tegenaria civilis*: HOLMBERG, 1876, p. 180; 1881, p. 135.



*Tegenaria modesta* KEYSERLING (not Banks), 1878, p. 594, pl. 14, figs. 17–18 (male palpus and female epigynum).

*Tegenaria domestica*: ROEWER, 1954, pp. 77–78. BONNET, 1959 (1945–1959, vol. 2), pp. 4276–4287.

TYPE LOCALITIES: Of *domestica* (Clerck), Sweden; of *civilis* Walckenaer, France; of *modesta* Keyserling, Uruguay.

DISTRIBUTION: Cosmopolitan. In South America the species has been recorded from Uruguay (Keyserling, 1878, pp. 594–597), Brazil (Keyserling, 1891, p. 158), Argentina (Holmberg, 1876, p. 15; 1881, p. 135; Mello-Leitão, 1933, pp. 14–15), and Chile (Porter, 1920a, p. 58; 1920b, p. 28; Simon, 1897, pp. 106–107; 1904, p. 110).

NEW RECORDS: *Ecuador*: Tungurahua: Banos, 1800–2000 meters in elevation, March, 1939 (W. C. MacIntyre), in the Museum of Comparative Zoology, male; July, 1938 (W. C. MacIntyre), in the Museum of Comparative Zoology, female. *Chile*: Malleco: Angol, 1950 (D. S. Bullock), in the Roth collection; Santiago: Santiago, “Quinta Normal,” April, 1961 (J. Avos), in the American Museum of Natural History, female.

#### *Tegenaria pagana* C. L. Koch

Plate 51, figures 6, 7

*Tegenaria pagana* C. L. KOCH, 1841, p. 31, figs. 612–613. ROEWER, 1954, p. 75. ROTH, 1956, p. 176. BONNET, 1959 (1945–1959, vol. 2), pp. 4293–4294.

*Tegenaria bidentata* KEYSERLING, 1878, pp. 597–599, fig. 19 (male palpus). New synonymy confirmed by D. J. Clark, British Museum (Natural History).

For additional references, see Bonnet [1959 (1945–1959, vol. 2), pp. 4293–4294] or Roewer (1954, p. 75).

TYPE LOCALITIES: Of *pagana* C. L. Koch, near Nauplia, Greece, location of type unknown; of *bidentata* Keyserling, northern South America (Neu Granada), in British Museum (Natural History).

DISTRIBUTION: Southern United States from California to Alabama, Europe, south from Germany and east to Asia Minor, northern Africa west to the Azores. In South America it has been recorded from “Neu Granada,” which, according to Levi (1964, p. 15), could include Panama, Colombia, Venezuela, and Ecuador, as well as adjoining parts of Peru and Brazil.

NEW RECORDS: Chile: Santiago: Santiago, “I Pedag. Stgo II–55,” (M. Toro G.), in the collection of M. Toro, female; Santiago: “Quinta Normal,” April, 1961 (J. Avos), in the American Museum of Natural History, female.

#### SUBFAMILY CYBAEINAE

Eyes none, six, or eight. Plumose hair absent. Clypeus usually narrower than or as wide as anterior lateral eye. Colulus usually conspicuous, linguiform, seldom divided. Posterior spinnerets often shorter than anterior or distal segment minute to one-fourth as long as basal segment.

#### GENUS CYBAEOLUS SIMON

*Cybaeolus* SIMON, 1884, p. 125; 1887, p. E17; 1898b, p. 244.

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of female holotype, 2.5 mm. Eyes eight; both eye rows slightly procurved. Chelicera barely convex. Labium barely longer than wide. Sternum slightly longer than wide. Tibiae spined. Metatarsi I and II lacking spines. Paired claws of fourth tarsus with from 10 to 12 teeth; third claw with two. Spinnerets small, not segmented. Posterior spinnerets more slender than anterior.

DISTRIBUTION: Southern tip of South America.

TYPE SPECIES: *Cybaeolus pusillus* Simon.

DIAGNOSIS: The absence of spines from the anterior metatarsi separates *Cybaeolus* from other agelenids except *Lizarba* and *Mevianes*. The latter differs in having the posterior eye row straight to slightly recurved rather than slightly procurved and the sternum as wide as long rather than slightly longer than wide, not distinct differences. *Lizarba* differs by the widely separated anterior spinnerets. The similarities of *Mevianes* and *Cybaeolus* make it probable that they are synonymous. Both are of about the same size, occur in the same region, have many teeth on the paired claws of the fourth tarsus, and are the only two genera lacking spines on metatarsi I and II.

#### *Cybaeolus pusillus* Simon

*Cybaeolus pusillus* SIMON, 1884, pp. 125–126; 1887, pp. E17–E18; 1898b, pp. 237–238.

TYPE DATA: Female holotype from Orange Bay on Hoste Island, Tierra del Fuego, Chile, about latitude 55° S., longitude 69° W., col-

lected at an altitude of 15 meters, October 7, 1882. Location of type unknown. It is not in the Muséum National d'Histoire Naturelle in Paris according to J. F. Jezequel (correspondence, 1964).

GENUS "CYBAEUS" L. KOCH

*Cybaeus* L. KOCH, 1868, p. 46.

The following description is based on Keyserling's description of two species of South American "*Cybaeus*" and does not characterize the genus.

Length, 4.7 mm. to 4.8 mm. Eyes eight; posterior eye row procurved; anterior eye row straight to slightly recurved. Chelicera slightly geniculate to straight. Labium as wide as long. Endites longer than wide. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 110-115. Tibia and metatarsus I with three pairs of ventral spines. Paired claws of fourth tarsus with five or six teeth. Anterior spinnerets stout; posterior spinnerets smaller.

DISTRIBUTION: Peru and Colombia.

TYPE SPECIES: *Amaurobius tetricus* C. L. Koch.

DIAGNOSIS: The genus "*Cybaeus*" can be separated from other cybaeids except *Rubrius* and *Urepus* by the following combination of characters: the posterior eye row is procurved, the anterior eye row is straight; the trochanters are not notched; and the anterior tibiae have three pairs of ventral spines. *Urepus* differs in having the chelicerae strongly geniculate and in being twice the size of "*Cybaeus*." *Rubrius* cannot be separated from these two species with the information available, but it occurs in Chile and Argentina, whereas "*Cybaeus*" occurs much farther north in Peru and Colombia.

KEY TO THE SOUTH AMERICAN  
SPECIES OF "*Cybaeus*"

Spermathecae visible anterior to paired openings.

Known from Peru . . . *maculatus* Keyserling

Spermathecae not visible through integument.

Known from Colombia . . . *signatus* Keyserling

"*Cybaeus*" *maculatus* Keyserling

Plate 51, figures 8-10

*Cybaeus maculatus* KEYSERLING, 1878, pp. 592-594, pl. 14, fig. 16 (epigynum). SIMON, 1898b, p. 242. MELLO-LEITÃO, 1941a, p. 269.

The type of *C. maculatus* Keyserling was examined by D. J. Clark (British Museum) at my request. He reports that the chelicera has three teeth on the promargin and four teeth on the retromargin. An illustration of the tip of the abdomen provided by Clark shows a colulus one-third wider than long and separated anterior spinnerets, which indicate this species does not belong to *Cybaeus* but probably belongs to an undescribed genus.

TYPE DATA: Female holotype from Santa Fé de Bogotá (Bogotá), Cundinamarca, Colombia, about latitude 5° N., longitude 74° W., in the British Museum (Natural History).

"*Cybaeus*" *signatus* Keyserling

Plate 51, figure 11

*Cybaeus signatus* KEYSERLING, 1882, pp. 287-288, pl. 11, fig. 12 (epigynum). SIMON, 1898b, p. 242.

TYPE DATA: Female holotype from "Maragnoe, Peru." This locality could not be found, but it may represent a misspelling of Maraynioc in the province of Tarma, department of Junín, where K. Jelski collected spiders and birds. Some of the spiders are known to have been studied by Keyserling (see Levi, 1964, pp. 14, 15). The locality could also be Marañón, a river between Ancash and Huanuco, or a province in Huanuco, Peru (Levi, correspondence, 1965). The type was deposited in the University collection at Warsaw, Poland, but has been lost, according to Wojciech Starega (correspondence, 1964).

GENUS EMMENOMMA SIMON

*Emmenomma* SIMON, 1884, p. 126; 1887, pp. E18-E19; 1898b, p. 247.

DESCRIPTION: Length of females, 7.0 mm., to 11.6 mm., males, 6.3 mm. to 7.0 mm. Eyes eight; posterior eye row strongly recurved; anterior eye row slightly procurved. Anterior lateral eyes greatly enlarged, almost twice diameter of posterior lateral eyes. Chelicera strongly geniculate; promargin with four, or occasionally three, teeth at inner margin, with single tooth near base; retromargin with two to four large isolated teeth near base of fang, followed by three or four minute contiguous teeth. Labium as wide as long. En-

dites almost parallel, slightly wider distally than at base. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 105 (female) to 138 (male). Spination of tibia I, ventral 2-2-2, metatarsus I, ventral 2-2-3. Paired claws of fourth tarsus bearing eight teeth; third claw with one tooth. Seven trichobothria on fourth tarsus. Trochanters shallowly notched.

Anterior spinnerets broad and stout, slightly separated, distal segment minute. Posterior spinnerets very slender, shorter than anterior; distal segment very small, almost wedge-shaped, angled toward median line. Colulus triangular, wider than long (10/5), rounded distally, covered with 18 to 20 setae.

DISTRIBUTION: Southern tip of South America, Falkland Islands, and Santa Cruz, Argentina.

TYPE SPECIES: *Emmenomma oculatum* Simon.

DIAGNOSIS: The greatly enlarged anterior lateral eyes and the shallowly notched trochanters separate this genus from all other agelenids. The large eyes and general appearance remind one, at first glance, of a wolf spider.

#### ***Emmenomma oculatum* Simon**

Plate 51, figures 12, 13

*Emmenomma oculatum* SIMON, 1884, pp. 126-127, pl. 3, figs. 8, 9 (eyes), 10 (epigynum), 11 (palpus); 1898b, pp. 237, 240, 242, fig. 232 (eyes). TULLGREN, 1901, p. 251, pl. 5, fig. 8 (male palpus).

*Emmenomma oculatum obscurum* SIMON, 1905, pp. 14-15.

*Emmenomma falklandica* HOGG, 1913, pp. 45-46, pl. 1, figs. 2, 2a, 2b (female, dorsal view, eyes and unknown object), new synonymy.

*Emmenomma falklandicum*: ROEWER, 1954, p. 94. BONNET, 1956 (1945-1959, vol. 2), p. 1653.

DESCRIPTION: Taken from female from Hoste Island, southern tip of South America. Color in alcohol: Ground color orange-brown; chelicerae, mouth parts, and sternum slightly darker. Carapace edged in black, heavily mottled with gray; median area opposite thoracic furrow unmottled. Head mottled low on sides and behind posterior eye row. Femora mottled above and below. Tibiae similarly marked above but lighter. Area at

base of spines darkened. Abdomen dark gray on top and sides, venter light gray. Dark line flanked with two white lines over heart.

Total length, 9.7 mm. Carapace length, 4.0 mm., width, 2.9 mm., head width, 2.0 mm., eye-row width, 1.5 mm. Carapace covered with fine setae. Posterior eye row strongly recurved (9/6); anterior eye row slightly procurved (4/6). Ratio of eyes: AME/ALE/PME/PLE = 8/30/20/25. Separation ratio of eyes: AME-AME:10; AME-ALE:5; AME-PME:35; ALE-PLE:30; PME-PME:7; PME-PLE:20. Clypeus less than half as wide as anterior lateral eye (30/12), with six to eight scattered setae. Promargin of chelicera with four teeth, three contiguous, one nearest base isolated; retromargin with three separated teeth, four denticles; basal tooth small, followed by two large ones, first denticle larger than others, contiguous to third tooth. Fang shorter than base (47/28), toothed over half of its tip. Labium slightly wider than long (16/15). Endites almost parallel (16/13), longer than wide (28/20). Sternum longer than wide (55/43).

Carapace/tibia-patella ratio, 105. Legs: Lengths of tibia-patella I and IV, 4.2 mm. and 4.0 mm. Spination: Femora I-III, dorsal 0-3-3; IV, dorsal 0-2-3. Patellae I-IV, dorsal 1br.-1. Tibiae I, ventral 2-2-2, prolateral 1-1-1, retrolateral 0-1-0, II, ventral 2-2-2, prolateral 1-1-1-0, retrolateral 0-0-1-0; III, dorsal 1-0-1-0, ventral 2-2(or 1p)-2, prolateral 1-1-1, retrolateral 1-1-1; IV, dorsal 1-0-1-0, ventral 2-2(or 1p)-2, prolateral 1-1-1, retrolateral 1-1-1. Metatarsus I, ventral 2-2-3, prolateral 1-1-1, retrolateral 1-1-1(or 0); II, ventral 2-2-3, prolateral 1-1-1, retrolateral 1-1-1; III and IV, dorsal 0-1-0, ventral 2-2-3, prolateral 1-1-1, retrolateral 1-1-1. Palpal claw with three teeth.

Abdomen longer than wide (57/37), covered with short and long setae.

Epigynum (pl. 51, fig. 13) inconspicuous, consisting of two polished oval plates flanked by short spur on each side directed diagonally toward middle.

Description of male from Puerto Williams, Navarino Island, at tip of South America: Color similar to that of female, but ground color lighter, more yellow present. Abdomen light above, with five chevrons outlined in

black. Markings on legs much lighter. Sternum gray.

Total length, 6.3 mm. Carapace length, 2.9 mm., width, 2.1 mm., head width, 1.2 mm., eye-row width, 1.0 mm. Male more slender than female. Chelicera almost straight; fang half as long as base of chelicera (30/15). Retromargin of chelicera with two or three teeth and three or four denticles.

Carapace/tibia-patella ratio, 121. Legs: Lengths of tibiae-patellae I and IV, 3.5 mm. and 3.7 mm. Spination similar to that of female, but spines more slender; femur I, dorsal 0-2-3.

Palpus (pl. 51, fig. 12); patella unmodified. Tibia and cymbium stout, latter slightly longer (10/8) than former, and longer than wide (25/15). Tibia with short, obliquely truncated spur at tip on ventral side; spur about as wide as long; pointed spur, longer than wide (5/2), next to truncated spur. Elbowed apophysis on outer side of tibia extending forward to side of cymbium and terminating sharply, grooved above; short spur on each side of base of apophysis. Embolus stout and short. Median apophysis membranous, supporting embolus. Sharp spur at base toward middle of bulb ("tubercle" of Gering, 1953, p. 11). Conductor consisting of two hooklike segments, one slender, other broad, neither touching embolus.

MALE LECTOTYPE: Color similar to that of female; markings on legs lighter. Structure like that of male described above, except as follows: Total length, 8.0 mm., carapace length, 3.4 mm., width, 2.6 mm., head width, 1.53 mm., eye-row width, 1.26 mm. Promargin of chelicera with four teeth; three teeth and three denticles on retromargin. Carapace/tibia-patella ratio, 138. Lengths of tibiae-patellae I and IV, 4.7 mm.

TYPE DATA: Simon (1884, p. 127) designated Ile Hoste and Ile Hermite as type localities of *E. oculatum* Simon, both situated at the southern tip of South America. The syntypes include 10 females, four males (of which the largest is designated lectotype), and two immature specimens with the label "6687 Cap Horn T de fue," in the Muséum National d'Histoire Naturelle in Paris. The female holotype of *E. falklandica* Hogg was collected on the Falkland Islands off the tip of South America and is probably deposited in the

British Museum (Natural History). The immature female syntypes of *E. oculatum oculatum* Simon were collected at Monte Buenos-Aires, Santa Cruz, Argentina, and are probably deposited in the Muséum National d'Histoire Naturelle, Paris.

DISTRIBUTION: Falkland Islands, Tierra del Fuego, surrounding islands and adjacent mainland, and Santa Cruz, Argentina.

NEW RECORDS: *Chile*: Magallenes: Hardy Peninsula, Orange Bay, Hoste Island, January 2-3, 1963 (P. J. Darlington), in the Museum of Comparative Zoology, two females; Navarino Island, Puerto Williams, December, 1962, to January, 1963 (P. J. Darlington), in the Museum of Comparative Zoology, male and three females; Puerto Williams, above tree line, December 31, 1963 (P. J. Darlington), in the Museum of Comparative Zoology, seven females, three immature; Laguna Blanca, October 10, 1952 (Rodríguez Gonzales), in the American Museum of Natural History, male and female. *Tierra del Fuego*: Bahía Inutil, November 5-6, 1960 (L. Peña), in the Museum of Comparative Zoology, two females; Cameron, November 14-17, 1960 (L. Peña), in the Museum of Comparative Zoology, female; Estancia Vicuña, southeast of Cameron, December 1-6, 1960 (L. Peña), in the Museum of Comparative Zoology, seven females, one male; Rusfin, southeast of Cameron, November 17-20, 1960 (L. Peña), in the Museum of Comparative Zoology, 22 females, four males, and one immature. *Argentina*: Tierra del Fuego: Carbajal, February 17, 1961 (Borys Malkin), in the American Museum of Natural History, 23 females, two males, and seven immature; Ushuaia, February 8-26, 1961 (Borys Malkin), in the American Museum of Natural History, 19 females, two males, and three immature; La Pataia, February 20-23, 1961 (B. Malkin), in the American Museum of Natural History, female; Isla de Los Estados (Staten Island), Puerto San Jaun del Salamento, 1961 (P. F. Squires, T. Dow), in the American Museum of Natural History, one immature.

REMARKS: This species and *Rubrius antarcticus* Karsch are the most common agelenids at the tip of South America and occur in almost every collection. They are found under rocks and trunks of fallen trees. All the



material mentioned in the literature and listed here was collected between October and February.

Six males ranged in length from 6.3 mm. to 7.0 mm. and averaged 6.6 mm. Twenty-seven females ranged from 7.0 mm to 9.8 mm. and averaged 8.5 mm.

Six females from above the tree line on Navarino Island, not included in the above averages, ranged in length from 11.0 mm. to 11.6 mm. and averaged 11.4 mm. Females from a collection at a lower level on the island at Puerto Williams ranged from 7 mm. to 7.5 mm. This increase in size with an increase in altitude and latitude has been noted in my studies (unpublished) on *Cybaeus reticulatus* Simon in the northwestern United States and Canada.

#### LIVIUS, NEW GENUS

DESCRIPTION: Length, female 4.6 mm. Eyes eight; posterior eye row straight to slightly recurved (4/6); anterior eye row straight. Chelicera geniculate; promargin with four equal, equidistant teeth; retromargin with two widely separated teeth and three contiguous denticles at base of mesial tooth. Labium wider than long. Endites slightly convergent, longer than wide. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 101. Spination: spines stout, one-half of or more than length of tibiae. Tibia I, ventral, 2-2-2-0-0. Metatarsus I, ventral, 2-2-2-0. Paired claws of fourth tarsus with eight teeth, third claw with two teeth, unequal in size. Fourth tarsus with four trichobothria. Palpal claw with six teeth. Trochanters not notched.

Anterior spinnerets contiguous, stout, conical, terminated by short, ringlike segment. Median spinnerets hidden. Posterior spinnerets situated behind anterior spinnerets, more slender; distal segment narrower mesially, directed toward median line. Colulus about as wide as long, narrower distally, covered with five to 10 setae as long as colulus.

DISTRIBUTION: Chile: Concepción.

TYPE SPECIES: *Livius macrospinus*, new species.

DIAGNOSIS: This genus can be separated from other South American cybaeids by the presence of the stout and long spines on tibiae

and metatarsi I and II, each spine at least one-half as long as the segment to which it is attached.

