# THE ORB WEAVER GENUS *MANGORA* IN SOUTH AMERICA (ARANEAE, ARANEIDAE)

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ABSTRACT. Of the 18 previously known *Mangora* species from South America, three names are synonyms and 12 species have their genitalia illustrated here for the first time. All of the 127 new species found are described, illustrated, and named. Most of these many species are found in the Amazon drainage. All the species outside the Amazon have only limited distributions except *M. melanocephala*, the most common *Mangora*, found between the Isthmus of Tehuantepec, Mexico, and northern Argentina. Only four species found in Central America extend their ranges to South America. A new method of immobilizing and examining palpi is described.

## INTRODUCTION

South American *Mangora* have previously been impossible to determine. Of the few species described, most had unrecognizable descriptions or lacked adequate illustrations. Eighteen species are listed in Platnick's catalog (2006). *Mangora mathani* Simon was erroneously listed as a nomen nudum. *Mangora decolorata* (Keyserling) does not occur in South America, a citation error of Platnick (2006) and older catalogs. Three names are synonyms of older names, leaving 15 species. Of these, 12 never had their genitalia illustrated, or the illustrations were unrecognizable. Of 142 species considered in this study, 127 are new. Because in the past most species could not readily be determined, little is known about *Mangora*. Ecological and behavioral research have been limited to a few well-described species.

Because there is little overlap with South American species, the 32 species of Mexico and Central America were revised separately in a previous publication (Levi, 2005). An earlier paper treated the seven species north of Mexico (Levi, 1975).

*Mangora* species make a very fine, dense orb web. The common North American *M. gibberosa* (Hentz) makes its fine-meshed web in the tall grass of meadows. The European *M. acalypha* (Walckenaer) is found in sparse vegetation on sandy ground. Webs are vertical or slightly inclined, occasionally almost horizontal. The web of *M. acalypha* can have 50 to 60 radii and only 10 to 12 circles of temporary spiral, with 500 to 600 attachments. The viscid threads of *M. acalypha* are only 1 mm apart, and there can be 50 to 60 in one sector. The spiders work rapidly, the temporary spiral being completed in 7 minutes. The small spiders rest in the hub. There is no retreat. When disturbed, the spider drops on a thread (Wiehle, 1931).

When mating, the male stays attached to the female with an insertion of about 7 seconds; a minute later, there is a second insertion. After three to six or up to 13 insertions, alternating the palpi, the male leaves on a thread but may soon return to start a new series of insertions (Wiehle, 1931).

The outer lobe of the epigynum of many South American *Mangora* is broken off, not observed previously. Presumably this happens when mating and makes further mating with other males more difficult.

Although *Mangora* are mainly diurnal, Lubin (1978) found webs of *M. pia* at night in Panama. There is recent literature by Eberhard (1982) describing radii construction, by Carico (1986) on web remov-

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al patterns, and by Craig (1987a,b, 1988, 1989) on behavior and the structure of silk in the Panamanian and northern South American *M. pia*. However, nothing has been published about the function of the unique feathered trichobothria on the third tibia, or the high carapace: Does it contain a large venom gland, or perhaps stomach or brain tissue?

Of the 142 species here described, only 62 are known from both sexes, 59 from females only, and 21 from males only. It is possible that some of the new males belong to described females.

## METHODS

The methods used were the same as in Levi (2005), except for the use of a new embedding medium to immobilize small genitalia for examination and illustrating.

The immobilizing medium is K-Y Jelly (or similar personal lubricant available from pharmacies). K-Y Jelly is miscible in both water and alcohol. One or two drops of the jelly are placed in a dish and the genitalia to be illustrated are directly transferred from alcohol into the bottom of the jelly. The submerged specimen can be placed in the required position and stays as oriented. A thin layer of 80% alcohol may be added over the jelly to reduce reflections. After use, the genitalia are placed in a small dish with hot water to remove the jelly from the specimen. After 10 minutes in hot water, some alcohol is added, and after a short time, the specimen is returned to its vial. (Nadine Dupérré made me aware of the procedure, but it originated with J. Cokendolpher. J. Cokendolpher and N. Dupérré permitted me to publish the method.)

As mentioned in the previous *Mangora* publication (Levi, 2005), eye placement and measurements are rough estimates made by viewing from above and slightly anterior. Sizes and distances of eyes are given in numbers, not to indicate accuracy, but to avoid verbiage. Measurements are made relative to the diameter of eyes.

The position of the posterior eye row is measured in relation to a hypothetical line behind the eyes, as viewed from above. The ocular quadrangle is measured by drawing an imaginary line around the eyes.

Total length was measured without stretching the animal because the abdomen is often at an angle to the prosoma.

The illustrations here of previously described species were made in 1970, when I borrowed the types of all American species of *Mangora* for revising the North American species (Levi, 1975).

In the illustrations, the ventral view of the epigynum is often tilted at an angle, with the anterior end slightly higher. For the posterior view, the epigynum was pulled out with a fine, mounted needle. The posterior view is sometimes from slightly ventral with the anterior end of the spider slightly pulled up. A drop of Hoyer's Medium on the epigynum was used to temporarily clear it. (Some colleagues have used sodium hydroxide for clearing, but this is not clearing oil; it digests the tissues, indirectly making the structure more transparent. However NaOH could warp structures of the epigynum or palpus.)

A spine is here considered an immovable pointed structure, whereas the strong, movable setae on legs are referred to as macrosetae.

The directions for locating structures in the illustrations refer to the numbers on the face of a clock (h). The illustrations of the posterior view of the epigyna have their venter up and dorsum down.

*Specimens used* came from the following collections and individuals.

| | |
|---|---|
| AMNH | American Museum of Natural History, New York; W. J. Gertsch, J. A. L. Cooke, N. Platnick, L. Sorkin. |
| ANSP | Academy of Natural Sciences, Philadelphia; D. Azuma. |
| BMNH | The Natural History Museum, London, United Kingdom; P. Hillyard, J. Beccaloni. |
| CAS | California Academy of Science, |

| | |
|---|---|
| | San Francisco; C. Griswold, D. Ubick. |
| CUC | Cornell University Collection kept in the AMNH. |
| FSCA | Florida State Collection of Arthropods, Gainesville, Florida; G. B. Edwards. |
| HGF | H. G. Fowler; Universidade de São Paulo, Rio Claro, Est. São Paulo, Brazil. |
| IBSP | Instituto Butantan, Laboratório de Artrópodos Peçonhentos, São Paulo, Brazil; A. D. Brescovit. |
| ICNB | Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogota, Colombia; E. Florez. |
| INPA | Instituto Nacional de Pesquisas da Amazônia, Manaus, Est. Amazonas, Brazil; C. Magalhaes. |
| MACN | Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina; C. L. Scioscia. |
| MCN | Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil; E. H. Buckup. |
| MCP | Museu de Ciências, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil; A. A. Lise. |
| MCZ | Museum of Comparative Zoology, Cambridge, Massachusetts; G. Giribet, L. Leibensperger. |
| MECN | Museo Ecuatoriano de Ciencias Naturales, Quito, Ecuador; Germania Estévez Jácome, Leticia Avilés. |
| MLP | Museo de Universidad Nacional, La Plata, Argentina; C. Ituarte, L. A. Pereira. |
| MNHN | Museum National d'Histoire Naturelle, Paris, France; C. Rollard. |
| MNRJ | Museu Nacional, Rio de Janeiro, Brazil; A. Timotheo da Costa, A. B. Kury. |
| MUSM | Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru; G. Lamas, D. Silva D. |
| MZSP | Museu de Zoologia da Universidade de São Paulo, São Paulo, SP, Brazil; P. Vanzolini, J. L. Leme, R. Pinto da Rocha. |
| NHMB | Naturhistorisches Museum, Basel, Switzerland; E. Sutter, A. Hänggi. |
| PAN | Polish Academy of Science, Warsaw, Poland; J. Proszynski, A. Slojewska, M. Adamczewska, W. Tomaszewska. |
| SMF | Senckenberg Museum, Frankfurt am Main, Germany; M. Grasshoff, P. Jäger. |
| UBTU | Coleção Científica de Aranhas do Departamento de Zoologia, Universidade de São Paulo, Botucatu, Brazil; I. M. P. Rinaldi. |
| USNM | National Museum of Natural History, Washington, D.C.; J. Coddington, F. S. Larcher, D. G. Furth. |
| ZMUC | Zoologisk Museum, Copenhagen, Denmark; H. Enghoff, N. Scharff. |

After the revision was complete, I received two large important collections from areas that had been undersampled: Peru and Colombia. Among these collections were some new species and males of several species known previously from females only. The Colombian collection contained the first specimens of *M. fornicata* (Keyserling), known only from the original specimens. These additions explained the broken nature of the epigyna of some species. This new information had to be incorporated into the paper and 45 new illustrations added to the finished plates, rather awkwardly in some cases.

My revisions of araneids were started at a time when museums would freely loan specimens (unlike olden times when types were locked up in museums, available only to rare visitors), and they could easily be returned. Also, collecting in various coun-

tries was permitted without bureaucratic permits. At present, some countries do not permit export of specimens, others only with permits. Times have changed in such a way that future revisions will be cumbersome and extremely costly.

## DISCUSSION

Judging by previous revisions of araneid genera in which one-third of the species had been described, I expected 40 to 50 new species. Actually, the numbers found were 127 new with only 15 previously described. Many South American areas have been poorly collected, suggesting that there may be two or three times as many species. A probable reason for the few descriptions is that many species are very small, less than 2.5 mm total length.

Some *Mangora* species around the periphery of the Amazon, the area of greatest abundance, have only small distributions.

Platnick (2006) lists only one species from Europe, the Palearctic *M. acalypha*, one species from Sri Lanka, two from southeast Asia, 10 from eastern Asia (Yin, 1997), and none from Africa. However, related genera *Psyllo* and *Umbonata* are found in Africa and *Prasonicella* in Madagascar, and *Prasonica* has several species in Africa and a few in the Orient and New Guinea (Grasshoff, 1971).

Lack of a good series of specimens for many species makes it difficult to decide whether differences between epigyna are due to normal variation or indicate species-level divergence. This is especially difficult to decide in females from widely separated collecting localities. Male palpi have more characters than female epigyna and are easier to separate. But the short-lived males are less common in collections than females. It is surprising that so many new males were found that could not be matched to females.

Although in many genera the epigyna can be used to match male palpi, this is not true in *Mangora*. Also many *Mangora* species have similar coloration, also making matches difficult. (This also makes it difficult to place illustrations of similar species adjacent.) Exceptions are few: species with nine black spots on the abdomen dorsum (Figs. 418–457) can have a similar median apophysis (Figs. 420, 427, 435, 448, 456).

Keyserling's female syntypes of *M. fornicata* (Figs. 524, 525) differ from his own illustration. One possible explanation is that the edge of the epigynum broke off when handling. The explanation was suggested by Colombian specimens: several species came in a series, with some specimens whole and others with the edge broken off. But had holotypes of new species illustrated here their epigynum broken? (e.g., *M. acre*, Figs. 4, 6; *M. mapia*, Fig. 9; and perhaps others). Was this breakage noticed only because many Colombian species came in a series, whereas other collections had only a few specimens? Or is the breakage limited to species occurring in northwestern South America? No answer was found. Apparently, males in some species tear off the edge of the epigynum after mating (Figs. 436–443, 527–530), thereby preventing later mating with other males.

## TAXONOMIC SECTION

### *Mangora* O. P.-Cambridge

*Mangora* O. P.-Cambridge, 1889: 13. Type species *Mangora picta* O. P.-Cambridge from Guatemala, designated by Simon, 1895; Levi, 1975: 116.

*Diagnosis. Mangora* is one of the most distinct genera of orb-weavers. It differs from most other genera by having the cephalic region of the carapace always about half the maximum width of the thoracic region (Fig. 25). The thorax is very high, evenly sloping toward the eyes (Figs. 1, 3), and has a longitudinal median line. The abdomen is always longer than wide (Figs. 19, 20). All *Mangora* species differ from all other araneid genera found in America by having a set of long, feathered trichobothria on the anterior face of the third tibia of both males and females (Figs. 2, 3).

*Metazygia* species have been confused with *Mangora*. *Manogea porracea* (C. L. Koch) is also surprisingly, but only superficially, similar (Levi, 1997, figs. 79–93). Both differ from *Mangora* by having a lower thorax and lacking feathered setae on the third tibia.

*Note.* Grasshoff (1971) split some species of *Mangora* into several genera on the basis of the number of rows of feathered setae on the third legs. None of these are American.

*Description.* Virtually all South American *Mangora* preserved in alcohol are yellowish and have few, thin setae. The cephalic region is black (Fig. 140), or eyes have black rings (Fig. 188). Some species have a gray or black band on the side of the carapace (Figs. 114, 140). The sternum often has a darker rim; sometimes the sternum is black (Fig. 228). The legs are rarely ringed. The distal articles are often darker than proximal ones. The abdomen has various markings depending on size. Many have no markings on the venter. Most small species, those whose females are less than 2.5 mm total length, lack white pigment spots on the abdomen; have a broad gray or black band posteriorly, fading anteriorly (Fig. 11); have a venter with a square gray patch, gray book lung covers, gray spinnerets, and a gray patch on the sides posteriorly (Figs. 12, 20, 26). The largest species, females with total length of 5.0 mm and larger, usually have only a pair of square, gray or black patches on the dorsum posteriorly (Figs. 518, 522). The one exception here is the large *M. lactea* (Fig. 640), which lacks gray markings but has white pigment spots on the abdomen. The live coloration of only one species, *M. pia*, is known to be green (C. Craig, personal communication). Presumably others with the two black patches are also green. The intermediate-sized species have a diversity of markings (Figs. 160, 173, 240, 243). Because of the uniformity of markings of the smallest, and also the largest species, not all the abdomens in these two groups are illustrated.

The eyes are often relatively large (Fig. 188), and the posterior ones can have black rings. The posterior row may be procurved (Fig. 46), straight (Fig. 78), or recurved (Fig. 351). The posterior or anterior median eyes could be the largest, the laterals smallest, the anterior lateral eye slightly larger than the posterior. The distances of the eyes from each other are recorded for the types, but the distances can vary within a species. The clypeus height usually equals about the diameter of the anterior median eyes (Figs. 1, 3), rarely to 2.0 diameters and sometimes as little as 0.3 diameter. Its height is variable within species and sometimes is difficult to see because of transparency and softness of the clypeus margin. The first or fourth leg may be longest; the third is always shortest (Fig. 3). The legs have long upright macrosetae (Figs. 2, 3). The abdomen shape, although always longer than wide, varies in different species, being widest anteriorly, in the middle, or posteriorly.

The epigynum of females is simple but variable in widespread species. The epigyna of some species have the edge lobed, others have a tongue, and some have a scape with a pocket at its tip.

All males probably have a tooth or denticle on the endite, but it may be very small, barely perceptible. The first coxa of almost all males has a hook; in small species it can be a barely visible tooth, posteriorly on the rim, but in large species, the hook is well developed. Only *M. semiatra* and *M. paquisha* seem to lack a hook. In many species, the fourth femur of the male has a strong, often short, macroseta on the venter of its proximal end (Fig. 21). The differences of the complex palpi are better distinguishing characters for species than the female genitalia. The variation of the palpi arises from the shape of various sclerites, but the position of the sclerites stays about the same, making it easier to assign the males to species.

The mesal face of all, and the ventral of many, of the palpi were illustrated. But, the mesal view was found to be the most

useful in separating species (Fig. 189). One can usually find the embolus in the mesal or ventral view even if it is hidden behind a sclerite.

Males with a filamentous or sword-shaped embolus (Fig. 222) or with a projecting terminal apophysis (Fig. 217) are more easily determined than those without distinct or prominent sclerites (Fig. 244), in which case any small twist away from the view illustrated will make the palpus look different.

The labeled sclerites of palpi of two larger males are illustrated in Figures 627, 628, 642. Some palpal sclerites of small species are difficult to homologize unless the palpus is dissected. Grasshoff (1973) published on the morphology of *M. acalypha* (Walckenaer).

*Distribution. Mangora* species have not been found in Chile or on the Galapagos Islands, although a new, related genus with several species is found on Galapagos. The most abundant species and populations are in the Amazon (Map 6F), and some of these are widespread. But the species outside the Amazon and its tributaries are often localized and apparently less abundant. Only a few species are widespread: *M. melanocephala* (Map 2F), *M. dianasilvae* (Map 3F), and *M. novempupillata* (Map 4C). Large collections are available only from northern Argentina and southern Brazil. One can expect new species in the many uncollected areas.

## SYNONYMS

*Mangora bituberculata* Mello-Leitão = *Mecynogea erythromela* (Holmberg). Synonymy by Levi (1997).

## KEYS

The easiest characters are based on coloration of the specimen. Unfortunately, greens and reds wash out in alcohol and even black can fade over time. Also, it is not known how much the coloration pattern varies. Few specimens were available for each species and no color images. Other characters depend on the position of the epigynum and palpus being examined. The keys thus are limited.

In the keys and descriptions to females, the term "tongue" is used for a lobe extending from the epigynum that is too short and wide to be called a scape.

### Speed Key for Females

1 Abdomen, dorsal view: one to three discrete, round black spots on each side, usually also a black spot on median anterior (Figs. 426, 432, 454).
Go to 1 in Key for Females, or if not, to 5 below.

5(1) Abdomen, dorsal view: with discrete, posterior median black band (Fig. 484); ventral: with pair of lateral bands (Figs. 485, 486); western Brazil.
Go to 5 in Key, or if not, to 6 below.

6(5) Thorax with light gray to black lateral bands (Figs. 130, 140, 196, 206).
Go to 6 in Key, or if not, to 14 below.

14(6) Abdomen without marks other than white pigment spots (Fig. 640) and larger than 4.8 mm; epigynum as in Figure 638; southeastern Bolivia, southern Brazil, northern Argentina.
Go to 14 in Key, or if not, to 15 below.

15(14) Abdomen, dorsal view: posterior with a pair of more or less discrete gray to black rectangles (Figs. 412, 531); most larger than 4 mm.
Go to 15 in Key, or if not, to 56 below.

56(15) Abdomen, dorsal view: with wide, longitudinal, posterior gray or black band, fading anteriorly (Figs. 11, 107, 112); venter with gray square or one or two rectangles (Figs. 12, 108, 113, 125); book lung covers usually gray (Figs. 20, 108); sides usually with gray patch (Figs. 26, 113), most less than 3 mm total length.
Go to 56 in Key, or if not, to 87 below.

87(56) Abdomen, dorsal view: with paired dorsal white patches on black (Figs. 247, 248); southern Guyana.
Go to 87 in Key, or if not, to 88 below.

88(87) Abdomen, dorsal view: all black with one to three white patches on sides (Figs. 385, 391).
Go to 88 in Key, or if not, to 95 below.

95(88) Abdomen with various patterns.
Go to 95 in Key.

### Key for Females

1 Abdomen, dorsal view: one to three discrete, round black spots on each side, usually also a black spot on median anterior (Figs. 426, 432, 454) ..... 2

– Abdomen without discrete, paired black spots ..... 5

2(1) Abdomen, dorsal view: without anterior median spot (Fig. 432); epigynum, posterior view: median plate heart-shaped, longer than wide (Fig. 431); upper Amazon: Peru (Map 3D) ..... *chanchamayo*

– Abdomen always with anterior median black spot (Fig. 426); epigynum other than heart-shaped posterior median plate ..... 3

3(2) Epigynum, ventral view: rim with median notch (Figs. 450, 452); upper Amazon, Amazon region (Map 4C) ..... *novempupillata*

– Ventral: rim without notch (Figs. 424, 438) ..... 4

4(3) Epigynum, ventral view: with median short tongue (Figs. 436, 438, 440); posterior: with dorsolateral pockets (Figs. 437, 439, 441, 444, 542); upper Amazon, Amazon region (Map 4H) ..... *mathani*

– Ventral: rim with a wide, curved lobe (Fig. 424); posterior: with pair of ventral semicircular slits (Fig. 425); upper Amazon: Peru (Map 4G) ..... *comaina*

5(1) Abdomen, dorsal view: with discrete, posterior median black band and a pair of lateral spots (Fig. 484); ventral: with pair of lateral bands (Figs. 485, 486); upper Amazon: Brazil (Map 5C) ..... *rondonia*

– Dorsal: no such discrete black bands present ..... 6

6(5) Thorax with light gray to black lateral bands (Figs. 130, 140, 196, 206) ..... 7

– Carapace without lateral bands (Figs. 25, 46) ..... 14

7(6) Epigynum, ventral view: with spermathecae (as seen through integument) more than one and one-half times their diameter from rim (Figs. 137, 186, 199, 203) ..... 8

– Ventral view: spermathecae one diameter or less from rim or not visible (Figs. 302, 309, 324) ..... 11

8(7) Epigynum, ventral view: with a projecting, triangular tongue (Fig. 137); posterior: plates fused, with a dorsal pair of circular depressions (Fig. 138); Guianas, lower Amazon (Map 4A) ..... *brokopondo*

– Ventral: without triangular tongue (Figs. 186, 199, 331); posterior: without dorsal pair of depressions (Figs. 187, 200, 332) ..... 9

9(8) Epigynum, ventral view: rim with notch at each side of a short lobe (Fig. 331); posterior: median plate with almost parallel sides, slightly wider than lateral plates (Fig. 332); southern Brazil (Map 4B) ..... *paranaiba*

– Ventral: rim without notches (Figs. 186, 199); posterior: median plate otherwise (Figs. 187, 200) ..... 10

10(9) Epigynum posterior view: narrow, long median plate, with subparallel sides, subtriangular lateral plates with transverse folds (Figs. 200, 202, 204); ventral view: [plates along rim variable, often broken in midline, Figs. 199, 201, 203]; common, Mexico to northern Argentina (Map 2F) ..... *melanocephala*

– Posterior: median plate hourglass-shaped (Fig. 187); ventral: with wide transverse unsclerotized band (Fig. 186); southwestern Colombia (Map 1I) ..... *dagua*

11(7) Epigynum, ventral view: with dark, transverse mark near rim (Fig. 309); posterior: plates fused and pair of curved slits close to rim (Fig. 310); Suriname (Map 3E) ..... *browns*

– Ventral: without transverse marks (Figs. 287, 302, 324); posterior: with plates distinct (Figs. 288, 303, 325) ..... 12

12(11) Epigynum, ventral view: a thin lip on rim expanding at lateral ends (Figs. 302, 304); posterior: wide median plate with ventral curved slits close to rim (Figs. 303, 305); Trinidad, Amazon, to Peru, Mato Grosso, Brazil (Map 3F) ..... (in part) *dianasilvae*

– Ventral and posterior: otherwise (Figs. 287, 288, 324, 325) ..... 13

13(12) Epigynum, posterior view: median plate narrows dorsally, without depressions (Fig. 325); Amazon region, upper Amazon to southern Mato Grosso, Brazil (Map 3G) ..... *chacobo*

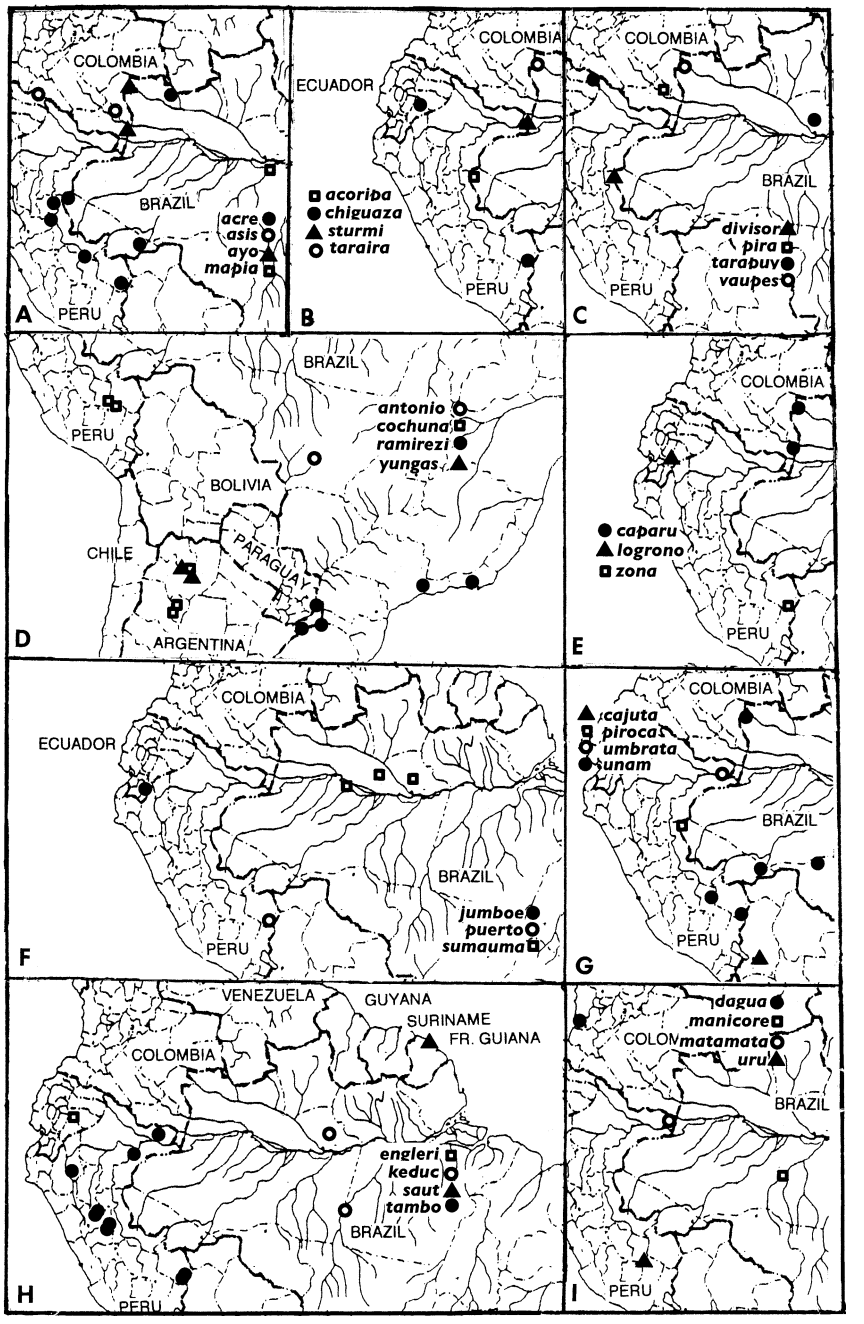
– Posterior: diamond-shaped median plate with ventral pair of circular depressions (Fig. 288); Amazon region (Map 3C) ..... *isabel*

14(6) Abdomen without marks except white pigment spots (Fig. 640) and larger than 4.8 mm total length; epigynum as in Figures 638, 639; southeastern Bolivia, southern Brazil, northern Argentina (Map 6E) ..... *lactea*

– Abdomen usually with marks, smaller size or different epigynum ..... 15

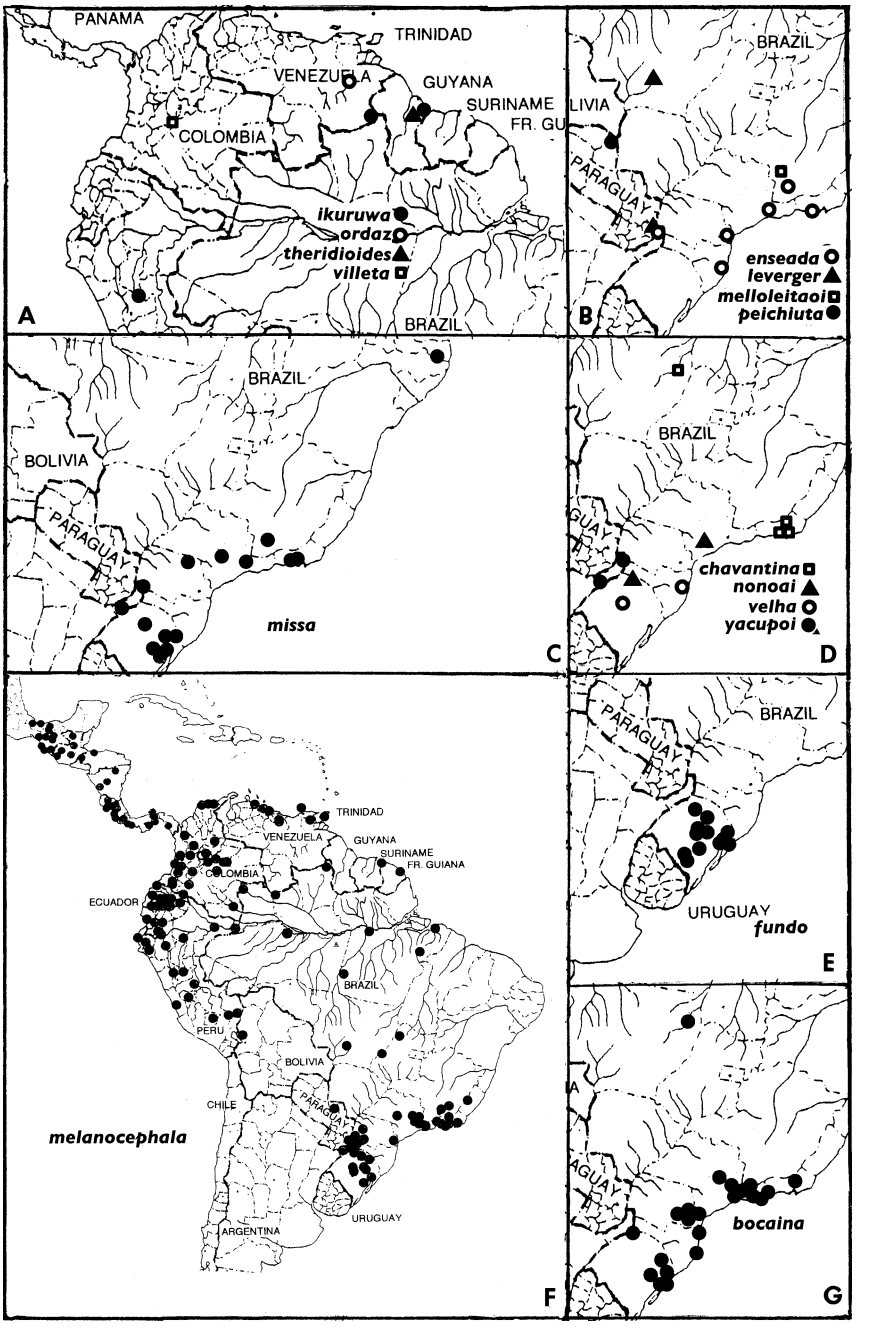
15(14) Abdomen, dorsal view: posterior with pair of more or less discrete gray to

black rectangles (Figs. 412, 531); mostly larger than 4 mm ..... 16
– Abdomen marked otherwise (and usually smaller size) ..... 56
16(15) Epigynum venter: rim with median notch (Figs. 611, 616, 622, 629) ..... 17
– Ventral: rim entire, straight, curved or with tongue or scape (Figs. 156, 164, 500) ..... 21
17(16) Epigynum, posterior view: median plate diamond-shaped (Fig. 623); southern Brazil, northeastern Argentina (Map 6D) ..... *strenua*
– Posterior: median plate shaped otherwise (Figs. 612, 630) ..... 18
18(17) Epigynum, ventral view: notch flanked by sclerotized fold (Fig. 611); Panama to northern Brazil (Map 5H) ... *pia*
– Ventral: without sclerotized folds (Figs. 605, 616, 629) ..... 19
19(18) Epigynum, posterior view: with one median ventral seam (Fig. 630); southeastern Brazil (Map 2D) .. *nonoai*
– Posterior: with median plate and with pair of ventral seams (Figs. 606, 617) ..... 20
20(19) Epigynum, ventral view: a subrectangular base (Figs. 605, 607); posterior: median plate flanked by depressed lateral plates (Figs. 606, 608); upper Amazon: Colombia, Ecuador and western Brazil (Map 6C) ..... *tefe*
– Ventral: a subtriangular base with median depression having a constriction (Fig. 616); posterior: median plate narrower than laterals with large ventral, bordered, triangular depression (Fig. 617); southwestern Colombia (Map 6B) ..... *bambusa*
21(16) Epigynum, ventral view: a tongue or scape (Figs. 534, 563) ..... 29
– Ventral view: rim straight (Fig. 500), or full width of rim curved (Figs. 164, 487) ..... 22
22(21) Epigynum, ventral view: rim almost straight with pair of dark patches near rim (Fig. 500); posterior: median plate longer than wide (Fig. 501); northeastern Argentina (Map 5F) ..... *vianai*
– Ventral: full width of rim curved (Figs. 156, 508, 516) ..... 23
23(22) Epigynum, ventral view: full width of rim lobed into a tongue as long as wide anteriorly (Fig. 487); posterior: median, plate narrows dorsally (Fig. 488); southern Brazil, northeastern Argentina (Map 5F) ..... *bemberg*
– Ventral: epigynum wider than long; posterior: median plate not narrowing dorsally (Figs. 159, 165, 517) .... 24
24(23) Epigynum, ventral view: with a pair of adjacent dark discs (center of Figs. 156, 164) ..... 25
– Ventral: without such adjacent central discs (Figs. 508, 547) ..... 26
25(24) Epigynum, ventral view: a tubercle on anterior of tongue (Fig. 164); southern Brazil (Map 2D) ..... (in part) *velha*
– Ventral: a shallow, longitudinal groove anterior of tongue (Fig. 158); eastern Brazil to northeastern Argentina (Map 2C) ..... (in part) *missa*
26(24) Epigynum, ventral view: a wide transverse groove with posterior thick lip (Fig. 516); posterior: median plate oval (Fig. 517); northern Peru (Map 5G) ..... (in part) *kuntur*
– Ventral: rim without transverse groove (Figs. 497, 508) ..... 27
27(26) Epigynum, posterior view: median plate subrectangular (Figs. 525, 528, 530); ventral tip of lobe often broken off (Figs. 524, 529); central Colombia (Map 5H) ..... *fornicata*
– Posterior: median plate otherwise (Figs. 498, 509) ..... 28
28(27) Epigynum, ventral view: rim forming tongue with slight depression of edge on each side; posterior: median plate with a ventral stalk flanked by swollen lateral plates (Fig. 509); southeastern Ecuador (Map 5C) ..... *cutucu*
– Ventral: rim evenly rounded (Fig. 497); posterior: median plate with depressions flanking ventral short stalk (Fig. 498); northern Colombia (Map 5B) ..... *kochalkai*
29(21) Epigynum, ventral view: with two arching loops and cup-shaped lobes on sides of scape (Fig. 478): upper Amazon: northern Peru (Map 5E) ..... *explorama*
– Ventral: lacking arching loops and cup-shaped lobes (Fig. 458) ..... 30
30(29) Epigynum, ventral view: ducts visible in lobes on anterior sides of scape (Figs. 458, 460); upper Amazon: Colombia to Mato Grosso, Brazil (Map 4E) ..... *insperata*
– Ventral: no ducts visible (Figs. 586, 595) ..... 31
31(30) Epigynum, ventral view: scape flanked by two, often sclerotized, lobes (swollen posterior lateral and median plates, Figs. 563, 577, 586) ..... 32
– Ventral: scape flanked by only one lobe or without lobes on sides (Figs. 534, 547, 554) ..... 41




Map 1. Distribution of *Mangora* species.

32(31) Epigynum, ventral view: with scape longer than wide anteriorly (Figs. 586, 590) ..... 33
– Ventral: scape shorter than wide anteriorly, or length equals width (Figs. 563, 595) ..... 34
33(32) Epigynum, ventral view: with small lobes flanked and in part covered by larger, lateral lobes (Fig. 590); Amazon region, Ecuador, Brazil, and Bolivia (Map 6A) ..... *alinahui*
– Ventral: with lateral lobes tucked under median ones (Figs. 584, 586); southern Brazil, northeastern Argentina (Map 4F) ..... *caxias*
34(32) Epigynum, ventral view: tongue without distal pocket or lip, both lobes wider than long (Fig. 534); upper Amazon: Brazil (Map. 5H) ..... *taboquinha*
– Ventral: tongue with distal pocket or a lip (Fig. 568, 595) ..... 35
35(34) Epigynum, posterior view: narrow median plate, constricted in middle (Fig. 596); upper Amazon: southern Ecuador, northwestern Peru (Map 6A) ..... *lechugal*
– Posterior: median plate wider than long (Figs. 572, 578) ..... 36
36(35) Epigynum, posterior view: with pair of facing thumbs along rim (Fig. 569); upper Amazon: central Peru (Map 5E) ..... *laga*
– Posterior: without thumbs ..... 37
37(36) Epigynum, posterior view: median plate bordered ventrally by a pair of triangular funnels (Figs. 564, 566); Guyana, Amazon region (Map 5E) ..... *hirtipes*
– Posterior: without funnels ..... 38
38(37) Epigynum, ventral view: short scape flanked by a sclerotized longitudinal lobes and less sclerotized lateral lobes (Figs. 577, 580); upper Amazon: southeastern Peru, western Brazil, northern Bolivia (Map 6A) ..... *apobama*
– Ventral: without longitudinal lobes (Fig. 571) ..... 39
39(38) Epigynum, ventral view: epigynum base with lateral, longitudinal swellings (Fig. 571); upper Amazon: eastern Peru (Map 5I) ..... *moyobamba*
– Ventral: basal plate without lateral swellings (Figs. 557, 573) ..... 40
40(39) Epigynum, posterior view: median plate widest ventrally and swollen at ventral margin (Figs. 573, 574); upper Amazon: central Peru (Map 6A) ..... *nuco*
– Posterior: median plate oval, widest in center (Fig. 558); Ecuador (Map 6B) ..... *palenque*
41(31) Epigynum, ventral view: tongue or scape with anterior constriction (Figs. 344, 491) ..... 42
– Ventral: tongue not constricted anteriorly ..... 43
42(41) Epigynum, ventral view: scape twice as long as wide (Fig. 491); southwestern Colombia (Map 5B) ..... *eberhardi*
– Ventral: with scape as long as wide (Fig. 344); Venezuela to Panama (Map 3H) ..... *falconae*
43(41) Epigynum, ventral view: sclerotized thick wide lip (Fig. 560); posterior: an hourglass-shaped median plate (Fig. 561); southwestern Ecuador, northwestern Peru (Map 6B) ..... *colonche*
– Ventral and posterior: otherwise ..... 44
44(43) Epigynum, posterior view: median plate diamond-shaped, lateral plates almost touching each other dorsally (Fig. 551); northeastern Peru (Map 5I) ..... *porcullo*
– Posterior: median plate shaped otherwise (Figs. 539) ..... 45
45(44) Epigynum, ventral view: scape longer than wide with parallel sides (Fig. 383); posterior: with pair of deep, narrow dorsoventral grooves (Fig. 384): Guianas and Amazon region (Map 5A) ..... (in part) *uraricoera*
– Ventral: scape or tongue about as long as wide, or shorter ..... 46
46(45) Epigynum, ventral view: tongue with a median, triangular, bordered swelling and posterior pocket (Fig. 600); upper Amazon: Colombia (Map 6C) ..... *latica*
– Ventral: tongue or scape without median structure (Figs. 538, 547) ..... 47
47(46) Epigynum, posterior view: median plate with ventral stalk (Figs. 548); northern Colombia (Map 5I) ..... *socorpa*
– Posterior: median plate without stalk (Figs. 551) ..... 48
48(47) Epigynum, ventral view: frame of tongue extending to sides as a swollen lip (Fig. 538); posterior: oval median plate swollen on sides (Fig. 539); coastal Ecuador (Map 5H) ..... *manglar*
– Ventral: tongue and rim of epigynum otherwise ..... 49
49(48) Epigynum, posterior view: median plate wider than long (Fig. 544) ..... 50
– Posterior: median plate longer than wide ..... 51
50(49) Epigynum, posterior view: median plate oval, with a transverse swelling,




Map 2. Distribution of *Mangora* species.

sides convex (Fig. 544); Amazon region, east-central Brazil (Map 4D) ..... *minacu*

– Posterior: median plate sides having a curved slit close to rim (Figs. 303, 305); Trinidad, Amazon, to Peru, Mato Grosso, Brazil (Map 3F) ..... (in part) *dianasilvae*

51(49) Epigynum, posterior view: lateral plates fused dorsally, enclosing long median plate (Fig. 634); southeastern Brazil (Map 4I) ..... *itatiaia*

– Posterior: lateral plates separated by median plate (Figs. 513, 521) ..... 52

52(51) Epigynum, posterior view: median plate in a groove (Fig. 513); upper Amazon: central Peru (Map 5G) ..... *oxapampa*

– Posterior: median plate otherwise (Figs. 411, 521) ..... 53

53(52) Epigynum, posterior view: wide grooves flanking median plate (Fig. 521); central Colombia (Map 5G) ..... *boyaca*

– Posterior: otherwise (Figs. 411, 555) ..... 54

54(53) Epigynum, ventral view: scape wider than rim on sides (Fig. 410); posterior: lateral plates swollen (Fig. 411); Guyana and Amazon region, Brazil (Map 4E) ..... *bovis*

– Ventral: scape as wide or narrower than sides of rim (Figs. 505, 554) ..... 55

55(54) Epigynum, posterior view: median plate narrows dorsally (Fig. 506); central Peru (Map 5C) ..... *tarma*

– Posterior: median plate not narrowing dorsally, lateral plates appear divided (Fig. 555); southern Colombia (Map 6B) ..... *pepino*

56(15) Abdomen, dorsal view: with an anteriorly fading, wide, longitudinal, posterior gray or black band (Figs. 11, 107, 112); ventral: usually with black square or one or two rectangles (Figs. 12, 108, 113, 125); book lung covers usually gray (Figs. 20, 108); sides usually with gray patch (Figs. 26, 113); all less than 3 mm total length ..... 57

– Abdomen with various patterns ..... 87

57(56) Epigynum, ventral view: rim with shallow notch (Figs. 6, 42, 81) [some may be the result of a broken tip] ..... 58

– Ventral: rim without shallow notch (Figs. 15, 48) ..... 62

58(57) Epigynum, posterior view: with a median, circular depression (Fig. 43); Serra do Divisor, western Brazil (Map 1B) ..... *acoripa*

– Posterior: without circular depression (Figs. 7, 82) ..... 59

59(58) Epigynum, posterior view: sclerotized area square with dorsal lateral swellings (Fig. 82); upper Amazon: southern Colombia (Map 1B) ..... *sturmi*

– Posterior: sclerotized area wider than long (Figs. 5, 10, 39) ..... 60

60(59) Epigynum, posterior view: with transverse curved folds (Fig. 39); upper Amazon: Colombia (Map 1A) ..... *asis*

– Posterior: without transverse folds (Figs. 5, 10) ..... 61

61(60) Epigynum, posterior view: with dorsal, light median trapezoid (Figs. 5, 7); upper Amazon: Colombia, Peru, western Brazil (Map 1A) ..... *acre*

– Posterior: with dorsal, dark median area (Fig. 10); central Amazon region (Map 1A) ..... *mapia*

62(57) Epigynum, posterior view: with pair of deep depressions with lips (Fig. 415), the distance of their diameter from the rim; southeastern, southern Brazil (Map 4F) ..... (in part) *blumenau*

– Posterior: without pair of deep depressions (Figs. 33, 49) ..... 63

63(62) Posterior view with two adjacent black discs, ventral to a dorsal dark area containing depressions (Fig. 33); ventral: epigynum projecting from abdomen, no spermathecae visible (Fig. 32); Colombia (Map 1C) ..... *pira*

– Posterior: otherwise ..... 64

64(63) Epigynum, ventral view: full width of rim lobed, length less than one-third its width anteriorly, or rim straight (Figs. 15, 48) ..... 65

– Ventral: with tongue or scape longer than one-half its width (Figs. 57, 96) ..... 73

65(64) Epigynum, ventral view: with circular bulge (Fig. 405); southeastern Brazil (Map 4F) ..... *castelo*

– Ventral: without circular bulge (Figs. 15, 48) ..... 66

66(65) Epigynum, ventral view: with transverse groove anterior to rim (Fig. 15); posterior: also with transverse, oval groove (Fig. 16); southern Mato Grosso, Brazil to eastern Paraguay (Map 2B) ..... *leverger*

– Ventral: without transverse groove (Figs. 44, 48, 414) ..... 67

67(66) Epigynum, ventral view: with black rim and median black spot (Fig. 48); posterior: dorsal, light semicircle (Fig. 49); Serra do Divisor, western Brazil (Map 1C) ..... *divisor*

– Ventral: otherwise; posterior: without

dorsal light semicircle (Figs. 18, 45) ..... 68

68(67) Epigynum, posterior view: a large, semicircular, bordered depression (Fig. 45); Ecuador to central Amazon region (Map 1C) ..... *tarapuy*

– Posterior: without bordered, semicircular depression (Figs. 18, 232) ..... 69

69(68) Epigynum, ventral view: rim with thick lip and anterior median circular depression (Figs. 231, 233); southern Brazil, northern Argentina (Map 3B) ..... *caballero*

– Ventral: without such depression and lip (Figs. 17, 27, 98) ..... 70

70(69) Epigynum, posterior view: with pair of dark, shallow, dorsoventral grooves (Fig. 18); northern Venezuela (Map 4A) ..... *grande*

– Posterior: with oval or round depressions (Figs. 28, 33) ..... 71

71(70) Epigynum, posterior view: with two light spermathecae touching rim and showing through transparent integument (Fig. 28); upper Amazon: Colombia, southern Peru and western Brazil (Map 1G) ..... *unam*

– Posterior: no spermathecae visible or spermathecae dark (Figs. 33, 86, 99) ..... 72

72(71) Epigynum, ventral view: with a transverse swelling (Fig. 98); posterior with dark circles and two round depressions some distance from rim (Fig. 99); upper Amazon: southeastern Colombia (Map 1E) ..... *caparu*

– Ventral: flat (Fig. 85); posterior: with two dark dorsal depressions (Fig. 86); upper Amazon: Colombia (Map 1B) ..... *taraira*

73(64) Epigynum posterior: with dorsal opening having a dorsal lip, its width equals one-third of diameter of tongue (Fig. 117); Guyana, southern Venezuela, Peru (Map 2A) ..... *ikuruwa*

– Posterior: otherwise (Figs. 92, 106, 111) ..... 74

74(73) Epigynum, posterior view: transverse opening with width equals almost half width of tongue (Fig. 92); southeastern Ecuador (Map 1E) ..... *logrono*

– Posterior: opening smaller (Figs. 106, 111) ..... 75

75(74) Epigynum, posterior view: with dorsal light circle (Figs, 23, 111) or rectangular light area (Figs. 64, 106) ..... 76

– Posterior: without dorsal light area (Figs. 66, 76, 357, 364) ..... 79

76(75) Epigynum, posterior view: rectangular, light, dorsal depression (Figs. 64, 106) ..... 77

– Posterior: with round depression (Figs. 23, 111) ..... 78

77(73) Epigynum, ventral view: without black line across anterior of tongue (Fig. 105); posterior: five adjacent dorsoventral swellings (Fig. 106); Amazon region (Map 1I) ..... *manicore*

– Ventral: a black line across anterior of tongue (Fig. 63); posterior: with four bulges (Fig. 64); Serra do Divisor, western Brazil (Map 1G) ..... *piroca*

78(76) Epigynum, posterior view: light semicircular opening between swollen ridges (Fig. 111); southeastern Ecuador (Map 1F) ..... *jumboe*

– Posterior: dorsal, median light semicircular opening surrounded by a black area (Fig. 23); upper Amazon: Ecuador to southern Peru (Map 1B) ..... *chiguaza*

79(75) Epigynum, ventral view: notches flanking scape (Figs. 356, 363) ..... 80

– Ventral: without notches on sides of scape (Figs. 75, 76, 317) ..... 81

80(79) Epigynum, ventral view: scape as wide as long (Fig. 356); posterior: median plate, heart-shaped (Fig. 357); southern Brazil to southern Bolivia and northwestern Argentina (Map 4B) ..... (in part) *v-signata*