#### *Livius macrospinus*, new species

Plate 51, figure 14

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Mouth parts brownish orange. Carapace yellowish orange. Head darker in eye region and on sides; posterior margins of head outlined with dusky markings, wider anteriorly; dark streak between posterior median eyes and thoracic furrow. Thorax with two broad, lateral, dusky, longitudinal markings connecting to wide dusky markings of head. Sternum and legs yellowish orange, becoming almost orange-brown distally on legs I and II. Anterior tibiae and metatarsi darker orange-brown, lacking dusky markings. Other legs ringed with dusky markings below, three on femora, one on patellae, two on tibiae and metatarsi. Abdomen mottled black, with three pairs of large, light gray spots over basal half, with two indistinct chevrons on distal half; venter light gray. Spinnerets light yellow, with dusky basal spot ventrally.

Total length, 4.6 mm. Carapace length, 2.0 mm., width, 1.6 mm., head width, 1.0 mm., eye-row width, 0.75 mm. Carapace smooth, with few scattered setae. Ratio of eyes: AME/ALE/PME/PLE = 6/8/8-9/8-9. Separation ratio of eyes: AME-AME:8; AME-ALE:4; AME-PME:7-8; ALE-PLE:4-5; PME-PLE:11; PME-PME:7. Clypeus not so wide as anterior lateral eye (8/5), with six long setae along border, one long upcurved seta below anterior median eye. Chelicera about half as long as thorax (60/29). Fang short, about half as long as chelicera (29/16), basal half of tip serrated. Labium wider than long (10/9). Endites slightly convergent distally (10/6), longer than wide (18/12), almost straight-sided. Sternum longer than wide (35/30).

Legs: Lengths of tibiae-patellae I and IV, 2.07 mm. and 1.94 mm. Spination: Femora I, dorsal 0-1-0, prolateral 0-0-1; II-IV, dorsal 0-1-0. Patellae I-IV, dorsal 0-1br. Tibiae I, ventral 2-2-2-0-0, spines stout, one-half of or more than one-half of length of tibiae; II, ventral 2-2-0-0, prolateral 1-1, retrolateral

1-0; III, ventral 1p-2-0, prolateral 0-0-1, retrolateral 0-0-1; IV, ventral 1(or 0)-1, retrolateral 0-0-1. Metatarsi I, ventral 2-2-2-0, spines stout, half as long as metatarsi, third pair situated laterally; prolateral 1-0-1, retrolateral 1-0-0; II, ventral 2-2-2-0, prolateral 1-1, retrolateral 1-0; III, ventral 2-2-3, prolateral 1-0-1, retrolateral 1-0-1; IV, ventral 1r-2-3.

Abdomen ovate, longer than wide (78/55).

Epigynum: Epigynal plate wider than long (pl. 51, fig. 14), with two circular depressions on posterior half of plate, surrounded by broader but indistinct depression.

TYPE DATA: Female holotype from Bosques de Ramuncho, Concepción, Chile, about latitude 37° S., longitude 73° W., October, 1961 (Archer and Jeldes), in the American Museum of Natural History.

#### NAEVIVS, NEW GENUS

DESCRIPTION: Length of male lectotype, 4.8 mm.; female, 5.8 mm. Carapace slightly longer than wide, lacking plumose hair. Eyes eight; posterior eye row procurved; anterior eye row recurved. Chelicera of male almost straight, of female slightly geniculate; promargin with three teeth; retromargin with two or three teeth and three or four denticles; boss conspicuous. Labium slightly longer than wide. Endites almost parallel. Sternum slightly longer than wide, lateral edges deeply scalloped, produced to dull point between hind coxae.

Carapace/tibia-patella ratio of male, 142, of female, 122. Spination: Tibia I, ventral 2-2-0; metatarsus I, ventral 2-2-2. Pair of large dorsal spines on tibia III of male. Paired claws of fourth tarsus with seven or eight teeth, third claw with two. Fourth tarsus with four or five trichobothria. Trochanters III and IV deeply notched. Anterior spinnerets contiguous, long, conical, with a short, flattened, disklike, terminal segment. Posterior spinnerets hidden behind anterior, slender, cylindrical, terminal segment about as long as wide, somewhat pointed. Colulus as long as wide, rounded distally, covered with fine setae.

DISTRIBUTION: Peru.

TYPES SPECIES: *Cybaeus varius* Keyserling.

DIAGNOSIS: This genus differs from others in the subfamily by the procurvature of the posterior eye row, the presence of three pairs

of ventral spines on tibia I, and the deeply notched third and fourth trochanters. *Olybrius* also has the third and fourth trochanters notched but differs in having five pairs of ventral spines on tibia I and the posterior eye row straight.

***Naevius varius*** (Keyserling), new combination

Plate 51, figures 15-17

*Cybaeus varius* KEYSERLING, 1880, pp. 319-321, pl. 4, figs. 19 (male palpus), 19a (epigynum). SIMON, 1898b, p. 242.

DESCRIPTION OF MALE LECTOTYPE: Color in alcohol: Ground color dark orange-brown. Carapace mottled dark to light brown, with darker patch on each side of thoracic furrow. Sternum mottled gray, lighter in center. Legs darker beyond femora. All femora with two ventral blotches on distal half. Abdomen dark brown, with dark streak over heart, flanked by white granular markings narrowed at middle and extending to base of spinnerets; venter brown, with scattered flecks of white; two broken lines of black extending from lateral edges of epigastric furrow to spinnerets.

Total length, 4.8 mm. Carapace length, 2.4 mm., width, 2.0 mm., head width, 1.1 mm., eye-row width, 0.75 mm. Carapace covered with minute (0.01 mm. long) setae separated by two to three times their length. Posterior eye row procurved (6/6); anterior eye row recurved (4/6). Ratio of eyes: AME/ALE/PME/PLE = 7/14/12/14. Separation ratio of eyes: AME-AME:3; AME-ALE:2; AME-PME:18; ALE-PLE:3; PME-PME:6; PME-PLE:8. Clypeus almost as wide as anterior lateral eye (14/13), lacking setae. Promargin of chelicera with two large, contiguous teeth near base of fang, followed by one small isolated tooth; retromargin with one isolated minute tooth near base of fang, two large teeth, contiguous at base, one smaller tooth followed by three denticles; boss slightly swollen; fang more than half as long as base of chelicera (70/40). Endites longer than wide (45/32). Labium slightly longer than wide (11/10). Sternum slightly longer than wide (40/37), edges scalloped, tip dull.

Legs: Lengths of tibiae-patellae I and IV, 3.4 mm. and 2.7 mm. Spination: Many spines rubbed from type. Femora I-IV, dorsal 0-1-3. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal

1-1, ventral 2-2-0, prolateral 1-1-1, retrolateral 1-1; II, dorsal 1-0-1-0, ventral 2-2-0, prolateral 1-1, retrolateral 1-1; III, dorsal 1-0-1-0, ventral 0-1p-2, prolateral 1-1, retrolateral 1-1; IV, dorsal 1-0-1-0, ventral 1p-1p-0, prolateral 1-0-1-0, retrolateral 1-0. Metatarsi I, dorsal 2-2-2, ventral 2-2-2; II, dorsal and ventral 2-2-2; III, dorsal 3-2-3, middle two spines very large, half as long as metatarsus, arising from dorsal swelling, ventral 2-2-1; IV, dorsal 3-2-3, ventral 2-2-1. Two setae crossing third claw of fourth tarsus, curving toward tip of paired claws, appearing like spurious claws.

Abdomen longer than wide, (27/20), tapering at tip.

Palpus (pl. 51, figs. 15, 16): Patella lacking apophysis. Tibia with ventral, thumblike, bifid apophysis, not so long as tibia (13/8), and dorsal, curved, spinelike structure extending to tip of cymbium, attached with flexible coupling to end of tibia, dorsal to cymbium attachment. Cymbium slender, gradually reduced in size toward tip, depressed on side near end opposite tip of movable tibial apophysis; row of setae along mesial margin of alveolus. Embolus arising at base of bulb, terminating distally on hook-shaped conductor.

FEMALE: Color similar to that of male. Abdomen with different pattern, with dark longitudinal patch on each side of heart, posterior half of abdomen white.

Total length, 5.8 mm. Carapace length, 2.7 mm., width, 2.2 mm., head width, 1.5 mm., eye-row width, 0.9 mm. Retromargin of chelicera lacking small basal tooth, with three large teeth, one smaller tooth, and three denticles. Lengths of tibiae-patellae I and IV, 3.3 mm. and 2.8 mm. Spination similar to that of male, but large pair of dorsal spines on tibia III absent. Palpal claw with two teeth.

Epigynum (pl. 51, fig. 17) broad, non-sclerotized, liplike, overlapping epigastric furrow, with broad notch in middle of posterior edge.

TYPE DATA: Male lectotype, one female and 14 immature lectotypes from "Maraynioe, Peru," according to the label on the type series. (See *Cybaeus signatus* Keyserling for remarks on this locality.) The type material is deposited in the Instytut Zoologiczny at the Polska Akademia Nauk, Warsaw, Poland.

REMARKS: The abdominal color patterns of the 14 immature specimens in the type series vary considerably, but most have the dark streak above the heart and the remainder of the abdomen covered with flecks of white. The movable tibial apophysis of the male palpus appears to be unique in the Ageleenidae.

#### GENUS *NEOPORTERIA* MELLO-LEITÃO

*Neoporteria* MELLO-LEITÃO, 1943, p. 140.

DESCRIPTION (BASED PARTLY ON ORIGINAL DESCRIPTION): Length, 4.5 mm. to 5.0 mm. Eyes eight; anterior eye row straight or slightly procurved; posterior eye row slightly or moderately procurved. Chelicera slightly convex; promargin of males with nine to 10 teeth, of females with four to eight teeth; retromargin of males with four to six teeth, of females with four to eight small, widely separated teeth. Labium slightly wider than long. Endites almost parallel. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, males, 168-170, female, 132. Spination: Tibia I, ventral 0-2-2-0 (or irregular, *N. pracellens* Mello-Leitão). Metatarsus I, ventral 2-2-3 (or 2-2-0-2, *N. pracellens*). Paired claws of fourth tarsus with five to seven teeth, third claw with three. Fourth tarsus with five trichobothria. Trochanters not notched.

Anterior spinnerets contiguous, stout; terminal segment inconspicuous. Posterior spinnerets slender, no longer than anterior; terminal segment minute, directed toward center. Colulus broader than long, rounded distally, covered with setae.

DISTRIBUTION: Central Chile.

TYPE SPECIES: *Neoporteria pracellens* Mello-Leitão.

DIAGNOSIS: *Neoporteria* differs from other eight-eyed cybaeinids by the lack of notched trochanters and the longer legs, and has a carapace/tibia-patella ratio of 130 to 170, rather than less than 120.

#### KEY TO THE SPECIES OF *Neoporteria* MELLO-LEITÃO

- Metatarsus I with 2-2-2-0-2 ventral spines. Tibia I with ventral spines irregularly spaced . . . . . *pracellens* Mello-Leitão
- Metatarsus I with 2-2-3 ventral spines. Tibia I with 0-2-2-0 ventral spines . . . . . *annulata*, new species

***Neoporteria pracellens* Mello-Leitão**

Plate 51, figure 18

*Neoporteria pracellens* MELLO-LEITÃO, 1943, p. 139, fig. 5 (epigynum), pp. 140-141.

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of female holotype, 5.0 mm. Color and structure similar to those of *N. annulata*, new species. Promargin of chelicera with four large teeth; retromargin with eight tiny teeth. The spination differs from that of *N. annulata*. Tibiae I, ventral 1p-1p-1r-2-0-0; II, ventral 1r-1p-1r-2-0-0. Metatarsi I, ventral 2-2-2-0-2; II, ventral 2-0-2-0-2.

TYPE DATA: Female holotype from Maullin, Llanquihue, Chile, latitude 41° 38' S., longitude 73° 35' W. Location of type unknown.

DIAGNOSIS: The epigyna of *N. pracellens* and *N. annulata* are illustrated in plate 51, figure 18, and plate 52, figure 3. The promargin of the chelicera of *N. pracellens* has four teeth, whereas that of *N. annulata* has seven. The male of *N. pracellens* is unknown.

***Neoporteria annulata*, new species**

Plate 52, figures 1-3

DESCRIPTION OF MALE HOLOTYPE: Color in alcohol: Carapace, legs, and sternum yellow-orange, chelicerae brown, endites and labium slightly lighter. Carapace with gray markings; dark median line extending from between posterior median eyes to thoracic furrow; narrow gray band outlining junction of head and thorax, connecting with broad stripe on sides of thorax. Sternum with three pairs of spots opposite anterior three pairs of coxae. Legs somewhat ringed, faint above. Basal part of coxae marked. Femora I lacking markings; II, with two very faint marks below; III, two distinct marks below; IV, three distinct marks below, one in middle, two distal. All patellae marked below. Tibiae: I, darkened slightly distally; II, with three rings, one at base, one faint in middle, one distal; III-IV, each with four rings. Metatarsi lacking definite rings. All spines on legs with spot of gray at base, giving appearance of more definite rings than actually present. Abdomen mottled gray on white background; with four dorsal gray chevrons and two dark lines outlining heart; venter with gray stripe from epigastric furrow to spinnerets flanked by two short dark gray streaks. Colulus gray.

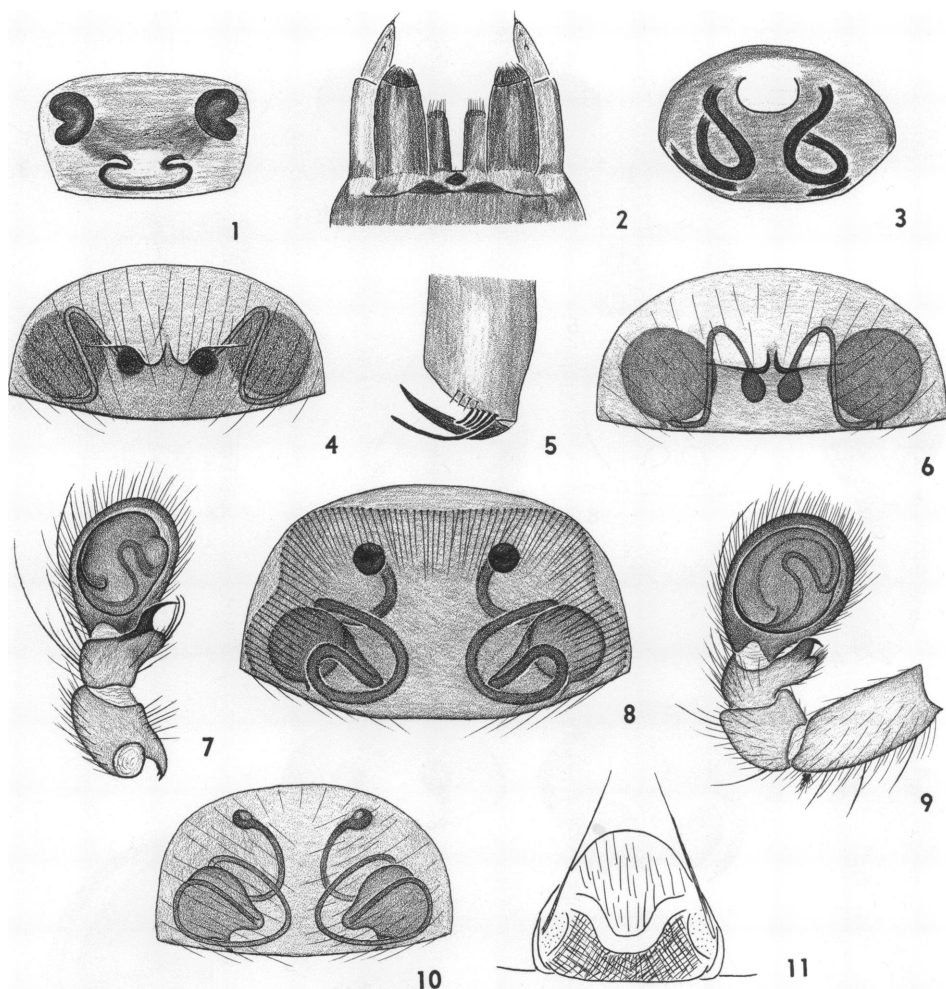
Anterior spinnerets gray laterally and mesially at base. Anal tubercle white.

Total length, 4.5 mm. Carapace length, 2.5 mm., width, 1.9 mm., head width, 1.22 mm., eye-row width, 0.85 mm. Posterior eye row moderately procurved (5/6), anterior eye row straight. Ratio of eyes: AME/ALE/PME/PLE=9/11/10/13. Separation ratio of eyes: AME-AME:8; AME-ALE:4; AME-PME:12; ALE-PLE:4; PME-PME:13; PME-PLE:13. Clypeus not so wide as anterior lateral eye (11/7), with two pairs of converging setae, one upturned seta below anterior median eyes. Chelicera slender, with very oblique margin, about two-thirds as long as carapace (74/54). Chelicera extending past endites almost length of endite (28/26), bowing outward opposite oblique margin; fang long, slender, almost as long as chelicera (54/40); promargin with nine or 10 separate teeth, first three nearest fang minute, three large teeth followed by three or four minute teeth extending down vertical edge of chelicera; retromargin with five or six separate minute teeth. Labium wider than long (15/13). Endites nearly parallel (14/9), longer than wide (28/16), slightly wider distally. Sternum longer than wide (42/35).

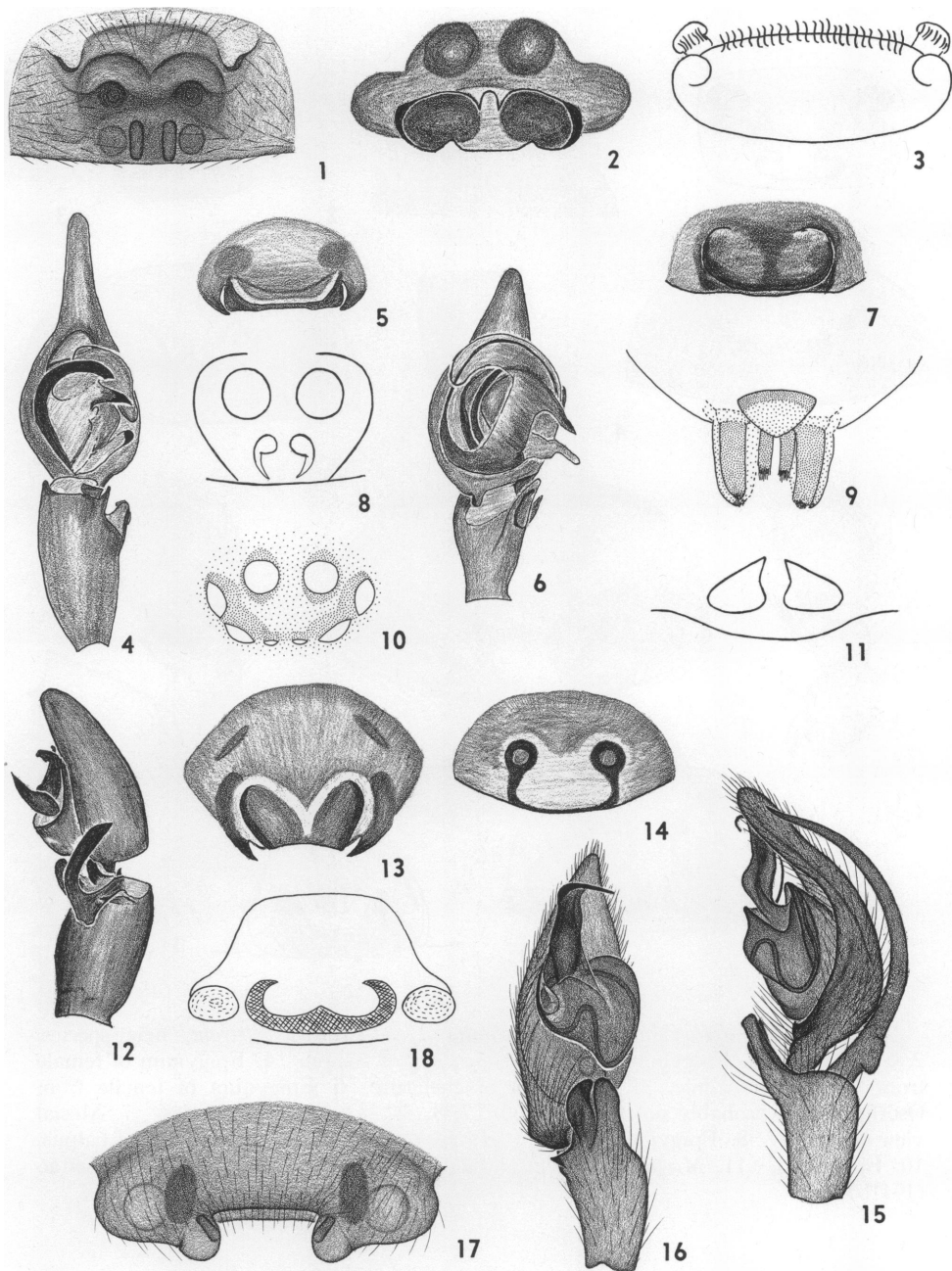
Carapace/tibia-patella ratio, 168. Lengths of tibiae-patellae I and IV, 4.2 mm., 2.9 mm. Spination: Femora I, dorsal 0-1-0, prolateral 0-0-1-0; II, dorsal 0-1-1p, prolateral 0-0-1; III, dorsal 0-1-3; IV, dorsal 0-1-2. Patellae I-IV, dorsal 1-1. Tibiae: I, ventral 0-2-2-0, prolateral 0-1-0-1, retrolateral 0-0-1-0; II, ventral 0-2-2-0, prolateral 1-1, retrolateral 1-1; III-IV, dorsal 1-0-1-0, ventral 1p-1p-2, prolateral 1-1, retrolateral 1-1. Metatarsi: I, ventral 2-2-3, prolateral 0-1-1-0-1, retrolateral 0-1-0-0-1; II, dorsal 0-1-0-2, ventral 2-2-3 prolateral and retrolateral 0-1-0-0; III, dorsal 2-3-2, ventral 2-2-3; IV, dorsal 2-2-0-2, ventral 2-2(or 1p)-3. Paired claws of fourth tarsus with six or seven teeth.

Abdomen longer than wide (27/15). Anterior spinnerets contiguous, stout; terminal segment inconspicuous, less than hemispherical. Posterior spinnerets slender, no longer than anterior, situated behind anterior spinnerets; terminal segment minute, hemispherical, angled toward opposite spinneret. Colulus broader than long, rectangular, rounded at tip, covered with setae.

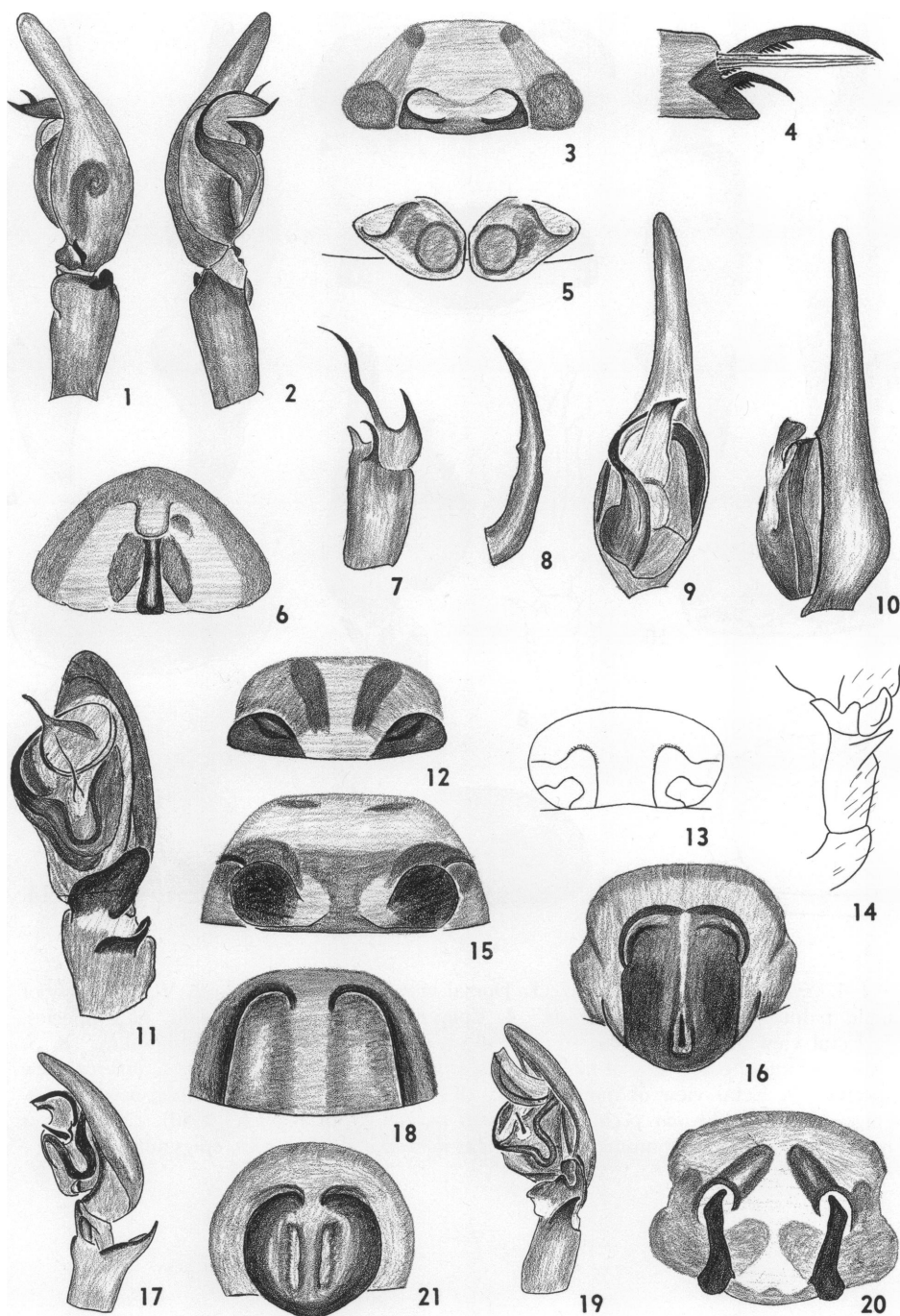




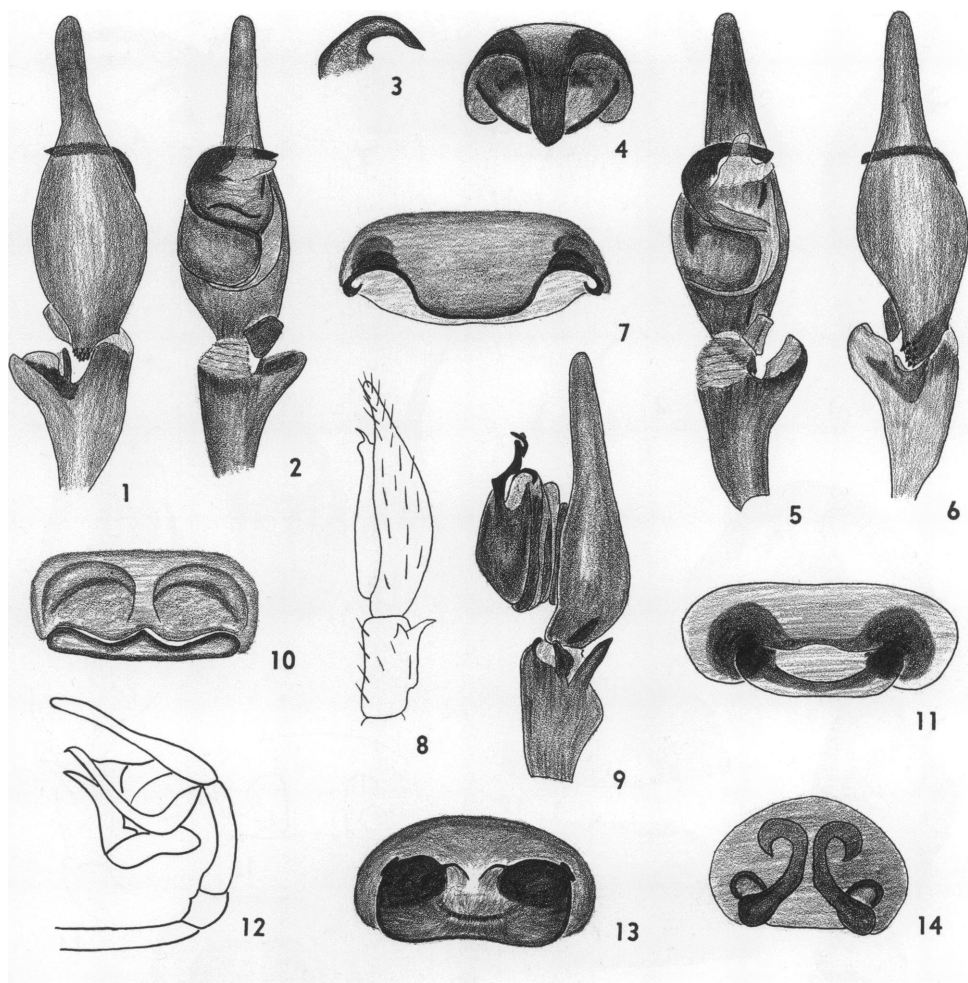
1. *Hicanodon cinerea* Tullgren, epigynum. 2, 3. *Lizarba separata*, new species. 2. Spinnerets. 3. Epigynum. 4-6. *Mevianes delfini* Simon. 4. Epigynum of female from Concepción, Chile. 5. Rastellum of chelicera. 6. Epigynum of female from Osorno, Chile (probably not this species). 7, 8. *M. rastellus*, new species. 7. Mesial view of palpus. 8. Epigynum. 9, 10. *M. wilsoni* Simon. 9. Mesial view of palpus. 10. Epigynum. 11. *Mevianops fragilis* Mello-Leitão, epigynum, from Mello-Leitão (1941b)



1. *Neotegenaria agelenoides*, new species, epigynum. 2. *Novalena bipunctata*, new species, epigynum. 3. *Philoicoides pallidus* Mello-Leitão, epigynum, from Mello Leitão (1944). 4, 5. *Tegenaria domestica* (Clerck). 4. Ventral view of palpus. 5. Epigynum. 6, 7. *T. pagana* C. L. Koch. 6. Ventral view of palpus. 7. Epigynum. 8-10. "*Cybaeus*" *maculatus* Keyserling. 8. Epigynum, from Keyserling (1878). 9. Spinnerets and colulus, by D. J. Clark. 10. Eyes, by D. J. Clark. 11. "*C.*" *signatus* Keyserling, epigynum, from Keyserling (1882). 12, 13. *Emmenomma oculatum* Simon. 12. Ectal view of left palpus. 13. Epigynum. 14. *Livius macrospinus*, new species, epigynum. 15-17. *Naevius varius* (Keyserling). 15. Male palpus, ectal view. 16. Ventral view. 17. Epigynum. 18. *Neoporteria pracellens* Mello-Leitão, epigynum, from Mello-Leitão (1943)



1-3. *Neoporteria annulata*, new species. 1. Ectal view of male palpus. 2. Mesial view of male palpus. 3. Epigynum. 4, 5. *Olybrius madrynsensis* (Tullgren). 4. Paired claws of fourth tarsus. 5. Epigynum. 6-10. *Porteria albopunctata* Simon. 6. Epigynum. 7. Ectal view of tibia of pulpus. 8. Fang of chelicera of male. 9, 10. Cymbium of male palpus. 9. Ventral view. 10. Ectal view. 11, 12. *Rubrius antarcticus* (Karsch). 11. Ventral view of male palpus. 12. Epigynum. 13. *R. annulatus* F. O. Pickard-Cambridge, epigynum, from F. O. Pickard-Cambridge (1898). 14, 15. *R. castaneifrons* (Simon). 14. Tibia of male palpus, from Simon (1898a). 15. Epigynum. 16. *R. lineatus*, new species, epigynum. 17, 18. *R. major* (Simon). 17. Ectal view of male palpus. 18. Epigynum. 19, 20. *R. paganus* Simon. 19. Ectal view of male palpus. 20. Epigynum. 21. *R. ululus*, new species, epigynum



1-4. *Symphysia silvicola* Simon. 1. Dorsal view of male palpus. 2. Ventral view of male palpus. 3. Tip of embolus. 4. Epigynum. 5-7. *S. sexoculata*, new species. 5. Ectal view of male palpus. 6. Dorsal view of male palpus. 7. Epigynum. 8. *S. umbrosa* Simon, ectal view of male palpus, from Simon (1898a). 9, 10. *S. bifurca*, new species. 9. Ectal view of male palpus. 10. Epigynum. 11. *S. dubiosa*, new species, epigynum. 12. *Thaida peculiaris* Karsch, palpus, from Karsch (1880). 13. *Urepus rossi*, new species, epigynum. 14. *Virgilus normalis*, new species, epigynum

Male palpus (pl. 52, figs. 1, 2): Patella unmodified. Tibia with short distal, ectal apophysis and rounded smooth hump ventrad to apophysis. Cymbium slender, more than two and one-half times as long as wide (29/11), with short carina near base on outer side. Embolus slender, arising in middle of bulb, forming half circle, terminating on conductor. Conductor acuminate, lying transversely across end of bulb, lateral spur near tip. Median apophysis transparent, slender, dilated at tip, extending to tip of conductor.

FEMALE: Color similar to that of male, lighter. Femur I ringed. Sternum with four pairs of spots, posterior tip dusky.

Total length, 4.5 mm. Carapace length, 2.21 mm., width, 1.70 mm., head width, 1.26 mm., eye-row width, 0.82 mm. Structure like that of male except as noted. Posterior and anterior eye rows procurved (4/6). Chelicera stouter, about half as long as carapace (68/38); fang shorter than chelicera (38/26); promargin with seven teeth, all separated, third tooth from base of fang largest, others diminishing in size: retromargin with eight minute, separate teeth, first near base of fang.

Carapace/tibia-patella ratio, 132. Lengths of tibiae-patellae I and IV, 2.92 mm., 2.52 mm.

Epigynum (pl. 52, fig. 3) sclerotized only at epigastric furrow, consisting of rectangular plate, depressed on each side, notched anteriorly in middle.

TYPE DATA: Male holotype, male, female, and one immature paratype from Bosque Relicto de Quintero, Valparaiso, Chile, about latitude 33° S., longitude 71° 30' W., May 11-12, 1961 (Donoso and Archer), in the American Museum of Natural History; one female paratype from Viña del Mar, about latitude 33° S., longitude 71° 30' W., March, 1962 (H. Morales), in the American Museum of Natural History.

ADDITIONAL RECORD: Chile: Valparaiso: Valparaiso, about latitude 33° S., longitude 71° 30' W., August 15, 1961 (Jorge Rothmam), male in the American Museum of Natural History. This male was not placed in the type series because of the distinct difference in the color pattern on the thorax. Two broad, almost black, stripes extend from behind the eyes to almost the posterior edge of the carapace. In other respects it is almost

identical to the type except for four or five tiny teeth on the retromargin of the chelicera and only five or six teeth on the paired claws of the fourth tarsus.

#### OLYBRIUS, NEW GENUS

DESCRIPTION: Length of females, 6.2 mm. to 6.7 mm. Eyes eight; posterior eye row straight; anterior eye row procurved. Chelicera geniculate; promargin with two or three teeth, retromargin with five or six equally separated teeth, first three from base largest. Labium almost as wide as long. Endites parallel, evenly rounded at tip. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 122. Spination: Tibia I, ventral 2-2-2-2-2, metatarsus I, ventral 2-2-2. Paired claws of fourth tarsus long, slender, with 13 teeth, third claw with four teeth. Palpal claw with six teeth. Six or seven trichobothria in single row present on fourth tarsus. Trochanters III and IV deeply notched (15/5), anterior more shallowly notched (20/4). Anterior spinnerets contiguous, stout, terminal segment short, hemispherical. Posterior spinnerets slender, hidden behind anterior, terminal segment as long as wide. Colulus wider than long, with few setae.

DISTRIBUTION: Southern Argentina, Chubut and Rio Negro.

TYPE SPECIES: *Cicurina madrynesis* Tullgren.

DIAGNOSIS: This genus differs from other cybaeids by the unusually long and slender tarsal claws (pl. 52, fig. 4) of the fourth tarsus, the presence of five pairs of ventral spines on tibia I, and notches on the third and fourth trochanters.

#### *Olybrius madrynesis* (Tullgren), new combination

Plate 52, figures 4, 5

*Cicurina madrynesis* TULLGREN, 1901, pp. 251-252, pl. 4 figs. 10a and 10b (epigyna).

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Pale yellow, with no markings: carapace and chelicera slightly darker, nearly orange.

Total length, 6.7 mm., carapace length, 3.1 mm., width, 2.2 mm., head width, 1.2 mm., eye-row width, 0.75 mm. Carapace smooth, lightly covered with short setae.

Ratio of eyes: AME/ALE/PME/PLE=7/-9/8/10. Separation ratio of eyes: AME-AME:-7; AME-ALE:3; AME-PME:6-7; ALE-PLE:5; PME-PME:12; PME-PLE:10. Posterior lateral eyes strongly ovate. Clypeus slightly wider than anterior lateral eye (12/9); with one upcurved seta below anterior median eyes; one seta at median lower edge of each anterior lateral eye converging distally. Eight setae irregularly spaced along edge of clypeus. Chelicera with many stout setae on front; fang serrated on basal half, shorter than chelicera (33/25).

Carapace/tibia-patella ratio, 122. Legs: Lengths of tibiae-patellae I and IV, 3.77 mm. and 4.15 mm. Spination: Femora I, dorsal 1(or 2)-2(or 4)-2, anterior spines smaller, prolateral 0-0-3; II, dorsal 3-3-3; III, dorsal 8-10 spines irregularly spaced; IV, dorsal 2-2-2(or 0)-3. Patellae I-IV, dorsal 0-1. Tibiae I, dorsal 1-0-0, ventral 2-2-2-2-2, prolateral 1-1-1, II, dorsal 1-0-0, ventral 2-2-2-1r-2, prolateral row of spines much smaller, prolateral 1-1-1; III, dorsal 1-1-1, ventral 1p-2-2, prolateral 1-1, retrolateral 1-1; IV, dorsal 0-1-1, ventral 2-0-2-2, prolateral 1-1, retrolateral 1-1. Metatarsi I, ventral 2-1(or 2)-2; II, ventral 2-2-3; III, dorsal 2-2-1, ventral 2-2-3, prolateral 1, retrolateral 1; IV, dorsal 2-2-2, ventral 2-2-2. Paired claws of fourth tarsus twice as long as diameter of tarsus, with four long setae at base on each side, extending to tip of claws. Paired claws of tarsus I with six setae at base.

Abdomen longer than wide, covered with short setae. Anal tubercle not divided.

Epigynum (pl. 52, fig. 5) divided into two parts, not connected in middle, small, wider than long; circular spermatheca large, two-thirds as wide as epigynal plate; openings apparently on anterior lateral border.

TYPE DATA: Female holotype from Puerto Madryn, Chubut, Argentina, about latitude 43° S., longitude 65° W., July 23, 1896, in the Swedish Museum of Natural History.

ADDITIONAL RECORD: Argentina: Rio Negro, Norquingo, about latitude 42° S., longitude 71° W., May 11, 1962 (Andor Kovács), in the American Museum of Natural History, female.

REMARKS: Several discrepancies will be noted between Tullgren's original description and the one given here. Tibia I has five pairs of ventral spines rather than four (the distal

spines are small). The promargin of the chelicera has two teeth on one side and three on the other (three on the promargin of the specimen from Norquingo and five on the retromargin). The clypeus is not twice the diameter of the anterior lateral eye. The overall length given by Tullgren includes the chelicera and spinnerets.