– Ventral: scape longer than wide (Fig. 363); posterior: median plate with parallel sides, same width as lateral plates (Fig. 364); southern Bolivia, northwestern Argentina (Map 4D) ..... (in part) *chuquisaca*

81(79) Epigynum, ventral view: pair of ducts, looping anteriorly (Fig. 57); upper Amazon: northeastern Peru (Map 1G) ..... *umbrata*

– Ventral: without looping ducts (Figs. 87, 100) ..... 82

82(81) Epigynum, ventral view: full width of rim lobed (Figs. 87, 100) ..... 84

– Ventral: tongue set off from rim (Figs. 51, 65) ..... 83

83(82) Epigynum, posterior view: a wide lip along rim (Fig. 66); ventral spermathecae separate, with pair of posterior transverse swellings (Fig. 65); Mato Grosso, Brazil (Map 1D) ..... *antonio*

– Posterior: without wide lip, with dorsal, slit-shaped, lateral facing openings, within a dark circles (Fig. 52); upper Amazon: southern Peru (Map 1E) ..... *zona*

84(82) Epigynum, ventral view: ventral visible spermathecae separated by their diameter (Figs. 96, 100) ..... 85

– Ventral: spermathecae touching or not visible (Figs. 87, 122) ..... 86

85(84) Epigynum, posterior view: with pair of adjacent dorsoventral oval depressions (Fig. 101); upper Amazon: southeastern Colombia (Map 1I) ..... *matamata*

– Posterior: with pair of adjacent dark depressions (Fig. 97); upper Amazon: southeastern Colombia (Map 1A) ..... (in part) *ayo*

86(84) Epigynum, posterior view: with two pairs of light rings showing through integument (Fig. 88); upper Amazon: southeastern Colombia (Map 1C) ..... *vaupes*

– Posterior: no rings showing; with pair of dark, circular depressions each with a dark ventral extension (Fig. 123); Amazon region (Map 1F) ..... *sumauma*

87(56) Abdomen, dorsal view: with paired dorsal white patches on black (Figs. 247, 248); southern Guyana (Map 3C) ..... *shudikar*

– Dorsal: all black with white lateral patches or other diverse, dorsal patterns (Figs. 321, 385) ..... 88

88(87) Abdomen, dorsal view: all black with one to three white patches on sides (Figs. 385, 391) ..... 89

– Dorsal: with various patterns (Figs. 328, 333) ..... 95

89(88) Epigynum, ventral view: with transverse groove (Fig. 516); northern Peru (Map 5G) ..... (in part) *kuntur*

– Ventral: without transverse groove (Figs. 383, 389) ..... 90

90(89) Epigynum, ventral view: with scape longer than wide (Figs. 383, 389) ... 91

– Ventral: tongue, wider than long (Figs. 218, 223, 313) ..... 92

91(90) Epigynum, ventral view: scape with parallel sides (Fig. 383); posterior: with two deep, bordered grooves (Fig. 384); Guianas, Amazon region, upper Amazon (Map 5A) ..... (in part) *uraricoera*

– Ventral: scape with sides sloping, tip pointed (Fig. 389); posterior: two long, pointed triangular, lateral plates (Fig. 390); Mato Grosso, Brazil (Map 4E) ..... *aripuana*

92(90) Epigynum, ventral view: with sides of rim sclerotized, spermathecae showing through the integument, next to V-shaped, longitudinal; triangular lobes (Fig. 218); upper Amazon: southern Peru (Map 1F) ..... *puerto*

– Ventral: without sclerotized lobes on sides (Figs. 223, 269) ..... 93

93(92) Epigynum, ventral view: with a pair of sclerotized circular holes on sides of rim (Fig. 313); posterior: median plate twice as wide as long (Fig. 314); coast of Venezuela, Colombia to upper Amazon region, Peru (Map 3E) ..... *semiatra*

– Ventral: lacking circular holes on each side; posterior: median plate one and at most three-quarters as wide as long (Figs. 224, 270) ..... 94

94(93) Epigynum, ventral view: rim with lateral angles and small, round tongue (Fig. 223); Paraguay, northeastern Argentina (Map 3A) ..... *uziga*

– Ventral view: rim lacking sclerotized lateral angles, tongue pointed (Fig. 269); upper Amazon region: Peru to Bolivia (Map 3D) ..... (in part) *huallaga*

95(88) Epigynum, ventral view: with visible, transverse ducts (Fig. 465); posterior: heart-shaped median plate (Fig. 466); southern Brazil (Map 4I) ..... *sobradinho*

– Ventral: without transverse, visible ducts ..... 96

96(95) Epigynum, ventral view: rim of sclerotized base with median groove or notch (Figs. 401, 402) ..... 97

– Ventral: rim without median notch, rim straight, with tongue or scape (Figs. 127, 293) ..... 101

97(96) Epigynum, lateral view: a semicircular projection (Fig. 403); ventral: with small median lobe (as seen from slightly anterior, Fig. 401); Amazon region (Map 4A) ..... *argenteostriata*

– Ventral: epigynum otherwise (Figs. 170, 241) ..... 98

98(97) Epigynum, ventral view: rim with median notch covered by soft tissue (Figs. 170, 177) ..... 99

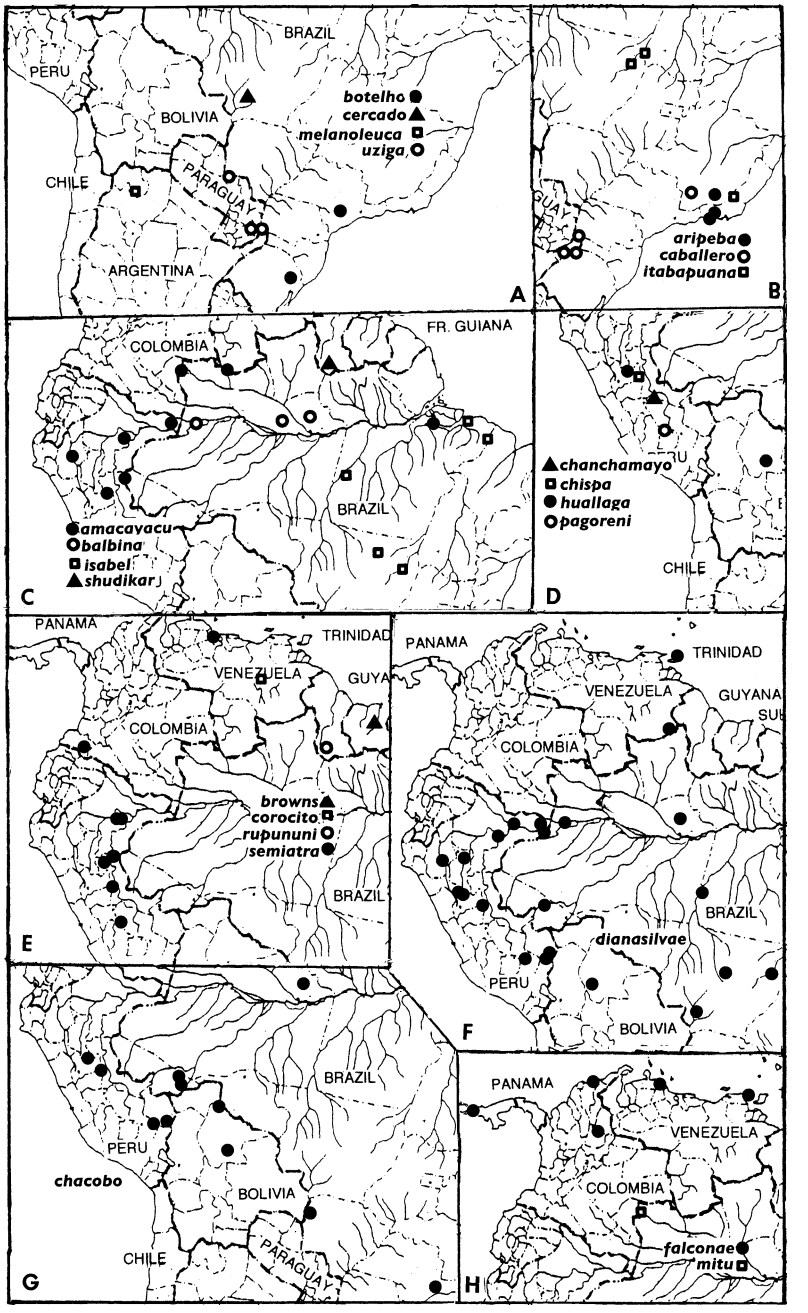
– Ventral: median septum of venter showing through a gap (Figs. 191, 193, 241) ..... 100

99(98) Epigynum, ventral view: tubercle anterior to notch (Fig. 170); southern Brazil (Map 2E) ..... *fundo*

– Ventral: with shallow longitudinal groove anterior to notch, notch with anterior longitudinal slit (Fig. 177); Mato Grosso to southern Brazil (Map 2G) ..... *bocaina*

100(98) Epigynum, posterior view: lateral plates with parallel margins above the median plate (Fig. 242); northern Argentina (Map 3A) ... *melanoleuca*

– Posterior: lateral plates with concave




Map 3. Distribution of *Mangora* species.

margins above median plate (Figs. 192, 194); northeastern Argentina (Map 2D) ..... *yacupoi*

101(96) Epigynum, ventral view: with projecting shelf, with median anterior edge extending (Fig. 397); posterior: median plate with slightly convex margins (Fig. 398); southwestern Colombia (Map 5B) ..... *barba*

– Ventral: otherwise ..... 102

102(101) Epigynum, ventral view: rim straight (Fig. 148) or the total width of rim curved, lobed (Figs. 127, 212) ..... 103

– Ventral: with set off tongue or scape (Figs. 298, 367) ..... 106

103(102) Epigynum, ventral view: with upside-down T-shaped raise dividing a pair of depressions (Fig. 148); northern Paraguay (Map 2B) ..... *peichiuta*

– Epigynum, ventral view: otherwise (Figs. 212, 516) ..... 104

104(103) Epigynum, posterior view: with two transverse slits in dark circles (Fig. 128); ventral: with triangular lobe (Fig. 127); southeastern Ecuador (Map 1H) ..... *engleri*

– Posterior: without transverse slits in dark discs (Figs. 213, 259) ..... 105

105(104) Epigynum, posterior view: with depression on tip and dorsal transverse slits (Fig. 213); French Guiana (Map 1H) ..... *saut*

– Posterior: with pair of depressions, posterior plates fused (Figs. 259, 261); ventral: a pair of black spermathecae and lighter area anterior to rim (Figs. 258, 260); Amazon region (Map 3C) ..... *balbina*

106(102) Epigynum, ventral view: tongue or scape slightly constricted anteriorly (Figs. 238, 349, 367, 372, 377) ..... 107

– Ventral: tongue or scape without anterior constriction (Figs. 296, 356, 363) ..... 113

107(106) Epigynum, posterior view: median plate, U-shaped, wider than long (Fig. 378); Panama, Trinidad, Venezuela, northern Colombia (Map 4A) ..... *amchickeringi*

– Posterior: median plate otherwise (Figs. 338, 473) ..... 108

108(107) Epigynum, ventral view: a projecting lobe on each side of scape (Figs. 367, 369); posterior view: lateral plates about as wide as scape, median plate short (Figs. 368, 370); upper Amazon: Peru (Map 5D) ..... *punctipes*

– Ventral: without projecting lobes (Fig. 372); posterior: otherwise (Figs. 373, 473) ..... 109

109(108) Epigynum, posterior view: a large oval median plate, lateral plates a thin lip (Fig. 473); Amazon region (Map 5C) ..... *mamiraua*

– Posterior: median plate other shape (Figs. 338, 350) ..... 110

110(109) Epigynum, posterior view: oval lateral plates with convex border overhanging median plate (Fig. 338); southeastern Ecuador, Amazon region, Brazil (Map 5D) ..... *morona*

– Posterior: lateral plates not oval, borders more or less parallel (Figs. 239, 350) ..... 111

111(110) Epigynum, ventral view: tongue small, twice as long as wide (Fig. 238); posterior: median plate wider than laterals (Fig. 239); southern Mato Grosso, Brazil (Map 3A) ..... *cercado*

– Ventral: tongue large, median plate width equals that of lateral plates (Figs. 349, 372) ..... 112

112(111) Epigynum, posterior: lateral plates with black patch (Fig. 373); southern Brazil (Map 4D) ..... *paula*

– Posterior: lateral plates without black patch (Fig. 350); Córdoba, north central Argentina (Map 4B) ... *sciosciae*

113(106) Epigynum, ventral view: scape with parallel sides (Figs. 75, 356) ..... 114

– Ventral: tongue diminishing in width (Figs. 298, 353) ..... 118

114(113) Epigynum, ventral view: a notch flanking scape (Figs. 356, 363) ..... 115

– Ventral: lacking notches on sides of scape (Figs. 75, 317) ..... 117

115(114) Epigynum, posterior view: median plate, heart-shaped (Fig. 357); southern Brazil to southern Bolivia, northern Argentina (Map 4B) ..... (in part) *v-signata*

– Posterior: median plate with parallel sides ..... 116

116(115) Epigynum, ventral view: notches of rim about their diameter apart (Fig. 363); southern Bolivia, northern Argentina (Map 4D) ..... (in part) *chuquisaca*

– Ventral: notches of rim more than two times their diameters apart (Fig. 70); mountains of Cuzco, Peru, to northern Argentina (Map 1D) ..... *cochuna*

117(114) Epigynum, posterior view: plates appear fused, with two deep longitudinal grooves divided by a septum (Fig. 76); Guyana (Map 2A) ..... *theridioides*

– Posterior: border of median plate turning lateral ventrally; median plate appearing mushroom-shaped (Figs.

318, 320); Amazon region to eastern Paraguay (Map 4D) ..... *chao*

118(113) Abdomen, dorsal view: with anterior, median, gray or black mark (Figs. 257, 295, 299) ..... 119

– Dorsal: without anterior median marks ..... 123

119(118) Epigynum, posterior view: with pair of small deep, bordered depressions a distance less than their diameter from rim in a triangular sclerotized area (Fig. 297); southern Brazil, northeastern Argentina (Map 1D) ..... *ramirezi*

– Posterior: without such depressions ..... 120

120(119) Epigynum, ventral view: with a tongue almost as long as wide (Fig. 353); posterior: median plate oval with convex sides (Fig. 354); central Peru (Map 5D) ..... *taczanowskii*

– Ventral: length of tongue less than two-thirds its width (Fig. 293); posterior: otherwise ..... 121

121(120) Epigynum, posterior view: with wide swollen parallel sided median plate (Fig, 394); southern Brazil (Map 4F) ..... *maximiano*

– Posterior: with median plate indistinct or fused to laterals (Figs. 252, 294) ..... 122

122(121) Epigynum, ventral view: rim with a minute pointed lobe, attached to a semicircular basal plate (Figs. 251, 253); Amazon region: Brazil to Peru (Map 3C) ..... *amacayacu*

– Ventral: with pointed scape-like lobe on surface of base, its tip two-thirds width of adjacent areas (Fig. 293); upper Amazon: Peru (Map 3D) ..... *chispa*

123(118) Epigynum, posterior view: with a pair of deep, bordered depressions, about the distance of their length from the rim based on a rectangular sclerotized area (Fig. 415); southern Brazil (Map 4F) ..... (in part) *blumenau*

– Posterior: otherwise (Figs. 133, 270, 281) ..... 124

124(123) Epigynum, posterior view: a sclerotized shield, longer than wide, plates fused, a pair of shallow grooves with dorsolateral slits (Fig. 133); southeastern Brazil, northeastern Argentina (Map 2B) ..... *enseada*

– Posterior: wider than long; plates not fused (Figs. 270, 281) ..... 125

125(124) Epigynum, posterior view: large, transverse, oval median plate with narrow lateral plates (Fig. 270); upper Amazon: Peru to Bolivia (Map 3D) ..... (in part) *huallaga*

– Posterior: median plate with more or less parallel sides ..... 126

126(125) Epigynum, ventral view: with a central pair of adjacent, dark circles, (center of Figs. 156, 164) ..... 127

– Ventral: without adjacent, dark, circles (Figs. 264, 280) ..... 128

127(126) Epigynum, ventral view: with tubercle on anterior of tongue (Fig. 164); southeastern Brazil (Map 2D) ..... (in part) *velha*

– Ventral: with shallow, median, longitudinal groove anterior of tongue (Fig. 158); southeastern Brazil to northeastern Argentina (Map 2C) ..... (in part) *missa*

128(126) Epigynum, ventral view: with anterior margin of tongue pocket forming a line with the rim (Fig. 264); southeastern Brazil (Map 3B) ..... *aripeba*

– Ventral: with pair of circular structures flanking tongue whose lips continue with the circles (Figs. 274, 280) ..... 129

129(128) Epigynum, posterior view: median plate ventrally without borders, fused to lateral plates (Fig. 281); southern Guyana (Map 3E) ..... *rupununi*

– Posterior: median plate with borders to rim (Figs. 275, 284); Tocantins, southeastern Brazil (Map 3B) ..... *itabapuana*

### SPEED KEY FOR MALES

(Left palpi are used; for their nomenclature, see Figs. 627, 628, 642.)

1 Palpal cymbium with macrosetae in a row above paracymbium (Fig. 249).
Go to 1 in Key for Males, or if not, to 2 below.

2(1) Abdomen, dorsal view: with three or more discrete, round black spots (Figs. 418, 422).
Go to 2 in Key, or if not, to 9 below.

9(2) Thorax with black or gray sides (Figs. 206, 307).
Go to 9 in Key, or if not, to 19 below.

19(9) Palpus: cymbium with proximal, dorsal, projecting tubercle (Figs. 146, 147, 152, 153).
Go to 19 in Key, or if not, to 21 below.

21(19) Palpus, mesal view: median apophysis with a proximal lobe or spine (left on median apophysis in figures of left palpi, 6 h in Fig. 126), or two lobes or spines, one on each end (7 h in Fig. 13); with a macroseta on venter proximal on femur of leg IV (Fig. 21).
Go to 21 in Key, or if not, to 29 below.

29(21) Same as 21, but without macroseta on venter proximal on femur of leg IV.
Go to 29 in Key, or if not, to 44 below.

44(29) Palpus, mesal view: median apophysis with only distal lobe or spine (right on median apophysis in figures of left palpus (6 h in Fig. 168) or no spine or distinct lobe. Fourth femur with proximal ventral macroseta (Fig. 21).
Go to 44 in Key or if not, to 57 below.

57(44) Same as 44, but without proximal ventral macroseta on femur of leg IV.
Go to 57 in Key.

## Key for Males

1 Palpus: cymbium with macrosetae in a row above paracymbium (Fig. 249); Cuzco, Peru (Map 3D) ..... *pagoreni*
– Cymbium without such macrosetae ..... 2

2(1) Abdomen, dorsal view: with three or more discrete, round black spots (Figs. 418, 422) ..... 3
– Abdomen coloration otherwise ..... 9

3(2) Palpus, mesal view: median apophysis with proximal lobe (7 h in Fig. 420, 6 h in Figs. 447, 456) ..... 4
– Median apophysis without proximal lobe (Figs. 423, 429) ..... 6

4(3) Palpus, mesal view: conductor with triangular apophysis and rugose bulge (center of Fig. 456); Amazon region, upper Amazon (Map 4C) ..... *novempupillata*
– Conductor shaped differently (Figs. 420, 447) ..... 5

5(4) Palpus, mesal view: conductor with sclerotized, flat, truncate lateral shield (center of Figs. 447, 448); Amazon region, upper Amazon (Map 4H) ..... *mathani*
– Conductor (below embolus) subtriangular; embolus slightly curved (1 h in Fig. 420); upper Amazon: western Brazil (Map 4G) ..... *anilensis*

6(3) Palpus, mesal view: visible conductor (below embolus) semicircular; a projecting lobe above embolus (2–3 h in Fig. 429); upper Amazon: Colombia (Map 4G) ..... *leticia*
– Conductor and embolus shaped differently (Figs. 423, 427) ..... 7

7(6) Palpus, mesal view: large, distal round lobe above embolus (2 h in Fig. 423); upper Amazon: Colombia, northern Peru (Map 4G) ..... *apaporis*
– Embolus without distal round lobe (Figs. 427, 435) ..... 8

8(7) Palpus, mesal view: conductor triangular (below embolus in Fig. 435); upper Amazon: central Peru (Map 5D) ..... *huancabamba*
– Conductor, subrectangular (below embolus in Fig. 427); northern Peru (Map 4G) ..... *comaina*

9(2) Thorax with black or gray sides (Figs. 206, 307) ..... 10
– Thorax without gray or black sides ..... 19

10(9) Fourth femur with ventral, proximal macroseta (Fig. 21) ..... 11
– Fourth femur without macroseta ..... 15

11(10) Palpus: terminal apophysis projecting distally (1 h in Figs. 197, 208, 209, 211) ..... 12
– Terminal apophysis confined ..... 13

12(11) Palpus, mesal view: long, wide embolus appearing broken (Figs. 208–210); common, Mexico to northern Argentina (Map 2F) ..... *melanocephala*
– Embolus entire (Figs. 197, 198); western Venezuela (Map 2A) ..... *ordaz*

13(11) Palpus, mesal view: lobe above embolus transparent (2 h in Fig. 330); Amazon region, upper Amazon to southern Mato Grosso, Brazil (Map 3G) ..... *chacobo*
– Lobe above embolus otherwise (Fig. 131) ..... 14

14(13) Palpus, mesal view: a large, round lobe above embolus (1 h in Fig. 131); upper Amazon: Peru (Map 1H) ..... *tambo*
– Small distal lobe above embolus (1 h in Fig. 115); Amazon region (Map 1H) ..... *keduc*

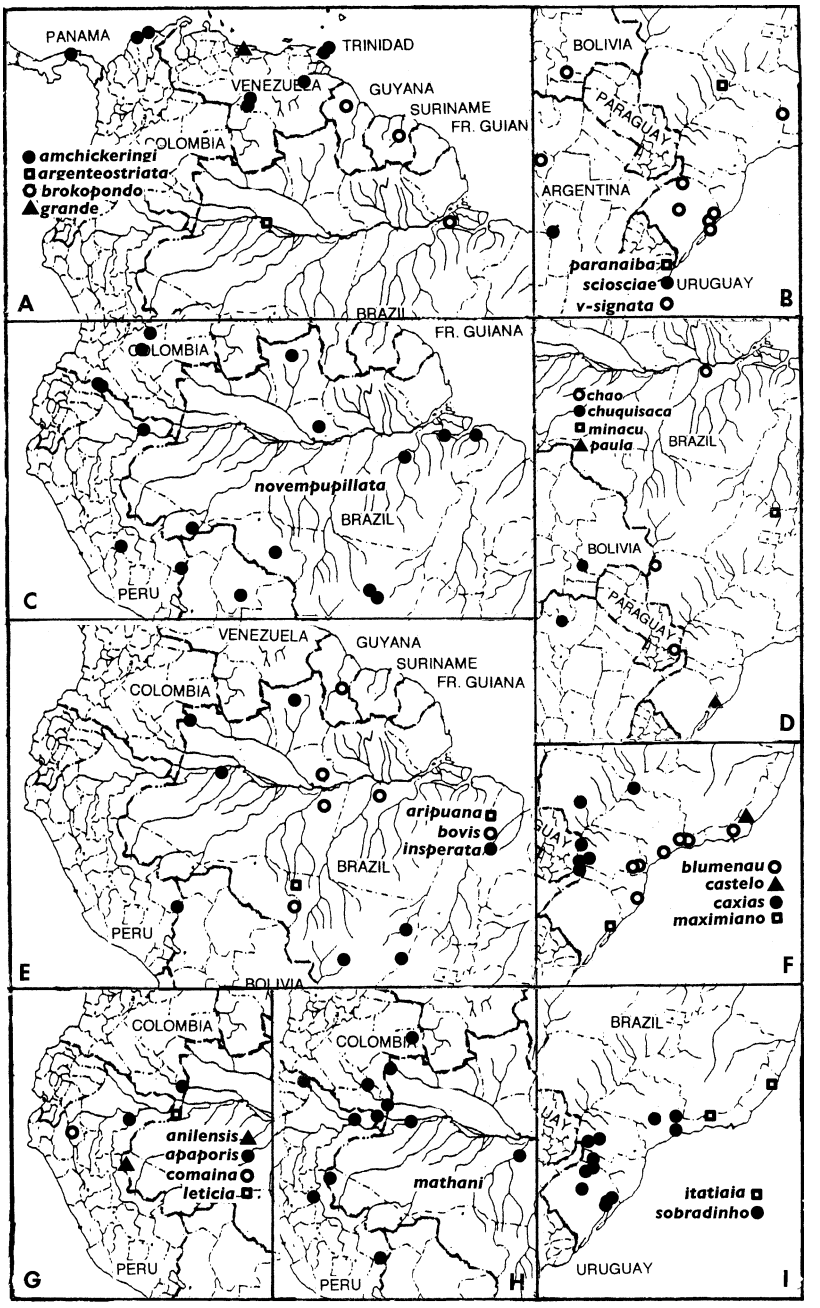
15(10) Palpus, mesal view: embolus long, curved; median apophysis with distal cylindrical lobe (Figs. 189, 308) ..... 16
– Embolus short or hidden; median apophysis otherwise (Figs. 291, 335) ..... 17

16(15) Palpus, mesal view: embolus short, base wide; median apophysis cylindrical lobe projecting ventrally from palpus (Fig. 308); Trinidad, Amazon region: Peru to southern Mato Grosso, Brazil (Map 3F) ..... *dianasilvae*
– Embolus longer, evenly curved, median apophysis cylindrical projecting lobe (5 h in Fig. 189); southwestern Colombia (Map 1I) ..... *dagua*

17(15) Palpus, mesal view: terminal apophysis with distal thorn (2 h in Fig. 335, Fig. 336); central Colombia (Map 5B) ..... *zepol*
– Terminal apophysis without distal thorn (Figs. 291, 342) ..... 18

18(17) Palpus, mesal view: conductor with a short distal lobe (3 h in Fig. 342); upper Amazon: Colombia (Map 3H) ..... *mitu*
– Conductor subcircular without distal lobe (2 h in Fig. 291); Amazon region (Map 3C) ..... *isabel*

19(9) Palpus: cymbium with proximal, dorsal, projecting tubercle (Figs. 146, 147, 152, 153) ..... 20




Map 4. Distribution of *Mangora* species.

– Cymbium with tubercle absent or very small ..... 21

20(19) Palpus, mesal view: embolus pointing distally (Fig. 146); central Colombia (Map 2A) ..... *villeta*

– Embolus pointing toward ventral side (Fig. 152); northern Paraguay (Map 2B) ..... *peichiuta*

21(19) Palpus, mesal view: median apophysis with a proximal lobe or spine (left on median apophysis in Figures of left palpi, 6 h in Fig. 126), or two lobes or spines, one on each end (7 h in Fig. 13) ..... 22

– Median apophysis with only one distal lobe or spine (right on median apophysis in Figures of left palpus, (6 h in Fig. 168) or no spine or distinct lobe ..... 44

22(21) Fourth femur with ventral proximal macroseta (Fig. 21) ..... 23

– Fourth femur without macroseta ..... 29

23(22) Palpus, mesal view: terminal apophysis with a distally indented projecting sclerite (2 h in Figs. 603, 610) ..... 24

– Terminal apophysis otherwise ..... 25

24(23) Palpus, mesal view: terminal apophysis projecting beyond bulb with length equal to width (2 h in Fig. 610); upper Amazon: Colombia, Ecuador, western Brazil (Map 6C) ..... *tefe*

– Terminal apophysis projecting less than its width (2 h in Fig. 603); upper Amazon: Central Peru (Map 6C) ..... *woytkowskii*

25(23) Palpus, mesal view: embolus filamentous, pointing to 3 h (center Fig. 511); southern Brazil (Map 5F) ..... *florestal*

– Embolus short (Figs. 347, 583) ..... 26

26(25) Palpus, mesal view: proximal projection of median apophysis bent apically (7 h in Fig. 36); embolus pointing to 1 h; upper Amazon: Colombia (Map 1C) ..... *pira*

– Median apophysis proximal projection otherwise (Figs. 347, 375) ..... 27

27(26) Palpus, mesal view: median apophysis with pair of short sharp spines; embolus hidden (Fig. 375); southern Brazil (Map 4D) ..... *paula*

– Median apophysis with blunt spines (Figs. 347, 583); embolus exposed ..... 28

28(27) Palpus, mesal view: embolus slightly curved (center of Fig. 583); upper Amazon: southeastern Peru, Brazil, Bolivia (Map 6A) ..... *apobama*

– Embolus triangular, straight (center of Fig. 347); Panama, Venezuela (Map 3H) ..... *falconae*

29(22) Palpus, mesal view: median apophysis with only one proximal lobe or spine (Figs. 121, 388) ..... 30

– Median apophysis with spines or lobes, one on each end (Figs. 217, 532) ..... 34

30(29) Palpus, mesal view: proximal spine of median apophysis pointed, curled, pointing toward tibia (Figs. 121, 126) ..... 31

– Proximal view spine not curled facing down or a blunt lobe present (Fig. 273) ..... 32

31(30) Palpus, mesal view: conductor subrectangular (3 h in Fig. 121); Guyana, southern Venezuela, Peru (Map 2A) ..... *ikuruwa*

– Conductor semicircular (Fig. 126); Amazon region (Map 1F) ..... *sumauma*

32(30) Palpus, mesal view: proximal spine of median apophysis pointing apical (Fig. 388); Guianas, Amazon region (Map 5A) ..... *uraricoera*

– Proximal lobe or spine horizontal or pointing toward tibia (Figs. 50, 273) ..... 33

33(32) Palpus, mesal view: median apophysis with proximal lobe pointing toward tibia (Fig. 273); upper Amazon: Peru to Bolivia (Map 3D) ..... *huallaga*

– Median apophysis spine straight (Fig. 50); western Brazil (Map 1C) ..... *divisor*

34(29) Palpus, mesal view: proximal end of median apophysis with a blunt lobe (Figs. 8, 13, 135) ..... 35

– Proximal end with pointed spine (Figs. 104, 476) or pointed triangle (Fig. 532) ..... 39

35(34) Palpus, mesal view: proximal end with lobe hanging down toward tibia (Fig. 13); Amazon region (Map 1A) ..... *mapia*

– Proximal lobe straight, pointing to cymbium or pointing apically (Figs. 135, 163) ..... 36

36(35) Palpus, mesal view: proximal and distal ends of median apophysis pointing apically (Fig. 163); southeastern Brazil to northeastern Argentina (Map 2C) ..... *missa*

– Proximal lobe more or less straight, pointing to cymbium (Figs. 8, 217) ..... 37

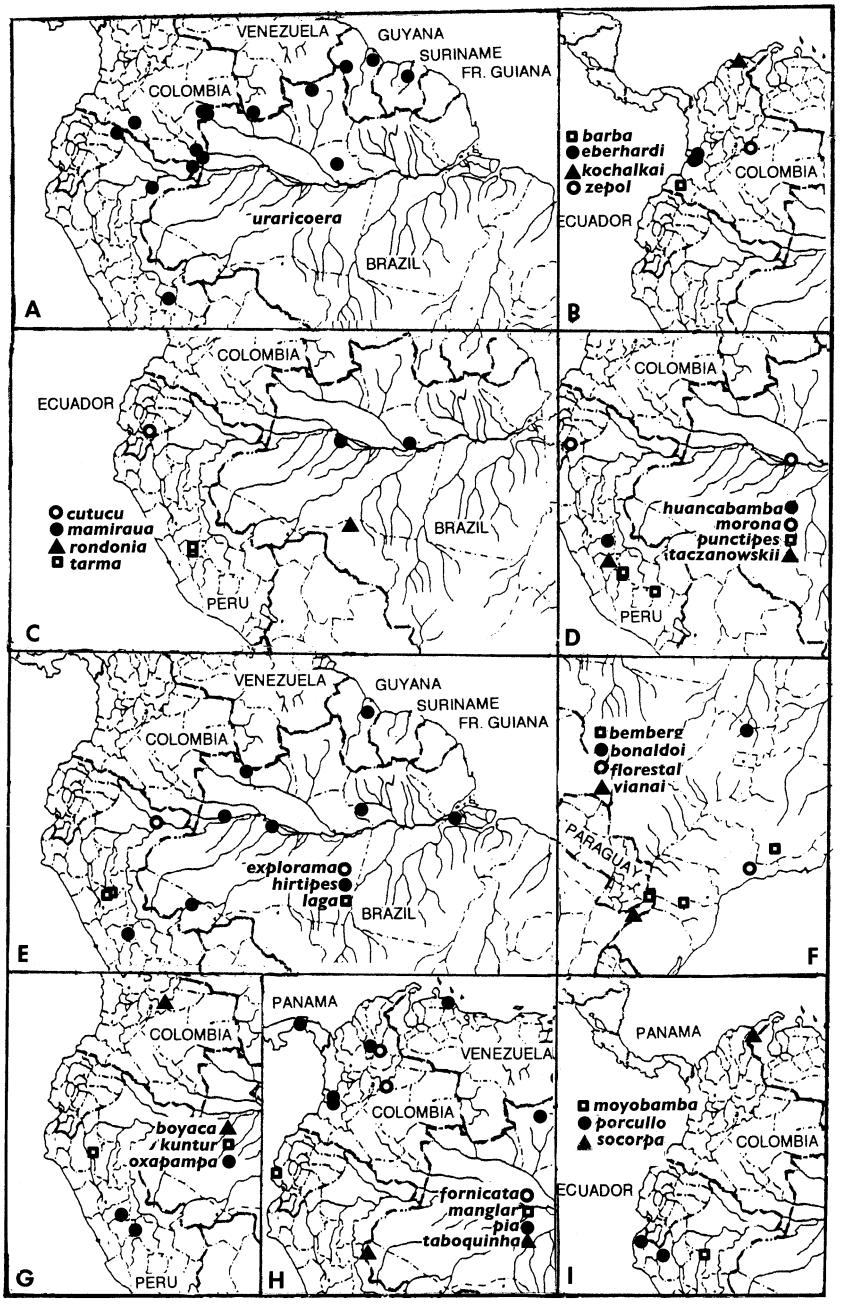
37(36) Palpus, mesal view: embolus long, semicircular (Fig. 217); Mato Grosso to Rio de Janeiro States, Brazil (Map 2D) ..... *chavantina*

– Embolus short (Figs. 8, 135) ..... 38

38(37) Palpus, mesal view: a pointed shield with two-pointed projection covering most of bulb (Fig. 135); southern Brazil, northeastern Argentina (Map 2B) ..... *enseada*

– No shield; embolus triangular (Fig. 8); upper Amazon: Colombia, Peru, western Brazil (Map 1A) ..... *acre*

39(34) Palpus, mesal view: proximal projection a




Map 5. Distribution of *Mangora* species.

pointed triangle above median apophysis attachment (Fig. 532); central Colombia (Map 5H) ..... *fornicate*

– Proximal projection a pointed spine (Figs. 104, 476) ..... 40

40(39) Palpus, mesal view: proximal spine of median apophysis pointing apically (Fig. 476); Amazon region (Map 5C) ..... *mamiraua*

– Proximal spine pointing toward cymbium (Figs. 104, 322) ..... 41

41(40) Palpus, mesal view: visible embolus a curved saber (Fig. 104); upper Amazon: southeastern Colombia (Map 1I) ..... *matamata*

– Embolus straight or hidden in mesal view (Figs. 244, 322, 381) ..... 42

42(41) Palpus, mesal view: embolus straight (one-third from top of Fig. 322); Amazon region to eastern Paraguay (Map 4D) ..... *chao*

– Embolus mostly hidden (Figs. 244, 381) ..... 43

43(42) Palpus, mesal view: embolus hidden by a large sclerotized, distally rounded lobe (2 h in Fig. 381); Panama, Trinidad, Venezuela, northern Colombia (Map 4A) ..... *amchickeringi*

– Embolus mostly hidden by a pointed lobe (Fig. 244); northwestern Argentina (Map 3A) ..... *melanoleuca*

44(21) Fourth femur with proximal ventral macroseta (Fig. 21) ..... 45

– Fourth femur lacking a proximal ventral macroseta ..... 57

45(44) Palpus: the terminal apophysis projecting apically beyond bulb (Figs. 489, 490); southern Brazil to northeastern Argentina (Map 5F) ..... *bemberg*

– No such straight, projecting terminal apophysis ..... 46

46(45) Palpus, mesal view: median apophysis with a distal, truncate lobe having a triangular projection (Fig. 614); Panama to northern Brazil (Map 5H) ..... *pia*

– Median apophysis with distal lobe lacking triangular projection or spine (Figs. 463, 576) ..... 47

47(46) Palpus, mesal view: median apophysis with distal lobe truncate or rounded (Figs. 463, 576) ..... 48

– Median apophysis with a pointed spine ..... 52

48(47) Palpus, mesal view: median apophysis lobe appearing truncate (Fig. 576); upper Amazon: central Peru (Map 6A) ..... *nuco*

– Median apophysis lobe appearing rounded (Figs. 463, 598, 620) ..... 49

49(48) Palpus, mesal view: embolus sword-shaped (Fig. 463); Colombia to Mato Grosso, Brazil (Map 4E) ..... *insperata*

– Embolus short, flat-triangular ..... 50

50(49) Palpus, mesal view: terminal apophysis with upright sclerite having two or three wide, ventral spines (12–2 h in Figs. 598, 620) ..... 51

– Terminal apophysis lacking upright sclerite with two or three spines (Fig. 589); southern Brazil, northeastern Argentina (Map 4F) ..... *caxias*

51(50) Palpus, mesal view: upright sclerite with upper notch wider than long (Fig. 620); southwestern Colombia (Map 6B) ..... *bambusa*

– Upright sclerite with upper notch as long as wide (Fig. 598); southern Ecuador, northwestern Peru (Map 6A) ..... *lechugal*

52(47) Palpus, ventral view: spine almost length of median apophysis (Figs. 80, 570) ..... 53

– Spine of median apophysis short (Fig. 470) ..... 54

53(52) Palpus, mesal view: terminal apophysis with projecting curved apical hook (1 h Fig. 79); upper Amazon: central Peru (Map 1I) ..... *uru*

– Terminal apophysis lacking projecting hook (Fig. 570); upper Amazon: central Peru (Map 5E) ..... *laga*

54(52) Palpus, mesal view: terminal apophysis with broad sclerotized shield covering distal half of bulb (Fig. 504); northeastern Argentina (Map 5F) ..... *bonaldoi*

– Terminal apophysis lacking shield; with distal apical encircling prong (2 h in Figs. 62, 69; 10 h in Fig. 74) ..... 55

55(54) Palpus, mesal view: distal prong lightly sclerotized (Figs. 470, 471); more than 3.0 mm total length; southern Brazil (Map 4I) ..... *sobradinho*

– Distal prong heavily sclerotized (Figs. 62, 74); less than 2.5 mm total length ..... 56

56(55) Palpus, mesal view: conductor hourglass-shaped (3 h in Fig. 62); Bolivian mountains near La Paz (Map 1G) ..... *cajuta*

– Conductor hidden in mesal view (Fig. 73); mountains of Cuzco, Peru to northwestern Argentina (Map 1D) ..... *cochuna*

57(44) Palpus, mesal view: embolus long, curved (Figs. 222, 417, 519) ..... 58

– Embolus short (Fig. 625) ..... 61

58(57) Palpus, mesal view: bulb wider than long (Fig. 417); southern Brazil (Map 4F) ..... *blumenau*

– Bulb slightly longer than wide (Figs. 222, 519) ..... 59

59(58) Palpus, mesal view: embolus thin, almost

filamentous, its base not visible (Fig. 519); northern Peru (Map 5G) ..... *kuntur*
– Embolus heavier with base (Fig. 222, 230) ..... 60
60(59) Palpus, mesal view: base of embolus covered by cymbium (Fig. 222); southern Brazil (Map 3A) ..... *botelho*
– Base of embolus exposed (Fig. 230); Paraguay, northeastern Argentina (Map 3A) ..... *uziga*
61(57) Palpus, mesal view: distal band of terminal apophysis hanging apically above bulb (Figs. 625, 626); southern Brazil, northeastern Argentina (Map 6D) ..... *strenua*
– Terminal apophysis otherwise ..... 62
62(61) Palpus: terminal apophysis with distal apical, encircling prong (Figs. 69, 496) ..... 63
– Terminal apophysis lacking distal encircling structure ..... 64
63(62) Palpus: encircling structure pointed (Figs. 68, 69); northwestern Argentina (Map 1D) ..... *yungas*
– Encircling structure appearing truncate in ventral view (Fig. 496); southwestern Colombia (Map 5B) ..... *eberhardi*
64(62) Palpus, mesal view: terminal apophysis with a projecting shield, extending beyond bulb (2 h in Figs. 109, 176, 185, 1 h in Figs. 278, 301) ..... 65
– Terminal apophysis without a projecting shield ..... 70
65(64) Palpus, mesal view: shield projecting distally from palpus (1 h in Figs. 278, 301) ..... 66
– Shield projecting ventrally (2–3 h in Figs. 109, 176, 185) ..... 67
66(65) Palpus, mesal view: embolus an unusually wide hook (1 h in Fig. 278); central Venezuela (Map 3E) ..... *corocito*
– Embolus a distally narrow hook (Fig. 301); southern Brazil, northeastern Argentina (Map 1D) ..... *ramirezi*
67(65) Palpus, mesal view: embolus with a more distal almost parallel hook (2 h in Fig. 109); Amazon region (Map 1I) ..... *manicore*
– Embolus without distal hook ..... 68
68(67) Palpus, mesal view: median apophysis distal projection within frame of bulb (Fig. 185); Mato Grosso, southern Brazil (Map 2G) ..... *bocaina*
– Median apophysis distal projection extends beyond bulb (Figs. 168, 176) ..... 69
69(68) Palpus, mesal view: median apophysis hook with rounded tip and projecting ventrally (5 h in Fig. 176); southern Brazil (Map 2E) ..... *fundo*
– Median apophysis hook pointed and projecting toward observer (6 h in Fig. 168); southern Brazil (Map 2D) ..... *velha*
70(64) Palpus, mesal view: embolus a large curved hook (Fig. 267); Minas Gerais, Rio de Janeiro States, southeastern Brazil (Map 3B) ..... *aripeba*
– Embolus not hook-shaped (Fig. 504) or a small hook (Fig. 142) ..... 71
71(70) Palpus, mesal view: several soft lobes above embolus (Fig. 142); southern Brazil (Map 2B) ..... *melloleitaoi*
– Never more than one lobe above embolus ..... 72
72(71) Abdomen, dorsal view: light color with a pair of black spots posteriorly (Figs. 503, 510) ..... 73
– Coloration otherwise ..... 78
73(72) Palpus, mesal view: terminal apophysis covering distal half of bulb with a truncate shield (12 h in Fig. 545); Amazon region: Brazil (Map 4D) ..... *minacu*
– No such shield present ..... 74
74(73) Palpus, mesal view: bulb with two longitudinal, distally bent columns (Fig. 594); Amazon region, Ecuador, Bolivia (Map 6A) ..... *alinahui*
– Bulb with a pointed or blunt, ventrally directed structure (Figs. 523, 636) ..... 75
75(74) Palpus, mesal view: central truncate structure (Fig. 636); southeastern Brazil (Map 4I) ..... *itatiaia*
– Central structure pointed (Figs. 523, 632) ..... 76
76(75) Palpus, mesal view: with terminal apophysis formed into a large spine (2 h in Fig. 523); median apophysis with large pointed overlapping spine (Fig. 523); central Colombia (Map 5G) ..... *boyaca*
– Terminal apophysis otherwise (Figs. 413, 632) ..... 77
77(76) Palpus, mesal view: a flat curved lobe above embolus (2 h in Fig. 413); Guyana and Amazon region, Brazil (Map 4E) ..... *bovis*
– Embolus a thick, curved, structure, without lobe above (Fig. 632); southeastern Brazil (Map 2D) ..... *nonoai*
78(72) Palpus, mesal view: distal embolus needle-shaped at right angle to its base (Fig. 316); coast of Venezuela, Colombia to upper Amazon, Peru (Map 3E) ..... *semiatra*
– Embolus otherwise ..... 79
79(78) Palpus, mesal view: center of bulb with thick straight spine; two projections on ventral side of bulb (Fig. 409); southeastern Brazil (Map 4F) ..... *castelo*
– Center of bulb and margin of bulb otherwise ..... 80
80(79) Palpus, mesal view: a bulge below embolus (center of Fig. 55); upper Amazon: southern Peru (Map 1E) ..... *zona*
– Embolus without bulge (Fig. 362) ..... 81

81(80) Palpus, mesal view: embolus straight with angular lobe above (Fig. 362); southern Brazil to southern Bolivia and northwestern Argentina (Map 4B) ..... *v-signata*
– Embolus curved up; median apophysis otherwise (Figs. 31, 237) ..... 82
82(81) Palpus, mesal view: conductor with sclerotized thimble-shaped lobe (4 h in Fig. 31); upper Amazon: Brazil, Colombia, southern Peru (Map 1G) ..... *unam*
– Conductor otherwise (Figs. 237, 641) .... 83
83(82) Palpus, mesal view: terminal apophysis, with small spine, projects above bulb (12 h in Fig. 641); embolus spine-shaped and pointing to 2 h (Fig. 641); abdomen with white pigment spots (as in Fig. 640); southeastern Bolivia, southern Brazil to northern Argentina (Map 6E) ..... *lactea*
– Terminal apophysis otherwise; embolus straight with slight distal curve pointing to 3 h (Fig. 237); southern Brazil, northeastern Argentina (Map 3B) ..... *caballero*

## *Mangora acre* new species
Figures 4–8; Map 1A

*Holotype.* Female holotype from Parque Nacional da Serra do Divisor, Acre, Brazil, 10 Mar. 1997 (L. Resende, R. Vieira) in IBSP 12444. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish, eye region gray; sternum, legs grayish on yellow. Abdomen: dorsum without marks; venter with ring around spinnerets and slightly gray book lung covers (as in *M. mapia,* Figs. 11, 12). Posterior eye row strongly procurved. Ocular quadrangle as long as anterior width; anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.3 diameter. Anterior median eyes 0.7 diameter apart, 0.2 from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.2 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 1.0 mm, patella and tibia 1.1, metatarsus 0.8, tarsus 0.5. Second patella and tibia 0.9 mm, third 0.6, fourth 1.0.

Male from Rio Branco. Prosoma: eye region black. Sternum, coxae gray. Abdomen: dorsum with a gray posterior band; venter with gray quadrangle, black book lung covers and gray ring around spinnerets; sides with a gray patch posteriorly. Anterior median eyes projecting slightly from carapace. Posterior eye row slightly procurved. Ocular quadrangle as long as anterior width; anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Second, third, and fourth coxae with a median macroseta. Total length 2.1 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.3. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

Males and females have been collected together.

*Variation.* Total length of females 2.2 to 2.4 mm, males 1.7 to 2.1. The illustrations were made from the female holotype and male from Rio Branco.