#### GENUS *PORTERIA* SIMON

*Porteria* SIMON, 1904, p. 109.

DESCRIPTION: Length, 4.4 mm. to 5.6 mm. Eyes eight; posterior eye row straight to slightly recurved; anterior eye row strongly procurved. Chelicera almost straight, slightly more than half as long as carapace (male), shorter in females; promargin with four or five small, separate teeth; retromargin with two widely separated teeth. Fang long, distinctly constricted in middle (pl. 52, fig. 8) in male, less so in female. Labium slightly wider than long. Endites long, slightly convergent. Sternum longer than wide, projecting between separated hind coxae, narrowly truncate.

Carapace/tibia-patella ratio, 151-160. Spination very sparse, spines small. Tibia I, ventral 0-0(or 2)-2; metatarsus I, ventral 1(2 or 0)-2-3. Paired claws of fourth tarsus with 11 teeth, third claw with two. Two trichobothria on fourth tarsus. Trochanter IV shallowly notched, others less so. Anterior spinnerets contiguous, short, very broad, terminal segment minute. Posterior spinnerets very slender, short, terminal segment about one-fourth as long as basal segment. Colulus linguiform, wider than long, rounded apically, with only few setae.

DISTRIBUTION: Southern tip of Chile.

TYPE SPECIES: *Porteria albopunctata* Simon.

DIAGNOSIS: *Porteria* can be separated from all cybaeinids by the presence of one or two pairs of ventral spines on tibia I and the presence of two teeth, and no denticles on the retromargin of the chelicera. This genus is similar to *Neoporteria*.

#### *Porteria albopunctata* Simon

Plate 52, figures 6-10

*Porteria albopunctata* SIMON, 1904, pp. 109-110, figs. 7 (side view of male palpus), 8 (tibia of male palpus).

DESCRIPTION: Based on a male from Puerto



Eden, Chile: Color in alcohol: Carapace and legs yellowish orange, darkened somewhat with diffused gray; two faint gray ventral markings on femora, tibiae, and metatarsi. Thorax edged in black, with three pairs of dark lines radiating out from thoracic furrow; reticulations extending from anterior edge of thoracic furrow to lateral eyes. Sternum dark gray, with broad light band extending back from labium, terminating in dull point past middle. Abdomen dark gray above, with two lateral white lines converging toward front; venter light gray.

Total length, 5.2 mm. Carapace length, 2.52 mm., width, 2.04 mm., head width, 1.02 mm., eye-row width, 0.75 mm. Posterior eye row recurved (4/6) to straight; anterior eye row procurved (7/6). Ratio of eyes: AME/ALE/PME/PLE=8/13/11/12. Separation ratio of eyes: AME-AME:5; AME-ALE:4; AME-PME:12; ALE-PLE:5; PME-PME:12; PME-PLE:12. Clypeus not so wide as anterior lateral eye (13/8), with two long, converging setae, four smaller setae between them. Chelicera slender, long compared with thorax (80/45), with distinct boss; fang long, slender, more than half as long as base of chelicera (48/26); promargin with four or five separated, small, equidistant teeth; retromargin with two widely separated teeth, one near base of fang, other at mesial corner. Labium slightly wider than long (11/9). Endites slightly convergent (11/3), longer than wide (20/14). Sternum longer than wide (14/13).

Carapace/tibia-patella ratio, 157. Lengths of tibiae-patellae I and IV, 3.95 mm. and 3.80 mm. Spination: Femora I, dorsal 1-1-2, prolateral 0-1-0; II, dorsal 1-1-1p(or 2)-2; III, dorsal 4 or 5 irregular; IV, dorsal 1-1-2. Patellae I-IV, dorsal 1-1. Tibiae I, ventral 0-0(or 1p)-2; II, ventral 0-1r-2, prolateral 0-0-1; III, ventral 0-0-2, prolateral 0-1-1, retrolateral 1-0-1; IV, ventral 0-1-2, prolateral 0-1-1, retrolateral 1-1-1. Metatarsi I, ventral 0(or 1)-2-3; II, ventral 2-2-3, prolateral 0-1-0; III, dorsal 1p-2-2, ventral 2-2-3; IV, dorsal 1r-1r-1p-1r-0-2, ventral 2-2-2 (irregularly placed). Paired claws of fourth tarsus with 11 teeth, third claw with two. Two trichobothria on fourth tarsus.

Abdomen longer than broad (26/19), covered with short and long setae. Colulus wider than long (8/6).

Male palpus slender (pl. 52, figs. 9, 10), cymbium produced to long tip, much longer than wide (55/15). Distal and inner edge of alveolus rimmed with fine hairs. Patella lacking apophysis. Tibia terminated ectally with four processes (pl. 52, fig. 7), longest as long as tibia. Embolus arising at base of bulb, curving anteriorly, resting on conductor. No median apophysis.

The male syntype, hereby designated lectotype, has coloration identical to that of the described male, and the structure is the same except for minor details in size and as indicated.

MALE LECTOTYPE: Total length, 5.6 mm. Carapace length, 2.8 mm., width, 2.2 mm., head width, 1.2 mm., eye-row width, 0.78 mm. Posterior eye row slightly recurved (4/6); anterior eye row strongly procurved (7/6). Carapace/tibia-patella ratio, 160. Lengths of tibiae-patellae I and IV, 4.5 mm., 4.0 mm. Tibia I, ventral 0-2-2.

FEMALE PARALECTOTYPE: Color similar to that of male, dusky markings darker.

Total length, 4.4 mm. Carapace length, 2.1 mm., width, 1.67 mm., head width, 1.02 mm., eye-row width, 0.68 mm. Posterior eye row straight; anterior eye row strongly procurved (8/6). Ratio of eyes: AME/ALE/PME/PLE=7/11/10/11. Separation ratio of eyes: AME-AME:2; AME-ALE:4; AME-PME:7; ALE-PLE:4; ALE-PME:11; PME-PME:8; PME-PLE:7. Chelicera slightly stouter than that of male. Promargin of chelicera with five teeth, third from base of fang smallest, fourth largest, all separated, equidistant.

Carapace/tibia-patella ratio, 151. Length of tibia-patella I (IV missing), 3.2 mm. Tibia I, ventral 0-2-2.

Epigynum (pl. 52, fig. 6) appears somewhat incompletely sclerotized, asymmetrical; membranous lip, slightly longer than wide, extending back from anterior rim; narrow sclerotized area in middle dilated slightly posteriorly at epigastric furrow.

TYPE DATA: Male lectotype and female lectoparatype from Punta Arenas, Magallanes, Chile, about latitude 53° S., longitude 71° W. (Dr. Delfin, B. Wilson), No. 22323 in the Muséum National d'Histoire Naturelle, Paris.

OTHER RECORDS: Chile: Magallanes: Wellington Island, Puerto Eden, latitude, 49°

08' S., longitude 74° 29' W., December 7-9, 1962 (P. J. Darlington), two males in the Museum of Comparative Zoology.

#### GENUS *RUBRIUS* SIMON

*Rubrius* SIMON, 1887, p. E14; 1898b, p. 245. BONNET, 1958 (1945-1959, vol. 2), p. 3879.

*Myntes* SIMON, 1887, p. E16.

*Pionaces* SIMON, 1904, p. 107. New synonymy.

DESCRIPTION: Length of females, 7.3 mm. to 15.0 mm., of males, 8.1 mm. to 9.5 mm. Eyes eight, posterior eye row slightly procurved to slightly recurved; anterior eye row straight to slightly procurved; anterior median eyes at least two-thirds of diameter of an anterior lateral eye. Chelicera strongly geniculate, with distinct boss; promargin with four to six teeth; retromargin with three to five teeth and/or two to 12 denticles. Labium as wide as long. Endites stout, longer than broad, truncate distally. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio (males), 113 to 116, (females), 90 to 111. Spination of tibia I, ventral 2-2-2(or 1 or 0); metatarsus I, ventral 2-2-3(or 2). Paired claws of fourth tarsus with seven to 10 teeth, third claw with two or three. Six to nine trichobothria on fourth tarsus. Trochanters not notched. Anterior spinnerets stout, contiguous, conical, terminated by second ring-shaped segment. Median spinnerets very small. Posterior spinnerets shorter than anterior, cylindrical, also with narrow, ring-shaped, second segment. Colulus linguiform, as long as wide or wider than long, with many setae on surface.

DISTRIBUTION: Southern half of Chile and Argentina.

TYPE SPECIES: *Cybaeus antarcticus* Karsch.

DIAGNOSIS: *Rubrius* can be separated from other genera of cybaeinids by the following series of features: presence of eight subequal eyes; straight to slightly procurved anterior eye row; spines on metatarsi I; absence of notched trochanters; short legs, tibia-patella being about as long as carapace; normal spines on legs; presence of three pairs of ventral spines on tibia I, occasionally two, apical pair missing [*R. castaneifrons* (Simon) and occasionally from *R. antarcticus* Karsch].

REMARKS: Three species assigned to *Rubrius* were not available for this revision:

*scottae* Mello-Leitão, *breviventris* (Nicolet), and *annulatus* F. O. Pickard-Cambridge. The first does not appear to belong to the genus and is not included in the generic description. The other valid species fall into two species groups: *ulula*, new species, and *lineatus*, new species, which are known only from females, with heavily sclerotized epigyna projecting over the epigastric furrow; and *antarcticus* (Karsch), *castaneifrons* (Simon), *major* (Simon), and *paganus* Simon the epigyna of which are wider than long, more lightly sclerotized, and the known males of which have an elongate "tubercle" attached to a membranous area on the tegulum.

Only the males of *R. antarcticus* (Karsch), *R. major* (Simon), and *R. paganus* Simon are known and included in the following key. The female of *R. breviventr*is (Nicolet) was not included.

#### KEY TO THE SPECIES OF *Rubrius* SIMON

1. Length, 7.0 to 15.0 mm. Promargin of chelicera with four to seven teeth; retromargin usually with more than three teeth or many denticles. Anterior median eyes only slightly smaller than anterior lateral eyes, in no case half of their diameter . . . . . 2  
Length, less than 5.0 mm. Promargin and retromargin of chelicera with three teeth. Anterior median eyes one-third of diameter of anterior lateral eyes. Distribution: Argentina: Rio Negro . . . *scottae* Mello-Leitão
2. Posterior eye row procurved to straight (try both parts of couplet when not distinct or specimen does not key out) . . . . . 4  
Posterior eye row slightly to moderately recurved . . . . . 3
3. Retromargin of chelicera with four tiny teeth, eight denticles. Anterior eye row slightly procurved. Epigynum heavily sclerotized, polished, oval, extending over epigastric furrow. Distribution: Chile: Osorno and Valdiva . . . . . *ululus*, new species  
Retromargin of chelicera with four or five teeth and one to four denticles. Anterior eye row straight. Epigynum lightly sclerotized, not oval, not extending over epigastric furrow. Male palpus with conductor; no median apophysis. Distribution: Chile: Osorno, Valparaíso, Llanquihue, and Malleco . . . . .  
. . . . . *paganus* Simon
4. Retromargin of chelicera with series of seven to 10 tiny teeth; promargin with four or five stout teeth . . . . . 5  
Retromargin of chelicera with three to five

- teeth and none to four denticles; promargin with six stout teeth . . . . . 6
5. Retromargin of chelicera with eight to 10 denticles, first two reaching tooth size. Epigynum lightly sclerotized, wider than long, not extending past epigastric furrow. Male palpus without conductor; with median apophysis. Distribution: Chile: Tierra del Fuego . . . . . *major* (Simon)
- Retromargin of chelicera with seven or eight small teeth. Epigynum heavily sclerotized, longer than wide, extending past epigastric furrow. Distribution: Chile: Osorno and Llanquihue . . . . . *lineatus*, new species
6. Promargin of chelicera with four or five teeth, retromargin with fewer than five. Length, less than 12 mm. . . . . 7
- Promargin and retromargin of chelicera with five teeth. Length, 15 mm. Distribution: Chile: Valdivia . . . . . *annulatus* F. O. Pickard-Cambridge
7. Retromargin of chelicera with three teeth, no denticles. Distribution: Tierra del Fuego . . . . . *castaneifrons* (Simon)
- Retromargin of chelicera with two to four teeth, two to four denticles. Male palpus with conductor, no median apophysis. Distribution: South of latitude 48° in South America and in Argentina: Chubut; Rio Negro and Buenos Aires . . . . . *antarcticus* (Karsch)

***Rubrius antarcticus* (Karsch)**

Plate 52, figures 11, 12

*Cybaeus antarcticus* KARSCH, 1880, p. 379, pl. 12, figs. 7a (male palpus), 7b (tibia of male palpus). PETRUNKEVITCH, 1911, p. 533. PORTER, 1920a, p. 52; 1920b, p. 23.

*Coelotes subfasciatus* SIMON, 1884, p. 123.

*Rubrius subfasciatus*: SIMON, 1887, p. E15, pl. 2, fig. 7 (dorsal view of female spider). TULLGREN, 1901, p. 250, pl. 5, fig. 7 (male palpus). MELLO-LEITÃO, 1944, p. 315.

*Rubrius antarcticus*: SIMON, 1895, p. 168; 1903b, pp. 2-7 (remarks on habitat and cocoons). BONNET, 1958 (1945-1959, vol. 2), p. 3881.

**DESCRIPTION:** From specimens from the type locality and Navarino Island, Chile. Color in alcohol: yellow to orange-brown, chelicerae usually much darker; endites, labium, and sternum moderately darker. Carapace usually mottled with dusky markings, especially on posterior portion of head and one each side of thorax. Three dusky rings on femora, with two faint dusky rings on tibiae and metatarsi, absent from some. Abdomen

dark gray on sides and above, with light gray markings in center along median line, light gray below. Spinnerets orange-brown.

Total length of three males, range, 8.1 mm. to 9.5 mm., average, 8.85 mm.; nine females, range, 7.3 mm. to 12.0 mm., average, 8.93 mm. The following measurements and descriptions are taken from a male from Navarino Island, Chile. Carapace length, 4.3 mm., width, 3.2 mm., head width, 1.8 mm., eye-row width, 1.1 mm. Carapace with few scattered setae, some in row from posterior median eyes to thoracic furrow. Posterior eye row straight to moderately procurved (4/6); anterior eye row straight to moderately procurved (4/6). Ratio of eyes (male): AME/ALE/PME/PLE=9/14/11/-14. Separation ratio of eyes: AME-AME:7; AME-ALE:7; AME-PME:16; ALE-PLE:9; PME-PME:14; PME-PLE:17; Ratio of eyes (female): AME/ALE/PME/PLE=8/-16/14/17. Separation ratio of eyes: AME-AME:10; AME-ALE:11; AME-PME:20; ALE-PLE:10; PME-PME:14; PME-PLE:-20. Clypeus not so wide as anterior lateral eye (14/11), male (16/15), female with one large upcurved seta below anterior median eyes, one converging seta under each anterior lateral eye, and two pairs of setae crossing near tip along clypeal border in middle. Chelicera with many stout setae on anterior face. Promargin of chelicera with four, in some cases five, teeth, one nearest base of fang widely separated from next two which are largest and contiguous; fourth tooth smaller, slightly separated; retromargin with one or two large teeth near base of fang, widely separated from next tooth (in some two contiguous teeth), followed by two to four contiguous denticles. Usually three teeth and three denticles, occasionally two or four teeth and two to four denticles. Fang short, with serrated edge more than two-thirds of fang tip. Labium as wide as long. Endites longer than wide (32/22), slightly convergent (17/12). Sternum longer than wide (70/51), pointed behind.

Carapace/tibia-patella ratio, 116 (male), 93 (female). Lengths of tibiae-patellae I and IV, 5.0 mm. and 4.8 mm. (male), 4.1 mm. and 4.1 mm. (female). Spination: Femora I, dorsal 1(or 2, retrolateral much smaller)-1 (or 2), prolateral 0-0-1; II, dorsal 2(retrolat-

eral much smaller)-3; III, dorsal 3-3; IV, dorsal 1p-2-1p-3 (irregularly placed). Patellae I-IV, dorsal 0-1. Tibiae I and II, dorsal 1-0-1-0, ventral 2-2-2, prolateral 1-1, retrolateral 1-1; III, dorsal 1-0-2-0, ventral 2-2-2, prolateral and retrolateral 1-1; IV, dorsal 1-1-2-0, ventral 2-2-2, prolateral and retrolateral 1-1. Metatarsi I, dorsal 2-1-2, ventral 2-2-3, prolateral 1-0-0; II, dorsal 3(middle a bristle)-2-2, ventral 2-2-3, prolateral 0-1-0-0, retrolateral 0-1-0-0; III, dorsal 3-2-2, ventral 2-2-3, prolateral 1-0-0, retrolateral 1-0-0; IV, dorsal 3-3-2, ventral 2-2-3, prolateral 1-0-0, retrolateral 1-0-0. Paired claws of fourth tarsus with eight to 10 teeth, third claw with two or three teeth. Six to eight trichobothria on fourth tarsus.

Abdomen covered with minute setae interspersed with long setae. Anterior spinnerets stout, contiguous, conical, terminated by second ring-shaped segment. Median spinnerets very small. Posterior spinnerets shorter than anterior, cylindrical, with narrow, ring-like terminal segment. Colulus linguiform, about as long as wide at base, covered with about 24 setae.

Male palpus (pl. 52, fig. 11): Cymbium short, blunt. Patella lacking apophysis. Tibia with two broad ectal apophyses, one distal, one smaller near base. Median apophysis of bulb threadlike, arising from conical base, embolus forming almost complete loop on distal end of bulb, terminating in groove on side of pointed conductor. Epigynum (pl. 52, fig. 12) consisting of two separated, transversely oval, sclerotized plates at edge of epigastric furrow; two spermathecae visible through integument anterior to sclerotized plates, connecting canals visible near median line; openings of epigynum widely separated, situated at lateral edge of disk.

TYPE DATA: Of *Cybaeus antarcticus* Karsch, Punta Arenas, Magallanes, Chile, about latitude 53° S., longitude 71° W., Venus Expedition of the "Gazelle" (Studer) in the "Berliner kgl. zoolog. Museum," male holotype. Of *Coelotes subfasciatus* Simon, Chile: Hermite Island, San Martin Bay, in the Muséum National d'Histoire Naturelle, Paris, female holotype.

DISTRIBUTION: Common south of latitude 48° S. in Chile and Argentina except for four records: two in Chubut, one in Rio Negro, and

one in Buenos Aires (Mello-Leitão, 1944, p. 315).

SELECTED RECORDS: *Chile*: Magallanes: Wellington Island, Puerto Eden, about latitude 49° S., longitude 74° 30' W., December 7-9, 1962 (P. J. Darlington), in the Museum of Comparative Zoology, two females; Tierra del Fuego, Navarino Island, Puerto Williams, about latitude 55° S., longitude 68° W., December, 1962, to January, 1963 (P. J. Darlington), in the Museum of Comparative Zoology, three males, seven females; Hoste Island, Hardy Peninsula, Orange Bay, about latitude 55° S., longitude 69° W., January 2-3, 1963 (P. J. Darlington), in the Museum of Comparative Zoology, six females. *Argentina*: Chubut: El Hoyo, September 3, 1961 (A. Kovács), in the American Museum of Natural History, one female; Rio Negro: Rio Azul, May, 1962 (Andor Kovács), in the American Museum of Natural History, male; Tierra del Fuego: La Patiaia, February 20-23, 1961 (Borys Malkin), in the American Museum of Natural History, one male, 14 females, five immature.

DIAGNOSIS: The male of *R. antarcticus* (Karsch) can be separated from *R. major* (Simon) by the presence of a conductor and from *R. paganus* Simon by the presence of four or five teeth on the promargin of the chelicera instead of six. The female can be separated from the other species by the shape of the epigynum (pl. 52, fig. 12).

REMARKS: A comparison of 10 females and five males to determine variation within the species showed differences in several important characters. The promargin of the chelicera had four teeth in most specimens, five in two females from north of the forty-eighth parallel, and one male with four teeth on one side and five on the other. The retromargin was more variable, normally three teeth and three or four denticles (twice two), in some four teeth (in one, two) totaling six or seven teeth and denticles (one with five). The posterior eye row varied from straight to recurved (4/6); the anterior eye row was straight to procurved (4/6) in the females and procurved (4/6 to 5-6/6) in the males. The ventral spination on tibia I was normally 2-2-2 in the males or 2-2-1(or 0) in the females, with one of the middle or distal spines often missing.

Mature female specimens occurred in all months of the year except April, June, and July. Males were present in October, December, February, March, and May collections but not in the November material when the largest collections were made. Immature specimens were present only in February and March.

**Rubrius annulatus** F. O. Pickard-Cambridge

Plate 52, figure 13

*Rubrius annulatus* F. O. PICKARD-CAMBRIDGE, 1898, pp. 20-21, pl. 2, fig. 10 (epigynum).

**CHARACTERS FROM ORIGINAL DESCRIPTION:** Length of female holotype, 15 mm. Posterior eye row slightly procurved; anterior eye row straight. Posterior eyes equal in size, median eyes slightly more than their diameter apart. Anterior median eyes slightly smaller than laterals, three-fourths of their diameter apart. Clypeus slightly narrower than anterior lateral eyes. Both margins of chelicera with five teeth. Femora with five or six spines above; tibiae with three pairs of ventral spines. Metatarsi with three or four pairs of ventral spines. Epigynum (pl. 52, fig. 13) with openings widely separated.

**TYPE DATA:** Female holotype from Corral, Valdiva, Chile, about latitude 40° S., longitude 74° W. Location of type unknown. It is not in the British Museum (Natural History), according to D. J. Clark (correspondence, 1963, 1965), or the University of Oxford collection, according to Ernst Taylor (correspondence, 1964).

**DIAGNOSIS:** This species differs from others of *Rubrius* by its larger size and by the presence of five teeth on both margins of the chelicera.

**Rubrius breviventris** (Nicolet)

*Clubiona breviventris* NICOLET, 1849, p. 438. SIMON, 1864, p. 132.

*Mynthes breviventris*: SIMON, 1887, pp. E4, E16.

*Rubrius breviventris*: PETRUNKEVITCH, 1911, p. 536.

The brief description given by Nicolet precludes identification of this species with any of the known species of *Rubrius*.

**TYPE DATA:** Female holotype from Llanquihue, Chile. Location of type unknown.

**Rubrius castaneifrons** (Simon)

Plate 52, figures 14, 15

*Coelotes castaneifrons* SIMON, 1884, pp. 124-125.

*Mynthes castaneifrons*: SIMON, 1887, p. E16, pl. 2, fig. 6 (dorsal view of female spider); 1898b, pp. 237, 245, 265, fig. 233 [tibia of male palpus, possibly not of *R. castaneifrons* (Simon)]. TULLGREN, 1901, p. 250.

*Rubrius castaneifrons*: SIMON, 1902, p. 36.

**DESCRIPTION:** Taken from a female from Lennox Cave (Lennox Island?), Tierra del Fuego, Chile. Color in alcohol: Orange-brown. Thorax dusky, with light border; light spot on each side of thoracic furrow. Chelicerae chestnut-brown. Legs ringed, femora with three rings, patellae with one, tibiae with two, metatarsi with two. Abdomen heavily mottled above and on sides with indistinct pattern; longitudinal black mark over heart at base followed by short light mark, flanked by four light blotches; three light colored chevrons, barely distinguishable posteriorly; venter pale.

Total length, 9.2 mm. Carapace length, 5.0 mm., width, 3.0 mm., head width, 1.9 mm., eye-row width, 1.4 mm. Carapace with few scattered setae, row from posterior median eyes to thoracic furrow. Eyes eight; anterior and posterior eye rows straight. Ratio of eyes: AME/ALE/PME/PLE = 5/6/6/7. Separation ratio of eyes: AME-AME:4; AME-ALE:5; AME-PME:5; ALE-PLE:4; PME-PME:7; PME-PLE:9. Clypeus as wide as anterior lateral eye, armed with one upcurved seta below anterior median eyes, 14 scattered setae across border. Chelicera strongly geniculate, with many short setae on anterior face; promargin with four or five teeth, first two teeth from base separated, third largest (if five teeth, third and fourth contiguous and largest), fourth tooth set closely against third; retromargin with three teeth, basal tooth halfway between fang articulation and other two closely situated teeth; fang much shorter than base of chelicera (65/25), serrated over two-thirds of tip. Labium as wide as long. Endites much wider distally than at base (37/25), slightly convergent (23/13). Sternum longer than broad (72/58), produced to point behind.

Carapace/tibia-patella ratio, 90. Lengths of tibiae-patellae I and IV, 4.5 mm. and 4.2 mm. Spinination: Femora I, dorsal 0-1(or 2)-0,

prolateral 0-0-1; II, dorsal 2-1p(or 0)-1r, prolateral 1; III, dorsal 2-2, prolateral 1p-1p(or 0)-1p; IV, dorsal, 1-1r. Patellae I-IV, dorsal 0-1. Tibiae I, ventral 2-2-0, prolateral 0-0-1 (or 0); II, ventral 2-2-0, prolateral 0-0-1; III, dorsal 1-1-0, ventral 2-2-0(or 1p), prolateral 0-0-1, retrolateral 0-0-1; IV, dorsal 1-1-0, ventral 1p-1p(or 2)-2, prolateral 0-0-1, retrolateral 0-0-1. Metatarsi I, ventral 2-2-2, prolateral 1-0-0, retrolateral 1-0-0; II, ventral 2-2-2, prolateral 1-0-1, retrolateral 1-0-0; III, ventral 2-2-3, prolateral 1-0-1, retrolateral 1-0-1; IV, ventral 2-2-3, prolateral 0-1-0, retrolateral 0-1-1. Paired claws of fourth tarsus with 10 teeth, third claw with three teeth. Palpal claw appears to have 10 teeth. Six trichobothria in a single row on fourth tarsus.

Abdomen longer than wide (43/32) covered with short and long setae. Anterior spinnerets contiguous, stout, terminated by short, ringlike segment. Posterior spinnerets slender, terminal segment wider ectally than mesially, mesial portion of segment almost non-existent. Colulus wider than long (15/12), covered with about 23 setae.

Epigynum (pl. 52, fig. 15) simple, with two circular disks sclerotized along posterior border; openings at anterior lateral edge of disks.

The darker of the two syntypes is hereby designated as the lectotype. It differs little from the above-described specimen. Markings on legs fainter. Total length, 10.6 mm. Carapace length, 5.3 mm., width, 3.5 mm., head width, 2.5 mm., eye-row width, 1.7 mm. Carapace/tibia-patella ratio, 94. Lengths of tibiae-patellae I and IV, 5.0 mm. and 4.9 mm. Spination: Tibia I, ventral 2-2-1p(or 0).

TYPE DATA: Female lectotype and female lectoparatype from Orange Bay, Hoste Island, Magallanes, Chile, about latitude 55° S., longitude 69° W., January 14, 1883, in the Muséum National d'Histoire Naturelle, Paris. They were collected at the south side of Orange Bay, at the base of sentry boxes, under the soil, with eggs.

OTHER RECORDS: *Chile*: Tierra del Fuego, Bahia Allen Gardiner, latitude 55° 24' S., longitude 68° 18' W. (Porter, 1920a, p. 54; 1920b, p. 25). The female from which the above description was taken was reported by Tullgren (1901, p. 250) from "Tierra del Fuego: Lennox Island (5/2/1896, O.N.)" The

female studied is labeled "Lennox Cave" but undoubtedly is the same. The collector was Otto Nordenskjöld. Lennox Island is near latitude 55° S., longitude 67° W. The specimen is in the Swedish Museum of Natural History.

DIAGNOSIS: This species differs from other species of *Rubrius* by the presence of only three teeth on the retromargin of the chelicera and by the shape of the epigynum.

REMARKS: The illustration of the tibia of the male palpus given by Simon (1898b, p. 237, fig. 233) appears to be identical with that of *R. paganus* Simon. Since Simon did not mention a male *R. castaneifrons* (Simon) in any of his writings, it is probable that the figure was mislabeled, or possible that the two species are very closely related.

*Rubrius lineatus*, new species

Plate 52, figure 16

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: All sclerotized parts orange-brown; labium and endites somewhat darker; chelicera chestnut-brown. Markings absent from carapace and legs except for two very faint rings on posterior tibiae. Abdomen mottled gray, with light streak over heart, flanked by two round light spots on each side; three indistinct chevrons occurring posterior to heart, first blending into longitudinal light streak over heart; venter light gray.

Total length, 8.7 mm. Carapace length, 4.5 mm., width, 3.2 mm., head width, 2.5 mm., eye-row width, 1.4 mm. Carapace smoothly polished, with few scattered setae; row of setae along midline between eyes and thoracic furrow. Eyes eight; anterior and posterior eye rows straight. Ratio of eyes: AME/ALE/PME/PLE=5/8/6.5/6.5. Separation ratio of eyes: AME-AME:4; AME-ALE:3; AME-PME:6.5; ALE-PLE:2.5; PME-PLE:8; PME-PME:6.5. Clypeus almost as wide as anterior lateral eye (8/7), armed with one upturned seta below anterior median eyes; few irregularly spaced setae along margin. Promargin of chelicera with six dark teeth (a tiny seventh tooth is present on one side near fang), basal three separated from one another, distal three contiguous at base increasing in size from base of fang; retromargin with seven or eight very small, pale teeth, basal tooth separated from other



six or seven which are contiguous along their whole length, appearing almost comblike.

Carapace/tibia-patella ratio, 111. Lengths of tibiae-patellae I and IV, 5.0 mm. and 4.7 mm. Spination: Femora I, prolateral 0-0-1; II, dorsal 0-1-0, prolateral 0-1-1; III, dorsal 1-0-0, prolateral 1-1-1, retrolateral 1-0-0; IV, dorsal 0-1-0, prolateral 0-0-1. Patellae I-IV, dorsal 0-1. Tibiae I and II, ventral 2-2-2; III, ventral 2-2-2, dorsal 1-0-0, prolateral 1-1, retrolateral 0-1-1; IV, ventral 1-1-2, dorsal 1-0-0, prolateral 0-1, retrolateral 1-1. Metatarsi I, ventral 2-2-3; II, ventral 2-2-3, prolateral 1-0-0; III, ventral 2-2-3, dorsal 0-1-0, prolateral 1-1-1, retrolateral 0-1-1; IV, dorsal 1-1-2, ventral 2-2-3, prolateral 0-1-0, retrolateral 0-1-0. Paired claws of fourth tarsus with seven or eight teeth, third claw with two or three. Fourth tarsus with seven to nine trichobothria, increasing in length distally.

Abdomen longer than broad (47/32). Anterior spinnerets stout, distal segment with narrow sclerotized ring. Posterior spinnerets slender, distal segment same as anterior. Colulus wider than long (17/14), rectangular, densely covered with setae.

Epigynum (pl. 52, fig. 16) longer than broad, consisting of heavily sclerotized plate projecting one-third of its length over epigastric furrow. Faint stabilizing pits at outer edge of sclerotized plate about one-third of distance from anterior end. Epigynal plate polished, somewhat raised, with longitudinal depression, bordered posteriorly along median line; transverse fold on anterior edge with opening to epigynum on each side.

TYPE DATA: Female holotype from 10 kilometers east of Puyehue, Osorno, Chile, about latitude 41° S., longitude 72° W., January 24, 1951 (Ross and Michelbacher), in the California Academy of Sciences. Llanquihue: Los Muermos, about latitude 42° S., longitude 74° W., forest, January 19, 1951 (Ross and Michelbacher), in the California Academy of Sciences, female paratype. This latter specimen differs slightly in details. It is slightly longer, 9.5 mm., and the chelicera has 10 teeth on the retromargin, the first two widely separated, the next close to the remaining seven which are contiguous at the base, six of which are contiguous for their whole length.

DIAGNOSIS: *Rubrius lineatus*, new species,

differs from other *Rubrius* species, in the female, by the rectangular, longer than wide epigynum which projects over the epigastric furrow. It is closely related to *R. ululus*, new species.

***Rubrius major* (Simon), new combination**

Plate 52, figures 17, 18

*Pionaces major* SIMON, 1904, p. 108, fig. 6 (male palpus).

DESCRIPTION OF MALE LECTOTYPE: Color in alcohol: Orange-brown; front of carapace and mouth parts darker; darker streak from posterior median eyes to thoracic furrow with radiating lines from thoracic furrow outlining head; three lateral lines emanating outward laterally from thoracic furrow; one median line extending to end of thorax. Femora with three ventral markings, other segments plain. Abdomen with large reticulated markings above and on sides, venter pale.

Total length, 8.1 mm. Carapace length, 5.3 mm., width, 3.5 mm., head width, 1.9 mm., eye-row width, 1.2 mm. Carapace with few scattered setae, especially along median line. Posterior eye row slightly procurved (4/6) to straight; anterior eye row straight. Ratio of eyes: AME/ALE/PME/PLE = 12/-19/17/20. Separation ratio of eyes: AME-AME:9; AME-ALE:8; AME-PME:17; ALE-PLE:5; PME-PME:14; PME-PLE:-17. Clypeus slightly wider than anterior lateral eye (20/19), with two upturned setae between anterior median eyes, one between eyes, one just below. Chelicera stout, promargin with six stout teeth, last tooth from fang smallest, first two teeth from base of fang separated, third tooth adjacent to last three which are contiguous at base; retromargin lacking teeth, with nine minute contiguous denticles, largest nearest base of fang. Labium as wide as long. Endites stout, wider than long (38/25), slightly convergent (20/13). Sternum longer than wide (70/55), pointed between hind coxae.

Carapace/tibia-patella ratio, 113. Lengths of tibiae-patellae I and IV, 6.0 mm. and 5.4 mm. Spination: Femora I, dorsal 0-2-2, prolateral 0-0-1, II, dorsal 0-3-2, prolateral 0-0-1; III, dorsal 0-3-1p-3; IV, dorsal 0-1-2. Patellae I-IV, dorsal 0-1br. Tibiae I, dorsal 2-2-0, ventral 2-2-2, prolateral 1-1-1, retrolateral

1-1-1; II, ventral 2-2-2, prolateral 1-1-1, retrolateral 1-1-1; III, dorsal 2-0-1-0, ventral 2-2-2, prolateral 1-1-1-0, retrolateral 0-1-1-0; IV, dorsal 1-0-1br-0, ventral 2-0-2, prolateral 0-1-0-1-0, retrolateral 1-1-0-1-1. Metatarsi I, ventral 2-2-3, prolateral 0-1-0-0, retrolateral 0-1-0-0; II, ventral 1-2-2, prolateral 1-1-0-1, retrolateral 0-1-0; III, dorsal 1p-3-2, ventral 2-2-3; IV, dorsal 2-2-3, ventral 2-2-3. Paired claws of fourth tarsus with seven or eight teeth, third claw with two. Eight or nine trichobothria on fourth tarsus.

Abdomen shrunken on type, longer than wide (40/23). Spinnerets and colulus like those of *R. antarcticus* Simon, fewer setae on tip of posterior spinnerets.

Palpus lacking patellar apophysis. Tibia with broad ectal apophysis at tip. Irregular short apophysis at base of attachment of cymbium. Cymbium short, stout, smooth along ventral border near attachment. Small, elongate, dull spine on tegulum surrounded by membranous area. Embolus arising mesially, forming half circle, terminating distally in broad, truncate, median apophysis. Conductor lacking.

Female teneral, partially collapsed. Total length, 11.5 mm. Promargin with six teeth, similar to those of male; retromargin with two small, separated teeth near base of fang, followed by three contiguous large denticles and five comblike, minute, contiguous denticles. Immature female with similar dentation except with seven minute denticles. Epigynum teneral, not fully developed, consisting of simple glabrous plate wider than long, outlined laterally, with openings hidden at anterior lateral corners.

TYPE DATA: Male lectotype and female and immature female paralectotypes from Punta Arenas, Magallanes, Chile, about latitude 71° S., longitude 53° W. (Delfin, B. Wilson), in the Muséum National d'Histoire Naturelle, Paris. The label in the vial of the type specimens reads "21799 Valdiva Pt. Arenas." Simon gave "Punta Arenas" as the type locality.

DIAGNOSIS: The male of *R. major* (Simon) differs from other known males by the presence of a median apophysis and the absence of a conductor. The epigynum of the female (pl. 52, fig. 18) differs in details from that of other females.

### *Rubrius paganus* Simon

Plate 52, figures 19, 20

*Rubrius paganus* SIMON, 1902, pp. 37-38; 1940a, p. 107. PORTER, 1920a, p. 55; 1920b, p. 25.

DESCRIPTION: Female from 10 kilometers east of Puyehue, Osorno, Chile. Color in alcohol: Carapace, legs, and sternum orange-brown; labium and endites light chestnut-brown; chelicera dark chestnut-brown. Carapace dusky, lighter band on border about as wide as diameter of tibiae; dark line extending from posterior median eyes to thoracic furrow; four indistinct dusky markings extending outward from furrow, dilating distally. Legs indistinctly ringed, three dusky markings on femora, one on patellae, two on tibiae, and two broad rings on metatarsi, almost meeting in middle. Abdomen dark gray, with dorsal, dirty white, indistinct pattern; sides reticulated, venter pale. Spinnerets unmarked.

Total length, 10.3 mm. Carapace length, 4.8 mm., width, 3.4 mm., head width, 2.2 mm., eye-row width, 1.5 mm. Carapace polished, with few scattered setae. Posterior eye row moderately recurved (5/6); anterior eye row straight. Ratio of eyes: AME/ALE/-PME/PLE=16/21/19/19. Separation ratio of eyes: AME-AME:12; AME-ALE:10; AME-PME:20; ALE-PLE:8; PME-PME:-16; PME-PLE:25. Clypeus not so wide as anterior lateral eye (21/14), with two up-curved setae (one seta much smaller than other) below anterior median eyes; four setae on clypeus near center. Chelicera strongly spined on anterior face; promargin with six stout teeth, first five increasing in size toward middle, sixth as small as first; retromargin with four distinct, separated, stout teeth, mesial tooth with minute tooth at base. Labium as wide as long. Endites slightly convergent (22/10), less than twice as long as wide (43/29). Sternum longer than wide (73/60).

Carapace/tibia-patella ratio, 104. Lengths of tibiae-patellae I and IV, 5.0 mm. and 4.6 mm. Spination: Femora I, dorsal 0-1-1, retrolateral 0-1-0; II, dorsal 0-2(or 3)-3; III, dorsal 0-3-3(or 4); IV, dorsal 0-2-3. Patellae I-IV, dorsal 1-1. Tibiae I and II, ventral 2-2-2, prolateral 1-0-1, retrolateral 0-1-0; III, ventral 2-2-2, prolateral 0-1-0, retrolateral 0-1-0; IV,

ventral 2-2-2, retrolateral 0-1-0. Metatarsi I and II, ventral 2-2-2, prolateral 1-0-1, retrolateral 0-1-0; III, ventral 2-2-3, prolateral 1-0-1, retrolateral 1-0-1; IV, ventral 2-2-3, prolateral 0-1-1, retrolateral 0-1-1. Paired claws of fourth tarsus with seven to eight teeth, third claw with three. Trichobothria on fourth tarsus seven.

Abdomen longer than broad (68/40). Anterior spinnerets stout, distal segment minute, with narrow sclerotized ring. Posterior spinnerets less stout, flattened somewhat dorsoventrally; distal segment wedge-shaped, at right angles to basal segment; sclerotized ring twice as wide as ring on anterior distal segment. Colulus trapezoidal, wider than long (16/10), with about 20 long setae.