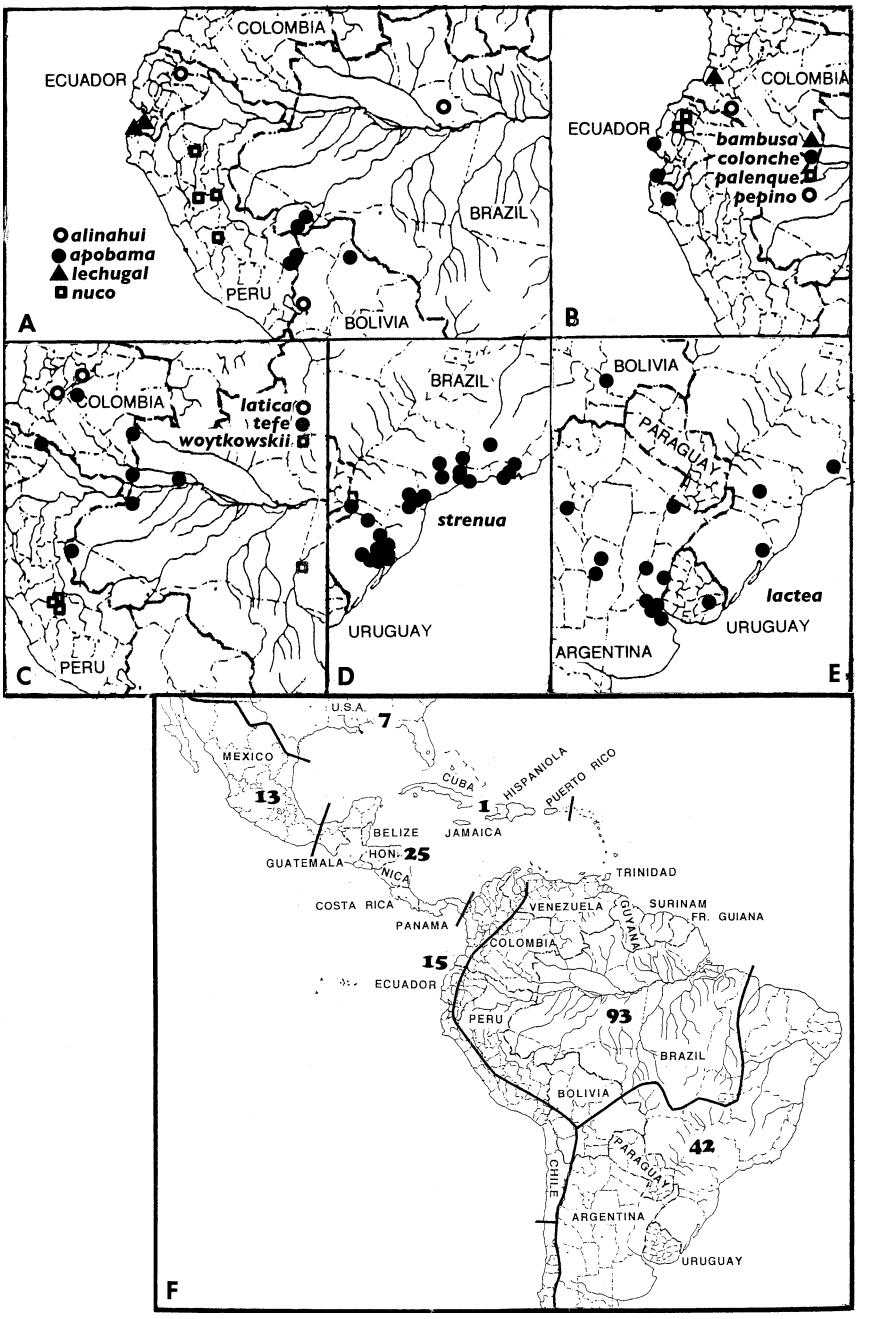
*Diagnosis.* The rim of the epigynum of the available specimens may have broken off. *Mangora acre* is separated from *M. mapia* by having, in posterior view of the epigynum, a light dorsal median trapezoid (6 h in Figs. 5, 7), whereas that area in *M. mapia* is dark (Fig. 10).

The male is separated by the median apophysis of the palpus (6 h in Fig. 8), which has two distal spines and a proximal lobe in *M. acre*, whereas that of *M. mapia* has only one visible spine and a proximal lobe (7 h in Figs. 13, 14). Both are separated from other species by the shape of the elongated sclerotized area of the terminal apophysis (2 h in Figs. 8, 13).

*Distribution.* Upper Amazon region: Colombia, Peru, western Brazil (Map 1A).

*Paratypes.* BRAZIL *Acre:* Parque Nacional da Serra do Divisor, 15, 24 Mar. 1997, 4♀ (L. Resende, S. Vieira, IBSP 12267, 12362).

*Specimens Examined.* PERU *Ucayali:* Pucallpa,




Map 6. (A–E) Distribution of *Mangora* species. (F) Approximate number of *Mangora* species known from American regions.

Bosque Nacional Alexander von Humboldt, zona de plantation 146, 30 July 1986, 1♀ (D. Silva D., MUSM). *Huánuco:* Estacion Dantas, La Molina, Quebrada Sapote, SW of Puerto Inca, 270 m, 09°38′S, 75°00′W, 18 May–1 June 1987, 5♀ (D. Silva D., MUSM). *Pasco:* Huancabamba, Quebrada Castillo, NW of Iscozacin, 345 m, 10°10′S, 75°15′W, 8–11 Sep. 1987, 5♀, 1♂ (D. Silva D., MUSM); Quebrada Chispa, 345 m, ca. 10°10′S, 75°15′W, 28 Oct., 1 Nov. 1986, 4♀ (D. Silva D., MUSM). *Cuzco:* Cashiari, 11°52′S, 72°39′W, 26 Nov. 1997, 1♀ (J. Duarez, MUSM). *Madre de Dios:* 15 km E of Puerto Maldonado, ca. 12°33′S, 69°03′W, 200 m, 9 June–10 July 1989, 2♀, 6♂ (D. Silva D., MUSM). BRAZIL *Amazonas:* Parque Nacional do Pico da Neblina, 13 Oct. 1990, 1♀ (A. A. Lise, MCP). *Acre:* Parque Nacional da Serra do Divisor, Juazeiro, 24 Nov. 1996, 1♀ (R. S. Vieira, IBSP 9046); Reserva Extrativista Humaitá, Rio Branco, 12 May 1996, 2♀, 2♂ (IBSP/SMNK staff, IBSP 15753).

### *Mangora mapia* new species
### Figures 9–14; Map 1A

*Holotype.* Female holotype, one male paratype from Borba, Rio Mapiá, Amazonas, Brazil, 22 Apr. 1996 (IBSP/SMNK staff), in IBSP 15977. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace yellowish white, eye region black. Sternum gray. Coxae, legs yellowish white. Abdomen: dorsum with indistinct posterior gray band (Fig. 11); venter with a transverse gray rectangle, epigastric area gray, ring around spinnerets gray; sides with gray patch (Fig. 12). Posterior eye row procurved. Ocular quadrangle as long as anterior width; anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 2.2 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.1 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6, fourth 0.9.

Male paratype. Coloration darker gray than female. Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.6 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Second patella and tibia curved and with long macrosetae including one distal macroseta. Total length 1.8 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.2 wide behind lateral eyes, 0.7 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.4, fourth 0.8.

The female holotype and male paratype were collected at the same locality on different days.

*Diagnosis.* The *Mangora mapia* epigynum rim may be broken off in both holotype and paratype (Figs. 9, 10). In posterior, view the dorsal, median area is black (6 h in Fig. 10), whereas that of *M. acre* has a light dorsal trapezoid (6 h in Fig. 5). Unlike most other species, the femur is as long or longer than patella and tibia.

The male has the second tibia curved with long macrosetae. The male is separated by the median apophysis of the palpus, which has two lobes (7 h in Figs. 13,

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Figure 1. Lateral view of male *Mangora* semiatra new species.

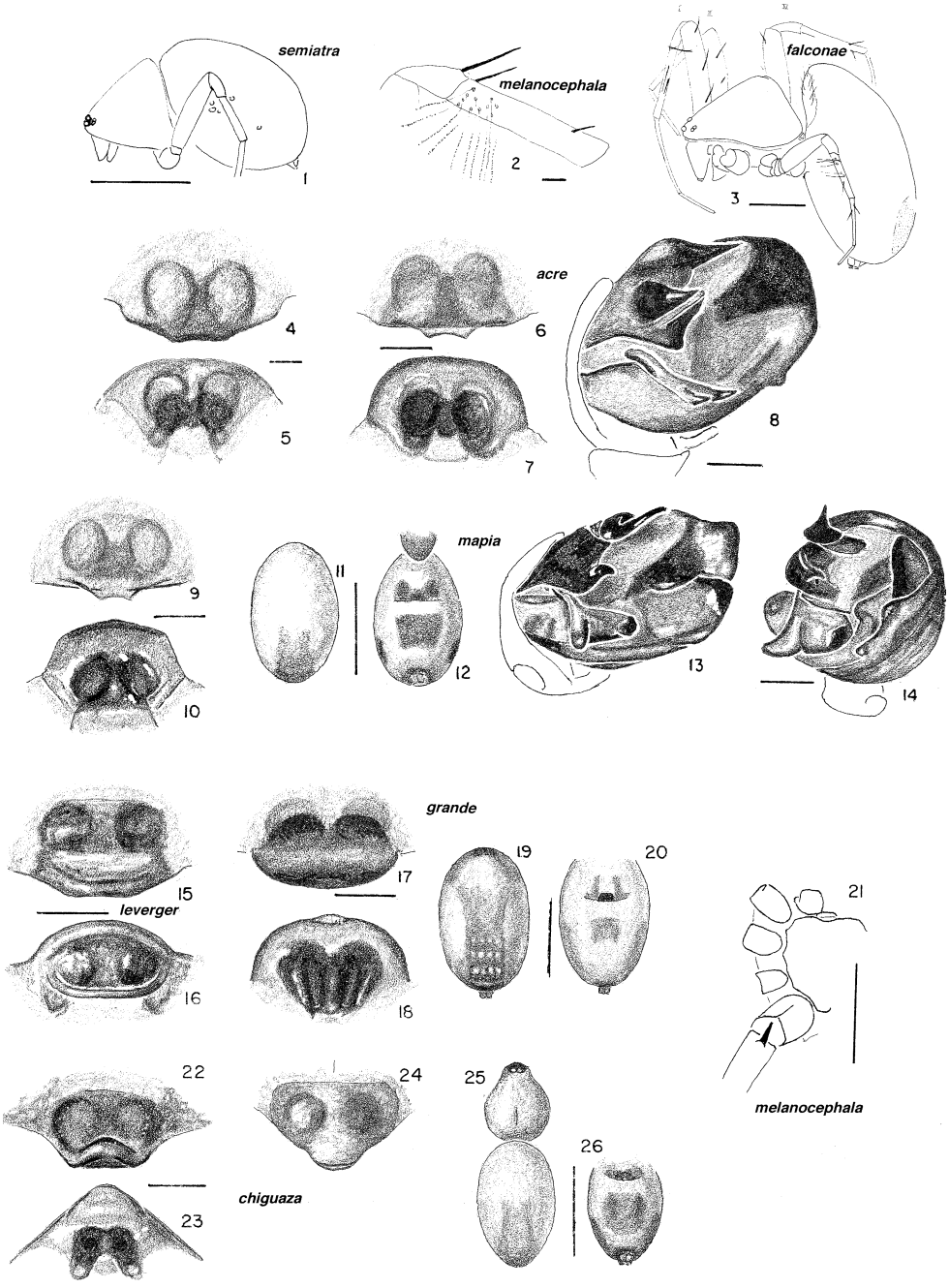
Figure 2. Left third leg of female *M. melanocephala* (Taczanowski).

Figure 3. Lateral view of female *M. falconae* Schenkel.

Figures 4–8. *M. acre* new species. 4–7, female epigynum. 4, 6, ventral; 5, 7, posterior. 8, left male palpus, mesal.

Figures 9–14. *M. mapia* new species. 9–12, female. 9, 10, epigynum. 9, ventral; 10, posterior. 11, 12, abdomen. 11, dorsal; 12, ventral. 13, 14, male palpus. 13, mesal; 14, ventral.

Figures 15, 16. *M. leverger* new species, female, epigynum. 15, ventral; 16, posterior.




Figures 17–20. *M. grande* new species, female. 17, 18, epigynum. 17, ventral; 18, posterior. 19, 20, abdomen. 19, dorsal; 20, ventral.

Figure 21. Ventral macroseta in fourth femur of male *M. melanocephala* (Taczanowski).

Figures 22–26. *M. chiguaza* new species, female. 22–24, epigynum. 22, 24, ventral; 23, posterior. 25, carapace, abdomen. 26, abdomen, ventral.

*Scale lines:* 1.0 mm; genitalia and Figure 2, 0.1 mm.

14), one of them pointed, and the tip of the embolus is a curved thorn, whereas the median apophysis of *M. acre* has two spines and a lobe and the embolus is a straight spine (6 h in Fig. 8). Both species can be separated from others by the elongated sclerotized area of the terminal apophysis (2 h in Figs. 8, 13).

*Distribution.* Amazon region (Map 1A).

*Paratypes.* BRAZIL *Amazonas:* Borba, Rio Mapiá, 23 Apr. 1996, 1♀ (IBSP/SMNK staff, IBSP 15973).

*Specimens Examined.* No other specimens have been found.

### *Mangora leverger* new species
Figures 15, 16; Map 2B

*Holotype.* Female holotype from Santo Antônio de Leverger, Mato Grosso, Brazil, 29 July 1992 (A. A. Lise, A. Braul), in MCP 2396a. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. The coloration is as in *M. mapia* (Figs. 11, 12). Prosoma yellowish, eye region black, a black rim on thoracic area. Sternum black. Abdomen: dorsum with an anterior gray patch and a median posterior band; venter, book lungs black; venter with gray central triangular area and a black ring around spinnerets; sides with a posterior gray patch. Posterior eye row slightly procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.6 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 1.2 diameters apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 2.2 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 1.0 mm, patella and tibia 1.1, metatarsus 0.8, tarsus 0.3. Second patella and tibia 0.9 mm, third 0.6, fourth 1.1.

The male is unknown.

*Diagnosis. Mangora leverger* has the characteristic coloration of other small *Mangora* (Figs. 11, 12) but differs from others by the epigynum, which, in ventral view, has a transverse depression and a lip along its margin (Fig. 15), and in posterior view, also a transverse depression with a ventral and dorsal lip (Fig. 16). The similar *M. kuntur* epigynum differs by lacking the dorsal lip in posterior view (Fig. 517).

*Distribution.* Southern Mato Grosso, Brazil, to eastern Paraguay (Map 2B).

*Specimens Examined.* PARAGUAY *Alto Paraná:* Taquarazapa, ?1908–1909, 1♀ (AMNH Ac. 3721).

### *Mangora grande* new species
Figures 17–20; Map 4A

*Holotype.* Female holotype from Rancho Grande, Aragua, Venezuela, 25–31 March 1945 (W. Beebe et al.), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Specimen yellowish white, eye region dark gray. Abdomen: dorsum with gray band containing light spots; venter with a square gray patch (Fig. 20). Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.2 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.1 mm, third 0.6. Fourth femur 1.2 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.4.

The male is not known.

*Variation.* Total length of females 2.3 to 2.5 mm. The paratype is much darker than the holotype (Figs. 19, 20) and the sternum is slightly gray, as are the distal leg articles. Figures 17, 18 were made from the holotype.

*Diagnosis. Mangora grande* epigynum is heavily sclerotized with a slight curvature of the rim in ventral view (Fig. 17) and is distinguished from other species by having a pair of dorsoventral grooves with dorsal openings within a pair of black depressions in posterior view (Fig. 18).

*Distribution.* Northern Venezuela (Map 4A).

*Paratype.* VENEZUELA *Aragua:* Rancho Grande Biological Station, 1♀ (C. T. Collins, AMNH).

*Specimens Examined.* No other specimens have been found.

### *Mangora chiguaza* new species
Figures 22–26; Map 1B

*Holotype.* Female holotype and one female paratype from Chiguaza, Prov. Wakani, Morona-Santiago, Ecuador, 22 May–3 June 1977 (N. Engler) in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace yellowish, eye region black. Endites, labium gray. Sternum gray, lightest in center. Coxae yellowish; distal leg articles gray, distally darkest. Abdomen: yellowish-white, dorsum with posterior median black band (Fig. 25); venter with a central gray square, spinnerets circled with gray; sides with a posterior gray patch (Fig. 26). Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 their diameter apart, 0.5 from laterals. Posterior median eyes 0.6 their diameter apart, 1.2 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.9 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.7. Fourth femur 1.0 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.5.

The male is unknown.

*Variation.* Total length of females 2.3 to 2.6 mm. The illustrations were made from the female holotype.

*Diagnosis. Mangora chiguaza* epigynum is similar to that of *M. acre* (Fig. 5) but the rim is evenly curved and in posterior view has a darker median dorsal area (6 h in Fig. 23).

*Distribution.* Upper Amazon: Ecuador to southern Peru (Map 1B).

*Specimens Examined.* PERU *Madre de Dios:* Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 9, 13 June 1988, 2♀ (J. Coddington, USNM).

### *Mangora unam* new species
Figures 27–31; Map 1G

*Holotype.* Female holotype from Puesto de Vigil. Pakitza, Zona Reservada Manu, Madre de Dios, Peru, 11°58′S, 71°18′W, 9 Oct. 1987 (D. Silva D., J. Coddington), in USNM. The specific name is a noun in apposition after an anagram of the type locality.

*Description.* Female holotype. Specimen light yellow. Eye region black. Abdomen: dorsum with a posterior gray longitudinal band (Fig. 29), venter with a pair of gray patches, book lung covers gray, spinnerets gray, a black ring around spinnerets; sides of abdomen with gray patches (Fig. 30). Eyes appear small. Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; anterior lateral eyes 0.6 diameter, posterior 0.4. Anterior median eyes 0.6 diameter apart, 0.4 from laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 1.8 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.4. Second patella and tibia 1.0 mm, third 0.6, fourth 1.1.

Male from Colombia. Coloration as in female. Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.5 diameter of anterior medians; anterior lateral eyes 0.3 diameter, posterior 0.2. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 1.0 diameter apart, 1.5 from laterals. Height of clypeus equals 3.0 diameters of anterior median eyes. Total length ca. 1.8 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7

high. First femur 0.9 mm, patella and tibia 1.1, metatarsus 0.7, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

The males and females have been collected together.

*Variation.* Total length of females 2.2 to 2.3 mm. The illustrations were made from female holotype and male from Colombia.

*Diagnosis.* The transverse swelling of the *M. unam* epigynum (Fig. 27) is similar to that of *M. grande* (Fig. 17) but differs in posterior sculpturing (Fig. 28).

The male is separated from others by the U-shaped tongue of the conductor (central, near 5 h in Fig. 31) and by the curvature of the embolus (center of Fig. 31).

*Distribution.* Upper Amazon: Colombia, southern Peru, western Brazil (Map 1G).

*Specimens Examined.* COLOMBIA *Vaupés:* Mpo. Taraira, Serra Taraira, Caño Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 11♀, 1♂ (J. Pinzón, ICNB 3336). PERU *Cuzco:* Camisea, Pagoreni, 11°42′S, 72°54′W, 465 m, 29 May 1998, 1♀ (MUSM). BRAZIL *Rondônia:* Porto Velho, 15 Apr. 1996, 4♀ (IBSP/SMNK staff, IBSP 16163). *Acre:* Reserva Extrativista de Pimenteira, Xapurí, 5–7 Apr. 1996, 1♀ (IBSP/SMNK staff, IBSP 1640).

### *Mangora pira* new species
### Figures 32–37; Map 1C

*Holotype.* Female holotype, two male and three immature paratypes, from Río Pira and Apaporis, 0°25′S, 70°15′W, Amazonas, Colombia, 7–16 Feb. 1989 (V. and B. Roth) in CAS. The specific name is a noun in apposition after the type locality. Pira is Spanish for pyre.

*Description.* Female holotype. Carapace and chelicerae yellowish, with eye region black. Labium, endites, sternum gray. Legs gray, darker distally. Abdomen: yellowish, dorsum with gray patches (Fig. 34); venter with gray square (Fig. 35). Posterior eye row procurved. Ocular quadrangle almost square, anterior slightly widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes their diameter apart, 0.3 from laterals. Posterior median eyes 0.8 their diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.3 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.8 mm, patella and tibia 0.8, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6. Fourth femur 1.0 mm, patella and tibia 1.4, metatarsus 0.7, tarsus 0.4. The fourth leg is longer than the first.

Male lighter than female. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 0.5 diameter apart, 0.8 from laterals. Height of clypeus equals 1.0 diameter of anterior median eye. Fourth femur with proximal ventral macroseta. Total length 2.2 mm. Carapace 1.3 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.1, tarsus 0.6. Second patella and tibia 1.3 mm, third 1.1, fourth 1.3.

Males and females have been collected together.

*Diagnosis. Mangora pira* differs from all others by the ventrally curved epigynum with a narrow lip (Fig. 32) and, in posterior view, by the more curved rim, and two black circles with a dorsal transverse black area (Fig. 33).

The male palpus differs from all others

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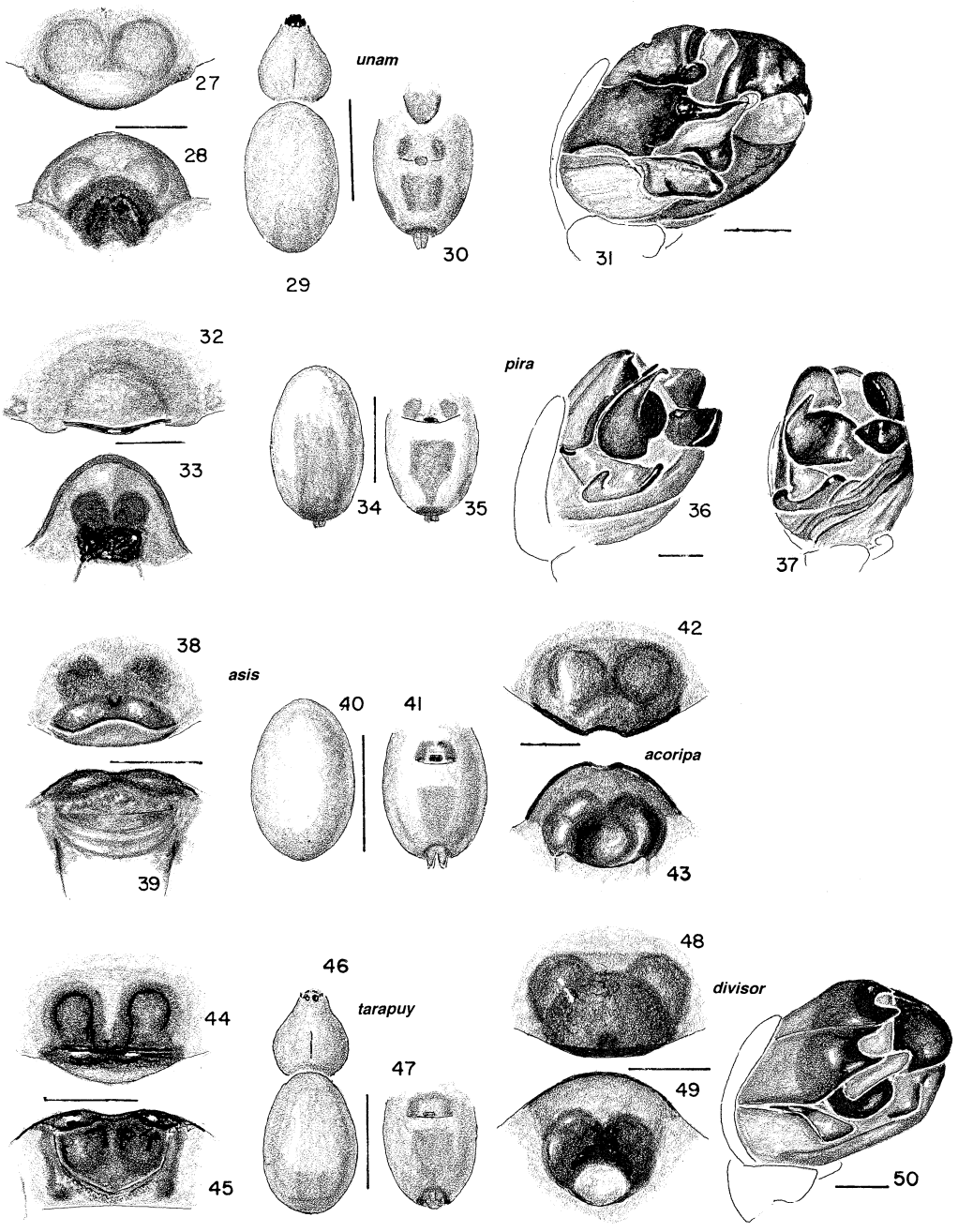
Figures 27–31. *Mangora unam* new species. 27–30, female. 27, 28, epigynum. 27, ventral; 28, posterior. 29, carapace, abdomen. 30, abdomen, ventral. 31, left male palpus, mesal.

Figures 32–37. *M. pira* new species. 32–35, female. 32, 33, epigynum. 32, ventral; 33, posterior. 34, 35, abdomen. 34, dorsal; 35, ventral. 36, 37, male palpus. 36, mesal; 37, ventral.

Figures 38–41. *M. asis* new species, female. 38, 39, epigynum. 38, ventral; 39, posterior. 40, abdomen, dorsal. 41, abdomen, ventral.




Figures 42, 43. *M. acoripa* new species, female, epigynum. 42, ventral; 43, posterior.

Figures 44–47. *M. tarapuy* new species, female. 44, 45, epigynum. 44, ventral; 45, posterior. 46, carapace, abdomen. 47, abdomen, ventral.

Figures 48–50. *M. divisor* new species. 48, 49, female, epigynum. 48, ventral; 49, posterior. 50, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

by the central pear-shaped structure, probably the conductor, its stalk pointing distally (toward 1 h in Fig. 36), and having a dark sclerotized lobe in mesal view (on the right in the left palpus, Fig. 36).

*Distribution.* Upper Amazon: Colombia (Map 1C).

*Specimens Examined.* No other specimens were collected.

### *Mangora asis* new species
Figures 38–41; Map 1A

*Holotype.* Female holotype from Río Putumayo near Puerto Asis, Putumayo, Colombia [no date] (W. Eberhard 455), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish white, eye region black and a gray median line on carapace. Sternum with gray rim. Abdomen: dorsum without marks; venter with black on epigastric area, a central gray patch and a black ring around base of spinnerets; sides with a gray line (Fig. 41). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.2 diameters of anterior medians; anterior lateral eyes 0.6 diameter, posterior 0.5. Anterior median eyes 0.9 diameter apart, 0.5 from laterals. Posterior median eyes 0.3 diameter apart, 0.6 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length 2.2 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.2 wide behind lateral eyes, 0.4 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.5. Second patella and tibia 0.9 mm, third 0.6. Fourth femur 1.1 mm, patella and tibia 0.9.

The male is unknown. This species was collected with a male of *M. mathani*, but the smaller size of the female precludes *M. mathani* from being its male.

*Variation.* Total length of females 2.2 to 2.3 mm. The female from the Amazon had the posterior of the epigynum less sclerotized than the holotype. The illustrations were made from the female holotype.

*Diagnosis.* The *Mangora asis* epigynum differs from all others by the indented rim with swellings on each side of the rim (Fig. 38), and in posterior view by having transverse folds (Fig. 39).

*Distribution.* Upper Amazon: Colombia (Map 1A).

*Specimens Examined.* COLOMBIA *Amazonas:* Río Pira and Apaporis, 0°25′S, 70°15′W, 7–16 Feb. 1989, 1♀ (V., B. Roth, CAS).

### *Mangora acoripa* new species
Figures 42, 43; Map 1B

*Holotype.* Female holotype and one female paratype from Piroca, Parque Nacional da Serra do Divisor, Acre, Brazil, 9 Nov. 1996 (R. S. Vieira) in IBSP 8973b, 8973c. The specific name is an arbitrary combination of letters as a noun in apposition.

*Description.* Female holotype. The coloration is as in *M. unam* and other small *Mangora* species (Figs. 29, 30). Carapace yellowish white, eye region, legs, and sternum gray. Abdomen: dorsum with a posterior black to gray band; venter with black square, sides gray posteriorly. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.2 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.9 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.4. Second patella and tibia 0.9 mm, third 0.5, fourth 0.9.

The male is not known.

*Illustrations.* The paratype was illustrated (Figs. 42, 43).

*Diagnosis. Mangora acoripa* differs from all others by the epigynum with a shallow dent on its rim (Fig. 42), and in posterior view by a deep, circular depression (Fig. 43).

*Distribution.* Only known from Serra do Divisor, Acre State, western Brazil (Map 1B).

*Specimens Examined.* No other specimens were found.

### *Mangora tarapuy* new species
Figures 44–47; Map 1C

*Holotype.* Female holotype Río Tarapuy, Sucumbíos, Ecuador, 23 Jan. 1983 (L. Avilés), in MECN. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma light yellowish, except sternum gray, darkest around border. Abdomen: whitish, dorsum with some posterior gray (Fig. 46); venter with a median gray patch, gray book lung covers and black circle around gray spinnerets (Fig. 47). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; anterior lateral eyes 0.7 diameter, posterior laterals 0.5. Anterior median eyes 0.4 diameter apart, 0.3 from laterals. Posterior median eyes 0.3 their diameter apart, 0.8 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.3 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.8 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6, fourth 0.9.

The male is not known.

*Diagnosis. Mangora tarapuy* epigynum is distinguished in ventral view by the light-colored rim, by the separated spermathecae and a pair of transverse swellings (Fig. 44). In posterior view there is a semicircular depression with a lip; the margin ventral to the depression has a pair of swellings (Fig. 45).

*Distribution.* Amazon region, Ecuador to central Amazon (Map 1C).

*Specimens Examined.* BRAZIL *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 12 Mar. 1987, 1♀ (A. A. Lise, MCN 27435).

### *Mangora divisor* new species
Figures 48–50; Map 1C

*Holotype.* Female holotype, male and immature male paratype from Parque Nacional da Serra do Divisor, Acre, Brazil, 15 Nov. 1996 (R. S. Vieira), in IBSP 9382. The specific name is a noun in apposition after the type locality. Divisor is Portuguese for divider.

*Description.* Female holotype. Coloration as in other small *Mangora* (Figs. 46, 47). Prosoma yellowish gray, eye region black. Abdomen: dorsum with posterior, longitudinal, gray band; venter with central dark gray area, black ring around spinnerets; sides with gray patches. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.1 mm. Carapace 0.8 mm long, 0.6 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.0 mm, patella and tibia 1.1, metatarsus 0.7, tarsus 0.3. Second patella and tibia 1.0 mm, third 0.5, fourth 0.8.

Male paratype. Coloration less distinct than that of female. Posterior eye row procurved. Ocular quadrangle as long as anterior width, slightly widest anteriorly. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 0.2 from laterals. Posterior median eyes 0.6 diameter apart, 1.1 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Total length 1.8 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.3. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

Male and female were matched because both come from the same locality.

*Diagnosis. Mangora divisor* epigynum is distinguished from that of *M. acre* (Figs. 4, 5) and *M. pira* (Figs. 32, 33) by having a slightly lobed black rim with an indistinct dark spot in the center (Fig. 48). In pos-

terior view it has a large pair of dark ovals and a median dorsal white oval (Fig. 49).

The male palpus differs by having a black circular structure underneath the conductor (5 h in Fig. 50).

*Distribution.* Only known from Serra do Divisor, Acre, western Brazil (Map 1C).

*Paratype.* BRAZIL *Acre:* Parque Nacional da Serra do Divisor, Pedernal, 13 Nov. 1996, 1♂ (R. S. Vieira, IBSP 9128).

*Specimens Examined.* No other specimen was found.

### *Mangora zona* new species
### Figures 51–56; Map 1E

*Holotype.* Female holotype, 15 female, 10 male paratypes from Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, Madre de Dios, Peru, 7–13 June, 1988 (D. Silva D.), in MCZ; one female and two male paratypes in MUSM, one male in USNM. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace light orange with black eye region. Sternum, legs light orange. Abdomen: orange-white, dorsum with posterior gray patch on each side (Fig. 53); venter with a pair of gray patches, gray book lungs and black ring around spinnerets (Fig. 54). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.8 diameter apart, 0.3 from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.0 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.6, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

Male paratype. Eye region lighter than in female. Venter of abdomen with dark gray square, book lung covers and epigastric area gray. Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.5 diameter apart, 0.3 from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equal to 3.0 diameters of anterior median eyes. Anterior median eyes projecting. Total length 1.9 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 0.8 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

Males and females have been collected together.

*Diagnosis. Mangora zona* epigynum is distinguished by a median truncate tongue (Figs. 51, 52), whereas *M. unam* (Fig. 27) has the edge evenly rounded. It differs from that of *M. piroca* (Fig. 63) by lacking the transverse line across the base of the tongue and lacking the ventral sclerotized area (Fig. 51). In posterior view of the epigynum, *M. zona* has two black discs containing the copulatory openings (Fig. 52).

The male palpus differs from that of *M. unam* (Fig. 31) by having a small median apophysis with a distal filiform branch (6 h in Figs. 55, 56), and the distinctive shape

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Figures 51–56. *Mangora zona* new species. 51–54, female. 51, 52, epigynum. 51, ventral; 52, posterior. 53, carapace, abdomen. 54, sternum, abdomen. 55, 56, left male palpus. 55, mesal; 56, ventral.

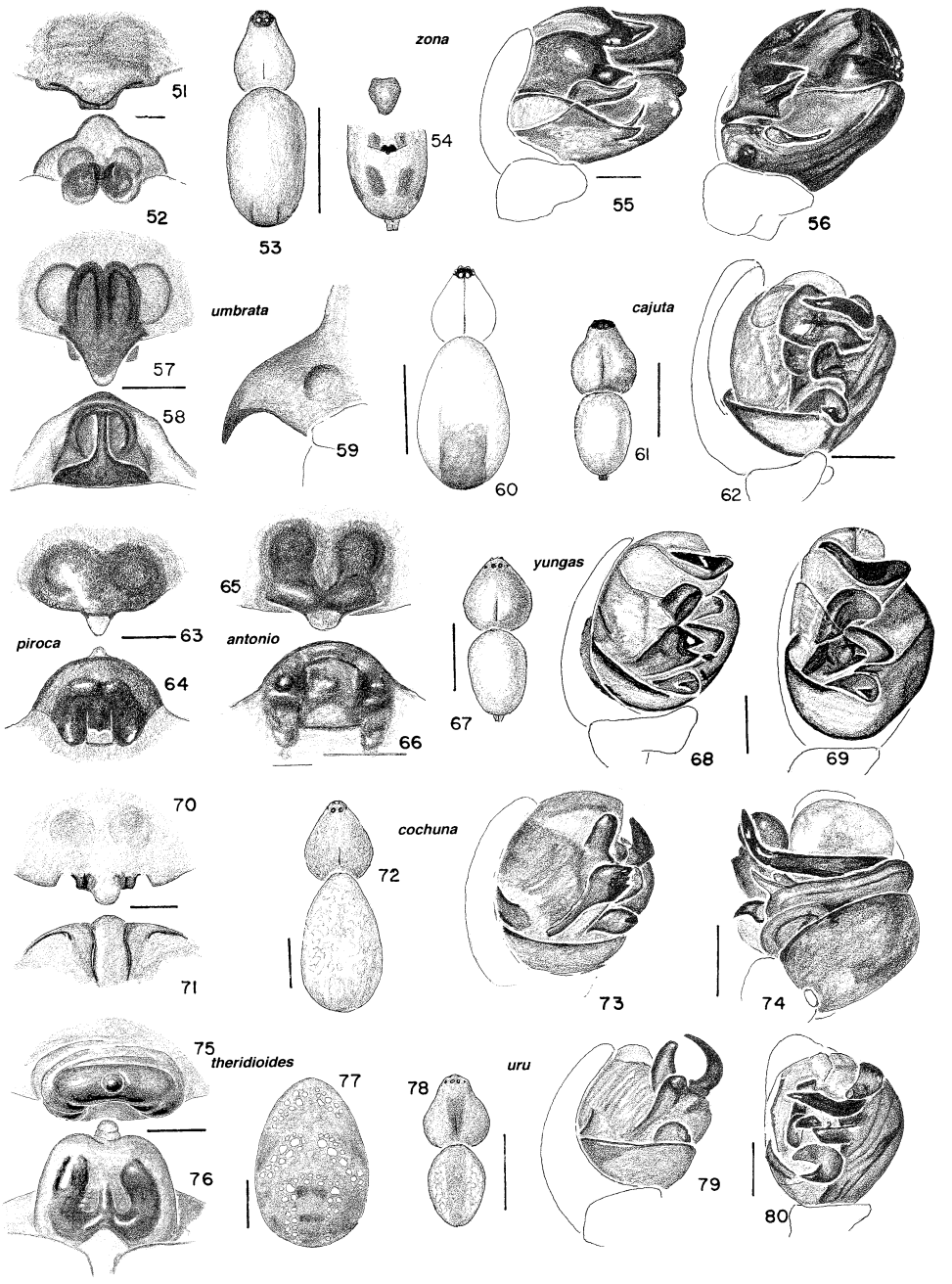
Figures 57–60. *M. umbrata* Simon, female. 57–59, epigynum. 57, ventral; 58, posterior; 59, lateral. 60, carapace, abdomen.

Figures 61, 62. *M. cajuta* new species, male. 61, carapace, abdomen. 62, palpus, mesal.

Figures 63, 64. *M. piroca* new species, female, epigynum. 63, ventral; 64, posterior.

Figures 65, 66. *M. antonio* new species, female, epigynum. 65, ventral; 66, posterior.

Figures 67–69. *M. yungas* new species, male. 67, carapace and abdomen. 68, 69, palpus. 68, mesal; 69, ventral.




Figures 70–74. *M. cochuna* new species, 70–72, female. 70, 71, epigynum. 70, ventral; 71, posterior. 72, carapace, abdomen. 73, 74, male palpus. 73, mesal; 74, ventral.

Figures 75–77. *M. theridioides* Mello-Leitão, female. 75, 76, epigynum. 75, ventral; 76, posterior. 77, abdomen, dorsal.

Figures 78–80. *M. uru* new species, male. 78, carapace, abdomen. 79, 80, male palpus. 79, mesal; 80, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

of the heavily sclerotized embolus with a bulge below the tip (center of Fig. 55).

*Distribution.* Upper Amazon region: southern Peru (Map 1E).

*Paratypes.* PERU *Madre de Dios:* Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 30 July 1988, 2♀, 1♂ (D. Silva D., MUSM).

*Specimens Examined.* No other specimens have been collected.

### *Mangora umbrata* Simon
Figures 57–60; Map 1G

*Mangora umbrata* Simon, 1897: 478. Female holotype from Pebas, Peru in the MNHN, examined. Platnick, 2006.

*Note.* No description was made in 1971 when I borrowed the specimen.

*Description.* The coloration is as in other small species (Fig. 60). Total length 2.3 mm.

The male is unknown.

*Diagnosis. Mangora umbrata* epigynum is separated from others by having the rim with a projecting tongue (Figs. 57, 59) and a pair of duct loops with the spermathecae visible laterally (Fig. 57); in posterior view the septum is an upside-down T-shape (Fig. 58).

*Distribution.* Upper Amazon: northeastern Peru (Map 1G).

*Specimens Examined.* No other specimens were found.

### *Mangora cajuta* new species
Figures 61, 62; Map 1G

*Holotype.* Male holotype, one male paratype from Circuata Cajuta, Yungas, 2,400 m, La Paz, Bolivia, 3–7 Dec. 1984 (L. E. Peña), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma orange, eye region black. Abdomen: lighter orange without marks (Fig. 61), spinnerets gray. Posterior eye row straight. Ocular quadrangle slightly wider than long, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.5 diameters apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Fourth femur with ventral, proximal macroseta. Total length 2.2 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.7. Second patella and tibia 1.3 mm, third 0.7, fourth 1.3.

The female is not known.

*Diagnosis. Mangora cajuta* male palpus is separated from others by having a prong surrounding the tip of the terminal apophysis (2 h in Fig. 62) and from *M. yungas* (Fig. 68) by having the conductor broadly attached to the tegulum (4 h in Fig. 62).

*Distribution.* Bolivian mountains near La Paz (Map 1G).

*Specimens Examined.* No other specimens have been found.

### *Mangora piroca* new species
Figures 63, 64; Map 1G

*Holotype.* Female holotype and a female paratype from Piroca, Parque Nacional da Serra do Divisor, Acre, Brazil, 9 Nov. 1996 (R. S. Vieira) in IBSP 8973, 8973a. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Colored as other small species (Figs. 34, 35). Prosoma yellowish white, eye region, sternum, legs gray. Abdomen: dorsum with median posterior dorsal band; venter with gray square; sides gray. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 0.7 diameter apart, 1.3 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.2 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.5, fourth 0.8.

The male is not known.

*Diagnosis. Mangora piroca* differs from

*M. antonio* (Figs. 65, 66) by having a narrower tongue extending from the epigynum (Fig. 63) and, in posterior view, a more delineated posterior, median light rectangle (Fig. 64).

*Distribution.* Only known from Serra do Divisor, Acre, western Brazil (Map 1G).

*Specimens Examined.* No other specimens have been found.

### *Mangora antonio* new species
Figures 65, 66; Map 1D

*Holotype.* Female holotype and one female paratype from Santo Antônio de Leverger, Mato Grosso, Brazil, 19 July 1992 (A. A. Lise, A. Braul) in MCP 2396. The specific name is a noun in apposition after the name of the type locality.

*Description.* Female holotype. Coloration as other small species (Figs. 34, 35). Prosoma yellowish, eye region black, a thin black line along carapace edge. Abdomen: dorsum with anterior gray patch, a posterior gray band; venter with gray square, black book lung plates and black ring around spinnerets; sides with gray patches. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior slightly widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.8 diameter apart, 0.5 from laterals. Posterior median eyes 0.9 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.5 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.9 mm, third 0.6, fourth 1.0.

The male is unknown.

*Diagnosis. Mangora antonio* differs from *M. piroca* (Figs. 63, 64) by having a wider tongue extending from the epigynum (Fig. 65) and, in posterior view, a wider, less distinct light area (Fig. 66).

*Distribution.* Mato Grosso, Brazil (Map 1D).

*Specimens Examined.* No other specimens have been found.

### *Mangora yungas* new species
Figures 67–69; Map 1D

*Holotype.* Male holotype with two male paratypes from El Rey National Park, 950 m, Pozo Verde Trail, km 5, Salta Prov., Argentina, 5–15 Dec. 1987 (S. and J. Peck), in AMNH. The specific name is a noun in apposition after the forest habitat.

*Description.* Male holotype. Prosoma orange. Abdomen: lighter orange (Fig. 67). Posterior eye row slightly recurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with one proximal, ventral macroseta and in line, two distal macrosetae. Total length 2.3 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.2 mm, patella and tibia 1.5, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.3 mm, third 0.7, fourth 1.1.

The female is not known.

*Diagnosis.* Males have a distinct ventral macroseta at the proximal end of the fourth femur (as in *M. melanocephala*, Fig. 21) and are distinguished from others, except *M. cajuta*, by the large distal prong surrounding the tip of the palpus (Figs. 68, 69). It differs from *M. cajuta* (Fig. 62) by the shape of the embolus (center toward 5 h in Fig. 68).

*Natural History.* Specimens were collected by sweeping, and in a Malaise trap in subtropical humid forest at El Ucumar.

*Distribution.* Northwestern Argentina (Map 1D).

*Specimens Examined.* ARGENTINA *Salta:* 45 km N Salta, 1,550 m, El Ucumar, 2–30 Dec. 1987, 4♂ (S. and J. Peck, AMNH).

### *Mangora cochuna* new species
Figures 70–74; Map 1D

*Holotype.* Male holotype from Cochuna, Tucumán, Argentina, 2 July 1995 (M. Ramírez, P. Goloboff) in MACN. The species name is a noun in apposition after the type locality.

*Description.* Female from Tucumán. Prosoma yellowish. Abdomen: dorsum with white pigment spots, except for a dorsal, posterior longitudinal rectangle (Fig. 72); venter orange-white; spinnerets gray; sides with white pigment spots. Posterior eye row straight. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; laterals 1.0 diameter. Anterior median eyes 1.2 diameters apart, 1.2 from laterals. Posterior median eyes 1.1 diameters apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.4 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.1, tarsus 0.4. Second patella and tibia 1.6 mm, third 0.8, fourth 1.6.

Male holotype. Prosoma yellowish. Abdomen: dorsum white, posterior with pair of faint gray lines; venter orange-white; spinnerets yellow. Posterior eye row slightly recurved. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.2 diameters apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. A weak macroseta on venter of proximal end of fourth femur. Total length 2.1 mm. Carapace 1.0 mm long, 0.9 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.3 mm, patella and tibia 1.6, metatarsus 1.1, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.7, fourth 1.2.

Males and females have been collected together.

*Variation.* Total length of females 3.0 to 3.4 mm, males 2.0 to 2.4. The palpus is lightly sclerotized and difficult to study. The transparent terminal apophysis bubble (1 h in Fig. 74) resembles that of some *Metazygia* species. However specimens of *M. cochuna* have macrosetae on the third tibia as in other *Mangora*.

*Diagnosis.* Unlike the genitalia of other small and medium-sized *Mangora, M. cochuna* genitalia are only weakly sclerotized; the epigynum is recognizable by the small tongue, widened near its base and flanked by notches (Fig. 70). In posterior view it has a narrow, parallel-sided, median plate and a pair of curved lateral plates (Fig. 71).

The weakly sclerotized male palpus, which has a distal prong, as in *M. cajuta* (Fig. 62) and *M. yungas* (Figs. 68, 69), differs by having an embolus that appears to bear several denticles on its tip (3 h in Fig. 73).

*Natural History.* Specimens were collected at night in cloud forest at Cuzco.

*Distribution.* Mountains from Cuzco, Peru, to northern Argentina (Map 1D).

*Specimens Examined.* PERU *Cuzco:* Parque Nacional Manu, carretera Paucartambo-Pilcopata, nr. Buenos Aires, 2,370 m, 15–16 Feb. 1990, 1♀, 1♂ (D. Silva, MUSM); Wiñayhuaina, ca. 13°07′S, 72°34′W, 2,700–3,100 m, 8–11 Feb. 1990, 2♀, 5♂ (D. Silva D., MUSM). ARGENTINA *Jujuy:* Parque Nacional Calilegua, 23–24, Sep. 1995, 1♂ (M. J. Ramírez, MACN). *Tucumán:* Horco Molle, Nov. 1960, 2♀ (M. E. Galiano, MACN 5332).

### *Mangora theridioides* Mello-Leitão
Figures 75–77; Map 2A

*Mangora theridioides* Mello-Leitão, 1948: 166, fig. 9, ♀. Female holotype from Takama River [05°34′S, 57°55′W], Guyana (Cattle Trail Survey), in BMNH, examined. Platnick, 2006.

*Note.* It is not possible to recognize the species by using Mello-Leitão's illustration of the epigynum.

*Description.* Female holotype. Prosoma orange yellow. Abdomen: dorsum with white pigment spots and dusky marks (Fig. 77); venter with a pair of white longitudinal lines, each line with a spur continuing up the sides. Posterior median eyes 1.0 diameter of anterior medians; anterior lateral eyes 0.8 diameter, posterior 0.6. Anterior median eyes 0.5 diameter apart, 0.5 from laterals. Posterior median eyes 0.6 diameter apart, 0.8 from laterals. Total length 4.7 mm. Carapace 1.8 mm long, 1.4 wide in thoracic region. First femur 2.2

mm, patella and tibia 2.5, metatarsus 2.0, tarsus 0.9. Second patella and tibia 2.3 mm, third 1.3, fourth 2.1.

The male is not known.

*Diagnosis. Mangora theridioides* epigynum projects ventrally (Fig. 75) and, unlike other species, in posterior view has a pair of grooves leading to a pair of openings separated and surrounded by swollen areas (Fig. 76) resembling that of *M. grande* (Fig. 18).

*Distribution.* Guyana (Map 2A).

*Specimens Examined.* No other specimens have been found.

### *Mangora uru* new species
Figures 78–80; Map 1I

*Holotype.* Male holotype and one male paratype from Urubamba River, below Machu Picchu, ca. 2,000 m, Cuzco, Peru, 21 Feb. 1965 (H. Levi) in MCZ. The specific name is a noun in apposition, an arbitrary combination of letters.

*Description.* Male holotype. Prosoma yellow-white, carapace with a gray, median band (Fig. 78). Abdomen: dorsum lighter with a pair of bands containing white pigment spots (Fig. 78); no marks ventrally, spinnerets gray. Posterior eye row straight. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameters. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with proximal, ventral macroseta. Total length 2.1 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.6 mm, patella and tibia 1.6, metatarsus 1.1, tarsus 0.7. Second patella and tibia 1.3 mm, third 0.8, fourth 1.2.

The female is not known.