Epigynum (pl. 52, fig. 20) broader than long (27/15), with distinct stabilizing pits at anterior lateral corners; posterior median portion of epigynal plate pale, remainder sclerotized, somewhat transparent; openings widely separated, with slightly divergent longitudinal ridges extending from epigastric furrow into openings.

A male designated as a lectotype is described below: Color like that of female, markings on legs slightly darker.

Total length, 9.2 mm. Carapace length, 5.6 mm., width, 4.1 mm., head width, 2.0 mm., eye-row width, 1.5 mm. Structure similar to that of female, differing as follows: Posterior eye row slightly recurved (4/6). Retromargin of chelicera with four teeth, two denticles, first two near base of fang separated, second two almost contiguous with two denticles at base. Retromargin of immature syntypes having four or five teeth, two to five denticles.

Carapace/tibia-patella ratio, 113. Lengths of tibiae-patellae I and IV, 6.3 mm. and 6.0 mm.

Palpus (pl. 52, fig. 19) without patellar apophysis. Tibia with short, acute spur on outer side directed forward and slightly dorsally. Large apophysis attached at base of spur by flexible attachment consisting of two parts, a longer-than-wide piece rounded distally, extending forward, a wider-than-long piece at base produced to two dull points, one opposite tip of spur, one at opposite end. Cymbium heavily sclerotized, angulate at base on outer side, stout, almost twice as

long as wide (60/33). Embolus long, slender, forming almost complete loop around bulb, resting in large membranous conductor. Tubercle present on tegulum, elongate, surrounded by membranous area.

TYPE DATA: Male lectotype, six female lectoparatypes, and two immature specimens from Valdiva, Chile, number 18228 in the Muséum National d'Histoire Naturelle, Paris. The type locality given by Simon was Chamil-chamil, Valdiva, Chile, about latitude 40° S., longitude 73° W., April 23, 1893 (Michaelsen).

OTHER RECORDS: Chile: Osorno: Ten kilometers east of Puyehue, about latitude 41° S., longitude 72° W., January 24, 1951 (Ross and Michelbacher), in the California Academy of Sciences, immature male and female; 20 kilometers east of Puyehue, January 26, 1951 (Ross and Michelbacher), in the California Academy of Sciences, immature male and female; 18 kilometers west of Parranque, valley forest, January 16, 1951 (Ross and Michelbacher), in the California Academy of Sciences, immature female. Llanquihue: Los Muermos, approximately latitude 42° S., longitude 72° W., January 19, 1961, forest (Ross and Michelbacher), in the California Academy of Sciences, immature female. Malleco: West Angol, Sierra Nahuelbuta, about latitude 37° S., longitude 72° W., 1200 meters, January 23, 1951 (Ross and Michelbacher), in the California Academy of Sciences, immature male and very immature specimen. Valparaíso: Los Perales, near Ouilpue, about latitude 33° S., longitude 71° W. (Porter, 1920a, p. 55; 1920b, p. 25; Simon, 1904, p. 107).

DIAGNOSIS: *Rubrius paganus* Simon differs from most other species of *Rubrius* by the presence of a recurved posterior eye row and the presence of four or five teeth and one to four denticles on the retromargin of the chelicera. *Rubrius ululus* also has a recurved posterior eye row, but the dentation differs.

REMARKS: The illustration of the tibia of the male palpus of "*Mynthes castaneifrons* Simon" (Simon, 1898b, p. 237, fig. 233) appears to be that of the male of *R. paganus* Simon. Simon made no mention of a male *R. castaneifrons* Simon in the literature except for this illustration. It is possible that the illustration is mislabeled.

**Rubrius scottae** Mello-Leitão

*Rubrius scottae* MELLO-LEITÃO, 1940, pp. 19-20.

CHARACTERS (FROM ORIGINAL DESCRIPTION): Length of female holotype, 4.2 mm. Anterior and posterior eye rows straight. Posterior eyes equal in size; median eyes separated slightly more than their diameter, somewhat more from laterals. Anterior median eyes one-third of diameter of anterior lateral eyes, separated from latter slightly more. Clypeus equal to diameter of anterior lateral eyes. Promargin of chelicera with three teeth, retromargin with three small teeth. Labium rounded, slightly longer than wide. Endites more than twice as long as wide; anterior border straight, outer angle projecting, scopulate. Sternum almost as wide as long, separating coxae IV.

Spinination: Tibiae I, ventral 2-2-2-0-0, stout spines on small elevations; II, spines much weaker; III, only setae present; IV, no spines. Metatarsus I, ventral 2-2-2-1p. Spinnerets equal, anterior stout. Epigynum very wide, with two separated circular openings.

TYPE DATA: Female holotype from Lago Mascaridi, Río Negro, Argentina, March 11, 1938 (Max Birabén), number 14.300 in the Museo de La Plata.

DIAGNOSIS: The presence of three teeth on both margins of the chelicera and the small anterior median eyes separate this species from all others in the genus *Rubrius*.

REMARKS: The small size of *R. scottae* Mello-Leitão and the much smaller anterior median eyes raise the possibility that it does not belong in *Rubrius*.

**Rubrius ululus**, new species

Plate 52, figure 21

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: All sclerotized parts orange-brown; chelicera chestnut-brown. No markings on carapace or legs. Abdomen grayish, with darker dorsal markings outlining light gray spots (0.5 mm. in diameter) on posterior part; mottled gray on sides; venter light gray. Spinnerets orange-brown.

Total length, 10.3 mm., paratypes, 9.4 mm. and 11.0 mm. Carapace length, 5.5 mm., width, 4.0 mm., head width, 2.8 mm., eye-row width, 1.6 mm. Carapace smoothly polished, with few scattered setae; row of

setae along midline between eyes and thoracic furrow. Posterior eye row slightly recurved (4/6), anterior eye row slightly procurved (4/6). Ratio of eyes: AME/ALE/PME/PLE=5/7/7/7. Separation ratio of eyes: AME-AME:3; AME-ALE:5; AME-PME:7; ALE-PLE:3; PME-PLE:9; PME-PME:7. Clypeus slightly wider than anterior lateral eye (9/7), armed with upturned seta below anterior median eyes; two setae under anterior lateral eyes converging at tip; six setae along center edge of clypeus. Chelicera with few long setae up to 1 mm. long on anterior face, converging distally. Fang much shorter than base of chelicera (83/48). Promargin with six dark, stout teeth, basal three separated from one another, distal three contiguous; teeth increasing in size from base of fang to fifth tooth, sixth smallest. Retromargin with 12 tiny teeth, basal three or four separated, stout, next four smaller, contiguous at base, distal three or four minute, contiguous throughout length, appearing almost comblike. Labium as wide as long. Endites slightly convergent (25/15), longer than broad (45/32). Sternum longer than broad (75/70), distinctly scalloped along edge.

Carapace/tibia-patella ratio, 105. Lengths of tibiae-patellae I and IV, 5.8 mm. and 5.7 mm. Spinination: Femora I, dorsal 0-2-0, unequal in size, prolateral 0-0-1; II, dorsal 0-3-2(or 3); III, dorsal 0-3-1-3; IV, dorsal 0-0-2. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1br-1br, ventral 2-2-2, prolateral 1br-0-1; II, ventral 2-1(or 2)-2, prolateral 0-1-1; III, dorsal 1-0-1, ventral 2-2-2, prolateral 1-1-1, retrolateral 1-1-1; IV, ventral 2-1-2, prolateral 1-1-1, retrolateral 0-1-1. Metatarsi I, ventral 2-2-3, prolateral 1-0-0; II, ventral 2(or 3)-2-3, prolateral 1-0-1; III, dorsal 2-2-2, ventral 2-2-3, prolateral 1; IV, dorsal 2-2-2, ventral 2-2-3, prolateral 0-1-0. Paired claws of fourth tarsus twice as long as diameter of tarsus, strongly curved, with seven to eight teeth, third claw with three or four. Fourth tarsi with nine trichobothria.

Abdomen longer than wide (50/38), covered with short setae, interspersed with setae twice as long. Anterior spinnerets stout, almost contiguous at base, distal segment minute, barely visible as narrow sclerotized ring. Posterior spinnerets shorter, more slender than anterior, almost contiguous,

distal segment similar to that of anterior spinneret. Colulus wider than long (27/12), slightly notched distally, with about 23 long setae.

Epigynum (pl. 52, fig. 21) heavily sclerotized, transversely oval, slightly projecting over epigastric furrow, appearing attached anteriorly, free behind and on sides. Thick rim extending around perimeter, with slightly raised median ridge bounded on each side by a longitudinal depression caused by fold in integument. Shallow stabilizing pits present near both anterolateral edges. Openings to spermatheca situated anteriorly in shallow depression on each side of median ridge.

TYPE DATA: Female holotype and paratype from 10 kilometers east of Puyehue, Osorno, Chile, about latitude 40° 30' S., longitude 72° 30' W., January 24, 1951 (Ross and Michelbacher), in the California Academy of Sciences. One female is tentatively included in this species but differs in having a pair of oval depressions on the face of the epigynum rather than longitudinal depressions. It was collected 30 kilometers south of Valdiva, Valdiva, Chile, about latitude 40° S., longitude 73° W., January 13, 1951 (Ross and Michelbacher), in the California Academy of Sciences.

DIAGNOSIS: *Rubrius ululus*, new species, differs from other species in the genus by the heavily sclerotized oval epigynum which extends over the epigastric furrow.

#### GENUS SYMPOSIA SIMON

*Symposia* SIMON, 1898a, p. 89; 1898b, p. 246.

DESCRIPTION: Length, 2.0 mm. to 2.7 mm. Eyes six, anterior median eyes lacking; posterior eye row moderately to strongly procurved, forming oval ring with anterior lateral eyes. Carapace smooth, thicker than in typical agelenids, almost half as high as long. Chelicerae of males straight, of females slightly geniculate. Boss inconspicuous, hidden under edge of carapace. Promargin of chelicera with three teeth; retromargin with four, one nearest base of fang isolated. Endites almost parallel, longer than wide, distinctly constricted in middle on males, less constricted on females. Sternum longer than wide, produced to broad dull point between hind coxae.

Carapace/tibia-patella ratio of females, 93 to 140, of males, 134 to 165. Spination: Tibia I, ventral 0-2-0 or 1-2-2 (*S. bifurca*, new species), metatarsus I, ventral 1(or 2)-2-3. Palpal claw of female minute, straight, without teeth. Paired claws of fourth tarsus curved or straight, with five to eight teeth, third claw with two or three. Two to three trichobothria on tarsus of fourth leg. Trochanter IV of male slightly notched. Anterior spinnerets contiguous, stout, cylindrical, with convex distal segment. Posterior spinnerets hidden behind anterior, more slender, shorter, distal segment minute. Anal tubercle appearing two-segmented. Colulus linguiform, longer than wide.

DISTRIBUTION: Venezuela.

TYPE SPECIES: *Symposia silvicola* Simon.

DIAGNOSIS: The presence of six eyes separates *Symposia* from all other South American agelenids.

REMARKS: This genus consists of cryptic spiders restricted to the cloud forests of Venezuela. Simon (1898a, p. 89), who collected and studied two of the species, indicated that the spiders live in humid detritus. One specimen was collected among epiphytes. Three of the species were collected by A. M. Nadler by beating shrubs and trees, according to W. J. Gertsch.

The loss of the anterior median eyes has also occurred in other agelenid genera. Among them, *Yorima* and *Blabomma* (some species lack the anterior median eyes) occur in similar cryptic situations in the mountains and canyons of Washington, Oregon, and California.

There are many sympatric species in the genus *Blabomma*, as many as five species occurring in one square yard of duff. From the evidence at hand it appears that *Symposia* may be similar. Three species were collected at Choroni and two at Colonia Tovar. It is likely that there will be many other species added to this genus in the future. The females from the above two localities cannot be associated positively with the males, at least not with the few specimens on hand. For this reason, Simon's association of sexes in *S. silvicola* Simon is followed. The male and female described as *S. sexoculata*, new species, are similar to *S. silvicola* Simon, a fact that lends support to this association.

KEY TO THE SPECIES OF *Symphysa* SIMON

1. Females (*S. umbrosa* Simon not included) . . . 2  
Males . . . . . 5
2. Carapace/tibia-patella ratio, 90 to 120 . . . 3  
Carapace/tibia-patella ratio, 130 to 140 . . . 4
3. Epigynum with lip twice as long as broad, projecting past epigastric furrow . . . . .  
Epigynum lacking projecting lip . . . . . *silvicola* Simon
4. Epigynum lacking lip . . . *bifurca*, new species  
Epigynum with lip, two times as broad as long, projecting to epigastric furrow . . . . .  
Epigynum with lip, two times as broad as long, projecting to epigastric furrow . . . . . *dubiosa*, new species  
Epigynum with lip, two times as broad as long, projecting to epigastric furrow . . . . . *sexoculata*, new species
5. Tibia of palpus with two ectal apophyses. Base of cymbium lacking process and teeth . . . 6  
Tibia of palpus with one ectal apophysis. Basal process of cymbium studded with short black teeth . . . . . 7
6. Tip of embolus bifid . . . *bifurca*, new species  
Tip of embolus simple . . . . . *umbrosa* Simon
7. Basal process of cymbium studded with 12 short black teeth on tip. Tip of embolus pointed . . . . . *silvicola* Simon  
Basal process of cymbium studded with eight short black teeth on side near tip. Tip of embolus truncate . . . *sexoculata*, new species

*Symphysa silvicola* Simon

Plate 53, figures 1-4

*Symphysa silvicola* SIMON, 1898a, p. 90; 1898b, p. 243.

DESCRIPTION OF MALE: Selected from syntypes and hereby designated as lectotype. Color in alcohol: Yellow-orange, with carapace and mouth parts slightly darker. Chelicera with inverted U on upper half. Carapace not rimmed with black; broad dusky stripe extending length, widest behind eyes, narrowing to posterior edge of thorax; no pale stripe between eyes and thoracic furrow. Sternum without markings. Legs ringed, markings lighter above; femora with one ring in middle, one distal; patellae with one ring; tibia IV with two rings; tibiae I-III and all metatarsi without markings. Abdomen with light gray markings above and on upper part of sides, white below; dark gray stripe above heart, and two irregular white areas, followed by dark gray markings extending irregularly to, and including, anal tubercle. Spinnerets white.

Total length, 2.48 mm. Carapace length, 1.09 mm., width, 0.88 mm., head width, 0.54

mm., eye-row width, 0.37 mm. Posterior eye row strongly procurved (6/6). Ratio of eyes: ALE/PME/PLE = 8/6.5/7. Separation ratio of eyes: ALE-ALE:8; ALE-PME:7; ALE-PLE:1; PLE-PME:4; PME-PME:3. Clypeus half as wide as anterior lateral eye (8/4), armed with one upturned seta between anterior eyes. Fang shorter than chelicera (40/23). Two-thirds of fang tip covered with fine serrations. Endites slightly constricted at base, longer than wide (25/15), slightly convergent (14/6).

Carapace/tibia-patella ratio, 165. Lengths of tibiae-patellae I and IV, 1.80 mm. and 1.46 mm. Spination: Femora I, dorsal 0-1-2, prolateral 0-1-1; II-IV, dorsal 0-1-3. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1-0-1, ventral 0-2-0, prolateral 0-1-1, retrolateral 0-1-1; II, dorsal 1-0-1, ventral 0-2-0, prolateral 0-1-1, retrolateral 0-1-1; III, dorsal 1r-0-1-0, ventral 0-1p-2, prolateral 0-1-1, retrolateral 0-1-1; IV, dorsal 1r-0-1, ventral 0-1p-2, prolateral 0-1-1, retrolateral 0-1-1. Metatarsi I-III, dorsal 2-2-2, ventral 2-2-3; IV, dorsal 2-2-2, ventral 1p-2-3. Paired claws of fourth tarsus curved, with seven or eight teeth, third claw with two or three. Fourth tarsus with two trichobothria.

Abdomen longer than wide (40/24). Colulus quadrate, longer than wide (6/5), somewhat rounded distally, covered with setae.

Palpus slender (pl. 53, fig. 1), patella unmodified. Tibia with truncate ectal-distal apophysis deeply grooved ventrally, notched for reception of ventral, acute apophysis of cymbium. Cymbium elongate, tip tapering into long point, as long as bulb; produced basally, with about 12 stubby black teeth on tip. Bulb simple, with stout embolus, pointed at tip (pl. 53, fig. 3), curving across anterior part, terminating in transparent conductor. Row of long setae lining mesial edge of alveolus.

FEMALE: Color in alcohol similar to that of male, ground color lighter, markings more distinct, especially on carapace and legs. Inverted U on upper part of chelicera. Broad stripe of carapace reticulated, extending to posterior edge of thoracic furrow; two elongate white areas on sides of stripe at widest part. Sternum with small, irregular, gray markings opposite coxae I-III. Legs with incomplete rings, two on femora, one on



patella, three on tibia I and II, two on tibia III and IV, one in middle on metatarsi and one distal, very faint. Abdomen similar to male but ventral markings near spinnerets at base. Spinnerets white.

Structure similar but stouter than that of male. Total length, 2.48 mm. Carapace length, 1.02 mm., width, 0.78 mm., head width, 0.54 mm., eye-row width, 0.37 mm. Ratio of eyes: ALE/PME/PLE=8/6/7. Separation ratio of eyes: ALE-ALE:11; ALE-PME:7; ALE-PLE:1; PLE-PME:4; PME-PME:5. Clypeus not as wide as anterior lateral eye (8/5), with one upcurved seta and one convergent seta under each anterior lateral eye. Fang shorter than chelicera (45/23).

Carapace/tibia-patella ratio, 117. Lengths of tibiae-patellae I and IV, 1.19 mm., 0.92 mm. Abdomen with scattered short setae. Epigynum wider than long, with lip longer than wide, projecting beyond epigastric furrow as illustrated in plate 53, figure 4; openings widely separated.

TYPE DATA: Male lectotype, two female, two male, and one immature male paralectotypes from "Colonia Tovar!, San Esteban!, 14574," Venezuela. The syntypes are labeled with both localities, and Simon included both with the original description. During the period the types were collected Simon (1889, pp. 170-171) lived at "*colonie Tovar, à environ 70 kilomètres à l'ouest de Caracas dans les montagnes, entre La Victoria et la côte,*" between January 21 and February 9, 1888, and at "*San Esteban (à deux heures du Puerto Cabello),*" between February 29 and March 27, 1888. San Esteban is at latitude 10° 26' N., longitude 68° 01' W. The syntypes are in the Muséum National d'Histoire Naturelle, Paris.

DIAGNOSIS: *Symposia silvicola* Simon is very closely related to *S. sexoculata* but differs mainly by the shape of the genitalia. The epigynum of *S. silvicola* Simon has a longer tip, which extends beyond the epigastric furrow, and the male embolus is acute at the tip rather than truncate. The base of the cymbium is studded with teeth at the tip rather than on the side.

REMARKS: Simon (1898a, p. 88) described the type species as having only two teeth on the retromargin, "*leur marge inférieure, très*

*longuement oblique, est armée, dans l'espèce type, de deux petites dents aiguës.*" However, the syntypes contained no specimen with only two teeth! It is possible that the collection studied for this review contained only part of the syntype series. The original description indicated that the length of the male and female was 3.0 mm., whereas the lengths are: male, 2.48 mm., 2.7 mm., and 2.2 mm.; females, 2.48 mm. and 2.4 mm.

One male from Choroni, Venezuela, March 9, 1959 (A. M. Nadler), in the American Museum of Natural History is tentatively identified as *S. silvicola* Simon, but the embolus appears to be broken off at the tip.