*Diagnosis. Mangora uru* palpus differs from those of *M. cochuna* (Figs. 73, 74), *M. yungas* (Figs. 68, 69), and *M. cajuta* (Fig. 62) in the shape of the short, distal prong (Figs. 79, 80).

*Natural History.* The type was collected in forest vegetation.

*Distribution.* Upper Amazon: Cuzco, Peru (Map 1I).

*Specimens Examined.* No other specimens have been collected.

### *Mangora sturmi* new species
Figures 81–84; Map 1B

*Holotype.* Female holotype from Amacayacu, Parque Nacional, ca. 48 km NW of Leticia, 03°48′S, 70°16′W, Amazonas, Colombia, 3 Oct. 1985 (H. Sturm), in MCZ. The species is named after the collector, entomologist Prof. Helmut Sturm.

*Description.* Female holotype [damaged and without legs]. Carapace gray-brown, cephalic region lighter. Labium, endites, sternum gray-brown. Abdomen: dorsum light gray with some gray marks (Figs. 83, 84). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes their diameter apart, 0.6 from laterals. Posterior median eyes their diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.2 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.4 wide behind lateral eyes, 0.5 high. [Legs lost.]

The male is unknown.

*Diagnosis. Mangora sturmi* epigynum in ventral view differs from others by having a transverse swelling and a thin rim, a projecting lip with a median notch (Fig. 81); it differs from others by being square in posterior view, with a dorsolateral ridge (Fig. 82).

*Distribution.* Upper Amazon: southern Colombia (Map 1B).

*Specimens Examined.* No other specimens have been collected.

### *Mangora taraira* new species
Figures 85, 86; Map 1B

*Holotype.* Female holotype from Municipio Taraira, Serrano Taraira, Caño Pintadillo, 01°01′S, 69°39′W, Vaupés, Colombia, Mar. 2002 (J. Pinzón), in ICNB AR-3336. The specific name is a noun in opposition after the type locality.

*Description.* Female holotype [dam-

aged, dorsoventrally flattened]. Coloration as other small species (Figs. 89, 90). Prosoma light yellowish, legs light gray, sternum gray. Abdomen: dorsum yellowish white, with black ring around spinnerets; venter with central gray square. Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 0.4 from laterals. Posterior median eyes 0.6 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.0 mm. Carapace 0.8 mm long. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus 0.3. Second patella and tibia 0.8 mm, third 0.6. Fourth femur 1.0 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.3.

The male is not known.

*Diagnosis.* *Mangora taraira* epigynum differs from that of other small species with similar coloration by the large, adjacent, indistinctly outlined spermathecae visible in ventral view, and the almost straight posterior rim, with a short, thin lip (Fig. 85). In posterior view it has dark openings, separated by a small dorsoventral light ridge (Fig. 86).

*Distribution.* Upper Amazon: southeastern Colombia (Map 1B).

*Specimens Examined.* COLOMBIA *Vaupés:* Lago Taraira, Estación Biológica Caparú, 1°04′S, 69°31′W, May 2002, 1♀ (J. Pinzón, A. Schogal, ICNB).

## *Mangora vaupes* new species
## Figures 87–90; Map 1C

*Holotype.* Female holotype from Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, Vaupés, Colombia, May 2002 (J. Pinzón, A. Schogal), in ICNB AR-3328. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish, eye region black; endites, labium, sternum black; legs with indistinct longitudinal lines, distal articles darker. Abdomen: dorsum with posterior, longitudinal gray band and black rings around spinnerets (Fig. 89); venter with central quadrangular dark gray patch (Fig. 90); sides with posterior gray patches, spinnerets black. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.5 diameter apart, 0.2 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 2.1 mm. Carapace 0.8 mm long, 0.6 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.7 mm, third 0.5, fourth 0.8.

The male is not known.

*Diagnosis.* *Mangora vaupes* epigynum has a wide, lobed, tongue-shaped rim (Fig. 87). *Mangora vaupes* differs from others in posterior view by having two overlapping black discs (Fig. 88).

*Natural History.* The holotype was found in tierra firma forest.

*Distribution.* Upper Amazon: southeastern Colombia (Map 1C).

*Specimens Examined.* No other specimens have been found.

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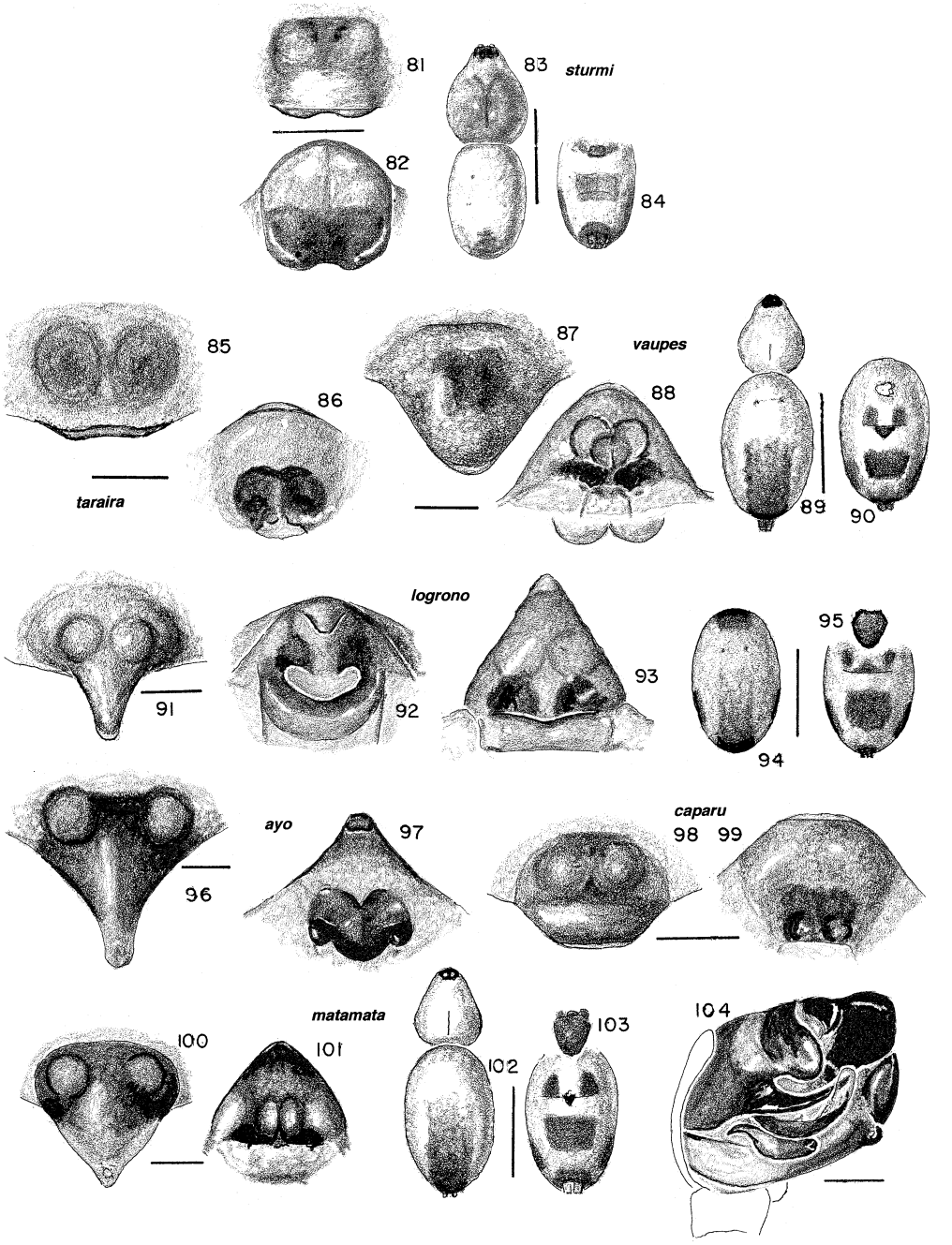
Figures 81–84. *Mangora sturmi* new species, female. 81, 82, epigynum. 81, ventral; 82, posterior. 83, carapace, abdomen. 84, abdomen, ventral.

Figures 85, 86. *M. taraira* new species, female epigynum. 85, ventral; 86, posterior.

Figures 87–90. *M. vaupes* new species, female. 87, 88, epigynum. 87, ventral; 88, posterior. 89, carapace, abdomen. 90, abdomen, ventral.

Figures 91–95. *M. logrono* new species, female. 91–93, epigynum. 91, ventral; 92, 93, posterior. 94, abdomen, dorsal. 95, sternum, abdomen, ventral.

Figures 96, 97. *M. ayo* new species, female epigynum. 96, ventral; 97, posterior.




Figures 98, 99. *M. caparu* new species, female epigynum. 98, ventral. 99, posterior.

Figures 100–104. *M. matamata* new species. 100–103, female. 100, 101, epigynum. 100, ventral; 101, posterior. 102, carapace, abdomen. 103, sternum, abdomen. 104, left male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

### *Mangora logrono* new species
Figures 91–95; Map 1E

*Holotype.* Female holotype from "Yapitya" along main trail from Logroño to Yaupi, W slope of Cordillera del Cutucú, ca. 02°38′S, 78°30′W, Morona-Santiago, Ecuador, 1 July 1984 (R. M. Peck), in ANSP. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma light orange, eye region black; endites, labium, sternum black, legs with gray. Abdomen: dorsum with an anterior black transverse mark, a posterior longitudinal black to gray band and black rings around spinnerets (Fig. 94); venter with black book lung covers; epigynal region, with a central quadrangular dark gray patch; black ring around spinnerets (Fig. 95); sides with posterior black patches, spinnerets black. Posterior eye row straight. Ocular quadrangle square. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 0.9 diameter apart, 1.3 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.3 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.9 mm, patella and tibia 1.1, metatarsus 0.8, tarsus 0.5. Second patella and tibia [lost], third 0.7, fourth [lost].

The male is not known.

*Diagnosis. Mangora logrono* epigynum differs from that of *M. ikuruwa* (Figs. 116, 117) by having, in posterior view, a transverse, wide, oval depression (Fig. 92), which can be seen, though with difficulty, by slightly turning the epigynum when viewed (Fig. 92, 93).

*Natural History.* The specimen was found in "tall, humid, primary forest on flat area along ridge top in large pristine remote area".

*Distribution.* Southeastern Ecuador (Map 1E).

*Specimens Examined.* No other specimens have been found.

### *Mangora ayo* new species
Figures 96, 97; Map 1A

*Holotype.* Female holotype and two female paratypes from La Mathani, Quebradón, El Ayo, Amazonas, Colombia, 01°35′S, 69°31′W, May 2002 (J. Pinzón, A. Schogal), in ICNB AR-3338. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Coloration as in other small species (Figs. 94, 95). Prosoma yellowish, eye region black; endites, labium, sternum black; legs with indistinct longitudinal lines, distal articles darker. Abdomen: dorsum with posterior, longitudinal, gray band and black rings around spinnerets; venter with central dark gray patch; sides with posterior gray patches, spinnerets black. Posterior eye row procurved. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 0.6 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.3 diameter apart, 0.2 from laterals. Posterior median eyes 0.8 diameter apart, 0.3 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 1.9 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 0.8 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.4, fourth 0.8.

The male is not known.

*Variation.* Total length of females 1.7 to 2.1 mm.

*Diagnosis. Mangora ayo* epigynum differs from that of *M. matamata* (Fig. 100) and *M. logrono* (Fig. 91) by having the spermathecae more than their diameter apart (Fig. 96), and by a pair of shallow depressions in posterior view (Fig. 97).

*Distribution.* Upper Amazon: southeastern Colombia (Map 1A).

*Specimens Examined.* COLOMBIA *Vaupés:* Mpo. Taraira, Serr. Taraira, Caño Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 4♀ (J. Pinzón, ICNB).

### *Mangora caparu* new species
Figures 98, 99; Map 1E

*Holotype.* Female holotype and one female paratype from Lago Taraira, Estación Biológica Caparú,

01°04′S, 69°31′W, Vaupés, Colombia, May 2002 (J. Pinzón, A. Schogal), in ICNB. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Coloration as in other small species (Figs. 94, 95). Prosoma yellowish, eye region black; endites, labium, sternum black; legs with indistinct longitudinal lines, distal articles darker. Abdomen: dorsum with posterior, longitudinal, gray band and black rings around spinnerets; venter with central square dark black patch; sides with posterior gray patches, spinnerets black. Posterior eye row slightly procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.3 from laterals. Posterior median eyes 0.9 diameter apart, 1.3 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.4 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.6. Fourth femur 1.0 mm, patella and tibia 0.8, metatarsus 0.8, tarsus 0.4.

The male is not known.

*Variation.* Total length of females 2.0 to 2.4 mm.

*Diagnosis. Mangora caparu* epigynum (Figs. 98, 99) differs from that of *M. taraira* (Figs. 85, 86) by having the spermathecae smaller, further from the edge, and anterior to a transverse swelling in a slightly extended, wide lobe (Fig. 98); and differs from all similar species in posterior view by the openings placed far dorsally in a pair of small circular depressions (Fig. 99).

*Natural History.* Specimens have been collected from tierra firma forest, forest that does not get flooded.

*Distribution.* Upper Amazon: southeastern Colombia (Map 1E).

*Paratypes.* COLOMBIA *Vaupés:* Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, 200 m, Sep. 2002—May 2003, 1♀, 4 imm. (L. Bonavides, ICNB AR-3326).

*Specimens Examined.* COLOMBIA *Amazonas:* La Mathani, Quebradón El Ayo, 01°35′S, 69°31′W, May 2002, 2♀ (J. Pinzón, ICNB).

### *Mangora matamata* new species
Figures 100–104; Map 1I

*Holotype.* Female holotype, two female and one male paratype from Parque Nacional Natural Amacayacu, Laguna Matamata, 03°41′S, 70°15′W, Amazonas, Colombia, Nov. 2001, in ICNB AR-3344a. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma light orange, eye region black; endites, labium, sternum black; legs gray. Abdomen: dorsum with posterior longitudinal gray band (Fig. 102); venter with central dark gray area, black ring around spinnerets, book lung covers black (Fig. 103). Sides with posterior gray patches. Posterior eye row strongly procurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.9 diameter apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Total length 2.3 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus [lost]. Second patella and tibia 0.8 mm, third 0.5, fourth 0.8.

Male paratype. Coloration as in female. Posterior eye row strongly procurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.9 diameter apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Total length 2.3 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.7, tarsus [lost]. Second patella and tibia 0.8 mm, third 0.5, fourth 0.8.

Males and females have been collected together.

*Diagnosis.* *Mangora matamata* epigynum (Fig. 100) is shorter and more pointed than that of *M. ayo* (Fig. 96). It differs from *M. ayo* in posterior view by a pair of narrow, oval, dorsoventral depressions (Fig. 101).

The male differs from others that have a sclerotized terminal apophysis, such as *M. divisor* (2 h in Fig. 50), by the long, gracefully curved embolus (Fig. 104).

*Distribution.* Upper Amazon: southeastern Colombia (Map 1I).

*Specimens Examined.* No other specimens have been collected.

### *Mangora manicore* new species
### Figures 105–109; Map 1I

*Holotype.* Female holotype and male paratype from Barreira do Matupiri, Manicoré, Amazonas, Brazil, 18 Apr. 1996 (IBSP/SMNK staff), in IBSP 15452, 15477. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace yellow, eye region black. Sternum black. Legs gray, darker ventrally. Abdomen: dorsum marked with a posterior longitudinal band (Fig. 107); venter with gray square, gray book lung covers, and gray patches on each side (Fig. 108). Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.5 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.4 diameter apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 2.1 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.1 mm, patella and tibia 1.1, metatarsus 0.8, tarsus 0.3. Second patella and tibia 0.9 mm, third 0.7, fourth [lost].

Male paratype. Coloration as in female. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 1.0 diameter apart, 0.2 from laterals. Posterior median eyes 0.5 diameter apart, 0.5 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Coxae 2, 3, 4 each with a short ventral macroseta. Palpal tibia with two dorsal macrosetae (Fig. 109). Second tibia swollen and with a posterior macroseta as long as tibia. Total length 2.1 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.7, tarsus 0.3. Second patella and tibia 0.8 mm, third 0.5, fourth 0.9.

Males and females have been collected together.

*Diagnosis.* The ventral view of the *M. manicore* epigynum has a short, small tongue and widely separated spermathecae (Fig. 105); in posterior view, it differs from all other species by having five dorsoventral swollen ridges (Fig. 106).

Males have a distinct macroseta on the venter of the proximal end of the fourth femur. The palpus, unlike other species has the median apophysis tipped by a curved spine (5 h in Fig. 109). The curved embolus has a similarly shaped, larger

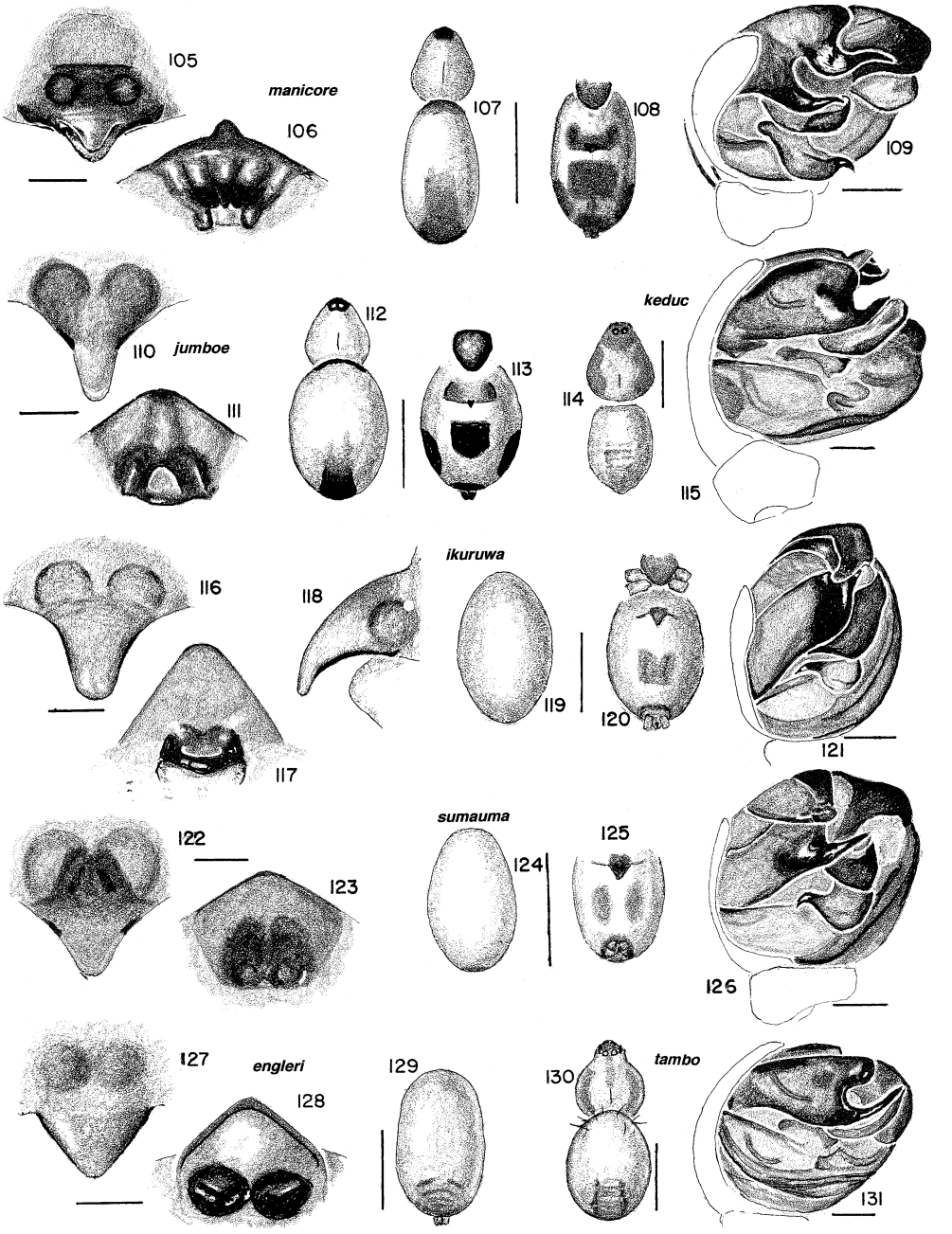
→

Figures 105–109. *Mangora manicore* new species. 105–108, female. 105, 106, epigynum. 105, ventral; 106, posterior. 107, carapace, abdomen. 108, sternum, abdomen. 109, left male palpus, mesal.

Figures 110–113. *M. jumboe* new species, female. 110, 111, epigynum. 110, ventral; 111, posterior. 112, carapace, abdomen. 113, sternum, abdomen.

Figures 114, 115. *M. keduc* new species, male. 114, carapace, abdomen. 115, palpus, mesal.

Figures 116–121. *M. ikuruwa* new species. 116–120, female. 116–118, epigynum. 116, ventral; 117, posterior; 118, lateral. 119, abdomen, dorsal. 120, sternum, abdomen. 121, male palpus, mesal.




Figures 122–126. *M. sumauma* new species. 122–125, female. 122, 123, epigynum. 122, ventral; 123, posterior. 124, abdomen, dorsal. 125, abdomen, ventral. 126, male palpus, mesal.

Figures 127–129. *M. engleri* new species, female. 127, 128, epigynum. 127, ventral; 128, posterior. 129, abdomen, dorsal.

Figures 130, 131. *M. tambo* new species, male. 130. carapace, abdomen. 131, palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

structure above it, separated by a deep notch (center of Fig. 109).

*Distribution.* Amazon region (Map 1l).

*Specimens Examined.* No other specimens were found.

### *Mangora jumboe* new species
Figures 110–113; Map 1F

*Holotype.* Female holotype from Cayenne, Jumboe River [04°04′S, 78°56′W, Zamora-Chinchipe], Ecuador, 1 June 1965 (L. Peña) in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace whitish, eye region black. Sternum black. Trochanters and rim of adjacent articles black, distal leg articles gray, indistinctly marked with some longitudinal lines and rings. Abdomen: whitish, dorsum marked with black (Fig. 112); venter also contrastingly marked (Fig. 113). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 0.6 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Sternum domed. Total length 2.2 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 0.9 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6, fourth 0.8.

The male is not known.

*Variation.* Total length of females 2.2 to 2.3 mm.

*Diagnosis. Mangora jumboe* epigynum has a tongue (Fig. 110) and differs from *M. ikuruwa* (Fig. 117) in posterior view by having a light-colored depression as long as wide (Fig. 111).

*Distribution.* Southeastern Ecuador (Map 1F).

*Specimens Examined.* No other specimens were found.

### *Mangora keduc* new species
Figures 114, 115; Map 1H

*Holotype.* Male holotype from Reserva Florestal Adolpho Ducke, Manaus, Amazonas, Brazil, 26 July 1973 (Lindalva), in MCN 20049. The specific name is an arbitrary combination of letters.

*Description.* Male holotype. Prosoma yellowish white, except carapace orange with gray cephalic region and sides (Fig. 114). Abdomen: whitish (Fig. 114). Posterior eye row procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.4 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 1.0 diameter apart, 0.5 from laterals. [Fourth femur with a long, ventral, proximal macroseta.] Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.6 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.4 wide behind lateral eyes, 1.5 high. First femur 1.7 mm, patella and tibia 1.7, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.6 mm, third 0.9, fourth [lost].

The female is not known.

*Variation.* Total length of males 2.6 to 2.7 mm. The notch at the tip of the embolus is deeper and more rounded in a specimen from Reserva Campina. Although the holotype has lost the fourth legs, fourth legs of other specimens show the macroseta.

*Diagnosis. Mangora keduc* differs from *M. ikuruwa* and *M. sumauma* by having a thorax with a gray band (Fig. 114), and from *M. tambo* (Fig. 131) by having the palpus with shorter lobe above the embolus (1 h in Fig. 115).

*Distribution.* Amazon region (Map 1H).

*Specimens Examined.* BRAZIL *Pará:* Jacareacanga, Oct. 1959, 1♂ (M. Alvarenga, AMNH). *Amazonas:* Manaus, Reserva de Campina, 17 Aug. 1978, 1♂ (C. P. Albuquerque, MCN 23564); 80 km N Manaus, Colosso Reserve, 23 Apr. 1990, 1♂ (H. G. Fowler et al., MCZ).

### *Mangora ikuruwa* new species
Figures 116–121; Map 2A

*Holotype.* Female holotype, male paratype from Canje Ikuruwa River, 05°70′N, 57°50′W, Guyana, Aug.–Dec. 1961 (G. Bentley), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow, gray eye region and sternum. Abdomen: dorsum with a gray ring around spinnerets (Fig. 120); venter with central gray square (Fig. 120). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.4 their diameter apart, 0.4 from laterals. Posterior median eyes 0.6 diameter apart, 0.7 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.8 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.2 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.5. Second patella and tibia 1.0 mm, third 0.7, fourth 1.1.

Male paratype. Coloration as in female, book lungs gray. Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameters of anterior medians; lateral eyes 0.6 diameters. Anterior median eyes 0.4 diameter apart, 0.4 from laterals. Posterior median eyes 0.5 diameter apart, 0.6 from laterals. Height of clypeus equals 1.5 diameters of anterior median eye. Total length 2.1 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.0 mm, patella and tibia 1.1, metatarsus 0.9, tarsus 0.4. Second patella and tibia 0.8 mm, third 0.6, fourth 1.1.

Males and females were collected together.

*Variation.* Total length of females 2.2 to 2.8 mm. A male paratype has one anterior median eye reduced in size.

*Diagnosis.* The posterior view of the epigynum of *M. ikuruwa* differs from that of *M. jumboe* (Fig. 111) by a transverse oval depression (Fig. 117), and from *M. logrono* (Fig. 92) by having the depression smaller.

The male palpus differs from that of *M. sumauma* (Fig. 126) by having a large dark bulge, the conductor, below the embolus (Fig. 121).

*Natural History.* The holotype came from forest savanna; the specimen from Venezuela from humid forest.

*Distribution.* Guyana, southern Venezuela, Peru (Map 2A).

*Specimens Examined.* VENEZUELA *Bolívar:* 40 km W Santa Elena, 7 July 1987, 1♀ (S. and J. Peck, AMNH). PERU *Huánuco:* La Divisoria, 1,700 m, 23 Sep.–3 Oct. 1946, 1♀ (F. Woytkowski, AMNH).

### *Mangora sumauma* new species
Figures 122–126; Map 1F

*Holotype.* Female holotype and male paratype from Boca do Sumaúma, near Tefé, Amazonas, Brazil, 16 Oct. 1992 (S. H. Borges) in MCN 23072. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: dorsum white (Fig. 124); venter with two indistinct, gray patches and gray ring around spinnerets (Fig. 125). Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.8 diameter apart, 0.3 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.1 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.9 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.3. Second patella and tibia 0.8 mm, third 0.6. Fourth femur 1.1 mm, patella and tibia 0.9, metatarsus 0.8, tarsus 0.3.

Male paratype. Coloration as in female, sternum slightly gray, square ventral patch, epigastric region gray. Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median

eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.1 from laterals. Posterior median eyes 0.4 diameter apart, 0.9 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 1.9 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.6 high. First femur 0.8 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.6. Fourth femur 1.1 mm, patella and tibia 0.8, metatarsus 0.7, tarsus 0.4.

Males and females have been collected together.

*Variation.* Total length of females 2.1 to 2.5 mm, males 1.8 to 2.2. Some specimens are darker, with abdomen dorsum having a black posterior and wide longitudinal band and lateral gray patches.

*Diagnosis.* The posterior view of the epigynum of *M. sumauma* differs from that of *M. ikuruwa* and *M. jumboe* by having two separate, circular depressions in a dark area (Fig. 123) and from *M. caparu* (Figs. 98, 99) by having a longer tongue in ventral view.

The male palpus differs from that of *M. keduc* and *M. ikuruwa* by having the dark sclerite behind the embolus, part of the conductor, subcircular (Fig. 126).

*Natural History.* In reserves north of Manaus, specimens have been collected inside forests and on border of forests.

*Distribution.* Amazon region (Map 1F).

*Paratype.* BRAZIL *Amazonas:* near Tefé, Boca do Sumaúma, 17 Oct. 1992, 2♂ (S. H. Borges, MCN 22971).

*Specimens Examined.* BRAZIL *Amazonas:* Parque Nacional do Jaú Moura, 16 Mar. 1999, 1♀ (J. H. Borges, IBSP 28490); near Manaus, km 41 Reserve, 1991, many specimens (H. G. Fowler et al., HGF); 80 km N Manaus, 02°24′S, 59°52′W, 17 Jan. 1989, 1♂ (H. G. Fowler, INPA); Reserve of km 80, 1989–1992, 2♀, 1♂ (H. G. Fowler, MCZ); Manaus, Reserva Florestal Adolpho Ducke, 26 July 1973, 1♀ (L. P. Albuquerque, MCN 27431); 15 Aug. 1991, 1♂ (A. D. Brescovit, MCN 21394); 15–23 Aug. 1991, 1♂ (A. D. Brescovit, MCN 21405); 80 km N Manaus, Porto Alegre Reserve, 1989–1992, 2♀ (H. G. Fowler, HGF); ca. 80 km N Manaus, Cabo Frio Reserve, very common, 1989–1991 (H. G. Fowler et al., HGF); 1989–1992, 1♂ (H. G. Fowler, IBSP); 80 km N Manaus, Colosso Reserve, very common, 1989–1991 (all H. G. Fowler, R. S. Vieira, E. Venticinque, HGF); 1989–1992, 2♀, 1♂ (H. G. Fowler, MCZ); Reserve C. de Powell, 80 km N Manaus, 20 Apr. 1991, 1♂ (H. G. Fowler, HGF); Reserve Gavião, 24 Apr. 1991, 1♀ (H. G. Fowler, HGF).

## *Mangora engleri* new species
Figures 127–129; Map 1H

*Holotype.* Female holotype from Chiguaza, Prov. Wakani, Morona-Santiago, Ecuador, 22 May–3 June 1977 (N. Engler), in MCZ. The species is named after the collector.

*Description.* Female holotype. Prosoma light yellowish, gray endites and labium. Abdomen: whitish, dorsum with indistinct posterior chevrons (Fig. 129). Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 their diameter apart, 0.4 from laterals. Posterior median eyes 0.5 diameter apart, 0.8 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 3.0 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.6 wide behind lateral eyes, 0.6 high. First femur 1.5 mm [other leg articles lost].

The male is not known.

*Diagnosis.* The female of *M. engleri* differs from that of *M. sumauma* (Figs. 122, 123) and others with a tongue-bearing epigynum in posterior view, in having slit-shaped openings within adjacent, dark circles (Fig. 128).

*Distribution.* Southeastern Ecuador (Map 1H).

*Specimens Examined.* No other specimens were found.

## *Mangora tambo* new species
Figures 130, 131; Map 1H

*Holotype.* Male holotype from Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, Madre de Dios, Peru, 5 May 1988 (D. Silva D.), in MCZ. The specific name is a noun in apposition of an arbitrary combination of letters. Tambo is Spanish for an inn.

*Description.* Male holotype. Prosoma light orange with a light gray band on each side of thoracic region of carapace (Fig. 130). Abdomen: dorsum with posterior median gray ladder-mark (Fig. 130). Posterior eye row slightly procurved. Ocular quadrangle as wide as long, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes their diameter apart, 0.2 from laterals. Posterior median eyes 0.5 their diameter apart, 0.5 from laterals. Height of clypeus equals 0.7 diameter of anterior median eye. Fourth femur with large ventral, proximal macroseta. Total length 2.8 mm. Carapace 1.4 mm long, 1.2 wide in thoracic region, 0.4 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.6, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.3 mm, third 1.0, fourth 1.3.

The male, although widespread, could not be matched to a female. The male from Sta. Teresa, Peru, was collected with females of *M. chacobo* and *M. dianasilvae.*

*Variation.* Total length of males 2.4 to 2.8 mm. The bands on the carapace can be very light, barely visible.

*Diagnosis.* The male of *M. tambo* (Fig. 131) differs from that of *M. keduc* (Fig. 115) by having a longer lobe above the embolus in the palpus (1 h in Fig. 131), from *M. apaporis* (Fig. 423) by having the tip of the embolus separated from the lobe and also by the general coloration of the male.

*Distribution.* Upper Amazon: Peru (Map 1H).

*Specimens Examined.* PERU *Loreto:* Estiron, Río Ampiacu, 13 Nov.–9 Dec. 1961, 1♂ (B. Malkin, AMNH); Jenaro Herrera, 04°45′S, 73°45′W, ca. 100 m, 28 Aug. 1988, 1♂ (D. Silva D., MUSM). *Amazonas:* Cordillera del Cóndor, alto Río Comaina, Puesto de Vigilancia 22, 850–1,150 m, 29 Oct. 1987, 3♂ (D. Silva D., MUSM). *Huánuco:* Sta. Teresa, Río Huallaga, 600 m, Aug. 1954, 1♂ (F. Woytkowski, CAS); Estacion Dantas, La Molina, SW de Puerto Inca, 270 m, 09°38′S, 75°00′W, 18 May–1 June 1987, 1♂ (D. Silva D., MUSM). *Pasco:* Quebrada Chispa, NW Iscozacin, ca. 345 m, ca. 10°10′S, 75°15′W, 1 Nov. 1986, 2♂ (D. Silva D., MUSM). *Madre de Dios:* 15 km E Puerto Maldonado, 200 m, 27 June–10 July 1989, 6♂ (D. Silva D., MUSM).

## *Mangora enseada* new species
## Figures 132–136; Map 2B

*Holotype.* Female holotype from Enseada das Palmas, Ilha Grande, Rio de Janeiro, Brazil, 2–12 Feb. 1997 (M. J. Ramírez), in MACN. The specific name is a noun in apposition after the type locality. Enseada is Portuguese for a cove.

*Zygiella decolorata*:—Roewer, 1942: 887.

*Mangora decolorata*:—Levi, 1974: 271.

*Note.* The holotype of *Zilla decolorata* (BMNH) was examined by me in the 1970s. It is now determined to be a male of a new species, *M. enseada*, coming from Blumenau [Paraná], Brazil. The specimen is labeled *Zilla decolorata* C. L. Koch, but Keyserling previously described a female with this name from Guatemala, not Brazil. Keyserling's type is lost. *Zilla decolorata* C. L. Koch was never described.

According to Bonnet (1957), C. L. Koch (1837: 5, 1840: 400) described a *Z. decora*, which is a synonym of *Mangora acalypha* (Walckenaer) found in Europe, but it also has been cited in the last century as *decolorata.* Roewer (1942) and Platnick (2006) list *Zygiella decolorata* Keyserling as coming from Brazil, but Keyserling's species came from Guatemala.

*Description.* Female holotype. Prosoma yellow; carapace lighter than legs. Large black circles around secondary eyes. Abdomen: dorsum with posterior median gray ladder, white pigment spots on sides (Fig. 134); venter without pattern. Posterior eye row procurved. Ocular quadrangle longer than wide posteriorly, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.8 diameter apart, 0.8 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 4.5 mm. Carapace 1.8 mm long, 1.3 wide in thoracic region, 0.8 wide behind posterior eyes, 0.8 high. First femur 2.1 mm, patella and tibia 2.2, metatarsus 1.7, tarsus

0.8. Second patella and tibia 1.9 mm, third 1.3, fourth 2.0.

Male from Argentina. Prosoma orange. Abdomen: whitish, dorsally with two longitudinal bands of white pigment spots. Posterior eye row procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 0.7 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length 2.7 mm. Carapace 1.5 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.5 mm, third 0.9, fourth 1.5 mm.

Males and females have been collected together.

*Variation.* Total length of females 3.1 to 4.8 mm.

*Diagnosis.* The shallow grooves of the epigynum in posterior view of *M. enseada* females (Fig. 133) differ from those of *M. grande* (Fig. 18) and others with a pair of grooves by the presence of a tongue (Fig. 132).

The palpus of the male differs from others by having a large tooth proximally on the embolus sclerite (below the embolus in Fig. 135).

*Distribution.* Southern Brazil, from Rio de Janeiro to northeastern Argentina (Map 2B).

*Specimens Examined.* BRAZIL *Minas Gerais:* Lavras, 29 Mar. 1979, 1♀ (W. D. Fronk, MCZ). *São Paulo:* Cotia, Dec. 2002, 2♀, 1♂ (A. A. Nogueira, M. C. Silveira, MZSP); Mar. 2003, 1♀ (I. Cizauskas, MZSP). *Paraná:* Morretes, Serra da Graciosa, 9–20 Jan. 1995, 1♀ (Lab. Arachnol, MCP 6931). *Santa Catarina:* Blumenau, 1♂ (BMNH). ARGENTINA *Misiones:* Parque Nacional del Iguazú, July 1983, 1♀ (P. Goloboff, MACN); 8–15 Feb. 1993, 1♂ (M. J. Ramírez, MACN); 22–30 Aug. 1986, 1♂ (M. J. Ramírez, MACN).

### *Mangora brokopondo* new species
Figures 137–140; Map 4A

*Holotype.* Female holotype from Browns Berg, Brokopondo Prov., 05°N, 55°27′W [4°53′N, 55°13′W], Suriname, 20 Feb. 1982 (D. Smith Trail), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace yellowish, with a black patch on each side of thoracic region, cephalic region black (Fig. 140). Median area of clypeus black. Chelicerae yellowish. Labium, endites gray. Sternum and coxae yellowish, slightly gray. Legs brown. Abdomen: dorsum white, with white pigment spots and contrasting black patches (Fig. 140); venter light gray, epigastric area yellowish. Posterior eye row strongly procurved. Ocular quadrangle longer than wide, anterior slightly widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.6 diameter apart, 0.5 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 3.3 mm. Carapace 1.6 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.7 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.6. Second patella and tibia 1.7 mm, third 1.0, fourth 1.7.

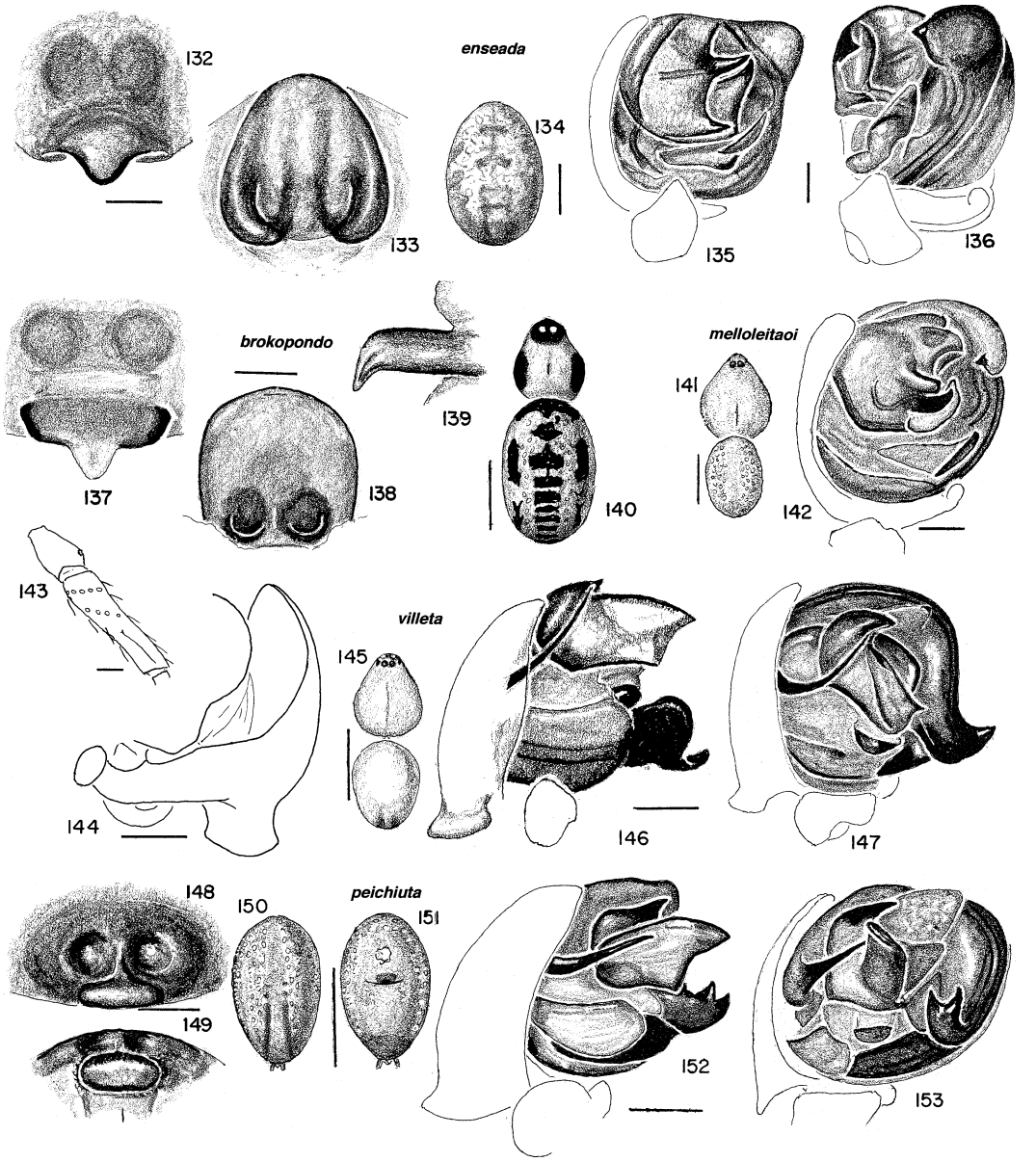
The male is not known.

*Variation.* Total length of females 3.0 to 3.3 mm. Specimens from Pará have the posterior median eyes slightly larger than anterior median eyes.

*Diagnosis. Mangora brokopondo* differs from all others by its contrasting coloration (Fig. 140) and by the epigynum, which is a thin, ventrally protruding shelf (Fig. 139) with a small tongue (Fig. 137) and, in posterior view far dorsally, the posterior openings, each within a black semicircle (Fig. 138).

*Distribution.* Guyana, Suriname, and Pará State, Brazil (Map 4A).

*Specimens Examined.* GUYANA *Bartica Distr.:* Kartabo, 1921, 1♀ (AMNH); Apr. 1924, 1♀ (W. Beebe et al., AMNH). BRAZIL *Pará:* Melgaço, Flona de Caxiuanã, 11 Aug. 1996, 2♀ (A. A. Lise, MCP 9318, 9376).




Figures 132–136. *Mangora enseada* new species. 132–134, female. 132, 133, epigynum. 132, ventral; 133, posterior. 134, abdomen, dorsal. 135, 136, left male palpus. 135, mesal; 136, ventral.

Figures 137–140. *M. brokopondo* new species, female. 137–139, epigynum. 137, ventral; 138, posterior; 139, lateral. 140, carapace, abdomen.

Figures 141, 142. *M. melloleitaoi* new species, male. 141, carapace, abdomen. 142, male palpus, mesal.

Figure 143. *M. peichiuta* new species, female, left third patella, tibia, with scars of macrosetae.

Figures 144–147. *M. villeta* new species, male. 144, cymbium, paracymbium. 145, carapace, abdomen. 146, 147, palpus, mesal.

Figures 148–153. *M. peichiuta* new species. 148–151, female. 148, 149, epigynum. 148, ventral; 149, posterior. 150, 151, abdomen. 150, dorsal; 151, ventral. 152, 153, male palpus. 152, mesal; 153, ventral.

*Scale lines:* 1.0 mm; genitalia and Fig. 143, 0.1 mm.

### *Mangora melloleitaoi* new species
Figures 141, 142; Map 2B

*Holotype.* Male holotype from Carmo do Rio Claro, Minas Gerais, Brazil [no date] (J. C. Carvalho), in MNRJ 2356. This species is named after the Brazilian arachnologist C. F. de Mello-Leitão.

*Mangora strenua*:—Mello-Leitão. 1947: 13. Misidentification.

*Note.* The specimens examined had been labeled by Mello-Leitão as *M. strenua,* but Mello-Leitão cites specimens from different localities as this species. They were probably different species, all with a pair of black patches on the posterior of the abdomen, but when I examined this specimen, I found the black patches faded and disappeared (Fig. 141).

*Description.* Male holotype. Prosoma yellowish. Posterior median eyes with distinct black rings. Abdomen: lighter, dorsum with two wide rows of white pigment spots (Fig. 141). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior slightly widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.0 diameter apart, 0.5 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with a dorsal proximal macroseta. Total length 3.1 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.5 mm, patella and tibia 1.8, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.6 mm, third 0.9, fourth patella and tibia 1.6.

The female is not known.

*Diagnosis.* The palpus is lightly sclerotized, and is separated from *M. tambo* (Fig. 131) by the short, thick, black, curved embolus with only a slender distal lobe above it (Fig. 142).

*Distribution.* Minas Gerais, Brazil (Map 2B).

*Specimens Examined.* No other specimens were found.

### *Mangora villeta* new species
Figures 144–147; Map 2A

*Holotype.* Male from Villeta, 850 m, Cundinamarca, Colombia, 17 June 1973 (P. Schneble), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma yellowish, with a gray longitudinal line on carapace. Abdomen: whitish; dorsum with two posterior, short, black bands (Fig. 145); venter with black book lung covers, and gray anterior to spinnerets. Posterior eye row straight. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; anterior lateral eyes 0.6 diameter, posterior 0.4. Anterior median eyes 0.4 diameter apart, 0.3 from laterals. Posterior median eyes 0.4 diameter apart, 1.0 from laterals. Height of clypeus equals 1.7 diameters of anterior median eyes. Clypeus with four adjacent macrosetae having their tips touching. Total length 2.7 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.5 high. First femur 1.4 mm, patella and tibia 1.4, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

The female is not known.

*Diagnosis.* The male *M. villeta* palpus differs from most male *Mangora* by having a bulge on the proximal end of the cymbium (8 h in Figs. 146, 147), and an extended paracymbium (8 h in Fig. 144). It differs from *M. peichiuta* by the placement of the embolus, shape of the conductor and terminal apophysis (Figs. 146, 147).

*Distribution.* Only known from central Colombia (Map 2A).

*Specimens Examined.* No other specimens have been collected.

### *Mangora peichiuta* new species
Figures 143, 148–153; Map 2B

*Holotype.* Female holotype and one male paratype from Bahía Negra Peichiuta, Alto Paraguay, Paraguay, 18–24 June 1988 (V. and B. Roth), in CAS. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype [in poor condition]. Prosoma orange, eyes with black rings. Abdomen: dorsum with posterior, longitudinal pair of gray lines, lateral to which is a band of white pigment spots (Fig. 150); venter with posterior dark gray area (Fig. 151). Posterior eye row slightly procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.2 diameters apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.8 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length ca. 2.3 mm. Carapace 0.8 mm long, 0.3 wide behind lateral eyes, 0.6 high. First femur 1.3 mm. Second patella and tibia 1.2 mm, third 0.7. [Other leg articles lost.]

Male paratype. Coloration as in female. Posterior eye row slightly procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.8 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length ca. 1.8 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region 0.3 wide behind lateral eyes, 0.5 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 1.0, tarsus 0.5. Third patella and tibia 0.6 mm, fourth 1.1. [Other leg articles lost.]

Male and female were collected together.

*Diagnosis.* The ventral view of the epigynum of *M. peichiuta* differs from all others by having a pair of depressions separated by an upside-down T-shaped ridge (Fig. 148) and a transverse, raised bar in posterior view (Fig. 149).

The male *M. peichiuta* palpus differs from most male species by having a bulge on the proximal end of the cymbium (8 h in Figs. 152, 153) and from *M. villeta* by the placement of the embolus, the shape of the conductor, and a terminal apophysis (Fig. 152).

*Distribution.* Only known from northern Paraguay (Map 2B).

*Specimens Examined.* No other specimens have been found.

### *Mangora missa* new species
Figures 154–163; Map 2C

*Holotype.* Female holotype from Santa María, Misiones, Argentina, Oct. 1956, in MACN. The specific name is an arbitrary combination of letters, a noun in apposition.