#### *Symposia sexoculata*, new species

Plate 53, figures 5-7

DESCRIPTION OF MALE HOLOTYPE: Color in alcohol: Yellow-orange, with carapace and mouth parts slightly darker. Chelicera with gray longitudinal streak at base. Carapace rimmed with narrow black line; broad dusky band extending length, widest behind eyes, narrowing to posterior edge of thorax; two black lines as long as thoracic furrow diverging forward from anterior part of thoracic furrow. Sternum with faint dusky spots opposite first three pairs of coxae. Legs incompletely ringed with broad dusky markings; femora with one in middle, one distally; patellae marked below; tibiae and metatarsi with none. Abdomen with light gray markings above and upper part of sides, white below; black stripe above heart, dividing posteriorly to encircle two white areas, extending irregularly to anal tubercle. Posterior spinnerets slightly gray, anterior white.

Total length, 2.5 mm. Carapace length, 1.22 mm., width, 0.95 mm., head width, 0.58 mm., eye-row width, 0.37 mm. Posterior eye row strongly procurved (6/6). Ratio of eyes: ALE/PME/PLE=9/7/8. Separation ratio of eyes: ALE-ALE:8; ALE-PME:7; ALE-PLE:1; PLE-PME:4; PME-PME:4. Clypeus slightly more than half as wide as anterior lateral eye (9/5), with one converging seta below each anterior eye. Fang shorter than chelicera (18/10); three-quarters of tip covered with fine serrations. Endites slightly constricted at base, longer than wide (30/17), slightly convergent (15/7).

Carapace/tibia-patella ratio, 164. Lengths of tibiae-patellae I and IV, 2.0 mm. and 1.7 mm. Spination: Femora I, dorsal 0-1-2, prolateral 0-0-1; II-IV, dorsal 0-1-3. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1-0-1, ventral 0-2-0, prolateral 1-1-1, retrolateral 0-1-1; II, dorsal 1-0-1, ventral 0-2-0, prolateral 0-1-1, retrolateral 0-1-1; III, dorsal 1-0-1-0, ventral 0-2-2, prolateral 0-1-1, retrolateral 0-1-1; IV, dorsal 1-0-1, ventral 0-1p-2, prolateral 0-1-1, retrolateral 0-1-1. Metatarsi I-III, dorsal 2-2-2, ventral 2-2-3; IV, dorsal 2-2-2, ventral 1p-2-3. Paired claws of fourth tarsus curved, with five to seven teeth, third claw with two to three. Fourth tarsus with two or three trichobothria.

Abdomen longer than wide (40/28). Colulus longer than wide (7/5), with 12 long setae.

Palpus (pl. 53, figs. 5, 6) slender, patella unmodified. Tibia with dull ectal-distal apophysis deeply grooved ventrally, notched for reception of ventral apophysis of cymbium. Cymbium elongate, tip produced into long point, as long as bulb, base produced to broad point at base, with eight stubby black teeth on outer side at tip; row of long setae lining mesial edge of alveolus. Ventral apophysis of cymbium acute, anterior of base, directed toward groove of tibial apophysis. Bulb simple, with stout embolus, truncate at tip, curving across anterior part, terminating in transparent conductor.

FEMALE: Color in alcohol lighter than that of male, but markings more distinct, especially on sternum and legs, less distinct on abdomen. Gray oval mark at base of chelicera. Abdomen grayer on sides. Posterior spinnerets white.

Structure similar to but stouter than that of male. Total length, 2.2 mm. Carapace length, 1.19 mm., width, 0.92 mm., head width, 0.61 mm., eye-row width, 0.37 mm. Ratio of eyes: ALE/PME/PLE=7/5/6. Separation ratio of eyes: ALE-ALE:11; ALE-PME:7; ALE-PLE:1; PLE-PME:4; PME-PME:4. Clypeus almost as wide as anterior lateral eye (7/5), with one upcurved seta, one convergent seta under each anterior lateral eye. Fang shorter than chelicera (20/9).

Carapace/tibia-patella ratio, 140. Length of tibia-patella I, 1.67 mm. (IV missing from type). Abdomen with scattered long

setae, one-fifth to one-quarter of length of abdomen. Epigynum wider than long, with lip projecting to epigastric furrow, as illustrated in plate 53, figure 7; openings widely separated.

TYPE DATA: Male holotype and female paratype from Choroní, Venezuela, latitude 10° 29' N., longitude 67° 37' W., March 9, 1959 (A. M. Nadler), in the American Museum of Natural History.

DIAGNOSIS: *Symphysia sexoculata*, new species, is very closely related to *S. silvicola* Simon but differs mainly by the shape of the genitalia. The epigynum of *S. sexoculata* has a shorter lip, which extends only to the epigastric furrow; the male embolus is truncate at the tip rather than being acute, and the basal projection of the cymbium is studded with teeth on the side rather than on the tip.

#### *Symphysia umbrosa* Simon

Plate 53, figure 8

*Symphysia umbrosa* SIMON, 1898a, p. 90; 1898b, p. 239, figs. 237 (eyes), 238 (chelicera), 239 (male palpus), p. 243.

CHARACTERS (BASED ON ORIGINAL DESCRIPTION): Length of male and female co-types, 3.0 mm. Retromargin of chelicera with three small, almost contiguous teeth and fourth tooth nearer base of fang. Female genitalia: "*plaga genitali feminae rufula, fovea simplici, anguste transversa, fere sulciformi et marginata notata.*" The male palpus was redescribed and illustrated in a later paper (Simon, 1898b, p. 239, fig. 239) in which Simon noted that the cymbium was truncate at the base, and "*le bulbe, bien séparé de la base du tarse et dépassant peu son milieu, est l'un des plus simples qui ait été observé parmi les Agelenides, il est ovale assez convexe, tronqué et un peu découpé à l'extrémité où il est entouré d'un stylus exserte.*"

TYPE DATA: Male and female syntypes from Colonia Tovar, Aragua, Venezuela, latitude 10° 30' N., longitude 67° 15' W. The types are not in the Muséum National d'Histoire Naturelle in Paris, according to J. F. Jezequel (correspondence, 1964).

DIAGNOSIS: Simon's description of the female epigynum indicates that *S. umbrosa* Simon is similar to *S. bifurca*, new species, and *S. dubiosa*, new species, but Simon did

not provide sufficient detail to separate the species. The male is similar to *S. bifurca* but lacks the bifid embolus. It differs from *S. silvicola* Simon in lacking teeth on the base of the cymbium.

*Symposia bifurca*, new species

Plate 53, figures 9, 10

**DESCRIPTION OF MALE HOLOTYPE:** Color in alcohol: Carapace and sternum orange-brown, legs and mouth parts lighter. Chelicera slightly dusky at base. Thorax rimmed laterally with dark gray line about as wide as posterior lateral eye; dark reticulated bands extending from posterior lateral eyes, bulging outward, narrowing at thoracic furrow; area enclosed by reticulated bands slightly lighter, free of dusky markings. Legs faintly ringed, darkest below; three rings present on femora, one on patellae, two on tibiae. Sternum dusky, with light streak in center, half as wide as sternum. Abdomen mottled dark gray above and below; gray streak over heart, lighter gray spots on each side, followed by four lighter chevrons posteriorly. Spinnerets with dusky markings.

Total length, 2.0 mm. Carapace length, 1.02 mm., width, 0.78 mm., head width, 0.58 mm., eye-row width, 0.34 mm. Carapace smooth, only few setae on head. Posterior eye row moderately procurved (5/6). Ratio of eyes: ALE/PME/PLE=8/7/7. Separation ratio of eyes: ALE-ALE:5; ALE-PME:-5; ALE-PLE:1; PLE-PME:3; PME-PME:-4. Clypeus narrow, almost one-third as wide as anterior lateral eye; one upturned seta between anterior eyes, one converging seta below each anterior eye. Chelicera more than half as long as carapace (30/19); fang slightly longer than base of chelicera (19/10). Endites almost parallel (14/10), twice as long as wide (30/14). Sternum longer than broad (18/15), produced between hind coxae as broad point, one-fifth as wide as sternum.

Carapace/tibiae-patella ratio, 133. Legs: Lengths of tibiae-patellae I and IV, 1.36 mm. and 1.12 mm. Spination: Femora I-IV, dorsal 0-1-2, prolateral 0-0-1. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1-0-1, ventral 1r-2-2, prolateral 1-1-1, retrolateral 0-1-1; II, dorsal 1-0-1, ventral 1r-2-2, prolateral 0-1-1, retrolateral 0-1-1; III, dorsal 1-0-1-0, ventral 0-1p (or 2)-2, prolateral 0-1-1, retrolateral 0-1-1;

IV, dorsal 1-0-1, ventral 0-1p-2, prolateral 0-1-1, retrolateral 0-1-1. Metatarsi I, dorsal 0-2-2, ventral 1p-2-3; II, dorsal 0-2-2, ventral 1r-2-3; III, dorsal 0-2-3, ventral 2-2-3; IV, dorsal 1r-2-3, ventral 1p-2-3. Fourth pair of tarsal claws curved, with seven or eight teeth, third claw with two or three. Two or three trichobothria on fourth tarsus.

Abdomen longer than wide (29/20), covered with short curved setae.

Palpus (pl. 53, fig. 9) slender. Patella unmodified. Tibia with two ectal apophyses; dorsal longest, swollen near base, acuminate, projecting distally beyond end of tibia with carina at base; ventral apophysis shorter, swollen in middle, tapering to dull tip, directed obliquely toward base of cymbium, appearing obliquely truncate when viewed from side. Tip of cymbium slender, almost as long as alveolus (33/29). Bulb simple, embolic structure arising mesially near base and center of bulb, projecting beyond end of bulb by one-quarter to one-fifth of length of bulb. Embolic structure bifid at tip, consisting of embolus and conductor combined, together with clear membrane.

**FEMALE:** Color like that of male, except markings on legs fainter. Sternum darker, with only light narrow streak extending posteriorly about two-thirds of its length. Abdomen darker above and below, area anterior of epigastric furrow mottled.

Total length, 1.8 mm. Carapace length, 0.88 mm., width, 0.64 mm., head width, 0.44 mm., eye-row width, 0.27 mm. Structure like that of male except as indicated. Sternum slightly narrower (15/11).

Carapace/tibia-patella ratio, 93. Lengths of tibiae-patellae I and IV, 0.82 mm. and 0.71 mm. Spination: Femora I, dorsal 0-1-0, prolateral 0-0-1; II, dorsal 0-1-0; III and IV, dorsal 0. Other spines the same.

Epigynum consisting of transverse glabrous area at epigastric furrow, with distinct sinuate anterior rim; spermathecae large, visible through integument anterior of rim.

**TYPE DATA:** Male holotype and female paratype from Rancho Grande, Aragua, Venezuela, latitude 10° 22' N., longitude 67° 41' W., December 20, 1954 (A. M. Nadler), in the American Museum of Natural History.

**ADDITIONAL RECORD:** Venezuela: Aragua: Rancho Grande National Park, 10,000

meters, 1960, "epiphytes in cloud forest" (J. Ojasti), in the Museum of Comparative Zoology, female paratype.

**DIAGNOSIS:** The male differs from that of *S. silvicola* Simon in lacking teeth at the base of the cymbium and from that of *S. umbrosa* Simon by the bifid rather than simple embolus. The female differs from other *Symposia* females by the shorter length of the tibia-patella I, which is only about as long as the carapace, and by the shape of the the epigynum, as is illustrated by plate 53, figure 10.

**REMARKS:** *Symposia umbrosa* Simon is very similar to *S. bifurca*, new species, and there is a possibility that they are identical. The illustration given by Simon (1898b, p. 239, fig. 239) of the male palpus, if accurate, would mean that the species are distinct. However, the palpus may have been drawn from an angle which makes the embolus appear simple. Only the discovery of the type of *S. umbrosa* Simon can provide the answer.

***Symposia dubiosa*, new species**

Plate 53, figure 11

**DESCRIPTION OF FEMALE HOLOTYPE:** Color in alcohol: Yellow-orange, with carapace and mouth parts slightly darker. Chelicera with two oval black marks, open below, on upper fourth of chelicera. Carapace rimmed with narrow black line; broad dusky band extending length, widest halfway between eyes and thoracic furrow; two black lines diverging outward from anterior part of thoracic furrow enclosing dusky band; narrow pale stripe between eyes extending halfway to thoracic furrow. Sternum with short dark marks opposite posterior edge of coxae I, II, and III. Legs incompletely ringed with dusky markings; femora with one in middle, one distal; patellae marked below; tibiae with three, faint above, at base, middle, and tip; metatarsi with two, one at middle, one distal, faint above. Abdomen white, with gray markings; black stripe above heart, flanked by two elongate white areas, terminating near spinnerets; light gray markings on venter flanked by two white areas. Spinnerets white.

Total length, 2.2 mm. Carapace length, 1.02 mm., width, 0.82 mm., head width, 0.51 mm., eye-row width, 0.38 mm. Carapace smooth, few scattered setae on head. Pos-

terior eye row moderately procurved (5/6). Ratio of eyes: ALE/PME/PLE=8/6/7. Separation ratio of eyes: ALE-ALE:8; ALE-PME:6; ALE-PLE:0; PLE-PME:4; PME-PME:4. Clypeus less than half as wide as anterior lateral eye (8/3), with one seta below each anterior eye. Fang shorter than chelicera (37/23). Endites longer than wide (28/17).

Carapace/tibia-patella ratio, 136. Lengths of tibiae-patellae I and IV, 1.39 mm. and 0.92 mm. Spination: Femora I, dorsal 0-1-2, II-IV, dorsal 0-1-3. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1-0-1, ventral 0-2-0, prolateral 1-1-1, retrolateral 0-1-1; II, dorsal 1-0-1-0, ventral 0-1r(or 2)-0, prolateral 0-1-1, retrolateral 0-1-1; III, dorsal 1-0-1-0, ventral 0-0-1r, prolateral 1-1, retrolateral 0-1-1; IV, dorsal 1-0-1-0, ventral 0-0-2, prolateral 0-1-1, retrolateral 0-1-1. Metatarsi I, ventral 2-2-1, dorsal 0-2-2; II-IV, dorsal 2-2-2, ventral 0-2-3. Paired claws of fourth tarsus almost straight, with five or six teeth, third claw straight, with three. Fourth tarsus with two or three trichobothria.

Abdomen longer than wide (37/30). Colulus longer than wide, rounded at tip, with long setae.

Epigynum (pl. 53, fig. 11) transversely ovate, with darkened rim in middle connecting large lateral spermathecae; openings obscured, widely separated.

**TYPE DATA:** Female holotype from Choroní, Venezuela, latitude 10° 29' N., longitude 67° 37' W., March 9, 1959 (A. M. Nadler), in the American Museum of Natural History.

**DIAGNOSIS:** This species differs from *S. sexoculata*, new species, and *S. silvicola* Simon by the absence of a lip on the epigynum and from *S. bifurca*, new species, by the longer legs, the carapace/tibia-patella ratio being 136 rather than 93.

**GENUS *THAIDA* KARSCH**

*Thaida* KARSCH, 1880, p. 389.

**CHARACTERS (BASED ON ORIGINAL DESCRIPTION):** Length, 8.5 to 9.5 mm. Eight eyes, anterior and posterior eye rows procurved. Clypeus sinuate, wide, two to three times as wide as anterior lateral eye (as shown in Karsch's illustration of the eyes). Labium as long as wide. Carapace/tibia-

patella ratio, 223. Legs and palpi slender, with short black spines. Spinnerets short, equally long.

DISTRIBUTION: "America," probably South America (see remarks under the species).

TYPE SPECIES: *Thaida peculiaris* Karsch.

DIAGNOSIS: *Thaida* differs from other agelenids by the procurvature of both eye rows and the extremely long legs. The first pair of legs of the male are almost six and one-half times as long as the carapace, and half again as long as those of any other South American agelenid.

***Thaida peculiaris* Karsch**

Plate 53, figure 12

*Thaida peculiaris* KARSCH, 1880, p. 389, pl. 12, figs. 14 (male palpus), 14a (eyes and clypeus).

TYPE DATA: Location of type and type locality unknown. According to Dr. W. Crome, the male and female cotypes are not in the Zoologisches Museum der Humboldt Universität, Berlin, and probably were lost during the war.

REMARKS: Karsch gave no locality for *T. peculiaris* but indicated in the title that it was an "American" spider. Other spiders described in the paper are from Peru (one species), Costa Rica (two species), and Chile (two species). No collector's name is given.

Wherever *Thaida* is mentioned in the literature, the author either omitted the type locality or guessed at it. O. Pickard-Cambridge (1880, p. 10) and Bonnet [1959 (1945-1959, vol. 2), p. 4388] used "Chili." Bonnet (correspondence, 1964) followed Pickard-Cambridge, who probably used "Chili" because the species that followed the description of *Thaida* was from Chile. Simon (1898b, p. 247) probably used the same reasoning in selecting "Costa Rica," the locality from which the species described previous to *Thaida* was collected. Petrunkevitch (1911, p. 538) was more conservative in suggesting "South America." Porter (1920a, 1920b) made no mention of *Thaida* in his list of the Agelenidae of Chile. Mello-Leitão (1940, p. 22) included *Thaida* in the key to South American Agelenidae but also included spiders endemic to Central America. Roewer (1954, p. 98) was the most conservative of all and probably supplied the best

answer to the problem by using "America (loc.?)."

**UREPUS, NEW GENUS**

DESCRIPTION: Length, 10.8 mm. to 11.6 mm. Eyes eight; posterior eye row moderately procurved (6/6); anterior eye row slightly recurved (4.5/6). Chelicera strongly geniculate; promargin with three teeth, middle one largest; retromargin with three to five stout teeth, followed by two or three minute contiguous teeth barely visible at  $\times 96$  magnification. Labium as wide as long. Endites curved slightly inward, appearing almost pyriform. Sternum longer than wide, pointed behind.

Carapace/tibia-patella ratio, 100. Spination: Tibia I, ventral 2-2-2-0; II, ventral 1r-1r-2-1p. Metatarsus I, ventral 2-2-2; II, ventral 2-2-2. Paired claws of fourth tarsus with seven or eight teeth, third claw with two. Fourth tarsus with nine trichobothria. Trochanters not notched.

Anterior spinnerets stout, almost contiguous at base; distal segment minute, hemispherical, bordered by narrow, sclerotized ring. Posterior spinnerets slender, basal segment as long as basal segment of anterior spinneret; distal segment short, almost one-third as long as basal segment, slightly longer than wide, wedge-shaped. Colulus triangular, wider than long.

DISTRIBUTION: Peru.

TYPE SPECIES: *Urepus rossi*, new species.

DIAGNOSIS: *Urepus* is a stout cybaeinaid similar to *Rubrius* but differs in not having the third pair of ventral spines at the tip of the tibia. From other cybaeinaids it differs in having the metatarsi spined, the posterior eye row procurved, and by lacking a notch on the fourth trochanter.

***Urepus rossi*, new species**

Plate 53, figure 13

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Sclerotized parts dark orange-brown, chelicera chestnut-brown, labium and endites slightly lighter. Carapace unmarked. Legs unmarked, except ventral surface of all femora with three faint, dusky, transverse markings. Abdomen gray, with sparse mottling of dorsal and ventral black flecks; nar-

row black mark above heart, widening anteriorly.

Total length, 11.6 mm., paratype, 10.8 mm. Carapace length, 4.7 mm., width, 3.3 mm., head width, 2.1 mm., eye-row width, 1.2 mm. Carapace smooth, polished, with almost no setae. Head sloping upward gradually from anterior to posterior eyes. Posterior eye row procurved (6/6); anterior eye row recurved (4-5/6). Ratio of eyes: AME/-ALE/PME/PLE = 3/7/6/6. Separation ratio of eyes: AME-AME:4; AME-ALE:3; AME-PME:9; ALE-PLE:3; PME-PME:7; PME-PLE:6. Clypeus not so wide as anterior lateral eye (7/5). Chelicera with distinct boss; fang short, stout, half as long as base of chelicera (62/38); retromargin with four or five stout teeth (three or four on paratype); basal two or three separated from each other; distal two contiguous at base. Endites stout, longer than broad (36/30), slightly convergent (20/16). Sternum longer than wide (8/6).