*Description.* Female holotype light yellowish. Abdomen: dorsum with two posterior black patches and several transverse lines (Fig. 161); sides gray. Posterior eye row straight. Ocular quadrangle slightly longer than wide, rectangular. Posterior median eyes 1.3 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 1.0 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.3 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.5 wide behind lateral eyes, 1.1 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.0, tarsus 0.4. Second patella and tibia 1.3 mm, third 0.8. Fourth femur 1.3 mm, patella and tibia 1.4, metatarsus 1.0, tarsus 0.4.

Males from San Antonio, Argentina. Darker than female. Abdomen: dorsum with an anterior gray patch and gray transverse lines more distinct. Posterior eye row slightly procurved. Ocular quadrangle square. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 0.8 diameter apart, 1.4 from laterals. Height of clypeus equals to 1.8 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.0, tarsus

0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 0.3.

Males and females have been collected together in Rio Grande do Sul and in Misiones, Argentina.

*Variation.* Total length of females 2.7 to 3.6 mm, males 2.3 to 2.9. One female had the lobe of the epigynum torn off. Figures 154, 155, 161 were made from the female holotype; Figures 156, 157, 162 from a female from Botelho, São Paulo; and Figures 158–160 from a female from Morro do Tigre, Rio Grande do Sul. The male (Fig. 163) came from Misiones Prov., Argentina; a lightly sclerotized male from Triunfo was used to touch up the illustration. Perhaps some females here illustrated belong to separate species.

*Diagnosis.* The epigynum of *M. missa* differs from that of most other species by the pair of adjacent dark round spots (center of Fig. 154, most distinct in Figs. 156, 158), and from *M. velha* by lacking the transverse swelling at the base of the tongue.

The male palpus differs from that of *M. velha* (Fig. 168) and others by the short, thick median apophysis (5 h in Fig. 163) and by the filiform embolus.

*Distribution.* Eastern, southern Brazil and northeastern Argentina (Map 2C).

*Paratypes.* ARGENTINA *Misiones:* Santa María, Nov.–Dec. 1952, 3♀ (M. J. Viana, MACN 3594, 3597).

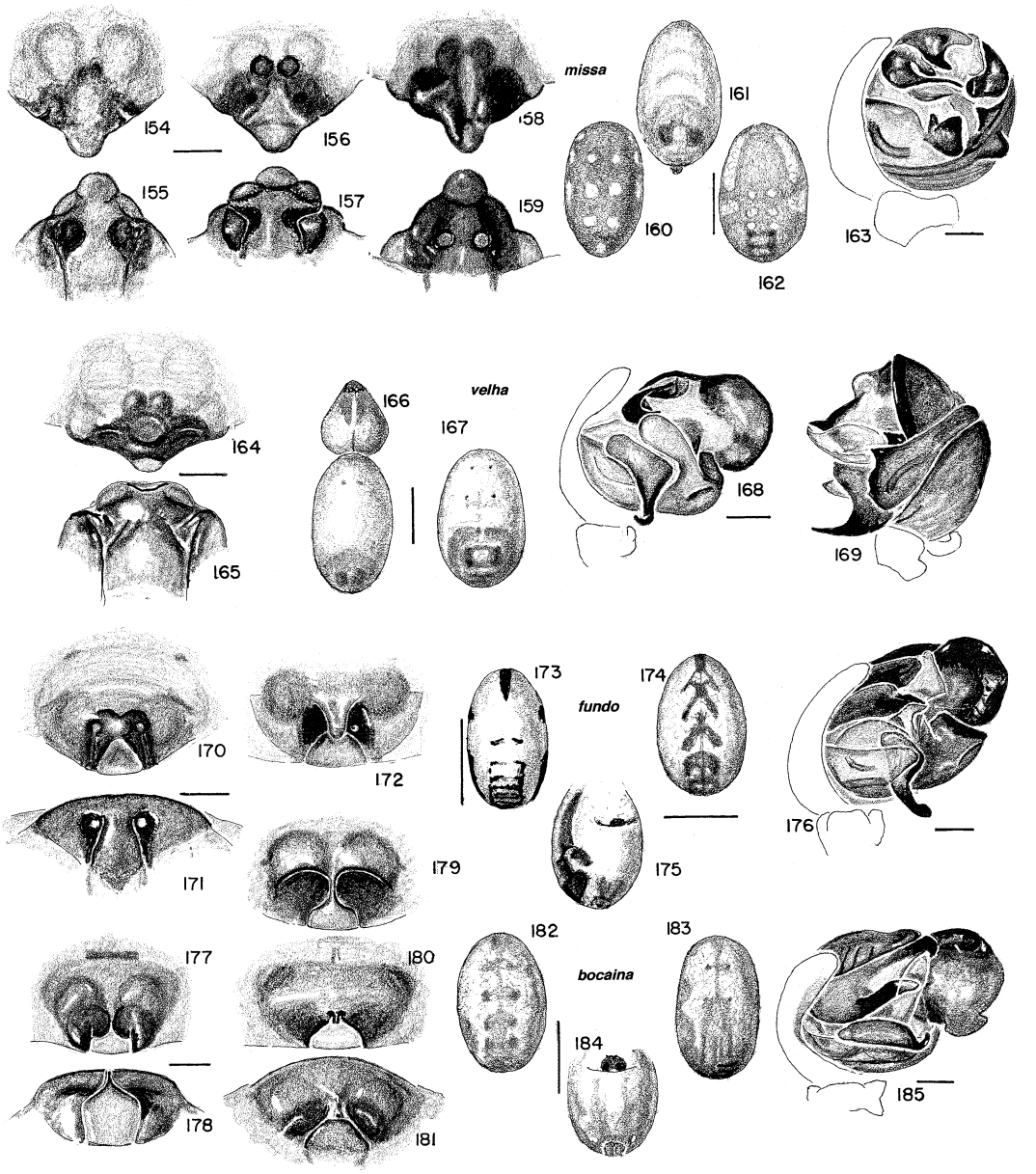
*Specimens Examined.* BRAZIL *Paraíba:* Areia, Mata do Guarim, 12 Apr. 1997, 1♀ (A. D. Brescovit, IBSP 10261). *Minas Gerais:* Lavras, 20 Sept. 1978, 1♀; 20 Mar. 1979, 1♀; 29 Mar. 1979, 1♀ (W. D. Fronk, MCZ). *Rio de Janeiro:* Rio de Janeiro, Reprêsa Rio Grande, Feb. 1976, 1♀ (M. Alvarenga, AMNH); Parque Nacional da Tijuca, Floresta dos Macacos, April 1961, 1♀ (M. Alvarenga, AMNH). *São Paulo:* Botucatu, Vitoriana, Fazenda Goldfarm, 18 Dec. 1986, 1♀ (I. M. P. Rinaldi, L. C. Forti, UBTU); São Miguel Arcanjo, Parque Estadual de Carlos Botelho, 14 Oct. 1990, 1♀ (A. B. Bonaldo, MCN 20476). *Paraná:* Jundiaí do Sul, 11 Aug. 1986, 1♀ (Equipe Profaupar, MCN 20286); Palmeira, 1 Oct. 1994, 1♀ (R. Bóçon, MCN 26612). *Rio Grande do Sul:* Estrela Velha (Barragem Itaúba), 7 Mar. 2001, 1♂ (R. Ott, MCN 33654); 20 Oct. 1998, 1♀ (A. Silva, MCN 29558); Salto do Jacuí, Horto See, 19 Oct. 1998, 1♀ (A. B. Bonaldo, L. Moura, MCN 29634); Porto Alegre, Morro Santana, 15 Dec. 1989, 1♀ (A. A. Lise, MCN 19169); Morro do Tigre, 29°50′S 50°52′W, 15 July 2000, 1♀ (A. B. Bonaldo, MCN 33091a); Rio Pardo, 1♀ (A. Rugo, MNRJ); Glorinha, São João, 29°52′S, 50°48′W, 14 July 2000, 1♂ (A. B. Bonaldo, MCN 33060); Triunfo, 15 Sep. 1977, 1♂ (E. H. Buckup, MCN 6533); 28 Nov. 1977, 1♀, 2♂ (E. H. Buckup, MCN 7327, 7343); Viamão, 2 Dec. 1994, 1♀ (A. A. Lise, MCP 7890); 17 Oct. 1995, 1♂ (A. A. Lise et al., MCP 8528); 16 Dec. 1995, 1♀ (A. A. Lise et al. MCP 9023a). ARGENTINA *Misiones:* San Antonio, Sep. 1956, 1♀, 1♂ (M. J. Viana, MACN).

## *Mangora velha* new species
Figures 164–169; Map 2D

*Holotype.* Female holotype, one male and one female paratype from Estrela Velha, Rio Grande do Sul, Brazil, 20 Oct. 1998 (A. Silva), in MCN 9626. The specific name is a noun in apposition after the type locality. Velha is a Portuguese word for old.

*Description.* Female holotype. Prosoma yellow. Abdomen: whitish, dorsum with anterior white pigment spots on sides, posterior transverse bands, two of which are connected forming a rectangle (Fig. 166). Posterior eye row straight. Ocular quadrangle longer than wide, almost rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.1 diameters apart, 1.0 from laterals. Posterior median eyes 0.7 diameter apart, 1.1 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 3.6 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8. Fourth femur 1.2 mm, patella and tibia 1.3, metatarsus 0.8, tarsus 0.5.

Male paratype. Posterior eye row slightly procurved. Ocular quadrangle square. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.7 diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.2 mm long, 1.1 wide in thoracic region, 0.5 wide behind lateral eyes,




Figures 154–163. *Mangora missa* new species. 154–162, female. 154–159, epigynum. 154, 156, 158, ventral; 155, 157, 159, posterior. 160–162, abdomen, dorsal. 163, left male palpus, mesal.

Figures 164–169. *M. velha* new species. 164–167, female. 164, 165, epigynum. 164, ventral; 165, posterior. 166, carapace, abdomen. 167, abdomen, dorsal. 168, 169, male palpus. 168, mesal; 169, ventral.

Figures 170–176. *M. fundo* new species. 170–175, female. 170–172, epigynum. 170, ventral; 171, posterior; 172, anteroventral. 173–175, abdomen, 173, 174, dorsal; 175, lateral-ventral. 176, male palpus, mesal.

Figures 177–185. *M. bocaina* new species. 177–184, female. 177–181, epigynum. 177, 180, ventral; 178, 181, posterior; 179, anteroventral. 182–184, abdomen. 182, 183, dorsal; 184, ventral. 185, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

0.7 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 1.2.

Male and females have been collected together.

*Variation.* Total length of males 2.3 to 2.4 mm. The illustrations were made from the female holotype, except Figure 166 from the paratype.

*Diagnosis. Mangora velha* female differs from most species by the pair of adjacent black circles on the ventral face of the epigynum (center of Fig. 164); it differs from *M. missa* by having a transverse swelling at the base of the tongue (Fig. 164), whereas *M. missa* has a median, longitudinal groove.

The male palpus differs from that of *M. missa* by having a median apophysis with an extended, pointed tip (7 h in Fig. 168) and a thick embolus partly hidden by the conductor (11 h in Fig. 168).

*Distribution.* Southern Brazil (Map 2D).

*Specimens Examined.* BRAZIL *Santa Catarina:* Bombas [27°08′S, 48°32′W], 14 Feb. 1990, 1♂ (A. D. Brescovit, MCN 19496).

### *Mangora fundo* new species
Figures 170–176; Map 2E

*Holotype.* Female holotype, two male, four female paratypes from Passo Fundo, Rio Grande do Sul, Brazil, 1 Aug. 1986 (A. A. Lise), in MCN 15868. The specific name is a noun in apposition after the type locality. Fundo is Portuguese for deep.

*Description.* Female holotype. Prosoma orange. Abdomen: dorsum with some silver pigment spots with a gray and black pattern (Figs. 173–175). Posterior eye row procurved. Ocular quadrangle as long as wide posteriorly, posterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.3 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.5 wide behind lateral eyes, 0.7 high. First femur 1.6 mm, patella and tibia 1.8, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.6 mm, third 0.9, fourth 1.3.

Male from Passo Fundo. Prosoma orange. Abdomen: whitish, dorsum with a gray cardiac mark and pairs of posterior, short transverse gray lines. Posterior eye row procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 1.0 diameter. Anterior median eyes 1.3 diameter apart, 0.8 from laterals. Posterior median eyes 1.2 diameters apart, 1.2 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.2, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 1.1.

Males and females have been collected together.

*Variation.* Total length of females 2.3 to 3.3 mm, males 2.2 to 2.6.

*Diagnosis.* The *M. fundo* epigynum has a median swelling anterior to the triangular light area (Fig. 170), whereas the similar *M. bocaina* (Fig. 177) has a narrow septum anterior to the light area. In posterior view *M. fundo* has a pair of depressions and the median plate is ventrally wide (Fig. 171), whereas *M. bocaina* has a septum extending ventrally from a median plate (12 h in Figs. 178, 181).

The male palpus differs from that of *M. bocaina* (Fig. 185) by the prominent median apophysis projection (5 h in Fig. 176) and the relatively indistinct small, sclerotized embolus (center of Fig. 176).

*Distribution.* Southern Brazil (Map 2E).

*Paratypes.* BRAZIL *Rio Grande do Sul:* Passo Fundo, 13 Oct. 1985, 2♀ (A. A. Lise, MCN 14260).

*Specimens Examined.* BRAZIL *Rio Grande do Sul:* Bajé, 28 Oct. 1981, 1♀, 1♂ (A. A. Lise, MCN 9957); Canela, 10 July 1984, 1♀ (A. A. Lise, MCN 12247); Canoas, 14 Oct. 1990, 1♀ (E. H. Buckup, MCN 20087); Candelária, Cerro do Botucaraí, 4–6 Sep. 2000, 1♂ (A. Franceschini, MCN 33148); Eldorado do Sul, 12–19 Sep. 1993, 3♀ (A. Braul, C. Queiróz,

MCP 4118); Estrela Velha, 6 May 1998, 1♂ (M. A. L. Marques, MCN 29363a); Arroio dos Ratos, Fazenda Recanto da Figueira, 1 Aug. 1986, 1♀ (A. D. Brescovit, MCN 15471); General Câmara, 16 Sep. 1982, 1♀ (A. A. Lise, MCN 10732); Guaíaba, Fazenda São Maximiano, 2 June 1995, 1♀ (A. A. Lise et al., MCP 6712); 9 Jan 1996, 1♂ (A. Lise et al., MCP 8217); Montenegro, 3 Nov. 1977, 1♀ (M. H. Galileo, MCN 7112); 15 Dec. 1977, 1♂ (H. Bischoff, MCN 7515); Pinhal Grande, Margens do Rio Jacuí, 7 May 1998, 1♀ (M. A. L. Marques, MCN 23388); Porto Alegre, 18 Jan. 1992, 1♀, 1♂ (M. A. L. Marques, MCN 21967); Porto Alegre, Jardim Botânico, 11 Oct. 1994, 1♂ (A. D. Brescovit, MCN 26139); Vila Manresa, Roua, Porto Alegre, 27 Sep. 1985, 1♂ (T. Arígony, MCN 13431); Santa Rosa, 2 Jan. 1984, 1♀ (A. D. Brescovit, MCN 12151); São Sepé, 30 Dec. 1987, 1♀, 1♂ (C. C. Kessler, MCN 17277); Viamão, Parque Estadual de Itapuã, Apr. 2002, 1♂ (L. E. C. Schmidt, MCN 34768); Viamão, 19 Jan. 1977, 1♀ (E. H. Buckup, MCN 5297); Viamão, Águas Belas, 6 Jan. 1977, 1♀ (A. A. Lise, MCN 5764); 30 Mar. 1977, 1♀ (E. H. Buckup, MCN 5557); Viamão, Médio Arroio Pasqueiro, 30 May 2000, 1♀ (A. B. Bonaldo, MCN 33186); Viamão, Escola Irmãos Maristas, 20 May 1994, 1♂ (A. A. Lise et al., MCP 4786); 19 Aug. 1994, 1♂ (A. A. Lise et al., MCP 5299).

### *Mangora bocaina* new species
Figures 177–185; Map 2G

*Holotype.* Female holotype and male paratype from Parque Nacional da Serra da Bocãina, Rio de Janeiro, Brazil, 14 May 1991 (N. Silveira), in MCN 21085. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma grayish yellow. Abdomen: whitish, dorsum with a posterior band containing some gray longitudinal lines and black transverse marks (Figs. 182, 183); venter without pigment spots except for a pair anterior white spots and lateral to spinnerets (Fig. 184); sides without pigment spots. Posterior eye row procurved. Ocular quadrangle as long as wide posteriorly, posterior widest. Posterior median eyes 1.4 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.7 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.5 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.5, metatarsus 1.3, tarsus 0.5. Second patella and tibia 1.3 mm, third 0.8, fourth, 1.3.

Male paratype. Prosoma orange-yellow. Abdomen: dorsum with white pigment spots. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.8 diameter apart, 0.4 from laterals. Posterior median eyes 0.7 diameter apart, 1.0 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.3 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.8, fourth, 1.2.

Males and females have been collected together.

*Variation.* Total length of females 2.5 to 3.8 mm, males 2.1 to 2.8. The smallest specimen is one from Mato Grosso and might belong to a different species. Some females have a depression lateral to the septum in ventral view of the epigynum (Fig. 179).

*Diagnosis.* The *M. bocaina* epigynum lacks the median swelling anterior to the triangular light area (Fig. 177) present in *M. fundo* (Fig. 170). In posterior view, *M. bocaina* has a narrow stalk extending ventrally from the median plate (Figs. 178, 179, 181), whereas *M. fundo* has the ventral end of the median plate wide (Fig. 171).

The male palpus differs from that of *M. fundo* (Fig. 176) by lacking the prominent median apophysis projection and having in its place a small hook (5 h in Fig. 185) and having a wide curved embolus (center of Fig. 185).

*Natural History.* Specimens were collected in cerrado-scrub in Mato Grosso.

*Distribution.* Mato Grosso, Brazil, and southern Brazil (Map 2G).

*Specimens Examined.* BRAZIL *Mato Grosso:* 260

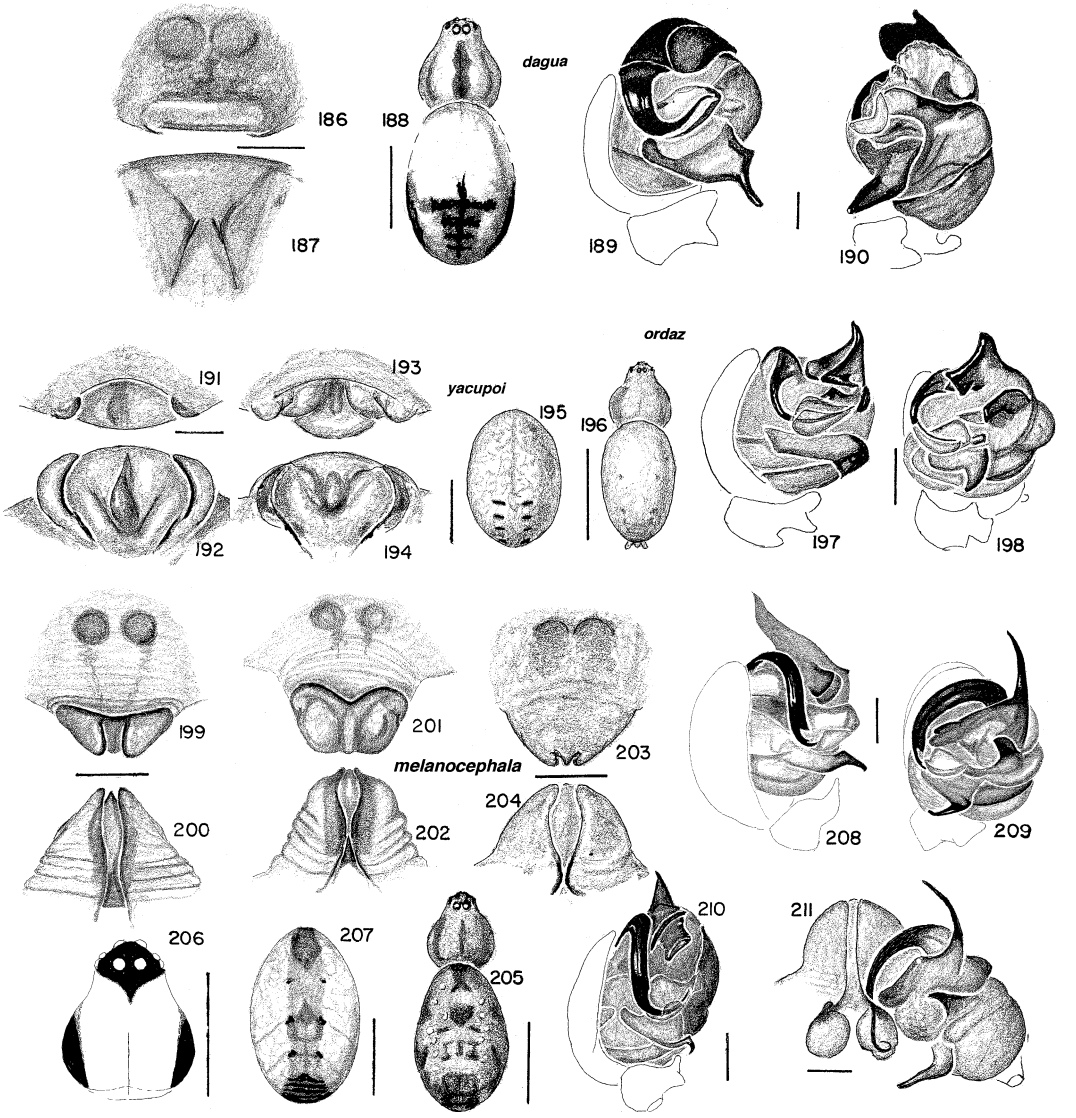
km N of Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, Feb.–Apr. 1969, 1♀ (Xavantina-Cachimbo Exped., MCZ). *Rio de Janeiro:* Mangaratiba, Feb. 1976, 1♀ (M. Alvarenga, AMNH); Teresópolis, 900–1,000 m, Mar. 1946, 1♀ (H. Sick, AMNH). *São Paulo:* Barueri, 9 Dec. 1961, 1♀ (K. Lenko, MZSP 7588); 8 Sep. 1965, 1♀ (K. Lenko, MZSP 4534); 3, 6 Dec. 1965, 3♀ (K. Lenko, MZSP 5874, 6883); São Miguel Arcanjo, Parque Estadual de Carlos Botelho, 14 Oct. 1990, 1♂ (A. B. Bonaldo, MCN 20475); Salesópolis, Estação Biológica de Boracéia, 10 Feb. 1942, 1♀ (MZSP 4815); 4 Apr. 1942, 2♀, 1♂ (B. Soares, MZSP 13243); 18 Oct. 1960, 1♀, 1♂ (K. Lenko. MZSP 13248); 22–23 Feb. 1961, 1♂ (P. de Biasi, MZSP 13247); 27, 28 July 1961, 4♀, 1♂ (P de Biasi, MZSP 13240); 18 Aug. 1966, 2♀, 3♂ (Dep. Zool., MSZP 15945); 28 Feb. 1967, 3♀, 1♂ (P. de Biasi, MZSP 15982); São Paulo, Campus IBSP, 12, 31 Aug. 1998, 1♀, 2♂ (F. S. Cunha, IBSP 19663, 19664, 19665); Embu-Guaçu, Cabeceiras do Rio Embu-Guaçu, Campos da Serra, 22 Sep. 1942, 1♀ (F. Lane, MZSP 13238); Carvalho de Araújo [?], 3 May 1942, 1♀ (A. Zoppei, MZSP 3239); Jundiaí, Nov. 1976, 8♀, 3♂ (P. A. Schneble, MCZ); 18–21 Apr. 1998, 1♀ (C. A. Rheims, IBSP 17455); 4–8 Mar. 2000, 1♂ (C. A. Rheims, IBSP 26232); Pindamonhangaba, 8–10 Apr. 1998, 1♀ (R. Martins, I. Knyzak); São Bernardo, 7 Feb. 1968, 1♀ (P. de Biasi et al., MZSP 8309); Cotia, Dec. 2002, 1♀ (H. Y. Yamaguti, MZSP); Salesópolis, 12 May 1961, 1♂ (K. Lenko, MZSP 13242); São Paulo, Água Funda, 16 Mar. 1961, 1♀ (H. Canter, MZSP 13244); São Paulo, Serra da Cantareira, 31 Aug. 1960, 1♂ (MZSP 13245); São Paulo, Mar. 1961, 2♀ (F. S. Cunha, IBSP 19661); 35 km S São Paulo, Camino do Mar, 11 Apr. 1965, 4♀, 1♂ (H. Levi, P. de Biasi, MCZ). *Paraná:* Curitiba, 2 May 1967, 2♀ (P. de Biasi, MZSP 7041); Almirante Tamandaré, Terra Boa, 5 Apr. 1987, 2♀ (A. D. Brescovit, MCN 16950); Almirante Tamandaré, 6 Apr. 1984, 3♀, 3♂; 25 Apr. 1984, 1♀, 1♂; 8 May 1984, 1♀, 1♂; 25 May 1984, 6♀, 3♂; 8 June 1984, 11♀; 22 June 1984, 1♀, 1♂; 10 July 1984, 1♀, 1♂; 5 Aug. 1984, 3♀; 8 Aug. 1984, 2♀, 2♂; 24 Aug. 1984, 1♂; 28 Sep. 1984, 1♂; 6 Oct. 1984, 3♂; 28 Oct. 1984, 1♀; 24 Aug. 1984, many ♀ (E. C. Costa, MCN 12387, 12391, 12399, 12406, 12413, 12420, 12425, 12433, 12436, 12441, 12442, 12446, 12453, 124767, 12473, 12484, 12489, 12498, 12506, 12516, 12512); Curitiba, Bom Retiro, 10 Apr. 1987, 1♀, 1♂ (A. D. Brescovit, MCN 16919); Morretes, Parque Estadual do Pico do Marumbi, 28 Mar.–25 Aug. 1996, 1♂ (J. A. Castano, IBSP 7329); Rio Azul, 2 Apr. 1993, 1♀ (R. Bóçon, MCN, 23607); Rio Branco do Sul, 16 Apr. 1987, 1♀ (A. D. Brescovit, MCN 17142). *Santa Catarina:* [?] June, 1♂ (J. P. Duret, MACN); Ilhota Morro do Baú, 13 May 1996, 2♀ (C. N. Duckett, MCN 27573); Porto Belo, 27 Oct. 1984, 1♂ (F. Z. da Cruz, MCN 12580); Bombinhas, Reserva Biológica Marinha do Arvoredo, Oct. 1993, 1♀ (L. Moura, MCP 4502). *Rio Grande do Sul:* Canela, 11 Jan. 1966, 1♀ (A. A. Lise, MCN 664); Capão Novo, 17, 18 Apr. 1993, 1♀ (A. A. Lise, MCP 3140); Guaíba, 29 Oct. 1994, 1♀ (A. Lise, MCP 5662); São Francisco de Paula, Potreiro Velho, 12–14 Nov. 1998, 1♂ (A. Lise, MCP 12698); Santo Antônio da Patrulha, Fazenda Paulo Lompra, 29°57′S, 50°37′W, 2 June 2000, 1♀ (A. B. Bonaldo, MCN 32970); Viamão, Morro do Côco, 25 July 1985, 1♀ (A. A. Lise, MCN 13376); 2 Dec. 1994, 1♀ (A. A. Lise et al., MCP 5907); Roca Sales, 24 May 1986, 1♀ (A. D. Brescovit, MCN 15102a); Tenente Portela, Parque Estadual do Turvo, Salto do Yucumã, 11 Sep. 1990, 1♀ (N. Silveira, MCN 19986); Torres, 8 May 1994, 1♂ (A. A. Lise, MCP 4837a); Torres, Colônia São Pedro, 7–9 June 1992, 1♂ (A. Braul, MCP 1983).

## *Mangora dagua* new species
## Figures 186–190; Map 1I

*Holotype.* Female holotype from Río San Juan, a tributary of Río Dagua near Queremal, 1300 m, Valle, Colombia, 25 July 1970 (W. Eberhard 308) in MCZ. The specific name is a noun in apposition after Río Dagua.

*Description.* Female holotype. Carapace yellowish with a wide, black, longitudinal median band and a smaller lateral band on each side (Fig. 188). Labium, endites, and sternum orange. Legs yellow with indistinct rings. Abdomen [in poor condition]: dorsum with a dark longitudinal posterior marking (Fig. 188). Posterior eye row procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 2.0 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes their diameter apart, 1.0 from laterals. Posterior median eyes 0.2 diameter apart, 0.4 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length about 3.0 mm. Carapace 1.4 mm long, 1.2 wide in thoracic region, 0.7 wide behind lateral eyes, 0.7 high. First femur 1.4 mm, patella and tibia 1.6, metatarsus 1.4, tarsus 0.5. Second patella and tibia [lost], third 1.1. Fourth femur 1.7 mm, patella and tibia 1.7, metatarsus 1.6, tarsus 0.5.

Male paratype. Coloration as in female. Posterior eye row procurved. Ocular quadrangle as long as wide posteriorly, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.8 diameter apart, 1.2 from laterals. Posterior




Figures 186–190. *Mangora dagua* new species. 186–188, female. 186, 187, epigynum. 186, ventral; 187, posterior. 188, carapace, abdomen. 189, 190, left male palpus. 189, mesal; 190, ventral.

Figures 191–195. *M. yacupoi* new species, female. 191–194, epigynum. 191, 193, ventral; 192, 194, posterior. 195, abdomen.

Figures 196–198. *M. ordaz* new species, male. 196, carapace, abdomen. 197, 198, male palpus. 197, mesal; 198, ventral.

Figures 199–211. *M. melanocephala* (Taczanowski). 199–207, female. 199–204, epigynum. 199, 201, 203, ventral; 200, 202, 204, posterior. 205, carapace, abdomen. 206, carapace. 207, abdomen, dorsal. 208–211, male palpus. 208, 210, mesal; 209, ventral; 211, epigynum with inserted embolus of male palpus.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

median eyes 0.4 diameter apart, 0.4 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length about 2.3 mm. Carapace 1.2 mm long, 0.9 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.4 mm, patella and tibia 1.3, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.1 mm, third 0.7, fourth 1.2.

Male and female were collected in different years from the same locality.

*Diagnosis. Mangora dagua* has the epigynum lightly sclerotized (Figs. 186, 187) and is distinguished from others by the hour-glass–shaped median plate in posterior view (Fig. 187).

The male palpus is distinguished from others by the thick, U-curved embolus (center of Fig. 189) and a median apophysis with a prong extending from its side (4 h in Fig. 189, 8 h in Fig. 190).

*Distribution.* Southwest Colombia (Map 1I)

*Paratypes.* COLOMBIA *Valle:* Río San Juan, a tributary of Río Dagua near Queremal, 1,300 m [date?], 1♂ (W. Eberhard, MCZ).

*Specimens Examined.* No other specimens have been found.

### *Mangora yacupoi* new species
### Figures 191–195; Map 2D

*Holotype.* Female holotype and two paratypes from Río Urugu-í, Yacú-Poi, 30 km from Puerto Bemberg [Puerto Libertad], Misiones, Argentina, Jan.–Feb. 1950 (A. Giai, W. Partridge), in MACN 3173. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: dorsum with white pigment spots, with five pairs of posterior black bars, the most posterior one very short (Fig. 195); venter with a few white pigment spots. Posterior eye row straight. Ocular quadrangle wider than anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 0.8 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 3.2 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.5 wide behind lateral eyes, 0.7 high. First femur 1.5 mm, patella and tibia 1.9, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.0, fourth 1.7.

The male is not known.

*Illustration.* Figures 191, 192, 195 were made from the holotype.

*Diagnosis. Mangora yacupoi* epigynum (Figs. 191–194) is lightly sclerotized and differs from that of *M. melanoleuca* (Figs. 241, 242) by the wider, shallower median plate (Figs. 191–194) and by lacking bands on the abdomen (Fig. 195).

*Distribution.* Northeastern Argentina (Map 2D).

*Specimens Examined.* ARGENTINA *Misiones:* Santa María, Nov., Dec. 1956, 3♀ (M. J. Viana, MACN 3593, 3595).

### *Mangora ordaz* new species
### Figures 196–198; Map 2A

*Holotype.* Male holotype from 15 km SW Puerto Ordaz, Bolívar, Venezuela, 13 July–2 Aug. 1987 (S. and J. Peck), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma orange, with a gray band on each side of carapace (Fig. 196). Abdomen: whitish, dorsum with posterior, paired gray marks (Fig. 196); venter with indistinct gray marks on sides. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.0 diameter apart, 0.7 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 0.3 diameter of anterior median eyes. Fourth femur with a ventral, proximal macroseta. Total length 2.0 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.0 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.5. Second patella and tibia 1.0 mm, third 0.6, fourth 1.0.

The female is not known.

*Diagnosis.* The palpus of *M. ordaz* differs from that of *M. dagua* (Figs. 189, 190) by having the median apophysis with a distal bend (4 h in Fig. 197, 6 h in Fig. 198) and a thinner embolus (center of Fig. 197, 9 h in Fig. 198).

*Distribution.* Only known from Venezuela (Map 2A).

*Specimens Examined.* No other specimens have been collected.

### *Mangora melanocephala* (Taczanowski)
Figures 2, 21, 199–211; Map 2F

*Linyphia melanocephala* Taczanowski, 1874: 70. Male and female syntypes from Cayenne, French Guiana, in PAN, examined.

*Zilla melanocephala*:—Keyserling, 1881: 552, pl. 16, fig. 4, ♀♂; 1893: 302, pl. 15, fig. 223, ♀♂.

*Mangora picta*:—O. P.-Cambridge, 1889: 14, pl. 3, fig. 6, ♀; F. O. P.-Cambridge, 1904: 479, pl. 45, ♀. (Female only, but not male holotype.) Error first noted by Chickering, 1954.

*Mangora spinula* F. O. P.-Cambridge, 1904: 480, pl. 45, fig. 18, ♂. Male holotype from Teapa, Mexico, in BMNH; Chickering, 1954: 211, figs. 23–26, ♀♂. Synonymized by Levi, 2005.

*Mangora dentembolus* Chamberlin and Ivie, 1936: 59, pl. 12, figs. 114–116, ♂. Male holotype from Barro Colorado Island, Panama, in AMNH; vial examined, but specimen lost. Synonymized with *M. spinula* by Chickering, 1954.

*Zygiella melanocephala*:—Roewer, 1942: 887.

*Mangora aragarcensis* Soares and Camargo, 1948: 372, figs. 27, 28, ♀. Female holotype from Aragarças, Goiás, Brazil, in MZSP no. 1215, examined. Platnick, 2005. Synonymized by Levi, 2005.

*Mangora melanocephala*:—Caporiacco, 1948: 659; Levi, 2005: 151, figs. 30–47, ♀♂; Platnick, 2006.

*Mangora pozonae* Schenkel, 1953: 20, fig. 18, ♀. Female holotype from Conwarook (Potaro), Pozón [Falcón], Venezuela, in the NHMB, examined. Synonymized by Levi, 2005.

*Note.* Taczanowski did not illustrate the specimen, but Keyserling apparently examined and described the syntypes and illustrated the genitalia.

*Description.* The species has recently been redescribed (Levi, 2005). Total length 2.7 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.4, tarsus 0.6. Second patella and tibia 1.5 mm, third 0.9, fourth 1.7.

Male. Total length 1.8 mm. Carapace 1.1 mm long, 0.9 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.2 mm, patella and tibia 1.5, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

*Variation.* Total length of females from South America 2.7 to 3.5 mm, males 1.8 to 2.7. Colombian specimens are slightly larger, some females to 4.3 mm, males 2.3. The epigynum is lightly sclerotized and the posterior rim variable in shape (Figs. 199, 201, 203). Some Colombian specimens are light and do not have a black cephalic region, but have a black patch on each side of the carapace. Several specimens from Depto. Santander, Colombia, had an epigynum with the median plate wide in ventral view and pulled out; males lack the characteristic break in the embolus, and the terminal apophysis short (Fig. 210). Two Ecuadorian specimens are light, whereas the third is very dark and has a black cephalic region as in the syntypes (Fig. 206). The spacing of eyes may differ slightly: southern Brazilian specimens have the eyes a little farther apart than those from Panama and have the legs shorter. A male from Puerto Maldonado, Peru, lacked the characteristic black patches on the carapace and also the macroseta on the fourth leg.

The illustrations in Figures 2, 199, 200, 206, 208, 209 were made from syntypes of *M. melanocephala*; Figures 201, 202 from Tumbes Prov., Peru; Figures 203, 204, 205 from Misiones Prov., Argentina, and Figure 210 from a specimen from Colombia. Figure 211, insertion of the embolus into the epigynum, is from specimens from Panama.

*Diagnosis. Mangora melanocephala* has a black or gray band on the sides of the carapace, sometimes barely visible (Figs. 205, 206). The epigynum is lightly sclerotized and is distinguished from others by having the spermathecae placed far anterior (Figs. 199, 201, 203), and in posterior view by the narrow median plate and wide triangular, striated lateral plates (Figs. 200,

202, 204). The posterior rim of the epigynum in ventral view is variable (Figs. 199, 201, 203).

Males have black or gray bands on the sides of the carapace (Figs. 205, 206), a macroseta on the fourth femur (Fig. 21). The palpus is distinguished by the long wide embolus that appears broken near its tip (center of Fig. 208), and the spine-shaped projection of the terminal apophysis (12 h in Figs. 208, 210, 2 h in Fig. 209).

*Natural History.* This is the most common and widespread species of *Mangora* in South America. It has been collected in various habitats: banana plantation, yucca plantation, coffee plantation, pasture, sweeping grasses, meadow, herbs and vegetation on river shore, dead foliage, forest border, forest ravine, sweeping forest floor, and rainforest.

*Distribution.* From Veracruz, Mexico, to northern Argentina (Map 2F).

*Specimens Examined.* Mexican and Central American records are cited in Levi (2005).

VENEZUELA *Sucre:* Nueva Esparta, Isla Margarita, Cerro Copey, 900 m, 13 Jan. 1984, 10 Feb. 1984, ♀ (J. Coddington, USNM). *Monagas:* Caripito, Aug. 1942, ♀♂ (W. Beebe, AMNH); Caripe Cueva Guacharo, 750 m, 20–31 July 1987, ♀ (S. and J. Peck, AMNH). *Guárica:* Guatopo Natl. Park, Río Orituco, 24 km N Altagracia, 13 June 1987, ♀♂ (S. and J. Peck, AMNH). *Miranda:* 28 km N Altagracia, Guatopo Natl. Pk., 700 m, El Lucero, 14 June 1987, ♀♂ (S. and J. Peck, AMNH). *Aragua:* Rancho Grande nr. Maracay, 24 Aug. 1946, ♀ (W. Beebe, AMNH). *Carabobo:* San Esteban, 26 Jan. 1940, ♀♂ (P. Andruze, AMNH). SURINAME Moengo, 160 km up Cottica River, Aug. 1932, ♀ (G. Damback, AMNH). FRENCH GUIANA slopes of Mt. Mahury nr. Cayenne, 12–14 Dec. 1972, ♀ (D. Quintero, MCZ); Cayenne [1866–1871], ♀ (K. Jelski, PAN). COLOMBIA *Magdalena:* San Pedro, Sierra Nevada de Santa Marta, 1,300 m, Feb. 1974, May 1975, ♀♂ (J. A Kochalka); Carmelio, Sierra Nevada de Santa Marta, 1,400 m, Feb. 1974, ♀ (J. A. Kochalka); above Minca Valley, Sierra Nevada de Santa Marta, Feb. 1974, ♀ (J. A. Kochalka); Serr. Nueva Granada, Sierra Nevada de Santa Marta, 1,600 m, 28 May 1975, ♀ (J. A. Kochalka); Cisneres Río Quebrada Descansion, 15 Dec. 1969, ♀♂ (MCZ); Cañaverales, Tayrona Park, ca. 40 km E Sta. Marta, 11 Aug. 1985, ♀ (H.-G. Müller, SMF); Río Don Diego, ca. 70 km E Sta. Marta, 25 March 1986, ♀♂ (H.-G. Müller, SMF); Sierra Nevada de Santa Marta, nr. San Pedro de la Sierra, 1,000 m, 12 Aug. 1986, ♀♂ (H.-G. Müller, SMF). *Santander:* Suaita, San José de Suaita, 1,800 m, 6–9 Oct. 1998, ♀♂ (E. Florez, Estud.. de Sistem. Animal, ICNB AR-1588, 1592 1593); Guadalupe, Vda. Solferina, Finca Maravilla, 1,800 m, 9 Oct. 1998, ♀ (E. Florez, Estud. de Sistem. Animal, ICNB AR-1591). *Antioquia:* Medellín, 1,700 m, June 1963, ♂ (P. B. Schneble, MCZ); Mutatá, June, July, Dec. 1963, ♀ (P. B. Schneble, MCZ). *Meta:* Pto. Lleras, Lomalinda, 03°18′N, 73°22′W, 10 Jan. 1986, Apr. 1986, Aug. 1988, Feb. 1989, ♀♂ (B. T. Carroll, MCZ, CAS); Carimagua, Oct. 1973, ♀ (W. Eberhard 628, MCZ); 6 km SW Puerto Lopez, 1978, ♀ (W. Eberhard 1415, MCZ); 15 km SW Puerto Lopez, Hacienda Mozambique, 200 m, 1978, ♀♂ (W. Eberhard 1467, 1468, 1472, 1501, 1508, 1590 1641, MCZ); ca. 20 km N Río Muco, ca. 20 km S El Porvenir, Finca Chenovo, 1978, ♀♂ (W. Eberhard 1344, 1349, 1351, 1353, 1355, 1358 1363, 1365, 1366, 1397, 1399, 1401, MCZ); Villavicencio, Aplay, 450 m, Oct. 2003, ♀ (E. Florez, ICNB AR-2985). *Cundinamarca:* Monteredondo, 1,200 m, 25 Feb. 1975, ♀♂ (P. B. Schneble, MCZ); Villetta, 800 m, 8 Sep. 1973, ♀♂ (P. B. Schneble, MCZ); ca. 4.8 km SE Finca Bella Vista W of Sasaima, 13 May 1965, ♂ (P. R., D. L. Craig, CAS). *Risaralda:* Santa Cecilia, Granja Secretaría de Agricultura, 600 m, Oct. 1991, ♀ (Curso Arañas ICN-UNAL, ICNB AR-132, 159, 161, 630); Mistrato, San Antonio del Chami, Albania, 1,400 m, 5 May 1992, ♀ (Est. Biol., UN ICNB AR-1589). *Chocó:* Quebrada Docordo betw. Cucurrupi and Noanama, Río San Juan, 5 Jan. 1969, ♂ (B. Malkin, AMNH). *Valle:* Anchicaya, 26 Oct. 1969, 1 July 1972, 1977, ♀♂ (W. Eberhard 61, 94, 418, MCZ); Buenaventura, 4 Nov. 1950, ♀♂ (E. S. Ross, CAS); Jan. 1970; Mar. 1973, ♀ (W. Eberhard 3, 208p, 224, 503, MCZ); 50 km S Buenaventura, Mar. 1973, ♀♂ (W. Eberhard, MCZ); Queremal to Buenaventura, 17 Feb. 1935, ♀ (H. F. Schwarz, AMNH); Cali, 1973, 1974, ♀♂ (W. Eberhard 467, 535, MCZ); 30 Dec. 1976, ♀ (H. Levi, MCZ); Río Jamundi, betw. Cali & Jamundi, 9 July 1969, 17 June 1970, 13 June 1972, ♀♂ (W. Eberhard 156, 156p, 263, 266, MCZ). *Huila:* Tierra a Dentro, ca. Tanzá, Aug. 1971, ♀ (W. Eberhard, MCZ). *Cauca:* NW of Guapi, Jan. 1973, ♀ (W. Eberhard, MCZ). *Putumayo:* Buena Vista, 23–29 July 1972, ♀ (W. Eberhard, MCZ); El Pepino [01°03′N, 76°38′W], 21 Feb. 1973, ♀♂ (N. Leist, IBSP 10769). *Nariño:* road to Barbacoas, Mar. 1974, ♀ (W. Eberhard, 752, MCZ); La Planada, 1,800 m, 7 km S Chocones, 9 km S Ricaurte, July 1986, June 1991, ♀♂ (W. E. Eberhard, MCZ). *Vaupés:* Mitú, 200 m, Feb. 1975, ♀♂ (P. B. Schneble, MCZ); 9–15 July 1990, ♀ (L. E. Peña, AMNH). *Amazonas:* Leticia, 20 Jan. 1965, ♀ (CAS); Río Pira and Apaporis, 0°25′S, 70°15′W, 16 Feb. 1989, ♀ (V., B. Roth, CAS). ECUADOR *Napo:* Alinahui, 20 km E Puerto Napo, Oct. 1994, ♀ (V., B. Roth, CAS); Misahualli, 21 Mar. 1971, ♀♂ (R. A. Sweet, AMNH); Bumbaini-yacu [?], 900 m, Apr. 1941, ♀♂ (W. Clarke-Macintyre, AMNH); Huagra-yacu [?], Apr. 1941, ♀♂ (W. Clarke-Macintyre,

AMNH); headwaters of Río Arajuno, 1,000 m, Napo watershed, 28 Apr. 1941, ♀♂ (W. Clarke-Macintyre, AMNH); Coca River, Napo River, 24–30 April 1965, ♀ (L. Peña, MCZ); Rio Topo, 17 June 1943, ♀♂ (D. L. and H. E. Frizzell, CAS). *Pastaza:* Puyo, 900 m, Mar. 1941, ♀ (W. Clarke-Macintyre, AMNH); Río Puyo, 900 m, Mar.–Apr. l941, ♀♂ (W. Clarke-Macintyre, AMNH); 12 km W Puyo, 5 Feb. 1976, ♀ (P. Spangler, USNM). *Pichincha:* 7 km SE Mindo, 16 Apr. 1994, ♂ (V., B. Roth, CAS); km 113 Via Pto. Quito, 1 Oct. 1984, ♂ (L. Avilés, MECN); 1989, ♂ (L. Avilés, MECN); 28 Aug. 1989, ♀, 28, 29 Sep. 1989, ♀ (L. Avilés, MECN); 1 Oct, 1989, ♀♂ (L. Avilés, MECN); 10 km W Santo Domingo de los Colorados, 23 Feb. 1955, ♀♂ (E. I. Schlinger, E. S. Ross, CAS); 47 km S Santo Domingo, Río Palenque, 5 June–25 July 1985, ♀ (S. and J. Peck, AMNH); 35 km NW Santo Domingo, 22 Dec. 1958, ♀ (A. M. Nadler, AMNH); 16 km SE Santo Domingo, Tinalandia, 680 m, 15–30 June 1975, ♀♂ (S. and J. Peck, MCZ); Tinalandia, ca. 2,830 m, 12 km E Santo Domingo de los Colorados, 11–17 May 1986, ♀♂ (G. B. Edwards, FSCA). *Esmeraldas:* Bilse nr. Herrera, 6–9 Feb. 1994, ♂ (V. Roth, CAS). *Chimborazo:* Yanaurcu, 300 m, 20–30 Aug. 1977, ♀♂ (L. Peña, AMNH). *Bolívar:* Balzapamba, 700 m, May–June 1938, ♀♂, June 1939, ♀♂ (W. Clarke-Macintyre, AMNH). *Los Ríos:* Playas de Montalvo, 15 m, 18 Apr. 1938, ♂ (W. Clarke-Macintyre); Juan Montalvo, Mar. 1938, 15 m, ♀ (W. Clarke-Macintyre, AMNH); Pichilinque, 3 Feb. 1955, ♀ (E. I. Schlinger, E. S. Ross, CAS). *Manabi:* on road betw. Crucita and Charapoto, 0°52′S, 80°31′W, 29 Aug. 1988, ♂ (W. Maddison, MCZ). *Morona-Santiago:* Los Tayos, Santiago, 03°04′S, 78°02′W, 3 Aug. 1976, ♀ (N. Engler, MCZ). *Guayas:* Guayaquil, 8 Mar. 1942, ♀ (H. D. Frizzell, CAS). *Azuay:* Tarqui, 10 Feb. 1976, ♀♂ (P. Spangler, USNM). *Zamora-Chinchipe:* Zamora, 4 Apr. 1965, ♀♂ (L. Peña, MCZ); Jamboé River [Jumbué], 1 June 1965, ♀♂ (L. Peña, MCZ); Prov. Zamora, 5 June 1976, ♀ (A. Langley et al., USNM). PERU *Loreto:* Yurimaguas Agric. Exp. Station, 9 Aug. 1974, ♂ (B. Patterson, MCZ); Explorama Lodge, 80 km NE Iquitos, 16–20 July 1989, ♀ (G. B. Edwards, FSCA); Río Manatee, 18 July 1989, ♀ (G. B. Edwards, FSCA). *Amazonas:* Cordillera del Cóndor, alto Río Comaina, Puesto de Vigilancia 22, 850–1,150 m, 24 Oct. 1987, ♀♂ (D. Silva D., MUSM). *Piura:* Mallares, 7 Dec. 1941, ♀ (D. L. and H. E. Frizzell, CAS); 6 km W Sullana, 5 Oct. 1941, ♀ (D. L. and H. E. Frizzell, CAS). *Lambayeque:* Lechugal [Río Zarumilla, NW], Mar. 1876, ♀ (J. Sztolcman, PAN). *Huánuco:* Monzón Valley, Tingo María, 18 Dec. 1954, ♀ (E. I. Schlinger, E. S. Ross, CAS); Aguaytía, Boqueron del Padre Abad, ca. Cascada "Velo de novia", 29 July 1986, ♀ (D. Silva D., MUSM). *Pasco:* Puerto Bermúdez, Río Pechis, 12–19 Jul. 1920, ♀ (CUC). *Lima*(?): San Juan, 23 June 1920, ♀♂ (CUC). *Junín:* Amable María [Prov. Tarma, 640 m, on Río Chanchamayo], ca. 1870–1875, ♀ (K. Jelski, PAN); Maraynioc, ♀ (?K. Jelski, PAN). *Madre de Dios:* Puerto Maldonado, 300 m, 16–23 April 1947, ♂ (J. C. Pallister, AMNH). *Cuzco:* Quincemil, 24–27 Apr. 1947, ♀ (J. C. Pallister, AMNH). *San Martín:* Mishqui-yacu, 1,600 m, 20 km NE Moyobamba, Aug. 1947, ♀ (F. Woytkowski, AMNH). BRAZIL *Pará:* Santarém, Alter do Chão, 26 Jan. 1994, ♀ (H. Höfer, MCN 25293); Belém, July 1971, ♀ (T. McGrath, MCZ); Tucuruí, July 1989, ♀ (IBSP, IBSP staff, 5951); Jacareacanga, Dec. 1968, ♀ (M. Alvarenga, AMNH). *Roraima:* Rio Surumu, Oct. 1966, ♀ (M. Alvarenga, MZSP 6193). *Amazonas:* Parque Nacional da Neblina, 12 Oct. 1990, ♀ (A. A. Lise, MCP); Manaus, Reserva Florestal Adolpho Ducke, 3 Apr. 1990, ♀♂ (J. Vidal, MCN 19879); ca. 80 km N of Manaus, Dimona Reserve, 1989–1992, ♀ (H. G. Fowler, INPA); 80 km N Manaus, Colosso Reserve, 20 Dec. 1989, ♀ (H. G. Fowler et al., HGF); Fonte Boa, Sep. 1975, ♀♂ (M. Oliveira, AMNH). *Goiás:* Minaçu, Usina Hidroelétrica Serra da Mesa, 13°45′S, 41°50′W, 1–10 Nov. 1996, ♂ (A. Bonaldo, L. Moura, MCN 27832). *Mato Grosso:* Santo António de Levergere, 29 July 1992, ♀ (A. A. Lise, A. Braul, MCP 2396a). *Espírito Santo:* Santa Teresa, 5 Oct. 1942, ♀ (B. Soares, MZSP 3257). *Minas Gerais:* Lavras, 7, 29 Mar. 1979, ♀♂ (W. Don Fronk, MCZ); Belo Horizonte, 1–6 Nov. 1919, ♀♂ (Cornell Univ. Exped., CUC). *Rio de Janeiro:* Angra dos Reis, 20 July 1966, ♀♂ (P. Monto, MZSP 5139); Niteroi, 25 Aug. 1961, ♀ (P. de Biasi, MZSP 3260); Ilha Grande, Enseada das Palmas, Praia Grande das Palmas, 19–21 Jan. 1999, ♂ (M. Ramírez, MACN); Rio de Janeiro, Dec. 1970, Jan. 1971, ♀ (D. McGrath, S. M. Camazine, MCZ); Serra dos Orgãos, 1,500 m, 20 Apr. 1965, ♂ (H. Levi, MCZ); Silva Jardim, Aug. 1975, ♀♂ (M. Alvarenga, AMNH); Mangaratiba, Muriqui, Feb. 1976, ♀♂, Oct. 1961, ♀ (M. Alvarenga, AMNH); Represa Rio Grande, Feb. 1976, ♀ (M. Alvarenga, AMNH); Rio de Janeiro, ♂ (H. Reinhardt, ZMUC); Paineiras, May, Aug. 1961, ♀♂ (M. Alvarenga, AMNH); Parque Nacional da Tijuca, Floresta dos Macacos, Feb. 1961, ♀♂ (M. Alvarenga, AMNH); Mata da Cicuda, Volta Redonda, 18 Mar. 2000, ♀♂ (F. S. Cunha, IBSP 26314); Parque Nacional do Itatiaia, 1,200 m, 19–20 Mar. 1960, ♂ (B. Malkin, AMNH); Represa Rio Grande, Feb. 1976, ♀♂ (M. Alvarenga, AMNH). *São Paulo:* Cajurú, Fazenda São Geraldo, May 1944, ♀ (MZSP 13258); Nova Europa, 18, 19 June 1965, ♀ (K. Lenko, MZSP 4778, 5322); Santos, 29 Jan. 1961, ♀♂ (P. de Biasi, MZSP 13261); São Sebastião, 3 June 1961, ♀ (K. Lenko, MZSP 13259); Pindamonhangaba, 8–10 Apr. 1998, ♀♂ (R. Martins, I. Kynzak, IBSP 20043); Rio Claro, 1♂ (MNRJ 4186). *Paraná:* Cruzeiro do Oeste, Mata do Copel, Barragem do Chopinzinho, 24 Feb. 1993, ♀ (A. B. Bonaldo, MCN 23151); Cruzeiro do Iguaçu/Dois Vizinhos, Represa do Foz do Chopin, 15 Oct. 1998, ♀ (IBSP staff, IBSP 21139, 21171); Morretes, 26 Apr. 1987, ♀ (S. F. Coron, MCN 16990); Morretes, Serra da Graciosa, 9–20 Jan. 1995, ♀♂ (Lab. Arachnol., MCP 7041, 7079, 7424); Capitão Leonidas Marques, Represa de Salto Caxias, Rio Iguaçú, 20–28 Mar. 1993, ♀♂ (A. B. Bonaldo, MCN

23305, 23303); Três Barras do Paraná, Rio Guarani (Foz do Córrego Três Barras); 20–26 Feb. 1993, ♀♂ (A. B. Bonaldo, MCN 23023); Foz do Iguaçu, Parque Nacional do Iguaçú, 22–24 Mar. 1985, ♀♂ (H., L. Levi, MCZ). *Rio Grande de Sul:* Jacutinga BR 283, 6 Nov. 1996, ♀ (Itá Machadinho Group, MCP 11093); Marcelino Ramos Estreito Augusto Cesar, 3 Feb. 1990, ♀ (G. A. Martinazzo, MCN 19546); Estrela Velha, 1 Sep. 1977, ♀♂ (E. H. Buckup, MCN 6449); 6 May 1998, ♀♂ (M. A. L. Marques, MCN 29363); 20 Oct. 1998, ♀ (A. Velha, MCN 29559); Iraí, 19 Nov. 1975, ♀ (A. A. Lise, MCN 3063); Arroio do Tigre, Itaúba, 17 Apr. 1978, ♀ (A. A. Lise, MCN 7995); Lageado, 20 Apr. 1974, ♀ (A. A. Lise, MCN 1985); Triunfo, 20 Oct. 1977, ♀♂ (H. Bischoff, MCN, 6882); 27 Oct. 1977, ♀♂ (M. H. Galileo, MCN 6998); Gravataí, 15 Mar. 1999, ♀♂ (M. A. L. Marques, MCN 30565); Ita, Rio Uruguai, Represa de Itá Machadinho, 1 Oct. 1988, ♂ (A. A. Lise, MCP 811); Montenegro, 1 Sep. 1977, ♀♂ (H. Bischoff, MCN 6423); 15 Dec. 1977, ♀ (H. Bischoff, MCN 7515); Montenegro, 11 Aug. 1977, ♀ (E. H. Buckup, MCN 6240); 29 Sep. 1977, ♀ (H. A. Gastal, MCN 6697); 6 Oct. 1977, ♀ (H. A. Gastal, MCN 6750); Muçum, 2 Mar. 1984, ♀ (A. D. Brescovit, MCN 12115); Rio Jacutinga, Br. 283, Represa de Itá-Machadinho, ♂ (A. A. Lise, MCP 6458); Triunfo, Parque Copesul Proteção Ambiental, 5 July 2000, ♂ (E. H. Buckup, MCN 32511); 23 May 2000, ♀ (M. A. L. Marques, MCN 32329); 5 Jan. 2001, ♂ (M. A. L. Marques, MCN 33560); Roca Sales, 24 May 1986, ♀ (A. D. Brescovit, MCN 15102a); Tenente Portela, 11 Sep. 1946, ♀♂ (S. Scherer, MCN 4632); Triunfo, 19 May 1977, ♀ (E. H. Buckup, MCN 5397); 15 Sep. 1977, ♀ (A. A. Lise, MCN, 6534); 15 Oct. 1980, ♀ (H. E. Buckup, MCN 9240); 23 Apr. 1987, ♀ (M. A. L. Marques, MCN 16783); June 1987, ♀ (M. A. L. Marques, MCN 16860); 25 Jan. 1990, ♀ (A. M. Brescovit, MCN 19393); 12 June 1991, ♀ (M. H. M. Galileo, MCN 21155); Viamão, Águas Belas, 13 Sep. 1984, ♂ (A. A. Lise, MCN 12328); Viamão (many collections). PARAGUAY St. Louis [? San Luis], Oct. 1908, ♀ (AMNH). BOLIVIA *La Paz:* Guanay, N La Paz, 19–15 Aug. 1989, ♀ (L. E. Peña, AMNH). ARGENTINA *Misiones:* Parque Nacional Iguazú, Oct. 1953, ♀ (R. D. Schiapelli et al., MACN 3885); Santa María, Oct. 1956, ♂ (J. M. Viana, MACN); Puerto 17 de Octubre [Puerto Libertad], Oct. 1953, ♀ (De Carlo, R. D. Schiapelli, J. M. Viana, M. E. Galiano, MACN); Eldorado, 26°28′S, 54°43′W, 1 Sep.–15 Nov. 1964, ♀♂ (A. Kovacs, AMNH).

### *Mangora saut* new species
### Figures 212–215; Map 1H

*Holotype.* Female holotype from Petit Saut, north of Plomb, Fleure Sinamary, 05°07′N, 53°05′W, French Guiana, Oct. 1989 (E. Nancé), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow; legs darker. Abdomen: dorsum yellowish with white pigment spots and pairs of posterior transverse gray bars (Fig. 215); venter with white spots on each side. Posterior eye row slightly procurved. Ocular quadrangle slightly wider than long, anterior widest. Legs are relatively heavy and carapace very high. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 their diameter apart, 0.6 from laterals. Posterior median eyes 0.4 their diameter apart, 0.8 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.6 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.9 high. First femur 1.7 mm, patella and tibia 1.8, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.1. Fourth femur 1.7 mm, patella and tibia 1.8, metatarsus 1.1, tarsus 0.6.

The male is unknown.

*Diagnosis. Mangora saut* epigynum is a projecting shelf (Fig. 214), but shorter than that of *M. brokopondo* (Fig. 139); the posterior side differs in having a slight anteromedian depression and almost straight, transverse dorsal slits (Fig. 213); also, specimens of *M. saut* are lighter in

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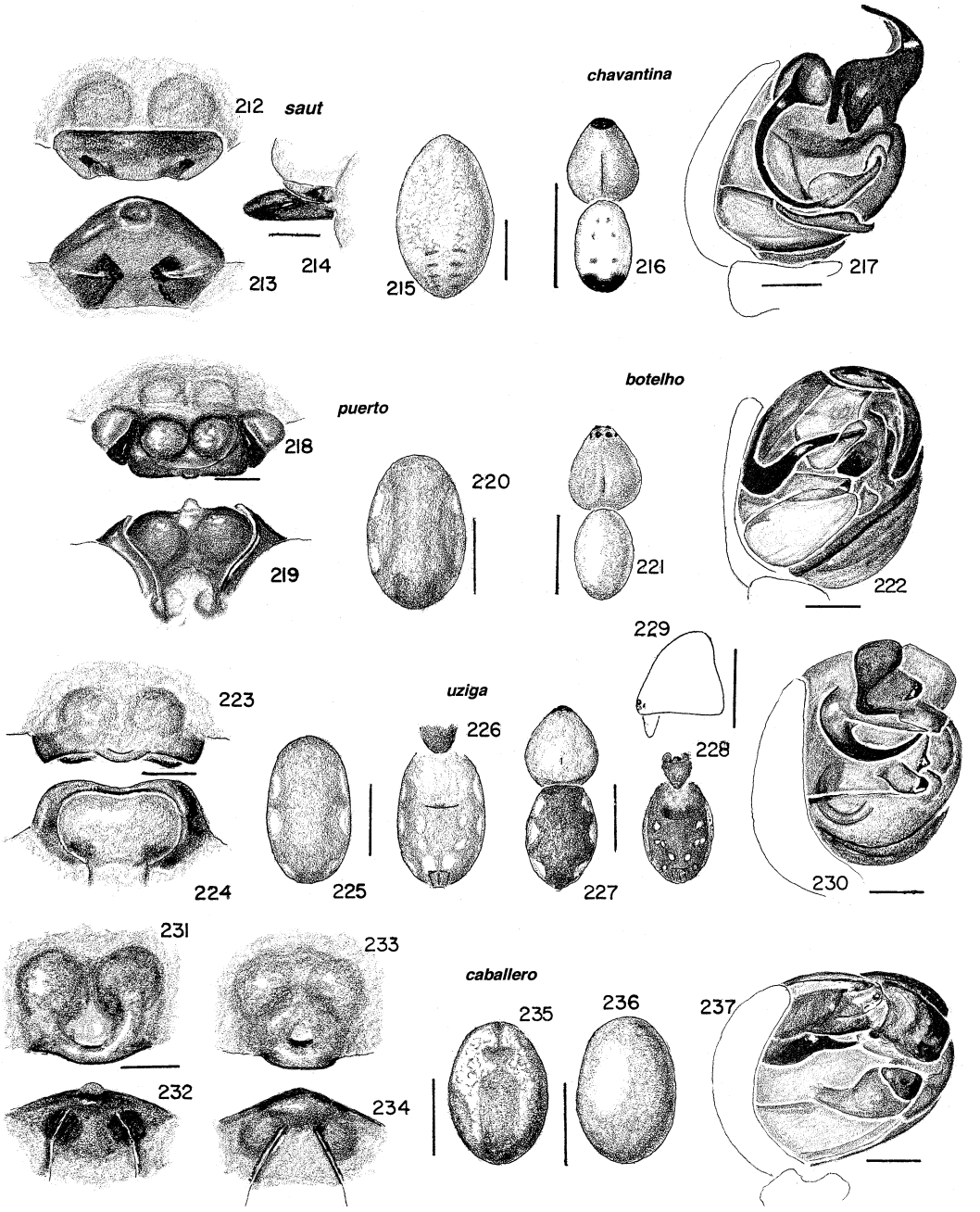
Figures 212–215. *Mangora saut* new species, female. 212–214, epigynum. 212, ventral; 213, posterior; 214, lateral. 215, abdomen, dorsal.

Figures 216, 217. *M. chavantina* new species, male. 216, carapace, abdomen. 217, left palpus, mesal.

Figures 218–220. *M. puerto* new species, female. 218, 219, epigynum. 218, ventral; 219, posterior. 220, abdomen, dorsal.

Figures 221, 222. *M. botelho* new species, male. 221, carapace, abdomen. 222, palpus, mesal.




Figures 223–230. *M. uziga* new species. 223–226, female. 223, 224, epigynum. 223, ventral; 224, posterior. 225, abdomen, dorsal. 226, sternum, abdomen. 227–230, male. 227, carapace, abdomen. 228, sternum, abdomen. 229, carapace, lateral. 230, palpus, mesal.

Figures 231–237. *M. caballero* new species. 231–236, female. 231–234, epigynum. 231, 233, ventral; 232, 234, posterior. 235, 236, abdomen, dorsal. 237, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

color (Fig. 215) than those of *M. brokopondo* (Fig. 140).

*Natural History.* The holotype was found by beating canopy.

*Distribution.* Only known from French Guiana (Map 1H).

*Specimens Examined.* No other specimens were found.

### *Mangora chavantina* new species
Figures 216, 217; Map 2D

*Holotype.* Male holotype from 260 km N Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, in campo-grasslands, Mato Grosso, Brazil, Feb.–Apr. 1969 (Xavantina-Cachimbo Exped.), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma grayish orange. Abdomen: dorsum with black posterior (Fig. 216); venter without markings, spinnerets gray. Posterior eye row straight. Ocular quadrangle slightly longer than wide, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Small coxal hook present. Total length 1.7 mm. Carapace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.3 high. First femur 1.0 mm, patella and tibia 1.2, metatarsus 0.7, tarsus 0.5. Second patella and tibia 1.0 mm, third 0.7, fourth 1.0.

The female is not known.

*Diagnosis. Mangora chavantina* palpus differs from that of *M. ordaz* (Fig. 197) by having a longer embolus (Fig. 217) and a larger, projecting, hook-shaped terminal apophysis (2 h in Fig. 217).

*Distribution.* Mato Grosso to Rio de Janeiro, Brazil (Map 2D).

*Specimens Examined.* BRAZIL *Rio de Janeiro:* Rio de Janeiro, Duque de Caxias, 5 Sep. 1961, 1♂ (M. Alvarenga, AMNH); Silva Jardim, Aug. 1975, 1♂ (M. Alvarenga, AMNH); Santa Maria Madalena, July 1960, 1♂ (M. Alvarenga, AMNH).

### *Mangora puerto* new species
Figures 218–220; Map 1F

*Holotype.* Female holotype and one female paratype from 30 km SW Puerto Maldonado, 290 m, Zona Reservada Tambopata, 12°50′S, 69°17′W, Madre de Dios, Peru, 6–14 Sep. 1984 (T. L. Erwin), in USNM. The specific name is a noun in apposition after the type locality. Puerto is Spanish word for port.

*Description.* Female holotype [poorly preserved]. Carapace yellow, eye region dark gray. Sternum, legs dark grayish yellow. Abdomen: whitish, dorsum with median dorsal gray band and on each side two large patches containing white pigment spots (Fig. 220); venter without marks. Eyes small. Posterior eye row slightly procurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.5 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length 3.0 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 1.1 high. First femur 1.3 mm, patella and tibia 1.3, metatarsus 0.8, tarsus 0.4. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

The male is not known.

*Diagnosis. Mangora puerto* epigynum, unlike others, in ventral view has a dark wedge-shaped sclerite forming a small lobe on each side along the rim (Fig. 218), and in posterior view, a wide median plate and narrow lateral plates (Fig. 219).

*Natural History.* Specimen collected by canopy fogging.

*Distribution.* Upper Amazon: southern Peru (Map 1F).

*Specimens Examined.* No other specimens have been found.

### *Mangora botelho* new species
Figures 221, 222; Map 3A

*Holotype.* Male holotype from Parque Estadual de Carlos Botelho, São Miguel Arcanjo, São Paulo, Brazil, 14 Oct. 1990 (A. B. Bonaldo), in MCN

20476. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma yellowish. Abdomen: white, dorsum with some posterior gray, spinnerets gray (Fig. 221). Posterior eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.5 from laterals. Posterior median eyes 1.0 diameter apart, 1.3 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.2 mm. Carapace 1.1 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.0 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.7. Second patella and tibia 1.2 mm, third 0.7, fourth 1.0.

The female is not known.

*Diagnosis. Mangora botelho* palpus differs from that of *M. uziga* (Fig. 230) by having a wider embolus, partly hidden by the cymbium, and a differently shaped terminal apophysis (Fig. 222).

*Distribution.* Southern Brazil, from São Paulo to Rio Grande do Sul (Map 3A).

*Specimens Examined.* BRAZIL *Rio Grande do Sul:* Morro do Tigre, 29°50′S, 50°52′W, 15 July 2000, 1♂ (A. B. Bonaldo, MCN 33091).

### *Mangora uziga* new species
Figures 223–230; Map 3A

*Holotype.* Male holotype from Parque Nacional Iguazú, Misiones, Argentina, 22–30 Aug. 1986 (M. Ramírez), in MACN. The specific name is a noun in apposition, an arbitrary combination of letters.

*Description.* Female paratype from Apa. Prosoma orange, except for black labium, endites, sternum. Abdomen: dorsum gray (Fig. 225); venter gray with paired light patches (Fig. 226); sides with three light patches (Figs. 225, 226). Posterior eye row recurved. Ocular quadrangle about square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.6 diameter apart, 1.1 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 1.1 high. First femur 1.2 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

Male from Paraguay. Prosoma orange, except for black labium, endites, and sternum. Abdomen: dorsum black (Fig. 227); venter black with paired white patches (Fig. 228); sides white. Posterior eye row recurved. Ocular quadrangle about square. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.1 diameters apart, 0.9 from laterals. Posterior median eyes 1.0 diameter apart, 1.1 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Height of carapace equals length of structure (Fig. 229). Total length 2.6 mm. Carapace 1.1 mm long, 0.9 wide in thoracic region, 0.3 wide behind lateral eyes, 1.1 high. First femur 1.2 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.6. Second patella and tibia 1.1 mm, third 0.7, fourth 1.1.

Males and females were matched because of similar coloration.

*Diagnosis.* The ventral view of the *M. uziga* epigynum differs from all others by being angular on both sides and having only a short, wide median tongue (Fig. 223). The posterior view has a wider than long, oval median plate (Fig. 224).

The male palpus differs by having a narrower embolus (Fig. 230) than that of *M. botelho* (Fig. 222) and a differently shaped terminal apophysis (2 h in Fig. 230).

*Distribution.* Paraguay and northeastern Argentina (Map 3A).

*Specimens Examined.* PARAGUAY *Concepción:* Apa, Jan.–Feb. 1909, 2♀, 1♂ (AMNH Ac. 3721). *Alto Paraná:* Taquarazapa, ?1908–1909, 1♀ (AMNH Ac. 3721).

### *Mangora caballero* new species
Figures 231–237; Map 3B

*Holotype.* Female holotype from Parque Provincial Cruce Caballero, Misiones, Argentina, 27–29 Oct.

1994 (M. J. Ramírez), in MACN. The specific name is a noun in apposition after the type locality. Caballero is Spanish for gentleman or knight.

*Description.* Female holotype. Female light orange-yellow. Abdomen: dorsum with white pigment spots and a dark median band (Fig. 235); venter with pair of gray patches anterior to spinnerets; sides with posterior gray patch. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.3 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.9 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.2 mm, patella and tibia 1.4, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

Male paratype. Prosoma yellow. Abdomen: dorsum white, shading into gray posteriorly; venter, book lung covers gray; sides light gray. Posterior eye row slightly procurved. Ocular quadrangle wider than anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 2.2 mm. Carapace 1.1 mm long, 0.9 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 1.2.

Males and females were collected at the same locality.

*Variation.* Total length of females 2.7 to 3.1 mm, males 1.8 to 2.3. A female from San Antonio has a colorless abdomen (Fig. 236).

*Diagnosis.* The epigynum of *M. caballero* differs from all others by having a median depression with a posterior, transverse, thick lip (Figs. 231, 233) and a quadrangleal posterior median plate (Figs. 232, 234).

The male palpus differs from that of *M. botelho* (Fig. 222) and *M. uziga* (Fig. 230) by a having a short, straight embolus (Fig. 237) and a large median apophysis of which the distal end is folded (4 h in Fig. 237)

*Distribution.* Southern Brazil to northeastern Argentina (Map 3B).

*Paratype.* ARGENTINA *Misiones:* Parque Provincial Cruce Caballero, 27–29 Oct. 1995, 1♂ (M. J. Ramirez, MACN).

*Specimens Examined.* BRAZIL *Minas Gerais:* Lavras, 5 Dec. 1978, 1♂; 29 Mar. 1979, 1♀ (W. D. Fronk, MCZ). *Rio Grande do Sul:* Tenente Portela, Parque Estadual do Turvo, 15 Jan. 1985, 1♂ (A. A. Lise, MCN 12974). ARGENTINA *Misiones:* San Antonio, Dec. 1956, 1♀ (M. J. Viana, MACN).

### *Mangora cercado* new species
### Figures 238–240; Map 3A

*Holotype.* Female holotype from Porto Cercado [near Poconé], Mato Grosso, Brazil, 2 Aug. 1992 (A. A. Lise, A. Braul), in MCP 2460. The specific name is a noun in apposition after the type locality. Portuguese "cercado" means "surrounded".

*Description.* Female holotype. Prosoma yellowish, except eyes with black rings. Abdomen: dorsum except midline with white spots, posterior with three pairs of indistinct gray spots (Fig. 240); venter with a band of white spots on each side. Pos-

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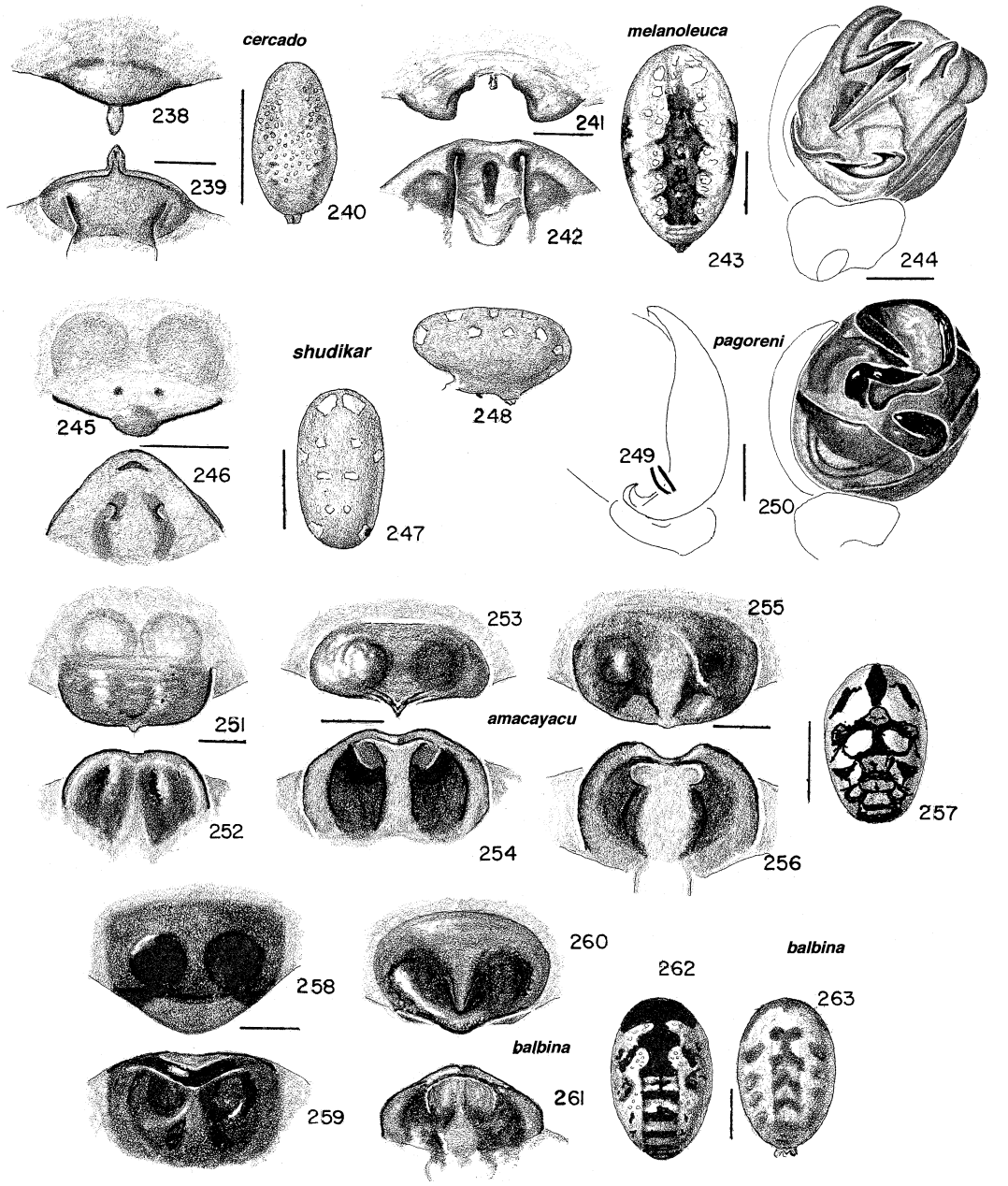
Figures 238–240. *Mangora cercado* new species, female. 238, 239, epigynum. 238, ventral; 239, posterior. 240, abdomen, dorsal.

Figures 241–244. *M. melanoleuca* (Mello-Leitão). 241–243, female. 241, 242, epigynum. 231, ventral; 242, posterior. 243, abdomen, dorsal. 244, left male palpus, mesal.

Figures 245–248. *M. shudikar* new species, female. 245, 246, epigynum. 245, ventral; 246, posterior. 247, abdomen, dorsal. 248, abdomen, lateral.




Figures 249, 250. *M. pagoreni* new species, male palpus. 249, cymbium, paracymbium, ectal. 250, mesal.

Figures 251–257. *M. amacayacu* new species, female. 251–256, epigynum. 251, 253, 255, ventral; 252, 254, 256, posterior. 257, abdomen, dorsal.

Figures 258–263. *M. balbina* new species, female. 258–261, epigynum. 258, 260, ventral; 259, 261, posterior. 262, 263, abdomen, dorsal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

terior eye row strongly procurved. Ocular quadrangle slightly longer than wide; anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. The legs are noticeably thin. Total length 2.3 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 1.2 mm, patella and tibia 1.2, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.1 mm, third 0.7, fourth 1.1.

The male is not known.

*Diagnosis.* The oval transverse swelling of the epigynum with the narrow, short diamond-shaped scape (Fig. 238) and the shape of the median plate in posterior view (Fig. 239) separate *M. cercado* from all other species.

*Distribution.* Southern Mato Grosso, Brazil (Map 3A).

*Specimens Examined.* No other specimens have been collected.

### *Mangora melanoleuca* Mello-Leitão
Figures 241–244; Map 3A

*Mangora melanoleuca* Mello-Leitão, 1941: 150, figs. 45, 46, ♀♂. Female holotype from Coronel Moldes, male paratype from Pampa Blanca, Jujuy, Argentina, in MLP ♀ no. 14795, ♂ no. 14796, examined. Platnick, 2006.

*Note.* It is not possible to interpret Mello-Leitão's illustration of the epigynum.

*Note.* Both sexes examined came from Jujuy. They probably belong together. Unfortunately, at the time I examined the specimens (1974), I did not describe them and the description here comes from Mello-Leitão (1941).

*Description.* Female holotype. Prosoma yellow, sternum black. Abdomen: dorsum with dark median band (Fig. 243). Posterior eye row recurved. The anterior medians separated by their diameter and by their diameter from laterals. The posterior medians are separated by their diameter and by less from laterals. Total length 2.4 mm.

Male. Total length 3.6 mm. The male lacks the macroseta on the venter of the fourth femur (C. Ituarte and L. Pereira, personal communication).

*Diagnosis.* The female of *M. melanoleuca* differs from that of *M. yakupoi* (Figs. 191–195) by its coloration (Fig. 243), and by the narrower, more convex median notch of the epigynum (Figs. 241, 242).

The palpus is weakly sclerotized and is distinguished by the median apophysis with two spines, both pointing toward the cymbium (6 h in Fig. 244).

*Distribution.* Only known from northwestern Argentina (Map 3A).

*Specimens Examined.* No other specimens were found.

### *Mangora shudikar* new species
Figures 245–248; Map 3C

*Holotype.* Female holotype from Upper Shudikar River, above camp, British Guiana [Guyana], 7, 8 Jan. 1938 (W. G. Hassler), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma light orange; legs lighter than carapace. Abdomen: orange-white, dorsum with pairs of large white pigment patches (Figs. 247, 248); venter orange-white. Posterior eye row straight. Ocular quadrangle as long as anterior width; anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.3 diameter apart, 0.3 from laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Abdomen: narrow (Fig. 247), overhanging spinnerets (Fig. 248). Total length 3.4 mm. Carapace 1.5 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 0.6, tarsus 0.4. Second patella and tibia 1.3 mm, third 0.7, fourth 1.2.

The male is not known.

*Diagnosis. Mangora shudikar* epigynum is lightly sclerotized and distinguished by

being triangular, with a median swollen lobe and a pair of dark dots in the center (Fig. 245); in posterior view, the plates appear fused, with a pair of small openings within narrow dark bands (Fig. 246).

*Distribution.* Only known from southern Guyana (Map 3C).

*Specimens Examined.* No other specimens were found.

### *Mangora pagoreni* new species
Figures 249, 250; Map 3D

*Holotype.* Male holotype from Pagoreni, 465 m, 11°42′S, 72°54′W, Cuzco, Peru, Apr.–May 1998, in MUSM. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma orange-yellow. Abdomen [lost]. Posterior eye row slightly recurved. Ocular quadrangle wider than long; anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.4 diameter apart, 0.3 from laterals. Posterior median eyes 0.7 diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Cymbium with a pair of macrosetae above paracymbium (Fig. 249). Fourth trochanter with a pair of small macrosetae. Fourth femur with ventral, proximal macroseta. Total length ca. 2.3 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.5 wide behind lateral eyes, 0.8 high. First femur 1.4 mm, patella and tibia 1.7, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.4 mm, third 1.1, fourth 1.6.

The female is not known.

*Diagnosis. Mangora pagoreni* differs from all other *Mangora* males known by having two prominent macrosetae above the paracymbium of the palpus (Fig. 249).

*Distribution.* Upper Amazon: Cuzco, Peru (Map 3D).

*Specimens Examined.* No other specimens were found.

### *Mangora amacayacu* new species
Figures 251–257; Map 3C

*Holotype.* Female holotype and one female paratype from Amacayacu, Parque Nacional, ca. 48 km NW Leticia, 90–100 m, Amazonas, Colombia, 03°48′S, 70°16′W, 4 Oct. 1985 (H. Sturm), in MCZ; paratype in ICNB. The species name is a noun in apposition after the type locality.

*Description.* Female holotype [in poor condition]. Prosoma orange, except large black rings around posterior median eyes, with legs dark orange. Abdomen: dorsum gray with black marks and white pigment spots (Fig. 257); venter orange-white with indistinct paired marks. Posterior eye row procurved. Ocular quadrangle longer than wide; posterior widest. Posterior median eyes 1.2 diameters of anterior medians; anterior lateral eyes 0.6 diameter, posterior 0.3. Anterior median eyes 0.3 their diameter apart, 0.2 from laterals. Posterior median eyes 0.4 diameter apart, 0.3 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Total length 3.5 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.7 wide behind lateral eyes, 0.7 high. First femur 1.8 mm, patella and tibia 2.1, metatarsus 1.6, tarsus 0.7. Second patella and tibia 2.0 mm, third 1.5, fourth 1.9.

The male is unknown.

*Variation.* Total length of females 3.0 to 4.0 mm. The epigynum is quite variable in shape (Figs. 251, 253, 255), and specimens were first considered to belong to several species. A Venezuelan specimen has an abdomen without dorsal black pigment but instead has two narrow, longitudinal lines of white pigment spots. A female from western Brazil lacks the pointed scape (Fig. 255).

*Diagnosis. Mangora amacayacu* epigynum has a straight posterior edge with a minute, triangular tongue (Figs. 251, 253); in posterior view, a pair of dark areas with indistinct ventral openings are separated by a narrow lighter band (Figs. 252, 254, 256). It differs from the epigynum of *M. balbina* (Figs. 258–261) by the presence of the small triangular tongue and lacking a

lip along the margin of the epigynum. Both have relatively large, black-ringed posterior median eyes.

*Natural History.* Specimens from Vaupés, Colombia, were collected in tierra firma forest.

*Distribution.* Southern Venezuela, lower Amazon region to upper Amazon in Peru (Map 3C).

*Specimens Examined.* VENEZUELA *Amazonas:* Cerro de la Neblina, base camp, 140 m, 0°50′N, 66°10′W, 6 Feb. 1985, 1♀ (W. E. Steiner, USNM). COLOMBIA *Vaupés:* Mpo. Taraira, Serrania Taraira, Caño, Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 3♀ (J. Pinzón, ICNB AR-3334); Río Apaporis, Lago Taraira, Estacíon Biologica Caparú, 200 m, 01°04′S, 69°31′W, Sep. 2002, 3♀ (L. Benavides, ICNB AR 3328, 3331). PERU *Loreto:* Centro de Investigacion Jenaro Herrera, 125 m, 04°55′S, 73°45′W, 23, 24 Aug. 1988, 3♀ (D. Silva D., MUSM). *Amazonas:* Cordillera del Cóndor, alto Río Comaina, Puesto de Vigilancia 22, 850–1,150 m, 29 Oct. 1987, 11♀ (D. Silva D., MUSM). *Huánuco:* Estacion Dantas, La Molina, SW de Puerto Inca, 270 m, 09°38′S, 75°00′W, 26 May 1987, 1♀ (D. Silva D., MUSM). BRAZIL *Pará:* Melgaço, Flona de Caxiuanã, 11 Aug. 1996, 1♀ (A. A. Lise, MCP 9380). *Acre:* Parque Nacional da Serra do Divisor, 14 March 1979, 1♀ (L. Resende, R. Vieira, 12611); 24 Mar. 1997, 1♀ (J. Resende, R. S. Vieira, IBSP 12274).

### *Mangora balbina* new species
### Figures 258–263; Map 3C

*Holotype.* Female holotype from Usina Hidroelétrica de Balbina, Presidente Figueiredo, Amazonas, Brazil, 1987, 1988 (IBSP staff), in IBSP 10816. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange, eye region black. Abdomen: dorsum contrastingly marked (Figs. 262, 263); venter without marks; sides gray. Posterior eye row strongly procurved. Ocular quadrangle longer than wide; posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 0.4 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.0 mm. Carapace 2.0 mm long, 1.6 wide in thoracic region, 0.8 wide behind lateral eyes, 0.8 high. First femur 2.2 mm, patella and tibia 2.4, metatarsus 1.8, tarsus 0.8. Second patella and tibia 2.2 mm, third 1.3, fourth 2.2.

The male is unknown.

*Variation.* Total length of females 3.5 to 4.6 mm. The specimen from Jaú Moura has the posterior tip of the epigynum broken.

*Diagnosis.* The epigynum of *M. balbina* is heavily sclerotized and in ventral view differs from others by the very dark spermathecae at the base of the wide lobe, separated from each other by a quarter of their diameter and by the same distance from the rim (Figs. 258, 260). There is a line visible where the tip might break off. In posterior view, as in *M. amacayacu*, two depressions close to the lip are separated by a ridge.

*Natural History.* Specimens were collected in interior of forest.

*Distribution.* Amazon region (Map 3C).

*Specimens Examined.* BRAZIL *Amazonas:* Parque Nacional do Jaú Moura, 17 Mar. 1999, 1♀ (S. H. Borges, IBSP 28504); Manaus, Reserva do km 41, Fazenda do Esteio, 13 Jan. 1994, 1♀ (A. D. Brescovit, MCN 25358); ca. 80 km N Manaus, Cabo Frio Reserve, 13 May 1992, 1♀; 12 June 1991, 1♀ (H. G. Fowler, INPA, MCZ); 80 km N Manaus, 02°24′S, 59°52′W, 17 Jan. 1989, 1♀ (H. G. Fowler, MCZ); 80 km N Manaus, Colosso Reserve, 23 Nov. 1989, 1♀, 5 Apr. 1990, 1♀; 5 June 1991, 1♀ (H. G. Fowler et al., HGF, MCZ); 80 km N of Manaus, Dimona Reserve, 1989–1992, 1♀; 26 March 1961, 1♀; 26 June 1991, 1♀ (H. G. Fowler et al., MCZ).

### *Mangora aripeba* new species
### Figures 264–268; Map 3B

*Holotype.* Female holotype from Ponta da Aripeba, Ilha Grande, Angra dos Reis, Rio de Janeiro, Brazil, 13–16 Nov. 1993 (A. B. Bonaldo), in MCN 24840. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange. Abdomen: dorsum whitish, with two indistinct bands of white anterior pigment spots, and a pair of posterior black lines (Fig. 266); venter without marks. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. An-

terior median eyes 1.0 diameter apart, 0.7 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 3.8 mm. Carapace 1.7 mm long, 1.3 wide in thoracic region, 0.7 wide behind lateral eyes, 1.0 high. First femur 1.8 mm, patella and tibia 2.2, metatarsus 1.8, tarsus 0.9. Second patella and tibia 2.0 mm, third 1.3, fourth 2.0.

Male from Vicosa. Coloration as in female. Posterior eye row procurved. Ocular quadrangle longer than wide; anterior widest. Posterior median eyes 1.3 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.1 diameters apart, 0.5 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.2 mm. Carapace 1.2 mm long, 0.9 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.2 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.6. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

Males and females have been collected together.

*Variation.* Total length of females 3.3 to 4.2 mm, males 2.1 to 2.3.

*Diagnosis. Mangora aripeba* female is larger (Fig. 266) than that of *M. ramirezi* (Fig. 299), in posterior view of the epigynum has a median plate with parallel sides, and lacks the pair of tiny depressions near the margin of the epigynum (Fig. 265).

The male palpus of *M. aripeba* lacks the shield-shaped projection of the terminal apophysis of *M. ramirezi* (Fig. 301) and differs by having a short embolus (Fig. 267).

*Distribution.* Minas Gerais and Rio de Janeiro, Brazil (Map 3B).

*Specimens Examined.* BRAZIL *Minas Gerais:* Vicosa, 1930, 1♀, 1♂ (Hambleton, CU). *Rio de Janeiro:* Rio de Janeiro, Parque Nacional da Tijuca, Floresta dos Macacos, April 1961, 2♂ (M. Alvarenga, AMNH); Represa Rio Grande, Feb. 1976, 2♀, 3♂ (M. Alvarenga, AMNH); Jacarepaguá, Rio de Janeiro, 19 Oct. 1964, 1♀ (P. San Martín, MACN); Paineiras, Rio de Janeiro, 6 May 1961, 1♀ (M. Alvarenga, AMNH).

### *Mangora huallaga* new species
Figures 269–273; Map 3D

*Holotype.* Female holotype from Monzón Valley, Tingo María [Dep. Huánuco], Peru, 19 Oct. 1954 (R. I. Schlinger, E. S. Ross), in CAS. The specific name is a noun in apposition after the adjacent Peruvian river.

*Description.* Female holotype. Prosoma light orange with median eye area black. Abdomen: dorsum with indistinct gray band (Fig. 271). Posterior eye row recurved. Ocular quadrangle as long as posterior width; posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.5 diameter apart, 1.0 from lateral. Posterior median eyes 0.6 diameter apart, 0.9 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.6 mm. Carapace 1.2 mm long, 0.9 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 0.8, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

Male. Prosoma light yellowish, eye region black. Abdomen: lighter with black ring around spinnerets and book lung covers gray. Posterior eye row procurved. Ocular quadrangle slightly wider than long; anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, almost touching laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 2.0 diameters of anterior median eyes. Total length 1.7 mm. Carapace 0.9 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 0.8 mm, patella and tibia 0.9, metatarsus 0.7, tarsus 0.4. Second patella and tibia 0.8 mm, third [lost], fourth 0.8.

*Note.* The association of male with female is uncertain. The female is one of the smallest *Mangora* from Peru, as is the

male, and both have been collected at the same site.

*Diagnosis. Mangora huallaga* epigynum (Figs. 269, 270) differs from those of *M. uziga* (Figs. 223, 224) and *M. aripeba* (Figs. 264, 265) by having a shorter, wider tongue on the margin of the epigynum (Fig. 269) and from *M. aripeba* (Fig. 264) by a wide, oval, median plate in posterior view (Fig. 270).

The male palpus of *M. huallaga* differs in having a wider embolus (Fig. 273) than *M. aripeba* (Fig. 267) and a narrower one than that of *M. corocito* (Fig. 278).

*Distribution.* Upper Amazon: Peru to Bolivia (Map 3D).

*Paratypes.* PERU *Huánuco:* Monzón Valley, Tingo María, 12 Oct. 1954, 1♀ (E. I. Schlinger, E. S. Ross in CAS); Huallaga Valley, Feb.–Apr. 1954, 1♀ (F. Woytkowski, CAS).

*Specimens Examined.* PERU *Huánuco:* Tingo Maria, 21 Oct. 1946, 1♂ (J. C. Pallister, AMNH). BOLIVIA *Beni:* Estación Biologica Beni, on trail from forest to Zone 1 at night, 14°47′S, 66°15′W, 9 Sep. 1987, 1♂ (J. Coddington, S. Larcher, USNM).

### *Mangora itabapuana* new species
### Figures 274–276, 283–286; Map 3B

*Holotype.* Female holotype from Usina Hidroelétrica de Rosal, Rio Itabapuana, between São José do Calçado, Espírito Santo, and Bom Jesus do Itabapuana, Rio de Janeiro, Brazil, Nov. 1999 (I. Knysak), in IBSP no. 26435. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish; black eye region and gray pigment at distal ends of leg articles. Abdomen: dorsum with scattered white pigment spots and a posterior gray band (Fig. 276); venter without marks, spinnerets gray; sides with white pigment spots. Posterior eye row procurved. Ocular quadrangle longer than wide; posterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Total length 3.1 mm. Carapace 1.2 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth, 1.2.

The male is unknown.

*Variation.* Total length of females 2.6 to 3.1 mm.

*Diagnosis.* The posterior view of the epigynum (Figs. 275, 284) is similar to that of *M. paranaiba* (Fig. 332) by having a seam dividing median from lateral plates. The seam ends at the rim of the epigynum (Figs. 275, 284). But the *M. paranaiba* epigynum has only a small median tongue, and the spermathecae are far anterior (Fig. 331), whereas in *M. itabapuana* they are close to the posterior lobe (Figs. 274, 283).

*Distribution.* Tocantins, Mato Grosso, Rio de Janeiro, Brazil (Map 3B).

*Specimens Examined.* BRAZIL *Tocantins:* Margem direita do Rio Araguaia, Sandolândia, 12°15′S, 50°07′W, 5–13 July 1997, 1♀ (L. S. Rocha, IBSP 12013). *Mato Grosso:* 260 km N Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, Feb.–Apr. 1969, 1♀ (Xavantina-Cachimbo Exped., MCZ).