Carapace/tibia-patella ratio, 100. Lengths of tibiae-patellae I and IV, 4.7 mm. and 4.3 mm. Spination: Spines of tibia short, about as long as diameter of tibia. Femora I, dorsal 1-1-1, prolateral 0-0-1; II-IV, dorsal 1-1-3. Patellae I-IV, dorsal 0-1. Tibiae I, ventral 2-2-2-0, prolateral 0-0-1; II, ventral 1r-1r-2-1p, prolateral 0-0(or 1)-1; III, dorsal 1-0-1 (or 0)-1-0, ventral 2-2-2, prolateral 1-1-1, retrolateral 1-1-1; IV, dorsal 1-0-0, ventral 2-2-2, prolateral 1-1-1-0, retrolateral 1-1-1-0. Metatarsi I, dorsal 1(or 0) distal, ventral 2-2-2; II, ventral 2-2-3, prolateral 0-1-1, retrolateral 0-0-1; III, dorsal 2-4-2, ventral 2-2-3; IV, dorsal 2-2-2, ventral 2-2-1, prolateral 1-1-1, retrolateral 1-1-1.

Abdomen longer than broad (70/45).

Colulus triangular, rounded distally, wider than long (41/27), covered with fine hairs. Spiracular opening wider than colulus (71/41).

Epigynum (pl. 53, fig. 13) transversely rectangular, with median transverse depression, truncate posteriorly, laterally, and undulate along anterior edge, with V-shaped notch along median line; round black spermathecae at anterior lateral corners; openings to spermathecae situated between notch and spermathecae on anterior edge of epigynal plate. Faint stabilizing pits present opposite and slightly anterior to spermathecae.

TYPE DATA: Female holotype and female paratype from the west side of the summit of Rio Rimac, Peru, 14,000 feet, about latitude 12° S., longitude 77° W., March 12, 1951 (Ross and Michelbacher), in the California Academy of Sciences.

This species is named in honor of Dr. Edward S. Ross who has made large collections of spiders in South America.

#### VIRGILUS, NEW GENUS

DESCRIPTION: Length of female, 3.7 mm. Eyes eight; posterior eye row moderately procurved (5/6); anterior eye row straight. Chelicerae geniculate; promargin with three teeth; retromargin with six, basal two widely separated. Labium as wide as long. Endites slightly convergent, longer than wide. Sternum longer than wide, produced between hind coxae.

Carapace/tibia-patella ratio, 104. Spination of tibia I, ventral 2-2-2-0-0; metatarsus I, ventral 2-2-2-0. Distal pair of spines on each segment situated more laterally than others. Paired claws of fourth tarsus with six teeth, third claw with one long slender tooth. Fourth tarsus with four trichobothria. Trochanters not notched. Spinnerets similar to those of *Cybaeus*. Anterior spinnerets contiguous, stout, terminal segment very short; posterior spinnerets slender, situated behind anterior, terminal segment slightly longer than terminal segment of anterior spinneret. Colulus about as wide as long, covered with setae. Anal tubercle appearing one-segmented.

DISTRIBUTION: Ecuador: Chimborazo.

TYPE SPECIES: *Virgilus normalis*, new species.

DIAGNOSIS: This genus is one of the smaller cybaeinids, near the size of *Symposia*, which has six eyes, and *Cybaeolus*, which lacks spines on the anterior metatarsi. *Virgilus* has three pair of ventral spines on tibia I, none at the tip. This is the only genus with this pattern of spines.

#### *Virgilus normalis*, new species

Plate 53, figure 14

DESCRIPTION OF FEMALE HOLOTYPE: Color in alcohol: Brownish orange, with diffused gray. Carapace slightly darker on sides of head and edge of thorax, latter rimmed with



narrow black line. Legs marked below; femora, tibiae, and metatarsi with two, one at middle, one distal. Abdomen dark gray, with two pairs of faint longitudinal spots dorsally; venter light gray. Posterior spinnerets and anal tubercle white; anterior spinnerets brownish orange.

Total length, 3.5 mm. Carapace length, 1.66 mm., width, 1.19 mm., head width, 0.68 mm., eye-row width, 0.44 mm. Carapace smooth, few scattered setae on head. Posterior eye row moderately procurved (5/6); anterior eye row slightly procurved (4/6). Anterior lateral eye on left side distorted, set back from clypeus. Ratio of eyes: AME/ALE/PME/PLE=4/7/7/7. Separation ratio of eyes: AME-AME:1; AME-ALE:2; ALE-PME:7; ALE-PLE:4; PME-PME:7; PME-PLE:5. Clypeus more than half as wide as anterior lateral eye (7/4), armed with one seta below each anterior eye. Boss of chelicera conspicuous. Fang shorter than chelicera (55/30). Endites longer than wide (35/25), slightly convergent (18/10). Sternum longer than wide (28/24).

Lengths of tibiae-patellae I and IV, 1.60 and 1.46. Spination: Femora I-II, dorsal

0-1-1-1, prolateral 0-0-1; III-IV, dorsal 1-1-3. Patellae I-IV, dorsal 1-1. Tibiae I, dorsal 1-0-1-0, ventral 2-2-2-0-0, prolateral 0-1-1-0, retrolateral 0-1-1-0; II, dorsal 1br-0-1br-0, ventral 2-2-2-0-0, prolateral 1-1-1-0, retrolateral 0-1-1-0; III, dorsal 1-0-1-0, ventral 1p-2-0, prolateral 0-1-0-1-0, retrolateral 0-1-0-1-0; IV, dorsal 1-0-1-0, ventral 1p-2-0, prolateral 0-1-0-1-0, retrolateral 0-1-0-1-0. Metatarsi I, dorsal 0, ventral 2-2-0, prolateral 0-1-0-1, retrolateral 0-1-0-1; II, dorsal 0-1p-2, ventral 2-2-0, prolateral 0-1-0-1, retrolateral 1-0-1-0-1-0; III, dorsal 2-1-2, ventral 2-2-1, prolateral 1-1-0-1, retrolateral 1-1-0-1; IV, dorsal 2-3-2, ventral 2-2-3.

Abdomen longer than wide (61/45). Colulus longer than wide (5/4.5), rounded at tip, with long setae.

Epigynum (pl. 53, fig. 14) transversely ovate, glabrous area narrow anteriorly, dilated to almost width of epigynum posteriorly; anterior openings separated, one with broken piece of embolus present.

TYPE DATA: Female holotype from 3 miles south of Alausi, Chimborazo, Ecuador, about latitude 2° S., longitude 79° W., February 20, 1955, in the California Academy of Sciences.

#### PRESENT SYNONYMY AND DISPOSITION OF SPIDERS OF SOUTH AMERICA FORMERLY OR PRESENTLY IN THE AGELENIDAE

*ambigua* Nicolet (*Mynthes*, *Rubrius*) = *Calacadia* (Pisauridae, Rhoicininae)  
*antarcticus* Karsch (*Cybaeus*) = *Rubrius* (Agelenidae)  
*Asemostera* Simon = Linyphiidae, Erigoninae  
*backhauseni* Tullgren (*Myro*) = *Macrobunus* (Dictynidae)  
*bidentata* Keyserling (*Tegenaria*) = *T. pagana* C. L. Koch (Agelenidae)  
*breviventris* Nicolet (*Clubiona*) = *Rubrius* (Agelenidae)  
*castaneifrons* Simon (*Coelotes*) = *Rubrius* (Agelenidae)  
*chilensis* Simon (*Myro*) = *Macrobunus* (Dictynidae)  
*civilis* Walckenaer (*Tegenaria*) = *T. domestica* (Clerck) (Agelenidae)  
*Cybaeodamus* Mello-Leitão = Zodariidae  
*Cyrioceta* Simon = Zodariidae  
*dentifer* Tullgren (*Mynthes*, *Rubrius*) = *Calacadia* (Pisauridae, Rhoicininae)  
*domesticus* Clerck (*Araneus*) = *Tegenaria* (Agelenidae)  
*enigmaticus* Mello-Leitão (*Rubrius*) = Zodariidae, new combination

*falklandica* Hogg (*Emmenomma*) = *E. oculatum* Simon (Agelenidae), new synonymy  
*latiithorax* Keyserling (*Erigone*) = *Asemostera* (Linyphiidae, Erigoninae)  
*lvens* Simon (*Rubrius*) = *Calacadia* (Pisauridae, Rhoicininae), new combination  
*madryensis* Tullgren (*Cicurina*) = *Olybrius* (Agelenidae)  
*major* Simon (*Pionaces*) = *Rubrius* (Agelenidae)  
*modesta* Keyserling (*Tegenaria*) = *T. domestica* (Clerck) (Agelenidae)  
*multidentata* Tullgren (*Myro*) = (Amaurobiidae), new combination  
*Pelidida* Simon = Linyphiidae (Erigoninae)  
*Pionaces* Simon = *Rubrius* (Agelenidae)  
*radulifer* Simon (*Rubrius*) = *Calacadia* (Pisauridae, Rhoicininae)  
*spinifer* Tullgren (*Macrobunus*) = *M. backhauseni* Simon (Dictynidae)  
*subfasciatus* Simon (*Coelotes*, *Rubrius*) = *Rubrius antarcticus* (Karsch) (Agelenidae)  
*Valcheta* Mello-Leitão = Zodariidae  
*varius* Keyserling (*Cybaeus*) = *Naevius* (Agelenidae)

## BIBLIOGRAPHY

- BONNET, P.  
1945-1959. *Bibliographia araneorum*. Toulouse, vols. 1, 2, pp. 1-5058.
- CHAMBERLIN, R. V., AND W. IVIE  
1942. Agelenidae of the genera *Hololena*, *Novallena*, *Rualena*, and *Melpomene*. *Ann. Ent. Soc. Amer.*, vol. 35, no. 2, pp. 203-241.
- CLERCK, C.  
1757. *Aranei Suecici, descriptionibus et figuris aeneis illustrati, ad genera subalterna redacti speciebus ultra lx determinati*. Stockholm, 154 pp.
- CROSBY, C. R.  
1926. Some arachnids from the Carlsbad Cave of New Mexico. *Proc. Ent. Soc. Washington*, vol. 28, pp. 1-5.
- GERING, ROBERT L.  
1953. Structure and function of the genitalia in some American agelenid spiders. *Smithsonian Misc. Coll.*, vol. 121, no. 4, 84 pp.
- HOGG, H. R.  
1913. Some Falkland Island spiders. *Proc. Zool. Soc. London*, pp. 37-50.
- HOLMBERG, E. L.  
1876. Arácnidos argentinos. *An. Agr. Argentina*, vol. 4, pp. 15-17, 23-25, 33-34, 47, 72, 79-80, 95, 112-113, 143, 160-161, 167-168, 176, 184-185, 193, 198.  
1881. Arácnidos. *In* Informe oficial de la Comisión Científica agregada al Estado Mayor General de la Expedición al Río Negro (Patagonia) bajo los órdenes del General D. Julio A. Roca. Entrega I *Zoología*. Buenos Aires, pp. 117-168.
- KARSCH, F.  
1880. *Arachnologische Blätter* (Decas I). *Zeitschr. Ges. Naturwiss., Leipzig*, vol. 53, pp. 373-409.
- KEYSERLING, GRAF EUGEN  
1878. Spinnen aus Uruguay und einigen anderen gegenden Amerikas. *Verhandl. Zool.-Bot. Gesell. Wien.*, vol. 27, pp. 571-624.  
1880. Neue Spinnen aus Amerika I. *Ibid.*, vol. 29, pp. 293-349.  
1882. Neue Spinnen aus Amerika III. *Ibid.*, vol. 31, pp. 269-314.  
1891. Die Spinnen Amerikas, Brasilianische Spinnen. *Nuremberg*, vol. 3, pp. 1-278.
- KOCH, C. L.  
1841. *Die Arachniden*. *Nuremberg*, vol. 8, pp. 1-131.
- KOCH, L.  
1868. *Die Arachnidengattungen Amaurobius, Coelotes und Cyboeus*. *Abhandl. Naturhist. Gesell. Nürnberg*, vol. 4, pp. 1-52.
- LAMY, ED.  
1902. Recherches anatomiques sur les trachées des araignées. *Ann. Sci. Nat. Zool.*, vol. 8, no. 15, pp. 149-280.
- LATREILLE, P. A.  
1804. Tableau méthodique des insectes. *In* Nouveau dictionnaire d'histoire naturelle. Paris, Planches et Tableaux Méthodiques, pp. 129-200.
- LEVI, H.  
1964. Nineteenth century South American araneology. *Papéis Avulsos Dept. Zool. São Paulo, Brazil*, vol. 16, no. 1, pp. 9-19.
- MACHADO, A. DE B.  
1945. Observations inédites sur le colulus et les filières de quelques aranéides, accompagnées de notes critiques sur la morphologie comparée des filières. *Arq. Mus. Bocage*, vol. 15, pp. 13-52.
- MELLO-LEITÃO, C. F. DE  
1917. Generos e species novas araneides. *Arch. Escol. Sup. Agr. Med. Veter.*, vol. 1, no. 1, pp. 3-19.  
1933. Catalogo das aranhas Argentinas. *Ibid.*, vol. 10, no. 1, pp. 3-63.  
1939. Araignées Américaines du Musée d'Histoire Naturelle de Bâle. *Rev. Suisse Zool.* vol. 46, pp. 43-93.  
1940. Aranhas de la Provincia de Buenos Aires y de la Gobern. de la Pampa, Neuguen, Río Negro y Chubut. *Rev. Mus. La Plata, new ser., zool.*, vol. 2, pp. 3-62.  
1941a. Catalogo das aranhas da Colombia. *An. Acad. Brasileira Sci.*, vol. 8, no. 4, pp. 233-300.  
1941b. Notas sobre a sistematica das aranhas, com descrição de algumas novas especies Sud-Americanas. *Ibid.*, vol. 13, no. 2, pp. 103-127.  
1943. Aracnidos de Maullin. *Rev. Chilena Hist. Nat.* vol. 45, pp. 136-143.  
1944. Aranas de la Provincia de Buenos Aires. *Rev. Mus. La Plata, new ser., zool.*, vol. 3, no. 24, pp. 311-393.
- MERIAN, P.  
1913. Les araignées de la Terre de Feu et de la Patagonie, comme point de départ de comparaisons géographiques entre diverses couches faunistiques. *Rev. Mus. La Plata*, vol. 20, pp. 7-100.
- MONTGOMERY, T. H.  
1909. On the spinnerets, cribellum, colulus, tracheae and lung books of araneads.

- Proc. Acad. Nat. Sci. Philadelphia, vol. 61, pp. 299-320.
- NICOLET, H.  
1849. Aracnidos. In Gay, C., Historia física y política de Chile. Paris, Zoologia, vol. 3, pp. 319-543.
- PETRUNKOVITCH, A.  
1911. A synonymic index-catalogue of spiders of North, Central, and South America with all adjacent islands, Greenland, Bermuda, West Indies, Terra del Fuego, Galapagos, etc. Bull. Amer. Mus. Nat. Hist., vol. 29, pp. 1-791.  
1925. Arachnida from Panama. Trans. Connecticut Acad. Arts Sci., vol. 27, pp. 51-248.  
1929. The spiders of Porto Rico, Part 1. *Ibid.*, vol. 30, 158 pp.  
1939. Classification of the Araneae with key to suborders and families. In Petrunkevitch, A., Catalog of American spiders. *Ibid.*, vol. 33, pp. 139-190.
- PICKARD-CAMBRIDGE, F. O.  
1898. On some spiders from Chili and Peru, collected by Dr. Plate of Berlin. Jour. Linnean Soc. London, vol. 27, pp. 15-22.
- PICKARD-CAMBRIDGE, O.  
1880. Arachnida. Zool. Rec., vol. 17, pp. 1-30.
- PORTER, C. E.  
1920a. Apuntes sobre aracnología Chilena. IV. La familia Agelenidae. Rev. Chilena Hist. Nat., vol. 24, pp. 50-60.  
1920b. Aracnología Chilena (Notas miscelánicas: sistemáticas y zoojeográficas) V. La familia Agelenidae. Bol. Mus. Nac. Chile, vol. 11, pp. 21-29. [This is a reprint of Porter, 1920a.]
- ROEWER, C. FR.  
1954. Katalog der Araneae. Brussels, vol. 2, pt. a, pp. 1-923.
- ROTH, VINCENT D.  
1952. A review of the genus *Tegenaria* in North America. Jour. Washington Acad. Sci., vol. 42, no. 9, pp. 283-288.  
1956. Taxonomic changes in the Agelenidae. Pan-Pacific Ent., vol. 32, no. 4, pp. 175-180.  
1965. Genera erroneously placed in the families Agelenidae and Pisauridae (Araneida: Arachnida). Ann. Ent. Soc. Amer. vol. 58, no. 3, pp. 289-292.
- SIMON, E.  
1864. Histoire naturelle des araignées (Araneides). Paris, pp. 1-540.  
1884. Arachnides recueillis par la Mission du Cap Horn on 1882-1883. Bull. Soc. Zool. France, vol. 9, pp. 117-144.
1887. Arachnides. In Mission Scientifique du Cap Horn 1882-1883. Paris, Zoologie, vol. 6, pp. 1-42.  
1888. Descriptions de quelques arachnides du Chili et remarques synonymiques sur quelques-unes des espèces décrites par Nicolet. Ann. Soc. Ent. France, vol. 8, pp. 217-222.  
1889. Arachnides. In Voyage de M. E. Simon au Venezuela (Décembre 1887-Avril 1888) 4th Mémoire. *Ibid.*, vol. 9, pp. 169-220.  
1895. Arachnides recueillis à la Terre de Feu par M. Carlos Backhausen. An. Mus. Nac. Buenos Aires, vol. 4, pp. 167-172.  
1897. Liste des arachnides du Chili communiqués par Mr. F. Lataste et déterminés par Mr. E. Simon. Actes Soc. Sci. Chili, vol. 6, pp. 104-107.  
1898a. Description d'un nouveau genre senocule (*Symphysa*) de la famille des agelenides (Arachnida). Bull. Soc. Ent. France, no. 4, pp. 88-90.  
1898b. Histoire naturelle des araignées. Paris, vol. 2, fasc. 2, pp. 193-380.  
1902. Arachnoideen, excl. Acariden und Gonyleptiden. In Ergebnisse der Hamburger Magalhaensische Sammelreise 1892-1893. Hamburg, vol. 6, no. 4, pp. 1-47.  
1903a. Histoire naturelle des araignées. Paris, vol. 2, fasc. 4, pp. 669-1080.  
1903b. Araignées et faucheurs. In Résultats du voyage du S. Y. Belgica en 1897, 1898, 1899. (Expédition antarctique belge. Rapports scientifiques). Anvers, pp. 2-7.  
1904. Etude sur les arachnides du Chili recueillis en 1900, 1901 et 1902, par MM. C. Porter, Dr. Delfin, Barcey Wilson et Edwards. Ann. Soc. Ent. Belgique, vol. 48, pp. 83-114; also 1904, Rev. Chilena Hist. Nat., vol. 8, pp. 45-77.  
1905. Etude sur les arachnides recueillis en Patagonie par le Dr. Filippo Silvestri. Boll. Mus. Zool. Anat. Comp. Torino, vol. 20, no. 511, pp. 1-17.
- TULLGREN, A.  
1901. The spider fauna of the Magellan Territories. In Svenska Expeditionen till Magellanslanderna. Stockholm, vol. 2, no. 10, pp. 181-260.
- YAGINUMA, T.  
1960. Spiders of Japan in color. Osaka, pp. 1-186.  
1962. The spider fauna of Japan. Osaka, Arachnological Society of East Asia, pp. 1-74 (and pp. 1-18, summary of families in Japanese).