### *Mangora corocito* new species
### Figures 277–279; Map 3E

*Holotype.* Male holotype from 10 km N Corocito, Bolívar (N of Las Trincheras, near Cauca River, S. Peck, personal communication), Venezuela, 18 June–3 Aug. 1987 (R. Caura, S. and J. Peck), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype [in poor condition]. Carapace orange, sternum or-

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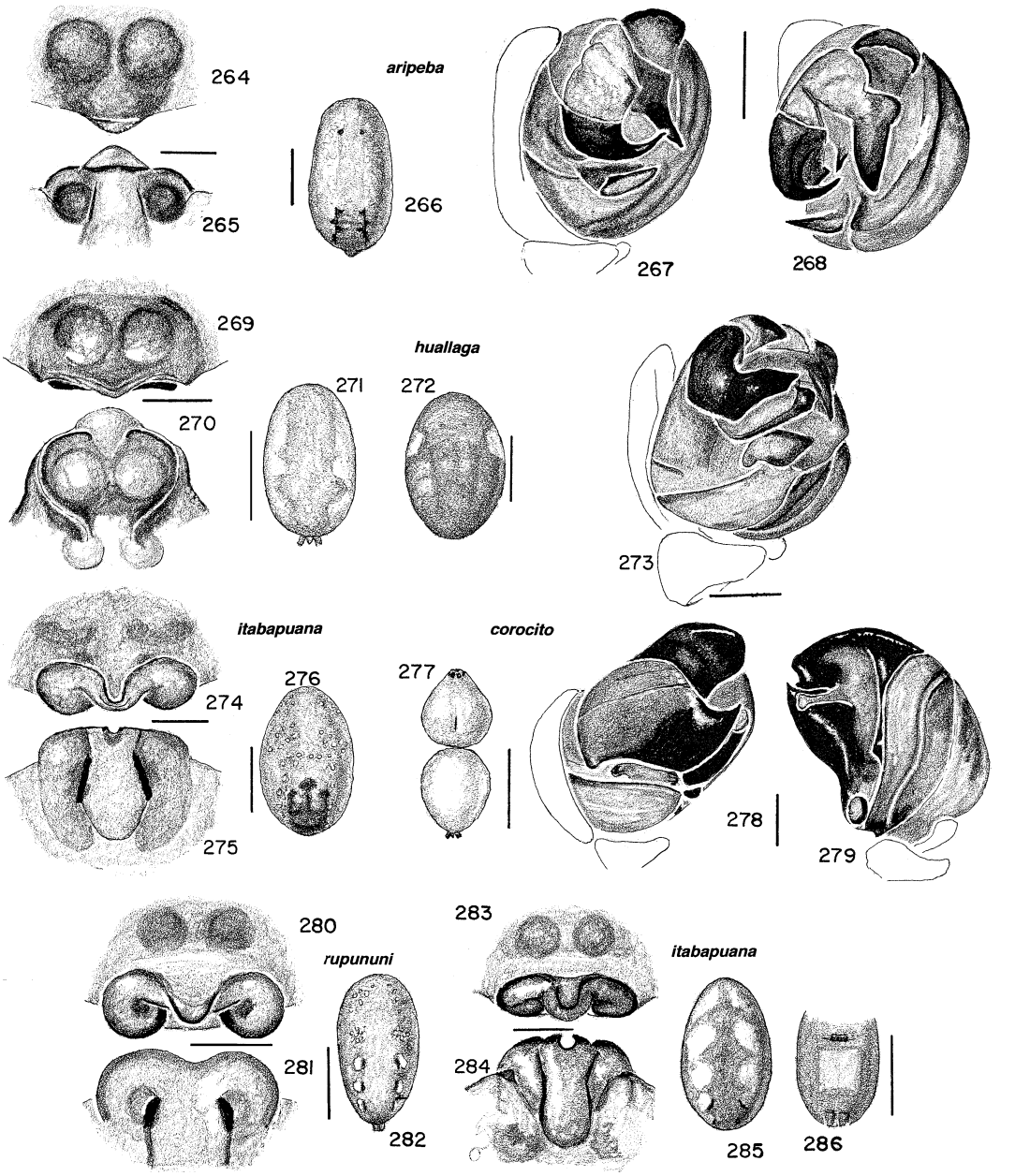
Figures 264–268. *Mangora aripeba* new species. 264–266, female. 264, 265, epigynum. 264, ventral; 265, posterior. 266, abdomen, dorsal. 267, 268, left male palpus. 267, mesal; 268, ventral.

Figures 269–273. *M. huallaga* new species. 269–272, female. 269, 270, epigynum. 269, ventral; 270, posterior. 271, 272, abdomen, dorsal. 273, male palpus, mesal.




Figures 274–276. *M. itabapuana* new species, female. 274, 275, epigynum. 274, ventral; 275, posterior. 276, abdomen, dorsal.

Figures 277–279. *M. corocito* new species, male. 277, carapace, abdomen. 278, 279, palpus. 278, mesal; 279, ventral.

Figures 280–282. *M. rupununi* new species, female. 280, 281, epigynum. 280, ventral; 281, posterior. 282, abdomen, dorsal.

Figures 283–286. *M. itabapuana* new species, female. 283, 284, epigynum. 283, ventral; 284, posterior. 285, abdomen, dorsal. 286, abdomen, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

ange with some gray. Legs light orange. Abdomen: dorsum orange-white (Fig. 277), with black ring around spinnerets; venter gray, epigastric area darker. Ocular quadrangle longer than wide; anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 0.3 from laterals. Posterior median eyes 0.3 diameter apart, 1.2 from laterals. Anterior eyes projecting. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.0 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.0 mm [other articles lost]. Third patella and tibia 0.6 mm. Fourth femur 1.1 mm, patella and tibia 0.9 [other articles lost].

The female is unknown.

*Diagnosis. Mangora corocito* (Fig. 278) has a much wider, heavier embolus in the palpus than does *M. huallaga* (Fig. 273).

*Natural History.* The holotype came from lowland Orinoco rain forest (S. Peck, personal communication).

*Distribution.* Only known from central Venezuela (Map 3E).

*Specimens Examined.* No other specimens were found.

### *Mangora rupununi* new species
Figures 280–282; Map 3E

*Holotype.* Female holotype from Rupununi River between Dadanawa and Isherton, British Guiana [Guyana], 5 Nov. 1937 (W. G. Hassler), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange. Abdomen: dorsum orange-white with areas of anterior white pigment spots, and paired posterior gray streaks, each with a white patch to the side (Fig. 282); spinnerets gray; venter orange-white. Posterior eye row procurved. Ocular quadrangle longer than wide; posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.1 diameters apart, 0.8 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length about 2.5 mm. Carapace 1.3 mm long, 0.8 wide in thoracic region, 0.5 wide behind lateral eyes, 0.6 high. Legs: [most leg articles lost]. Third patella and tibia 0.7 mm. Fourth femur 1.2 mm.

The male is not known.

*Diagnosis. Mangora rupununi* epigynum is similar to that of *M. itabapuana* (Figs. 274, 275), but in posterior view, the seams of the median plate stop a distance from the rim (Fig. 281), whereas in *M. itabapuana,* the seams extend to the rim (Figs. 275, 284).

*Distribution.* Only known from southern Guyana (Map 3E).

*Specimens Examined.* No other specimens have been found.

### *Mangora isabel* new species
Figures 287–292; Map 3C

*Holotype.* Female holotype from 15 km south of Santa Isabel, Pará, Brazil, 29 July 2000 (A. B. Bonaldo), in MCN no. 32545a. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish. Carapace with eye region black and three longitudinal gray bands (Fig. 289); endites, labium, sternum dark gray; coxae yellowish; distal leg articles gray with indistinct ventral rings. Abdomen: dorsum with dark gray marks and white pigment

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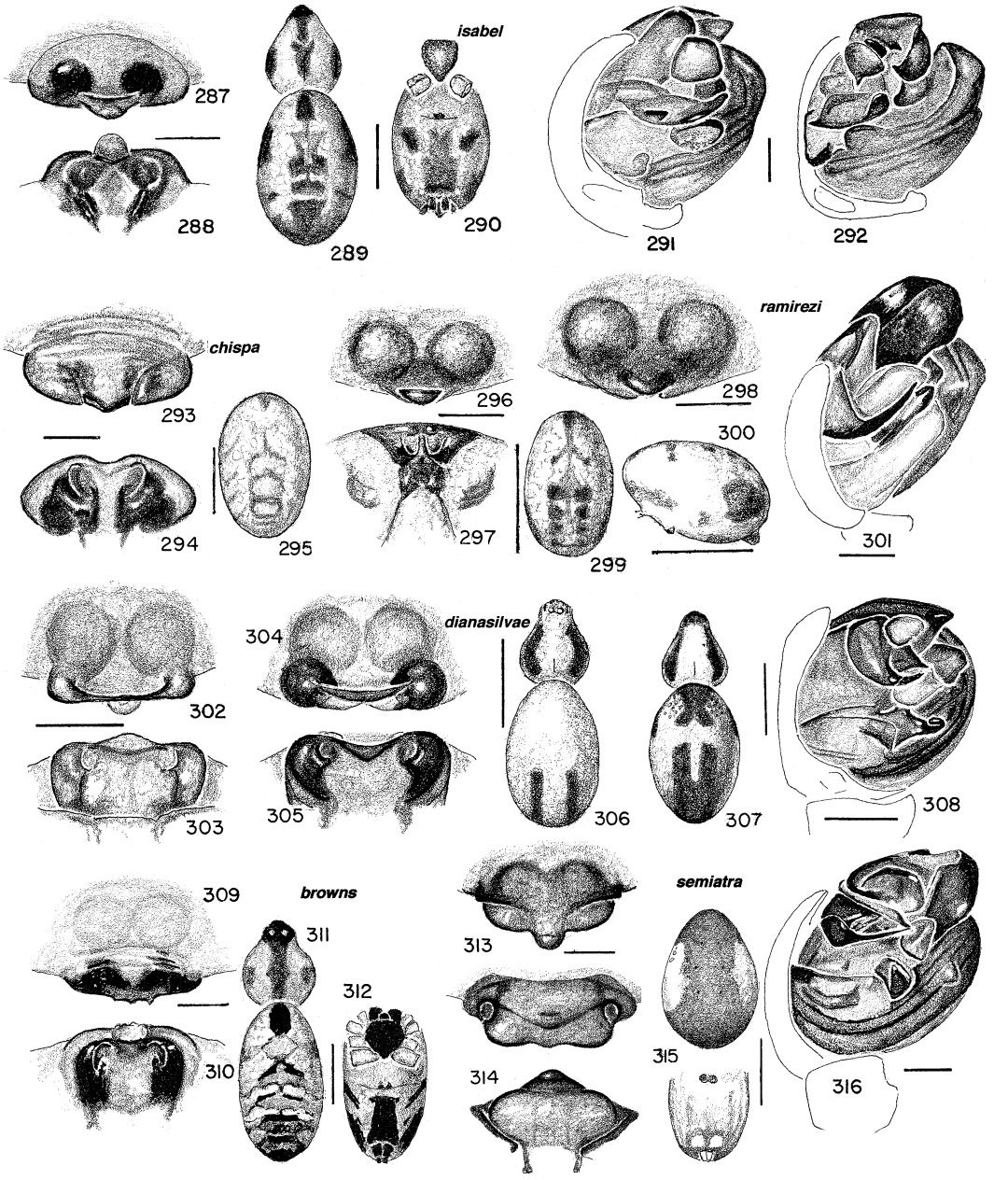
Figures 287–292. *Mangora isabel* new species. 287–290, female. 287, 288, epigynum. 287, ventral; 288, posterior. 289, carapace, abdomen. 290, sternum, abdomen. 291, 292, left male palpus. 291, mesal; 292, ventral.

Figures 293–295. *M. chispa* new species, female. 293, 294, epigynum. 293, ventral; 294, posterior. 295, abdomen, dorsal.

Figures 296–301. *M. ramirezi* new species. 296–300, female. 296–298, epigynum. 296, 298, ventral; 297, posterior. 299, 300, abdomen. 299, dorsal; 300, lateral. 301, male palpus, mesal.




Figures 302–308. *M. dianasilvae* new species, 302–307, female. 302–305, epigynum. 302, 304, ventral; 303, 305, posterior. 306, 307, carapace, abdomen. 308, male palpus, mesal.

Figures 309–312. *M. browns* new species, female. 309, 310, epigynum. 309, ventral; 310, posterior. 311, carapace, abdomen. 312, sternum, abdomen.

Figures 313–316. *M. semiatra* new species. 313–315, female. 313, 314, epigynum. 313, ventral, above, anterior ventral, below ventral; 314, posterior. 315, abdomen, above dorsal, below ventral. 316, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

spots (Fig. 289); venter with gray marks and white pigment spots (Fig. 290). Posterior eye row straight. Ocular quadrangle wider than long: posterior widest. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 0.7 from laterals. Posterior median eyes 1.2 diameters apart, 1.0 from laterals. Height of clypeus equals 0.4 diameter of anterior median eyes. Total length 4.4 mm. Carapace 1.8 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 1.0 high. First femur 1.8 mm, patella and tibia 2.1, metatarsus 1.7, tarsus 0.8. Second patella and tibia 2.0 mm, third 0.3, fourth 2.0.

Male from Belém. Coloration as in female. Posterior eye row recurved. Ocular quadrangle wider than long; anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 0.9 diameter apart, 0.7 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.7 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.5 high. First femur 1.4 mm, patella and tibia 1.6, metatarsus 1.1, tarsus 0.7. Second patella and tibia 1.5 mm, third 0.7, fourth 1.3.

Male and female were collected together.

*Variation.* Total length of females 4.3 to 4.7 mm, males 2.5 to 2.7.

*Diagnosis. Mangora isabel* epigynum differs from others by having the spermathecae almost their diameter apart (Fig. 287); in posterior view, it has a pair of shallow depressions near the rim and a diamond-shaped median plate (Fig. 288).

The embolus of the male palpus is hidden behind other sclerites, but a large median apophysis is visible (center of Fig. 291), resembling in shape that of *M. novempupillata* (Fig. 456). The configuration of various sclerites around the median apophysis separates the species.

*Natural History.* Females from Mato Grosso were found in cerrado scrub.

*Distribution.* Amazon region (Map 3C).

*Specimens Examined.* BRAZIL *Pará:* Belém, Aug. 1953, 1♂ (J. P. Duret, MACN); Canindé, Rio Gurupi, Feb.–May 1964, Feb.–May 1964, 1♀ (J. Carvalho, AMNH). *Mato Grosso:* Koluene [Rio Culuene], [Rio] Xingú, 1♀, 3♂ (J. C. Carvalho, MNRJ, det. as *Larinia bivittata* Keyserling by Mello-Leitão); 260 km N Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, Feb.–Apr. 1969, 2♀ (Xavantina-Cachimbo Exped., MCZ).

## *Mangora chispa* new species
## Figures 293–295; Map 3D

*Holotype.* Female holotype and one female paratype from Quebrada Chispa, NW Iscozacin, ca. 345 m, ca. 10°10′S, 75°15′W, Pasco, Peru, 1 Nov. 1986 (D. Silva D.), in MUSM. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow, posterior median eyes with black rings. Abdomen: dorsum with an anterior gray cardiac mark, a posterior longitudinal, gray ladder, and white pigment spots (Fig. 295); sides with diagonal gray bands. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, posterior slightly widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 diameter apart, 0.2 from laterals. Posterior median eyes 0.8 diameter apart, 0.6 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.6 mm, third 1.0, fourth 1.5.

The male is unknown.

*Diagnosis. Mangora chispa* differs from *M. amacayacu* (Fig. 257) by the dorsal abdominal pattern (Fig. 295). The posterior view of the epigynum differs from that of *M. amacayacu* (Fig. 254) by having larger oval openings and a differently shaped dark area (Fig. 294).

*Distribution.* Upper Amazon: Peru (Map 3D).

*Specimens Examined.* No other specimens were found.

### *Mangora ramirezi* new species
Figures 296–301; Map 1D

*Holotype.* Female holotype, male paratype and one female paratype from Parque Nacional Iguazú, Area Cataratas, Misiones, Argentina, 11–16 Dec. 1999 (M. J. Ramírez, L. Lopardo), in MACN. The species is named after the collector and arachnologist M. J. Ramírez.

*Description.* Female holotype. Specimen yellowish with dusky line on carapace. Abdomen: dorsum with six pairs of posterior gray patches, connected by gray lines surrounded by white pigment spots (Fig. 299); sides with a posterior black patch (Fig. 300). Posterior eye row straight. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.9 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.3 mm. Carapace 1.3 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.1 mm, patella and tibia 1.3, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, femur 1.1.

Male paratype. Specimen yellowish with dusky, median line on carapace. Abdomen: dorsum with white spots and four pairs of posterior gray spots. Posterior eye row slightly procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 0.7 from laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 1.8 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.5. Second patella and tibia 1.1 mm, third 0.6, femur 1.0.

Males and females were collected together.

*Variation.* Total length of females 2.3 to 2.7 mm.

*Diagnosis.* The pair of depressions on the posterior of the *Mangora ramirezi* epigynum (Fig. 297) differ from those of *M. blumenau* (Fig. 415) by being closer to the ventral rim (Fig. 297).

The male palpus differs from that of *M. dianasilvae* (Fig. 308) by the different shape of the embolus (Fig. 301) and from most species by the wide, sclerotized projecting shield of the terminal apophysis (12 h in Fig. 301).

*Distribution.* Southeastern Brazil and northeastern Argentina (Map 1D).

*Specimens Examined.* BRAZIL *Rio de Janeiro:* Paineiras, Rio de Janeiro, 22 Jan. 1959, 1♀ (A. Nadler, AMNH); Aug. 1961, 1♂ (M. Alvarenga, AMNH). *São Paulo:* Cotia, Dec. 2002, 2♀ (J. P. L. Guadanucci, H. Y. Yamaguti, MZSP); Mar. 2003, 1♀, 1♂ (M. B. Da Silva, C. A. Nogueira, MZSP); Engenheiro Marcilac, 11 Mar. 1967, 1♀, 1♂ (P. de Biasi, J. L. M. Leme, MZSP 6072). *Rio Grande do Sul:* Tenente Portela, Parque Estadual do Turvo, Salto do Yucumã, 16 Jan. 1985, 1♂ (A. A. Lise, MCN 12846). ARGENTINA *Misiones:* Santa María, Oct. 1956, 2♀ (J. M. Viana, MACN); Nov., Dec. 1956, 3♀ (J. M. Viana, MACN 3596).

### *Mangora dianasilvae* new species
Figures 302–308; Map 3F

*Holotype.* Female holotype, two female, two male paratypes from Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, Madre de Dios, Peru, 4 June–3 July, 1988 (D. Silva D.), in MCZ, one female paratype in MUSM. The species is named after the collector, arachnologist Diana Silva D.

*Description.* Female holotype. Prosoma light orange, with a gray band on each side of thoracic region (Figs. 306, 307). Abdomen: orange-white; dorsum with two posterior, longitudinal, parallel black bands (Fig. 306); venter without marks. Posterior eye row slightly recurved. Ocular quadrangle slightly wider than long; anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 diameter apart, 0.2 from laterals. Posterior median eyes 0.3 diameter apart, 0.9 from laterals.

Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 2.8 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.8, fourth 1.3.

Male paratype. Darker than female; lateral bands on the carapace may fuse in eye region. Sternum light gray. Abdomen: dorsal abdominal bands fuse above spinnerets; venter of abdomen light gray. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.5 their diameter apart, 0.5 from laterals. Posterior median eyes 0.2 their diameter apart, 0.7 from laterals. Height of clypeus equals 0.4 diameter of anterior median eye. Total length 1.8 mm. Carapace 1.1 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.9, tarsus 0.5. Second patella and tibia 0.9 mm, third 0.7, fourth 0.8.

Males and females have been collected together.

*Variation.* Total length of females 2.4 to 3.4 mm, males 1.8 to 2.8. The specimen from Trinidad is the largest and is light colored, except for the prosoma, which is golden-yellow. Some specimens from Peru are dark, as in *M. chacobo* (Figs. 328, 329). The illustrations in Figures 302, 303, 306, 308 were made from the holotype and paratypes, Figures 304, 305, 307 from a specimen from Trinidad.

*Diagnosis.* In ventral view, the epigynum of *M. dianasilvae* has a thin bar with lateral dark ends, and the spermathecae almost seem to touch (Figs. 302, 304). In posterior view, distinct curved openings are close to the ventral margin (Figs. 303, 305), whereas in *M. chacobo*, the margin appears folded, the median lobe is narrower, and the spermathecae are smaller and more anterior (Figs. 324, 326); in posterior view, the *M. chacobo* epigynum lacks the two lateral openings (Fig. 325).

The male palpus has a short, stout, curved embolus and a drawn out median apophysis, blunt and with a hook at the distal tip (4 h in Fig. 308). It lacks the transparent lobe above the embolus and elongate pocket of the median apophysis in the palpus of *M. chacobo* (Fig. 330).

*Natural History.* Specimens have been found in the forest interior in reserves north of Manaus and in gallery forest in Mato Grosso.

*Distribution.* Widespread from Trinidad, Amazon region to southern Mato Grosso, Brazil (Map 3F).

*Paratypes.* PERU *Madre de Dios:* Tambopata Reserve, 30 km air S Puerto Maldonado, 8–13 Jan. 1986, 1♂ (J. B. Heppner, FSCA). Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 6 June 1988, 1♀ (J. Coddington, USNM); July–Aug. 1979 (A. Rypstra, USNM).

*Specimens Examined.* TRINIDAD Cumuto [10°35′N, 61°12′W], Oct. 1926, 1♀ (W. S. Brooks, MCZ). VENEZUELA *Bolívar:* 40 km W Santa Elena, 1,000 m, 7 July 1987, 3♂ (S. and J. Peck, AMNH). COLOMBIA *Amazonas:* Leticia, km 7, Via Tarapacá, 200 m, 29 Oct. 1996, 1♀ (E. Flórez, ICNB AR-3487); Laguna Matamata, 03°41′S, 70°15′W, Nov. 2001, 3♀ (ICNB AR-3344d). PERU *Loreto:* Explorama Inn, 40 km NE Iquitos, 19, 21 July 1989, 1♀ (G. B. Edwards, FSCA); Bosque Nacional Pacaya-Samiria, Pithecia, 05°06′S, 74°50′W, ca. 100 m, 14–15 Aug. 1989, 2♀, 1♂ (D. Silva D., MUSM). *Amazonas:* Cordillera del Cóndor, alto Río Comaina, Puesto de Vigilancia 22, 850–1,150 m, 24–29 Oct. 1987, 15♀, 4♂ (D. Silva D., MUSM). *San Martín:* Mishqui-yacu, 1,600 m, 20 km NE Moyobamba, Aug. 1947, 1♀ (F. Woytowski, AMNH). *Húanuco:* Tingo María, 21 Nov. 1946, 1♀; Jan. 1947, 1♀ (J. C. Pallister, AMNH); Huallaga Valley, Feb–Apr. 1954, 14 ♀ (F. Woytkowski, CAS); Sta. Teresa, Huallaga R., 600 m, Aug. 1954, 7♀ (F. Woytkowski, CAS); Cucharas, Huallaga Valley, Feb.–Apr. 1954, 1♂ (F. Woytkowski, CAS). *Pasco:* Quebrada Chispa, NW Iscozacin, ca. 345 m, 10°10′S, 75°15′W, 3 Nov. 1986, 2♀, 2♂ (D. Silva D., MUSM). *Cuzco:* Ruinas Machu Picchu, 2,000–2,400 m, 4 Jan. 1982 (Harrington, Weintraub, MCZ). *Madre de Dios:* Tambopata Reserve, 30 air km S Pto. Maldonado, 8–13 Jan. 1986, 1♂ (J. B. Heppner, FSCA). BRAZIL *Pará:* Jacareacanga, Oct. 1959, 1♂ (M. Alvarenga, AMNH). *Amazonas:* Fonte Boa, Nov. 1975, 1♂ (M. Oliveira, AMNH); Manaus, Reserva Florestal Adolpho Ducke, 3–5 Aug. 1987, 4♀ (A. A. Lise, MCN 27433, 27436, 27437); 19 Dec. 1987, 1♀ (A. A. Lise, MCN 27434); km 62, Manaus,

Caracarai, 13 July 1977, 1♂ (J. Grazia, MCN 9475); Porto Alegre, 1989–1992, 1♀ (H. G. Fowler, INPA); 80 km N Manaus, Colosso Reserve, 9 Apr. 1989, 1♀ (H. G. Fowler, MCZ); 23 June 1990, 1♀ (H. G. Fowler et al., HGF); 80 km N Manaus, Reserva Dimona, 27 Mar. 1991, 1♀; 15 May 1991, 1♀, 1♂; 26 June 1991, 1♀ ; 25, 26 July 1991, 1♀, imm. (H. G. Fowler et al., HGF, IBSP, MCZ); ca. 80 km N Manaus, Cabo Frio Reserve, 4 Apr. 1990, 1♀; 12 June 1991, 1♀ (H. G. Fowler, MCN, HGF); km 41 Reserve near Manaus, 23 May 1991, 1♀ (H. G. Fowler, MCZ). *Acre:* Xapurí, Reserva Extrativista de Pimenteira, 5–7 Apr. 1996, 1♂ (IBSP/SMNK staff, IBSP 16037). *Mato Grosso:* 260 km N Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, Feb.–Apr. 1969, 2♀, 2♂ (Xavantina-Cachimbo Exped., MCZ); Sinop, Oct. 1976, 3♂ (M. Alvarenga, AMNH); NE Cáceres, 20 July 1988, 1♀ (P. Salinas, AMNH). BOLIVIA *Beni:* 27 km SW Yucumo, ca. 15°23′S, 66°59′W, 500 m, 15–19 Nov. 1989, 1♂ (J. Coddington et al., USNM).

### *Mangora browns* new species
Figures 309–312; Map 3E

*Holotype.* Female holotype from Browns Berg, Brokopondo Prov., 05°N, 55°27′W Suriname, 20 Feb. 1982 (D. Smith Trail), in MCZ. The name is a noun in apposition after the type locality.

*Description.* Female holotype. Carapace orange, with eye region black and black longitudinal band, a gray patch on each side of thoracic region (Fig. 311). Chelicerae orange. Endites, labium, sternum black. Legs grayish orange with indistinct gray rings on tibiae. Abdomen: dorsum orange-white, with contrasting markings and areas with white pigment spots (Fig. 311); venter with a black median band (Fig. 312); sides with black marks. Posterior eye row slightly procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; anterior lateral eyes 0.8 diameter, posterior 0.7. Anterior median eyes their diameter apart, 1.0 from laterals. Posterior median eyes 1.2 diameters apart, 1.0 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 3.8 mm. Carapace 1.6 mm long, 1.5 wide in thoracic region, 0.7 wide behind lateral eyes, 0.8 high. First femur 2.0 mm, patella and tibia 2.3, metatarsus 1.8, tarsus 0.8. Second patella and tibia 2.1 mm, third 1.4, fourth [lost.]

The male is unknown.

*Diagnosis.* The scape of the *M. browns* epigynum has broken off (Fig. 309). The species differs from others by the adjacent black patches on the venter of the epigynum (Fig. 309). The openings are difficult to see in the black bands in posterior view (Fig. 310). It differs from the *M. isabel* (Figs. 287, 288) epigynum by having a narrower scape, and from *M. isabel* and *M. chacobo* (Figs. 324, 326) by the sculpturing of the posterior view of the epigynum.

*Distribution.* Only known from Suriname (Map 3E).

*Specimens Examined.* No other specimens have been found.

### *Mangora semiatra* new species
Figures 1, 313–316; Map 3E

*Holotype.* Female holotype from San Esteban, Carabobo, Venezuela, 1887–1888 (E. Simon), in MNHN no. 10197. The specific name is the name that Simon gave the specimens. But he published no description.

*Mangora semiatra* Simon, 1895: 786, 787, 794 (nomen nudum); Bonnet, 1957: 2711.

*Description.* Female holotype. Carapace yellowish. Endites, labium, sternum gray. Femora with gray areas, coxal-femoral joint dark gray. Abdomen: dorsum gray with a darker longitudinal band and black ring around spinnerets (Fig. 315); venter gray (Fig. 315), sides with anterior white patch. Posterior eye row straight. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 their diameter apart, 1.0 from laterals. Posterior median eyes 0.4 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.7 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.5 wide behind lateral eyes, 1.1 high. First femur 1.1 mm, patella and tibia 1.3, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

Male from northern Peru. Coloration as in female, abdomen dark with three white

patches on each side. Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 their diameter apart, 0.8 from laterals. Posterior median eyes 0.4 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Carapace very high. No hook on first coxa. Total length 2.0 mm. Carapace 1.3 mm long, 1.0 wide in thoracic region, 0.5 wide behind lateral eyes, 1.0 high. First femur 1.1 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.4. Second patella and tibia 1.2 mm, third 0.8, fourth 1.3.

Males and females have been collected together.

*Variation.* Total length of females 2.7 to 2.9 mm. The upper Fig. 313 comes from a specimen from Peru; lower 313, 314, and upper 315 are from the holotype; lower 315 and 316 come from Peruvian specimens.

*Diagnosis. Mangora semiatra* is distinctively colored: the dorsum of the abdomen is black with one to three white patches on each side (Fig. 315). The epigynum is distinctive, with a scape that can be seen in slightly anterior view (upper Fig. 313); in ventral view, the rim has a lobe and circular notch on each side (lower Fig. 313); in posterior view, is a swollen, wide, oval median plate (Fig. 314).

The male palpus is similar to that of *M. missa* (Fig. 163), but the median apophysis, the conductor, and the terminal apophysis differ in shape (Fig. 316).

*Distribution.* Coast of Venezuela, southern Colombia to upper Amazon, Peru (Map 3E).

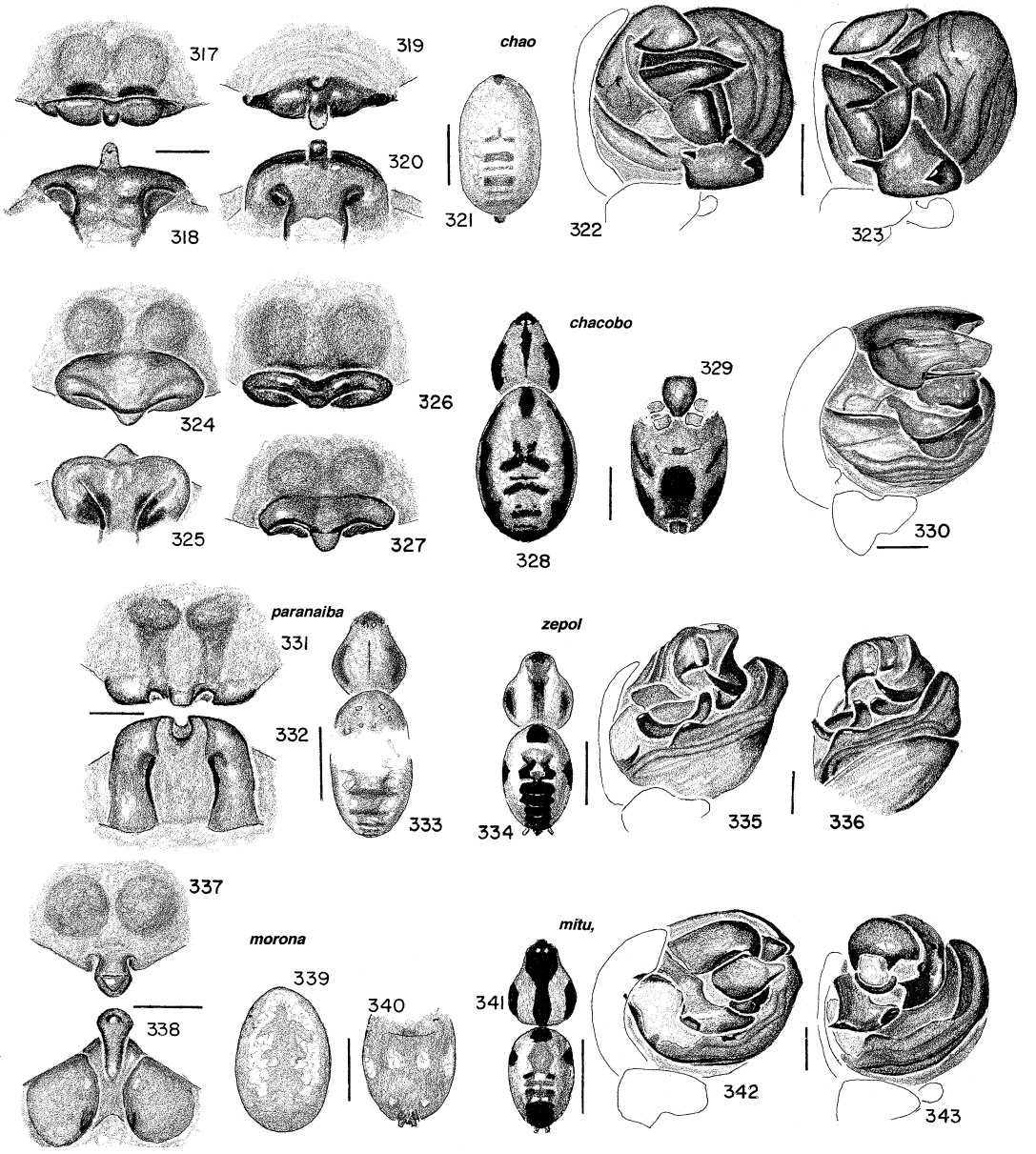
*Specimens Examined.* COLOMBIA *Nariño:* 29 km SE Mocoa, 2 Mar. 1955, 1♀ (E. I. Schlinger, E. S. Ross, CAS). PERU *Loreto:* Bosque Nacional Pacaya-Samiria, Pithecia, 100 m, 05°06′S, 74°50′W, 16, 17 Aug. 1989, 2♀, 2♂ (D. Silva D., MUSM); Bosque Nacional Pacaya-Samiria, Cocha Shinguito, 05°08′S, 75°45′W, 10, 22 May 1990, 17♀, 8♂ (T. Erwin et al., MUSM, MCZ). *Ucayali:* Colonia Calleria, Río Calleria, 15 km Ucuyali, 1–16 Oct. 1961, 1♀ (B. Malkin, AMNH); Pucallpa, Bosque Nacional, Alexander von Humboldt, 31 July 1986, 1♀ (D. Silva D., MUSM). *Pasco:* Huancabamba, Quebrada Chispa, NW de Iscozacin, 345 m, 10°10′S, 75°15′W, 30 Oct.–1 Nov. 1986, 5♀ (D. Silva D., MUSM); Iscozacin, Proyecto Especial Pichis-Palcazú, 26 Oct. 1986, 1♀ (D. Silva D., MUSM). *Ayacucho:* Monterico, ca. 1870, 2♀ (K. Jelski, PAN).

### *Mangora chao* new species
### Figures 317–323; Map 4D

*Holotype.* Female holotype from Alter do Chão, Santarém, Pará, Brazil, 26 Jan. 1994 (A. D. Brescovit), in MCN 25317. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow; some leg articles with a ventral, distal, small black mark. Abdomen: dorsum with white pigment spots, an anterior median black mark, and well-defined posterior transverse bars (Fig. 321); venter indistinctly gray in center; sides with two bands of longitudinal white spots and a median gray patch. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.6 diameter apart, 0.3 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 0.9 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.1 mm long, 1.0 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 0.8, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 1.3.

Male from Paraguay. Prosoma orange. Abdomen: dorsum with white pigment spots and with three pairs of short, black, posterior transverse bars; spinnerets gray. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.0 mm. Cara-




Figures 317–323. *Mangora chao* new species. 317–321, female. 317–320, epigynum. 317, 319, ventral; 318, 320, posterior. 321, abdomen, dorsal. 322, 323, left male palpus. 322, mesal; 323, ventral.

Figures 324–330. *M. chacobo* new species. 324–329, female. 324–327, epigynum. 324, 326, 327, ventral; 325, posterior. 328, carapace, abdomen. 329, sternum, abdomen. 330, male palpus, mesal.

Figures 331–333. *M. paranaiba* new species, female. 331, 332, epigynum. 331, ventral; 332, posterior. 333, carapace, abdomen.

Figures 334–336. *M. zepol* new species, male. 334, carapace, abdomen. 335, 336, palpus. 335, mesal; 336, ventral.

Figures 337–340. *M. morona* new species, female. 337, 338, epigynum. 337, ventral; 338, posterior. 339, abdomen, dorsal. 340, abdomen, ventral.

Figures 341–343. *M. mitu* new species, male. 341, carapace, abdomen. 342, 343, palpus. 342, mesal; 343, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

pace 0.8 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.3 high. First femur 1.0 mm, patella and tibia 1.0, metatarsus 0.8, tarsus 0.5. Second patella and tibia 0.8 mm, third 0.6, fourth 1.0.

Males and females have been collected together in Paraguay.

*Variation.* Total length of females 2.3 to 3.2 mm. Figures 317, 318, 321 were made from the holotype; Figures 319, 320 from specimens from Mato Grosso do Sul, and Figures 322, 323 from Paraguay. Figure 319 is from slightly more anterior, 320 from slightly more ventral than Figures 317, 318.

*Diagnosis. Mangora chao* differs from *M. chacobo* (Figs. 324–329) by its light coloration (Fig. 321), whereas *M. chacobo* has a dark pattern on the abdomen and black thoracic region (Figs. 328, 329). Also, the epigynum of *M. chao* differs from that of *M. chacobo* by having a narrower scape (Figs. 317, 319).

The male palpus differs from all other species by the unique, long, pencil-shaped embolus and wide median apophysis with two spines (Fig. 322).

*Distribution.* Amazon to eastern Paraguay (Map 4D).

*Specimens Examined.* BRAZIL *Mato Grosso do Sul:* Corúmba, Passo do Lontra, Apr. 1998, 1♀ (J. Raizer et al., IBSP 21547). PARAGUAY *Alto Paraná:* Taquarazapa [?1908–1909], 14♀, 2♂ (AMNH Ac. 3721).

### *Mangora chacobo* new species
Figures 324–330; Map 3G

*Holotype.* Female holotype, one male and one female paratypes from Estación Biológica de Beni, Beni, Bolivia (H. Höfer, A. D. Brescovit), in MCN no 24704. The specific name is a noun in apposition after the locality of a Bolivian specimen.

*Description.* Female holotype. Carapace yellowish, eye region black, with a median black band and black band on each side. (Fig. 328). Chelicerae, labium, endites gray. Sternum black around the margin, fading toward center (Fig. 329). Coxae yellow, distal leg articles yellow with many thin black rings. Abdomen: dorsum with white pigment spots and contrasting black marks (Fig. 328); venter contrastingly marked (Fig. 329). Posterior eye row procurved. Ocular quadrangle slightly wider than long, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 1.0 diameter apart, 0.6 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 3.7 mm. Carapace 1.7 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.7 mm, patella and tibia 1.9, metatarsus 1.5, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.1. Fourth femur 1.8 mm, patella and tibia 1.8, metatarsus 1.3, tarsus 0.7.

Male paratype. Contrastingly marked as in female. Posterior eye row procurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.3 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Fourth femur with proximal, ventral macroseta. Total length 2.4 mm. Carapace 1.8 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.5 high. First femur 1.3 mm, patella and tibia 1.5, metatarsus 1.3, tarsus 0.5. Second patella and tibia 1.3 mm, third 0.8., fourth 1.3.

Males and females have been collected together.

*Variation.* Total length of females 3.7 to 5.3 mm, males 2.3 to 3.0. Figures 324, 325, 328, 329 were made from the holotype; Figure 330 from a male from Bolivia; Figure 326 from Tambopata, Peru; and Figure 327 from Monzón Valley, Peru.

*Diagnosis. Mangora chacobo* female differs from that of *M. dianasilvae* (Figs. 302–307) by having narrow folds along the rim of the epigynum (Figs. 324, 326) and by the sculpturing in posterior view.

The male differs from that of *M. dian-*

*asilvae* (Fig. 308) by the transparent shield above the embolus of the palpus (2 h in Fig. 330), and the median apophysis with a slightly concave upper margin having a fold on the opposite margin (4 h in Fig. 330).

*Distribution.* Widespread from Amazon, upper Amazon region to southern Mato Grosso, Brazil (Map 3G).

*Specimens Examined.* PERU *Huánuco:* Tingo María, Cueva de las Lechuzas, 1♀, 2♂ (A. F. Archer, AMNH); Tingo María, 11 Oct. 1946, 1♀ (J. C. Pallister, AMNH); 19–25 May 1947, 1♀ (J. C. Pallister, AMNH); Monzón Valley, Tingo María, 15 Oct. 1954, 1♀ (E. S. Ross, E. I. Schlinger, CAS); Sta. Teresa, Huallaga Riv., 600 m, Aug. 1954, 1♀ (F. Woytkowski, CAS). *Pasco:* Huancabamba, Quebrada Chispa, NW de Iscozacin, 345 m, 10°10′S, 75°15′W, 3 Nov. 1986, 1♀ (D. Silva D., MUSM). *Cuzco:* Quincemil, 750 m, Sep. 1962, 1♂ (L. Peña, MCZ). *Madre de Dios:* Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 4 June–3 July, 1988, 1♀, 1♂ (D. Silva D., MCZ). BRAZIL *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 7 Aug. 1992, 1♀ (H. Höfer, IBSP 10737). *Acre:* Rio Branco, Reserva Extrativista de Catuaba, 9 Apr. 1996, 1♂ (IBSP/SMNK staff, IBSP 15912); Xapurí, Reserva Extrativista de Pimenteira, 5–7 Apr. 1996, 1♂ (IBSP/SMNK staff, IBSP 16039). *Mato Grosso do Sul:* Corumbá, Morro do Azeite, Mar. 1998, 1♀ (Raizer et al., IBSP 21976). *São Paulo:* Primavera, Usina Hidrelétrica Sérgio Motta, Jan., Feb. 2000, 19♀, 5♂ (IBSP staff, IBSP, 29783, 29788). BOLIVIA *Beni:* Chacobo Indian Village, Río Benicito, 12°30′S, 66°W, 1–10 July 1960, 1♂ (B. Malkin, AMNH).

### *Mangora paranaiba* new species
Figures 331–333; Map 4B

*Holotype.* Female holotype from Paranaíba, Mato Grosso do Sul, Brazil, 9 May 1983 (R. R. da Silva), in IBSP no. 14315. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow, with black between eyes and a black band on each side (Fig. 333). Distal ends of some leg articles with dark band. Abdomen [damaged]: dorsum with large anterior white pigment spots and posterior transverse dark bands (Fig. 333); venter with gray spinnerets. Posterior eye row procurved. Ocular quadrangle longer than wide, posterior slightly widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Total length ca. 2.7 mm. Carapace 1.2 mm long, 0.7 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.3 mm, third 0.8, fourth 1.4.

The male is not known.

*Diagnosis. Mangora paranaiba* epigynum differs from that of all other *Mangora* by the venter, which has a very short scape flanked by notches (Fig. 331). The posterior view resembles that of *M. itabapuana* (Fig. 275), whereas that of *M. paranaiba* has a smaller tongue.

*Distribution.* Only known from Mato Grosso do Sul, Brazil (Map 4B).

*Specimens Examined.* No other specimens have been found.

### *Mangora zepol* new species
Figures 334–336; Map 5B

*Holotype.* Male holotype from Hacienda Mozambique, 15 km SW Puerto Lopez, Meta, Colombia, 500 m [ca. 1970s] (W. Eberhard), in MCZ. The specific name in a noun in apposition, an anagram of the name of the type locality.

*Description.* Male holotype. Carapace light orange, with eye region black, thoracic region with a broad, longitudinal, gray to black band and a black band on each side (Fig. 334). Legs light orange with a gray cast. Abdomen: whitish, dorsum contrastingly marked (Fig. 334); venter with a transverse row of four indistinct patches and anterior to spinnerets gray; lung covers and spinnerets gray. Posterior eye row procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes their diameter apart, 0.6 from laterals. Posterior median eyes 0.7 their diameter apart, 0.6 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.6 mm. Carapace 1.3 mm long, 1.2 wide in tho-

racic region, 0.4 wide behind lateral eyes, 0.5 high. First femur 1.4 mm, patella and tibia 1.5, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

The female is not known.

*Diagnosis.* The male *M. zepol* palpus has a unique boat-shaped median apophysis (center of Fig. 335, 9 h in Fig. 336) and a curved black terminal apophysis with a long spine pointing at the conductor (2 h in Figs. 335, 336); the embolus, hidden behind the conductor, is not visible.

*Distribution.* Only known from central Colombia (Map 5B).

*Specimens Examined.* No other specimens have been found.

### *Mangora morona* new species
### Figures 337–340; Map 5D

*Holotype.* Female holotype from Los Tayos, 03°06′S, 78°12′W [Prov. Morona-Santiago], Ecuador, 30 July 1976 (N. Engler), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish white. Abdomen: dorsum with two white pigment bands (Fig. 339); venter with two patches of white pigment spots (Fig. 340). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.4 from laterals. Posterior median eyes 0.3 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.0 mm. Carapace 1.3 mm long, 1.0 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 0.9, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.8. Fourth femur 1.4 mm, patella and tibia 1.4, metatarsus 1.0, tarsus 0.6.

The male is not known.

*Variation.* Total length of females 2.8 to 3.0 mm.

*Diagnosis.* The epigynum of *M. morona* differs from that of *M. paranaiba* by having a longer scape, smaller notches flanking the scape in ventral view (Fig. 337), and larger spherical spermathecae a short distance from the rim (Fig. 337).

*Natural History.* The holotype was collected "on a dragline at night".

*Distribution.* Known only from southeastern Ecuador and central Amazon region, Brazil (Map 5D).

*Specimens Examined.* BRAZIL *Amazonas:* Manaus, 21–23 Sep. 1997, 1♀ (R. Ott, MCP 10184).

### *Mangora mitu* new species
### Figures 341–343; Map 3H

*Holotype.* Male holotype from Mitú, Comissaría del Vaupés, 01°08′N, 70°03′W, Colombia, 9–15 July 1990 (L. E. Peña), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Carapace orange with black median band and black on sides of thoracic region (Fig. 341). Chelicerae gray. Labium, endites, sternum, legs orange. Abdomen: dorsum with black and gray median marks and a black patch on each side (Fig. 341); venter with gray lung covers, a median gray rectangle, spinnerets gray. Posterior eye row straight. Ocular quadrangle slightly wider than long, almost square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 their diameter apart, 0.7 from laterals. Posterior median eyes 0.8 their diameter apart, 0.6 from laterals. Height of clypeus equals 1.0 diameter of anterior median eye. Total length 2.8 mm. Carapace 1.5 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.8. Second patella and tibia 1.5 mm, third 1.0, fourth 1.6.

The female is not known.

*Diagnosis.* The *M. mitu* palpus differs from all others by the shape of its palpal conductor with a small light bulge (3 h in Fig. 342), by having the embolus hidden behind the conductor (3 h in Fig. 342), and by the lobe near the base of the median apophysis (Fig. 342).

*Distribution.* Upper Amazon: Colombia (Map 3H).

*Specimens Examined.* No other specimens have been found.

### *Mangora falconae* Schenkel
### Figures 3, 344–348; Map 3H

*Mangora falconae* Schenkel, 1953: 19, Fig. 17, ♀. Female holotype from El Pozón [07°48′N, 68°04′W], Depto. Acosta, Falcón, Venezuela in NHMB, examined. Levi, 2005: 175, figs. 193, 199, ♀♂. Platnick, 2006.

*Description.* The species was redescribed in Levi, 2005.

*Variation.* Total length of females 3.1 to 4.4 mm, males 2.6 to 2.8. The illustrations were made from the female holotype and a male from a specimen from Colombia.

*Diagnosis.* The *M. falconae* epigynum is lightly sclerotized and is distinguished from others by a projecting, distally swollen scape, narrow at its base (Figs. 344, 345).

Males have a distinct, heavily sclerotized median apophysis, with one point facing the cymbium in the palpus (5 h in Fig. 347, 8 h in Fig. 348) and a heavily sclerotized, elongate triangular embolus (center in Fig. 347).

*Natural History. Mangora falconae* was collected on plants in Colombia, in coastal thorn-scrub in Venezuela.

*Distribution.* Venezuela to Panama (Map 3H).

*Specimens Examined.* PANAMA *Chiriquí:* 1938, 1♀ (AMNH). VENEZUELA *Sucre:* Carúpano, 23–31 July 1987, 1♂ (S. and J. Peck, AMNH). COLOMBIA *Magdalena:* Tayrone Park [Tairona National Park], Gairaca, 8 km NE Santa Marta, 13 June 1985, 1♀ (H.-G. Müller, SMF); Tayrone Park, 16 km NE Santa Marta, 16 June 1985, 9♀, 1♂, 2 imm. (H.-G. Müller, SMF). *Santander:* Piedecuesta, Estacion Experimental Demostrativa El Rasgón, 2,240–2,320 m, July 2000, Feb. 2002, 5♀ (E. Blanco, ICNB AR-1951).

### *Mangora sciosciae* new species
### Figures 349–352; Map 4B

*Holotype.* Female holotype from Calamuchita, Córdoba, Argentina, Feb. 1953 (J. M. Viana) in MACN. The species is named after arachnologist Cristina Scioscia, curator in the Museo Argentino Ciencias Naturales.

*Description.* Female holotype. Prosoma orange. Carapace with a median Y-shaped gray mark (Fig. 351). Chelicerae with a gray patch. Labium, endites, sternum black. Legs with indistinct black spots. Abdomen: dorsum with a median scalloped band that disappears anteriorly (Fig. 351); venter with median gray band, bordered on sides by a narrow white band, sides of band with white pigment spots (Fig. 352). Posterior eye row recurved. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.4 from laterals. Posterior median eyes 1.4 diameters apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.5 mm. Carapace 1.8 mm long, 1.6 wide in thoracic region, 0.7 wide behind lateral eyes, 0.7 high. First femur 2.5 mm, patella and tibia 2.6, metatarsus 2.8, tarsus 1.0. Second patella and tibia 2.4 mm, third 1.5, fourth 2.3.

The male is not known.

*Diagnosis. Mangora sciosciae* epigynum differs from others by its round scape (Fig. 349) and, in posterior view, by the median plate having parallel sides (Fig. 350).

*Distribution.* Only known from Córdoba, north central Argentina (Map 4B).

*Specimens Examined.* No other specimens have been found.

### *Mangora taczanowskii* new species
### Figures 353–355; Map 5D

*Holotype.* Female holotype from Amable María [Dept. Junín, Prov. Tarma, 640 m, on Río Chanchamayo], Peru, ca. 1870s, in PAN. The species is named after arachnologist L. Taczanowski, for whom the specimen was collected.

*Description.* Female holotype. Prosoma light yellow. Abdomen: whitish, dorsum with anterior, median gray spot and indistinct posterior gray ladder-marks; sides with white pigment (Fig. 355); venter without marks or white pigment. Posterior eye row slightly procurved. Ocular quadrangle as long as posterior width, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8

diameter. Anterior median eyes 0.8 diameter apart, 0.8 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.3 diameter of anterior median eyes. Total length 3.7 mm. Carapace 1.7 mm long, 1.3 wide in thoracic region, 0.7 wide behind lateral eyes, 0.9 high. First femur 1.5 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.6 mm, third 1.0, fourth 1.5.

The male is not known.

*Diagnosis.* Unlike others, the *M. taczanowskii* epigynum in ventral view has a triangular tongue (Fig. 353); in posterior view, the median plate is oval and wider than long (Fig. 354).

*Distribution.* Only known from central Peru (Map 5D).

*Specimens Examined.* No other specimens have been found.

### *Mangora v-signata* Mello-Leitão
### Figures 356–362; Map 4B

*Theridion fidum* Mello-Leitão, 1943: 169, figs. 13, 14, ♀. Female holotype from Rio Grande do Sul, Brazil, in MNRJ, examined. NEW SYNONYMY.

*Mangora v-signata* Mello-Leitão, 1943: 194, fig. 21, ♀. Female holotype from Porto Alegre [Rio Grande do Sul, Brazil], in MNRJ, lost. Platnick, 2006.

*Mangora fida* Levi 1967: 37, figs. 42–44, ♀. Platnick, 2006.

*Note.* Mello-Leitão (1943) illustrated the epigynum of *T. fidum* and the dorsal view of a light-colored female, and later the dorsal view of a dark-colored female, of *M. v-signata.* Both the dorsal band of the female abdomen and the small epigynum of *T. fidum* are diagnostic. The specimen of *T. fidum* survived, the other is lost. All specimens examined have the diagnostic ventral black spots on the first and second femur. Because it has a collecting locality, I chose the name *v-signata* for the species.

*Description.* Female from Porto Alegre. Carapace yellowish, with median gray line that widens in center (Figs. 358, 359). Chelicerae with a gray patch. Endites, labium partly black, sternum black (Fig. 360). Legs grayish yellow with a distal black spot and another proximally on venter of first and second femora. Venter with dusky line. Abdomen: dorsum with a median dusky band, black along its edge, and wider posteriorly, white pigment spots on sides of band (Figs. 358, 359); venter with a median gray patch (Fig. 360); sides with gray patch (Fig. 361). Posterior eye row slightly recurved. Ocular quadrangle slightly longer than wide, rectangular. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.0 diameter apart, 1.5 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.0 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.2 mm, patella and tibia 1.4, metatarsus 1.1, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.7, fourth 1.2.

Male from Tucumán. Lighter than female, with pattern less distinct, but with black spots on each end on the venter of first and second femora and marks on sides of abdomen. Posterior eye row slightly recurved. Ocular quadrangle square. Poste-

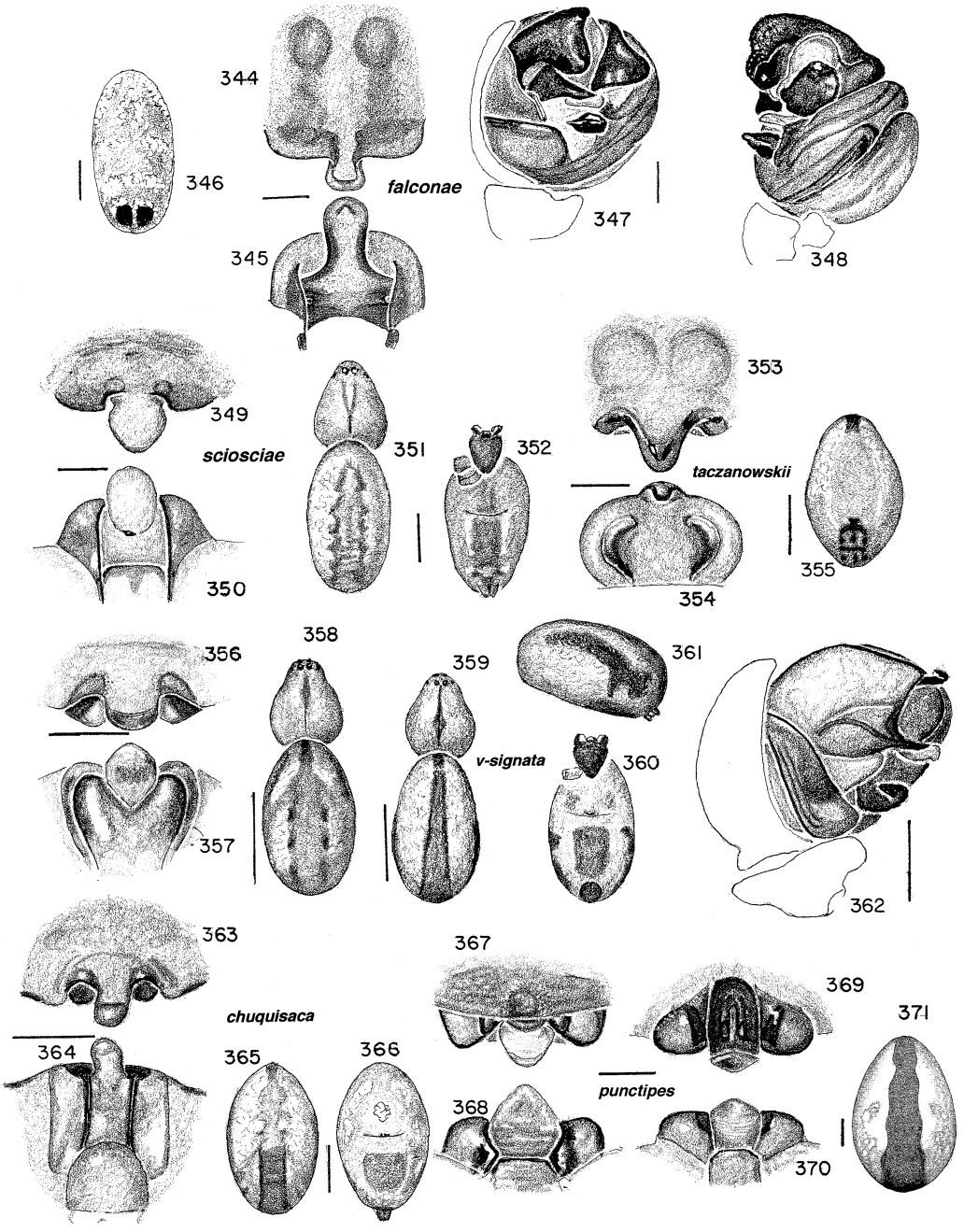
→

Figures 344–348. *Mangora falconae* Schenkel. 344–346, female. 344, 345, epigynum. 344, ventral; 345, posterior. 346, abdomen, dorsal. 347, 348, left male palpus. 347, mesal; 348, ventral.

Figures 349–352. *M. sciosciae* new species, female. 349, 350, epigynum. 349, ventral; 350, posterior. 351, carapace, abdomen. 352, sternum, abdomen.

Figures 353–355. *M. taczanowskii* new species, female. 353, 354, epigynum. 353, ventral; 354, posterior. 355, abdomen, dorsal.

Figures 356–362. *M. v-signata* Mello-Leitão. 356–361, female. 356, 357, epigynum. 356, ventral; 357, posterior. 358, 359, carapace, abdomen. 360, sternum, abdomen. 361, abdomen, lateral. 362, male palpus, mesal.




Figures 363–366. *M. chuquisaca* new species, female. 363, 364, epigynum. 363, ventral; 364, posterior. 365, abdomen, dorsal. 366, abdomen, ventral.

Figures 367–371. *M. punctipes* (Taczanowski), female. 367–370, epigynum. 367, 369, ventral; 368, 370, posterior. 371, abdomen, dorsal.

Scale lines: 1.0 mm; genitalia, 0.1 mm.

rior median eyes 1.1 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.2 diameters apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 1.9 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.5 high. First femur 1.0 mm, patella and tibia 1.3, metatarsus 0.8, tarsus 0.5. Second patella and tibia 0.9 mm, third 0.7, fourth 1.0.

Male and female were collected together.

*Variation.* Total length of females 2.2 to 3.3 mm, Figures 356–358 were made from specimens from Rio Grande do Sul, Figures 359–362 were illustrated from a specimen from Tucumán.

*Diagnosis. Mangora v-signata* differs from others by having two black spots on the venter of the first and second femora. The epigynum differs from that of *M. paranaiba* (Fig. 331) and *M. sciosciae* (Fig. 349) by having larger notches flanking the parallel-sided scape of the epigynum (Fig. 356) and dark lateral areas inside the notches (Fig. 356). The posterior view of the epigynum differs from similar species by a swollen heart-shaped median plate (Fig. 357).

The male palpus differs from others by the wide embolus (Fig. 362) and the black spots on the first and second femora.

*Distribution.* Southern Brazil to southern Bolivia and northern Argentina (Map 4B).

*Specimens Examined.* BRAZIL *São Paulo:* Águas da Prata, 10 Apr. 1998, 1♀ (V. C. Onofrio, IBSP 17504). *Rio Grande do Sul:* Estrela Velha, 20 Oct. 1998, 1♀ (A, Silva, MCN 29627); Morro Santana, Porto Alegre, 1 Sep. 1980, 1♀ (A. Lise, MCN 9329); Muçum, 8 Mar. 1984, 1♀ (A. D. Brescovit, MCN 12110); Tenente Portela, Parque Estadual do Turvo, 29 Nov. 1978, 1♀ (H. Bischoff, MCN 8428); 4–6 Feb. 1980, 1♀ (A. A. Lise, MCN 8972); Três Coroas, 15 Dec. 1976, 1♀ (E. H. Buckup, MCN 4925). BOLIVIA *Chuquisaca:* E Monteagudo, 1,600 m, 21–24 Dec. 1984, 1♀ (L. E. Peña, AMNH). ARGENTINA *Tucumán:* Horco Molle, Nov. 1960, 1♀, 1♂ (M. E. Galiano, MACN 5332b).

## *Mangora chuquisaca* new species
Figures 363–366; Map 4D

*Holotype.* Female holotype from east of Monteagudo, Chuquisaca, 1,600 m, Bolivia, 21–24 Dec. 1984 (L. E. Peña), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange, except eyes with black rings. Abdomen: dorsum with paired patches containing white pigment spots and a posterior, longitudinal gray band, having parallel sides, and an anterior median gray patch (Fig. 365); venter with a gray quadrangle and spinnerets black (Fig. 366); sides with gray marks, darker posteriorly. Posterior eye row straight. Ocular quadrangle as long as posterior width, posterior widest. Posterior median eyes 1.5 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.5 diameters apart, 1.8 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length ca. 3.7 mm. Carapace 1.4 mm long, 1.2 wide in thoracic region, 0.5 wide behind lateral eyes, 0.5 high. First femur 1.6 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.6 mm, third 1.1, fourth 1.6.

The male is unknown.

*Variation.* Total length of females 3.2 to 3.7 mm.

*Diagnosis. Mangora chuquisaca* epigynum has a notch containing a dark structure on each side of the narrow scape (Fig. 363) and is separated from *M. v-signata* by the posterior median plate with parallel sides (Fig. 364), whereas *M. v-signata* has a heart-shaped median plate (Fig. 357).

*Distribution.* Southern Bolivia, northwestern Argentina (Map 4D).

*Specimens Examined.* ARGENTINA *Jujuy:* San Salvador de Jujuy, 20 Apr. 1989, 1♀ (L. Pereira, USNM).

## *Mangora punctipes* (Taczanowski)
Figures 367–371; Map 5D

*Epeira punctipes* Taczanowski, 1878: 166, pl. 2, fig. 16, dorsal view. Two female syntypes from Mon-

terico [Depto. Ayacucho, Prov. Huanta], Peru, in PAN, examined.

*Mangora punctipes*:—Levi, 1991: 179; Platnick, 2006.

*Description.* Female syntype. Carapace brownish yellow with a gray Y-shaped mark. Large black circles around secondary eyes. Chelicerae with a gray patch. Labium, endites gray. Sternum dark brown. Coxae and distal leg articles yellow with brown spots at the bases of setae. Abdomen: dorsum with a dark longitudinal band (Fig. 371); venter with a pair of gray longitudinal bands flanked by white bands, black anterior to spinnerets. Posterior eye row recurved. Posterior median eyes 2.0 diameters of anterior medians; lateral eyes 1.3 diameters. Anterior median eyes 1.6 diameters apart, 2.0 from laterals. Posterior median eyes 1.2 diameters apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Abdomen elongate oval (Fig. 371). Total length 4.5 mm. Carapace 1.6 mm long, 1.5 wide in thoracic region, 0.7 wide behind eyes, 0.7 high. First femur 1.9 mm, patella and tibia 2.3, metatarsus 1.7, tarsus [lost]. Second patella and tibia 2.1 mm, third 1.3, fourth 2.0.

The male is not known.

*Variation.* Total length of females 3.8 to 4.5 mm. Figures 367, 368, 371 were made from the holotype, Figures 369, 370 from Machu Picchu, Peru.

*Diagnosis. Mangora punctipes,* like some *M. v-signata,* does not have the typical *Mangora* pattern on the abdomen (Fig. 371) and differs also by the low carapace, eye sizes, and spotted legs, but it does have the characteristic *Mangora* trichobothria on the third patella and tibia. As in *Araneus* species, *M. punctipes* has a scape with a distal pocket (Figs. 367, 369). It differs from other *Mangora* species by having the scape of the epigynum flanked by two large brackets, each the width of the scape (Figs. 367, 369), and in posterior view by the equal width of lateral and median plates (Figs. 368, 370).

*Distribution.* Upper Amazon: Peru (Map 5D).

*Specimens Examined.* PERU *Ayacucho:* Huanta, 8 Mar. 1951, 1♀ (E. S. Ross, A. E. Michelbacher, CAS). *Cuzco:* Machu-Picchu, 1942, 1♀ (F. Putlitz, MCZ); 20 Feb. 1947, 1♀; 6, 7 Mar. 1947, 2♀ (J. C. Pallister, AMNH).

## *Mangora paula* new species
Figures 372–376; Map 4D

*Holotype.* Female holotype and five male paratypes from Rincão dos Kroeff, São Francisco de Paula, Rio Grande do Sul, Brazil, 5 Jan. 1985 (A. A. Lise), in MCN 12727. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: white; dorsum with areas of white pigment spots and two pairs of short, black transverse lines; a posterior, black transverse line (Fig. 374); venter with a square of white pigment spots. Posterior eye row recurved. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.3 diameters apart, 2.0 from laterals. Posterior median eyes 2.0 diameters apart, 1.6 from laterals. Height of clypeus equals 0.9 diameter of anterior median eyes. Total length 4.4 mm. Carapace 2.1 mm long, 1.7 wide in thoracic region, 0.8 wide behind lateral eyes, 1.1 high. First femur 2.3 mm, patella and tibia 2.7, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.4 mm, third 1.6, fourth 2.5.

Male paratype. Coloration as in female. Posterior eye row straight. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.8 diameters of anterior medians; anterior lateral eyes 0.8 diameter, posterior 1.0. Anterior median eyes 1.3 diameters apart, 2.0 from laterals. Posterior median eyes 1.2 diameters apart, 1.1 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Fourth femur with five ventral macrosetae. Total length 3.6 mm. Carapace 1.7 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 2.2 mm, patella and tibia 2.5, metatarsus 1.8, tarsus 0.7. Second patella and tibia 2.1 mm, third 1.2, fourth 2.1.

Males and female were collected together.

*Diagnosis. Mangora paula* genitalia are weakly sclerotized. The epigynum (Figs. 372, 373) is distinguished from that of *M. v-signata* (Figs. 356, 357), *M. chuquisaca* (Figs. 363), and *M. punctipes* (Figs. 367–370) by lacking notches flanking the scape (Fig. 372). In posterior view of the epigynum, *M. paula* has narrow median plates and a pair of lateral plates, each with a central black mark (Fig. 373).

The male palpus has the median apophysis bearing two spines (4 h in Fig. 375) and a flat rounded sclerite, which may cover the embolus (center of Fig. 375).

*Distribution.* Only known from southern Brazil (Map 4D).

*Specimens Examined.* No other specimens were found.

## *Mangora amchickeringi* Levi
## Figures 377–382; Map 4A

*Mangora amchickeringi* Levi, 2005: 160, figs. 80–90, ♀♂. Male holotype and 16 male and 39 female paratypes from Madden Dam, Canal Zone, Panama, in MCZ. Platnick, 2006.

*Mangora mobilis*:—Chickering, 1954: 202, figs. 10–14, ♀♂ (misidentification).

*Description.* See Levi (2005). Total length of females 3.2 to 4.2 mm, males 2.3 to 2.8.

*Illustrations.* Illustrations of the female were made from a specimen from Trinidad, and the male from Panama.

*Diagnosis. Mangora amchickeringi* epigynum (Fig. 377) is like that of *M. paula* ventrally (Fig. 372); however, the posterior view differs by having a transverse, U-shaped median plate (Fig. 378).

The male palpus differs (Figs. 381, 382) from that of *M. paula* (Fig. 375) by having a sclerotized, pointed hook on the terminal apophysis (12 h in Fig. 381) above the round-topped sclerotized plate that shields the embolus (center of Fig. 381). The embolus can be seen under the plate (center of Fig. 382).

*Natural History.* Specimens were collected by fogging trees in middle savanna at Calabozo, Venezuela, and in dry forest and agricultural land at Atlantico, Colombia.

*Distribution.* Panama, Trinidad, Venezuela, northern Colombia (Map 4A).

*Specimens Examined from South America.* WEST INDIES. TRINIDAD St. Augustine University, April 1964, 1♀, 3♂ (A. M. Chickering, MCZ); Port of Spain, 1913, 1♀, 3♂ (R. Thaxter, MCZ); Gasparce, 3 Nov. 1944, 1♀ (R. H. Montgomery, AMNH). *St. George Co.:* Diego Martin Ward, Edith Falls, Trail, 18 Aug. 1986, 1♂ (G. B. Edwards, FSCA); San Rafael Ward, E side of Talparo River, 20 Aug. 1986, 1♂ (G. B. Edwards, FSCA). *St. Andrew Co.:* Valencia Ward, at Oropuche River, 17 Aug. 1986, 1♂ (G. B. Edwards, FSCA). VENEZUELA *Guárico:* Estacion Biologica de los Llanos, Calabozo, 280 m, 18 Jan. 1985, 1♀ (J. Palmer, MCZ); Hato Masaquarai, 45 km S of Calabozo, 17 Mar. 1980, 1♀ (K. Rabenold, MCZ). *Bolívar:* San Felix, Oct.–Dec. 1947, 1♀ (AMNH). COLOMBIA *Magdalena:* 10 km E Santa Marta, Oct. 1985, 1♀ (H.-G. Müller, SMF). *Atlántico:* Juan de Acosta, Finca Bella Lucilla, 60 m, Oct. 2000–Jan. 2001, 27♀, 3♂ (Y. Ow, D. Cuentes, ICNB AR-1952).

## *Mangora uraricoera* new species
## Figures 383–388; Map 5A

*Holotype.* Female holotype from Rio Uraricoera, Ilha de Maracá, Roraima, Brazil, 24 Mar. 1987 (A. A. Lise), in MCN 27430. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma

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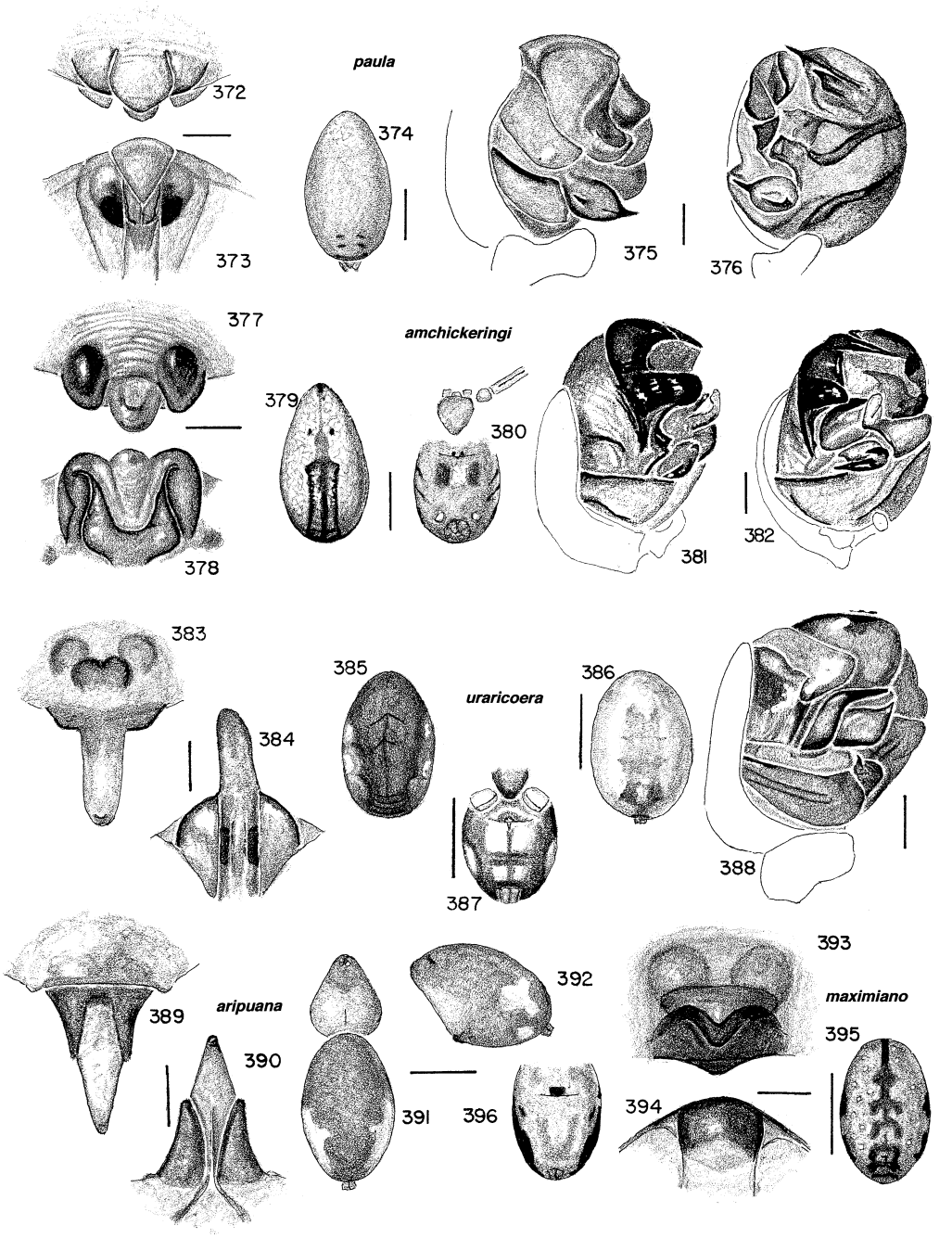
Figures 372–376. *Mangora paula* new species. 372–374, female. 372, 373, epigynum. 372, ventral; 373, posterior. 374, abdomen, dorsal. 375, 376, left male palpus 375, mesal; 376, ventral.

Figures 377–382. *M. amchickeringi* Levi. 377–380, female. 377, 378, epigynum. 377, ventral; 378, posterior. 379, abdomen, dorsal. 380, first femur, sternum, abdomen. 381, 382, male palpus 381, mesal; 382, ventral.

Figures 383–388. *M. uraricoera* new species. 383–387, female. 383, 384, epigynum. 383, ventral; 384, posterior. 385, 386, abdomen, dorsal. 387, sternum, abdomen. 388, male palpus, mesal.

Figures 389–392. *M. aripuana* new species, female. 389, 390, epigynum. 389, ventral; 390, posterior. 391, carapace, abdomen. 392, abdomen, lateral.




Figures 393–396. *M. maximiano* new species, female. 393, 394, epigynum. 393, ventral; 394, posterior. 395, abdomen, dorsal. 396, abdomen, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

yellowish, sternum black, coxae yellowish, legs with areas of gray. Abdomen: dorsum black (Fig. 385); venter marked with distinct white squares (Fig. 387); sides with white patches (Fig. 385). Posterior eye row recurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.9 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.5 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.8 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.4. Second patella and tibia 1.1 mm, third 0.8, fourth femur 1.2.

Male paratype. Posterior eye row recurved. Ocular quadrangle square. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 0.7 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length 1.7 mm. Carapace 0.9 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.0 mm, patella and tibia 1.1, metatarsus 0.8, tarsus 0.4. Second patella and tibia 1.0 mm, third 0.7, fourth femur 1.0.

Males and females were collected together.

*Variation.* Total length of females 2.2 to 2.8 mm, males 1.7 to 1.8. The scape of the epigynum seems to originate anteriorly to the posterior edge of the epigynum (Figs. 383, 384). The terminal apophyses vary slightly in structure. Figures 385, 387 were made from a female from Roraima, Figure 386 from a female from Ecuador.

*Diagnosis.* The epigynum of *M. uraricoera*, unlike all others, has a long scape with parallel sides (Fig. 383) and, in posterior view, two longitudinal grooves with parallel sides (Fig. 384).

The male palpus, unlike others, has a prominent, straight, pointed embolus with its base located proximally (Fig. 388).

*Natural History.* Specimens have been found in forest interior, 80 km N Manaus, others in tierra firma forest in Vaupés, Colombia.

*Distribution*. Guianas and Amazon region (Map 5A).

*Paratypes.* BRAZIL *Roraima:* Rio Uraricoera, Ilha de Maracá, 14 Dec. 1987, 1♂ (E. H. Buckup, MCN 27441).

*Specimens Examined.* GUYANA Ikuruwa River, 5°70′N, 57°50′W, Aug., Dec. 1961, 2♀, 1♂ (G. Bentley, AMNH); Kaieteur, 14 Aug. 1911, 1♀ (F. E. Lutz, AMNH). SURINAME *Brokopondo Prov.:* Browns Berg, 5°N, 55°27′W [04°53′N, 55°13′W], 20 Feb. 1982, 1♀ (D. Smith Trail, MCZ). VENEZUELA *Amazonas:* Cerro de la Neblina, basecamp, 140 m, 0°50′N, 66°10′W, 21–28 Feb. 1985, 1♀ (W. F. Steiner, USNM). COLOMBIA *Vaupés:* Terassa, Lago Terassa, E. G. Capan, 01°04′S, 69°31′W, May 2002, 2♀, 1♂ (J. Pinzon, A. Schogal, ICNB); Baja Río Apaporis, Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, Sep. 2002, 4♀, 4♂ (L. Benavides, ICNB AR-3332); Mpa. Taraira Serrania Taraira, Caño, Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 5♀, 2♂ (J. Pinzón, ICNB AR-3333); Río Apaporis, Tarcala, E. O. Mosiro Itayure, 200 m, 01°04′S, 69°31′W, Oct. 2002, 3♀, 1♂ (L. Benavides, ICNB); Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, May 2002, 1♀ (J. Pinzón, A. Schogal, ICNB). *Putumayo:* Parque Nacional Natural La Paya, June 2002, 1♂ (ICNB AR-3348). *Amazonas:* Laguna Matamata, 03°41S, 70°15′W, Nov. 2001, 1♀ (ICNB AR-3344c); Parque Nacional Natural Amacayacu, Laguna Matamata, 150 m, 03°41′S, 70°15′W, 2♀ (ICNB AR-3343); Corr. La Mathani, Quebradón El Ayo, 01°35′S 69°31′W, May 2002, 3♀, 3♂ (J. Ponzón, ICNB AR-3337, 3339). ECUADOR *Sucumbíos:* Río Tarapuy, 20 Feb. 1984, 1♀ (L. Avilés, MECN). PERU *Loreto:* Centro de Investigacion "Jenaro Herrera", 04°55′S, 73°45′W, 26–27 Aug. 1988, 1♀, 1♂ (D. Silva D., MUSM). *Cuzco:* Camisea, Cashiriari, 690 m, 11°52′S, 72°39′W, 30 Nov. 1997, 1♀ (J. Duarez C., MUSM). BRAZIL *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 18–25 Feb. 1992, 1♀ (A. D. Brescovit, MCN 22088); 19–24 Feb. 1992, 1♀ (A. A. Lise, MCP 1730); 80 km N Manaus, Colosso Reserve, 28 May 1990, 1♀; 25 Oct. 1989, 1♀ (H. G. Fowler et al., HGF); 80 km N Manaus, C. de Powell Reserve, 20 Apr. 1991, 1♀ (H.G. Fowler et al., IBSP); Maturucá, São Gabriel da Cachoeira, 12 Oct. 1990, 1♀ (A. A. Lise, MCP 1254); near Manaus, km 41 Reserve, 12 Mar. 1991, 1♀, 1♂; 18 Apr. 1991, 1♀ (H. G. Fowler et al., INPA, MCZ); Manaus, Fazenda Esteio, Reserva km 41, 12 Jan. 1994, 1♀ (A. D. Brescovit, MCN, 25138).

### *Mangora aripuana* new species
Figures 389–392; Map 4E

*Holotype.* Female holotype from Aripuana, Mato Grosso, Brazil, 1979 (W. and L. Miller), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow, area between median eyes black; cephalic area darker yellow (Fig. 391); endites, labium, sternum black. Legs grayish yellow, first three femora darkest, except for their ends, and a narrow black ring around distal end of tibiae. Abdomen: black, except for lighter lateral areas and two patches without pigment anterior to spinnerets (Figs. 391, 392). Posterior eye row straight. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.8 diameter apart, 0.3 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.1 diameters of anterior median eyes. Total length ca. 2.3 mm. Carapace 1.1 mm long, 0.9 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 0.8, tarsus [lost]. Second patella and tibia 1.0 mm, third 0.7, fourth 1.1.

The male is unknown.

*Diagnosis. Mangora aripuana* epigynum, unlike that of *M. uraricoera* (Fig. 383), has a pointed scape between two bracts (Figs. 389, 390). The median plate in posterior view, a continuation of the scape, is narrow dorsally (Fig. 390).

*Natural History.* The specimen was collected in forest.

*Distribution.* Only known from upper Amazon region in Mato Grosso, Brazil (Map 4E).

*Specimens Examined.* No other specimens were found.

### *Mangora maximiano* new species
Figures 393–396; Map 4F

*Holotype.* Female holotype from Fazenda São Maximiano, Guaíba, Rio Grande do Sul, Brazil, 2 June 1995 (A. A. Lise et al.), in MCP 6712. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish with black eye rings. Abdomen: dorsum with median gray to black marks (Fig. 395); venter with indistinct gray U-shaped mark (Fig. 396); sides with a black patch (Fig. 396). Abdomen posterior widest (Fig. 395). Posterior eye row slightly procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.8 mm. Carapace 1.2 mm long, 0.9 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.2, tarsus 0.4. Second patella and tibia 1.2 mm, third 0.8, fourth 1.2.

The male is unknown.

*Diagnosis. Mangora maximiano* epigynum differs from others by having a wide lobed scape (Fig. 393); the posterior view has a short, swollen, wide median plate (Fig. 394).

*Distribution.* Only known from southern Brazil (Map 4F).

*Specimens Examined.* No other specimens have been found.

### *Mangora barba* new species
Figures 397–400; Map 5B

*Holotype.* Female holotype and one female paratype from Barbacoas, 20 m, Nariño, Colombia, 20 Mar. 1974 (W. Eberhard 738), in MCZ. The specific name is a noun in apposition, an arbitrary combination of letters. "Barba" is Spanish for "beard".

*Description.* Female holotype. Carapace light orange, with a black patch between median eyes, lateral eyes on gray, a gray patch in center behind median eyes (Fig. 400). Clypeus orange. Chelicerae orange; labium, endites gray. Sternum with gray edge. Legs light orange, distal leg articles gray. Abdomen: dorsum with pairs of

white patches separated by anterior black areas, posterior gray; the second light patch continuous with other patches on sides of abdomen (Fig. 400); venter gray, blackish on sides and black anterior to spinnerets. Posterior eye row strongly procurved. Ocular quadrangle longer than wide, posterior widest. Posterior median eyes 1.4 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes their diameter apart, 0.3 from laterals. Posterior median eyes 0.6 diameter apart, 0.5 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.7 wide behind lateral eyes, 0.8 high. First femur 1.7 mm, patella and tibia 1.9, metatarsus 1.6, tarsus 0.8. Second patella and tibia 1.8 mm, third 1.2. Fourth femur 1.8 mm, patella and tibia 1.8, metatarsus 1.6, tarsus 0.7.

The male is unknown.

*Diagnosis. Mangora barba* has unusually large eyes, with anterior median eyes facing slightly ventrally. The epigynum is heavily sclerotized and is distinguished from others by its projecting shelf (Figs. 397–399); the lateral view is from slightly anterior (Fig. 399).

*Distribution.* Only known from southwestern Colombia (Map 5B).

*Specimens Examined.* No other specimens were found.

### *Mangora argenteostriata* Simon
### Figures 401–404; Map 4A

*Mangora argenteostriata* Simon, 1896: 478. Female holotype from Teffe [Tefé, Amazonas, Brazil], in MNHN no. 1445. When examining the specimen in 1971, I labeled it as a type. Platnick, 2006.

*Description.* Female holotype. Prosoma orange-yellow; large black circles around secondary eyes. Abdomen: dorsum with silver spots and gray pigment patches (Fig. 404). Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.7 diameter apart, 0.7 from laterals. Posterior median eyes 0.6 diameter apart, 0.6 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 4.8 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region. First femur 2.2 mm, patella and tibia 2.5, metatarsus 1.9, tarsus 0.8. Second patella and tibia 2.3 mm, third 1.3, fourth 2.3

The male is unknown.

*Diagnosis.* In ventral view, the epigynum of *M. argenteostriata* projects ventrally (Fig. 403) and on its ventral face shows a curved slit, the anterior lip of a slight depression (Fig. 401); the rim in posterior view has a pair of angular projections (Fig. 402).

*Distribution.* Only known from the Amazon region (Map 4A).

*Specimens Examined.* No other specimens have been collected.

### *Mangora castelo* new species
### Figures 405–409; Map 4F

*Holotype.* Female holotype and two male paratypes from Castelo, Espírito Santo, Brazil, Nov. 1976 (M. Alvarenga), in AMNH. The specific name is a noun in apposition after the type locality. The word "castelo" is Portuguese for "castle".

*Description.* Female holotype [in poor, shriveled condition]. Prosoma orange. Abdomen: dorsum with posterior median band (Fig. 407); venter with central gray area (Fig. 408), spinnerets gray; sides with

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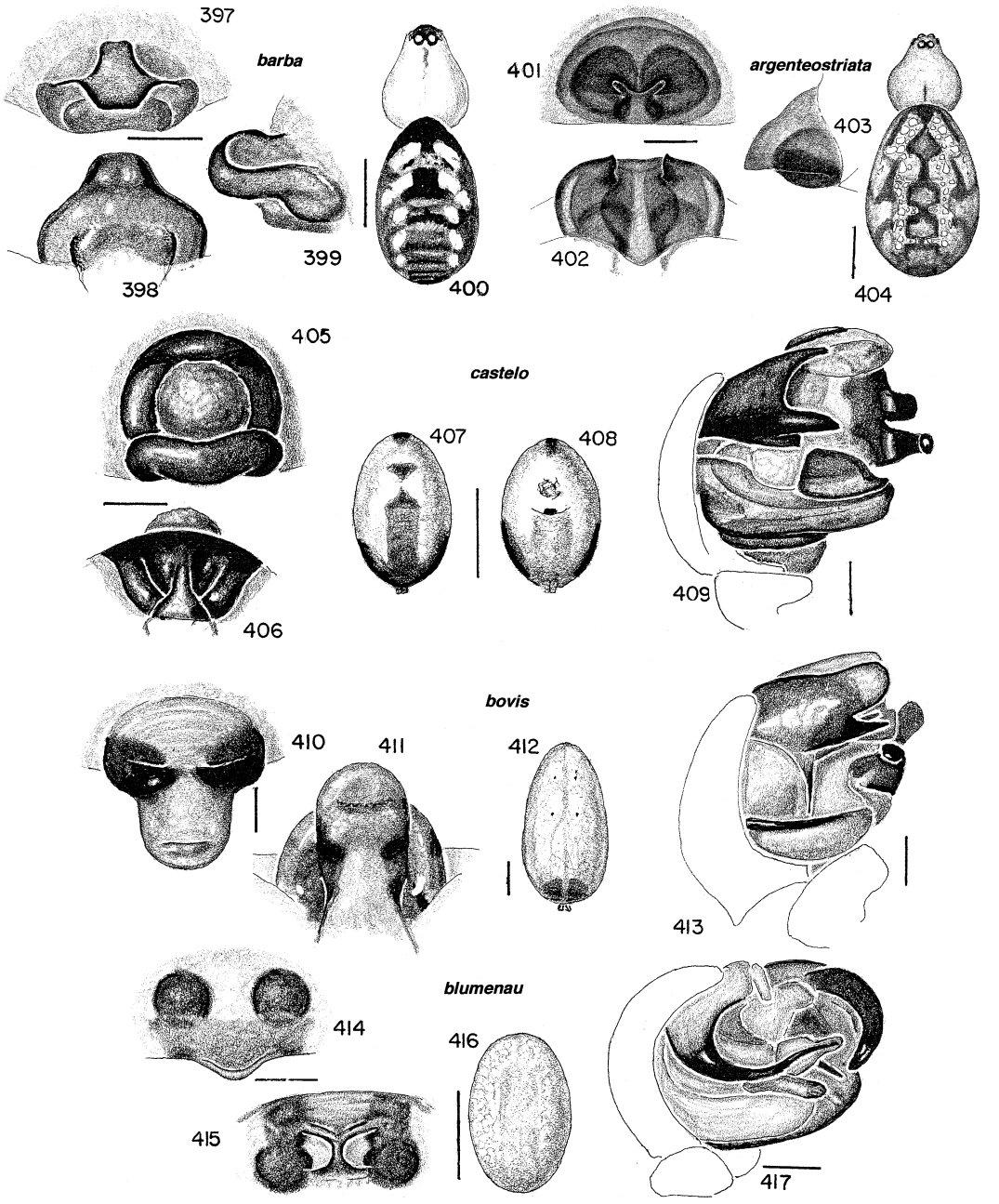
Figures 397–400. *Mangora barba* new species, female. 397–399, epigynum. 397, ventral; 398, posterior; 399, lateral. 400, carapace, abdomen.

Figures 401–404. *M. argenteostriata* Simon, female. 401–403, epigynum. 401, ventral; 402, posterior; 403, lateral. 404, carapace, abdomen.

Figures 405–409. *M. castelo* new species. 405–408, female. 405, 406, epigynum. 405, ventral; 406, posterior. 407, abdomen, dorsal. 408, abdomen, ventral. 409, left male palpus, mesal.




Figures 410–413. *M. bovis* new species. 410–412, female. 410, 411, epigynum. 410, ventral; 411, posterior. 412, abdomen, dorsal. 413, male palpus, mesal.

Figures 414–417. *M. blumenau* new species. 414–416, female. 414, 415, epigynum. 414, ventral; 415, posterior. 416, abdomen, dorsal. 417, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

posterior gray patches. Posterior eye row slightly recurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.5 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length ca. 2.8 mm. Carapace 1.0 mm long [width and height damaged]. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.8, fourth 1.2.

Male paratype [damaged]. Few abdominal markings. Posterior eye row slightly recurved. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.1 diameters apart, 1.0 from laterals. Posterior median eyes 1.2 diameters apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length ca. 2.2 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.4, metatarsus 1.0, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.7, fourth 1.3.

Males and females have been collected together.

*Diagnosis.* *Mangora castelo* epigynum, unlike that of any other species, has a framed hemisphere (Fig. 405); the posterior view has two openings in triangular depressions separated by an upside-down T-shaped septum (Fig. 406).

The male palpus has a triangular median apophysis pointed at its distal tip (4 h in Fig. 409). The median sclerotized sclerite with a pointed spine, which might be the embolus (Fig. 409), is not seen in any other species.

*Distribution.* Only known from Espírito Santo, in southeastern Brazil (Map 4F).

*Specimens Examined.* No other specimens have been collected.

### *Mangora bovis* new species
### Figures 410–413; Map 4E

*Holotype.* Female holotype from Cannister Falls, British Guiana [Guyana], Cattle Trail Survey, June 1920 (A. A. Abraham), in BMNH 1923.7.23.70. The specific name is a noun in apposition after the name of the expedition.

*Description.* Female holotype. Prosoma yellow. Abdomen: whitish; dorsum with white spots, a pair of posterior gray patches (Fig. 412); venter with two longitudinal rows of white spots. Posterior eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.3 diameter apart, 1.5 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. First legs almost the same length as fourth. Total length 6.2 mm. Carapace 2.5 mm long, 2.0 wide in thoracic region, 0.8 wide behind lateral eyes, 1.3 high. First femur 2.8 mm, patella and tibia 3.1, metatarsus 2.7, tarsus 0.9. Second patella and tibia [lost], third 1.8 mm, fourth, 3.1.

Male from Manaus. Abdomen: with a pair of small black patches anterior to posterior dorsal larger black patches. Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.3 their diameter apart, 0.2 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 0.3 diameter of anterior median eyes. Fourth femur with a proximal, ventral strong macroseta on a slight lobe. Total length 3.3 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.5 wide behind lateral eyes, 0.8 high. First femur 1.8 mm, patella and tibia 2.2, metatarsus 1.9, tarsus 0.7; second 1.9 mm third 1.2, fourth, 1.8.

Males and females were collected together in Brazil.

*Variation.* Total length of females 5.4 to 6.5 mm, males 3.3 to 6.4. The illustrations

were made from the female holotype and a male from Manaus.

*Diagnosis.* The wide, parallel-sided scape of the epigynum with rounded end and two anterior dark areas (Figs. 410, 411) is unlike that of any other species.

The male palpus has a lobe above its pointed embolus (Fig. 413). Unlike that of *M. apaporis* (Fig. 423), the embolus spine is straight, and unlike that of *M. tambo* (Fig. 131), it is short, straight, and sclerotized.

*Natural History.* Specimens from near Manaus have been found in the interior of forests.

*Distribution.* Guyana and Amazon region of Brazil (Map 4E).

*Specimens Examined.* BRAZIL *Pará:* Aveiro, 30 Oct. 1970, 1♂ (EPA, MZSP JJ 620). *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 3 Aug. 1987, 3♀, 1♂ (A. A. Lise, MCN 27439, 27436); 18 Dec. 1987, 2♀ (A. A. Lise, MCN 27427); 15 Aug. 1991, 1♀ (A. D. Brescovit, MCN 21393); 80 km N Manaus, Colosso Reserve, 5 Feb. 1990, 1♀ (IBSP); 22 Mar. 1990, 2♀ (H. G. Fowler, MCN); 5 Apr. 1990, 2♀ (INPA, MCZ); 19 Apr. 1990, 1♀; 6 June 1991, 1♀ (H. G. Fowler et al., MCZ); ca. 80 km N Manaus, Cabo Frio Reserve, 16 May 1990, 1♀ (H. G. Fowler, INPA); near Manaus, km 41 Reserve, 17 Apr. 1991, 1♀ (H. G. Fowler et al., MCZ); Borba, Rio Mapiá, 22 Apr. 1996, 2♀ (IBSP, SMNK staff, IBSP 15978). *Rondônia:* Pimenta Bueno, July 1999, 1♀ (G. Christianini, IBSP 23955).

### *Mangora blumenau* new species
Figures 414–417; Map 4F

*Holotype.* Female holotype from Blumenau, Santa Catarina, 27°00′S, 43°00′W, Brazil, 3 Feb. 1996 (A. Bonaldo, A. B. Kury), in MCN 27248. The specific name is a noun in apposition after the type locality. The name is a German word for "flower meadow".

*Description.* Female holotype. Prosoma yellowish white. Abdomen: white, dorsum with white pigment spots (Fig. 416). Posterior eye row straight. Ocular quadrangle slightly longer than wide, anterior widest. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 2.7 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.3 mm, patella and tibia 1.5, metatarsus 1.2, tarsus 0.5. Second patella and tibia 1.4 mm, third 0.7, fourth 1.2.

Male from Boracéia-Salesópolis. Coloration as in female. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Total length 2.1 mm. Carapace 1.0 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 1.1 high. First femur 1.0 mm, patella and tibia 1.3, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.0 mm, third 0.7, fourth 1.1.

Males and females have been collected together.

*Variation.* Total length of females 2.6 to 2.8 mm, males 1.6 to 2.3.

*Diagnosis. Mangora blumenau* epigynum in ventral view has spermathecae almost their diameter apart (Fig. 414); in posterior view, the epigynum resembles that of *M. balbina* (Fig. 261) and *M. ramirezi* (Fig. 297), but the pair of depressions are farther from the ventral rim (Fig. 415).

The male palpus resembles that of *M. ordaz* (Fig. 197), but the embolus is wider and the terminal apophysis differs in shape (Fig. 417).

*Distribution.* Rio de Janeiro to Santa Catarina, southern Brazil (Map 4F).

*Specimens Examined.* BRAZIL *Rio de Janeiro:* Teresópolis, 900–1,100 m, 7–9 Nov. 1945, 1♂ (H. Sick, AMNH). *São Paulo:* Salesópolis, Estação Biológica de Boracéia, 6–9 July 1948, 5♀, 3♂ (H. Camargo, MZSP 3249); 18 Oct. 1960, 1♀ (K. Lenko, MZSP 13248); 13, 14 Apr. 1961, 1♀ (P. de Biasi); 22–23 Feb. 1961, 1♂ (P. de Biasi, MZSP 13247); 15 June 1964, 1♂ (Oliveira, MZSP 5413); 23 Sep. 1965, 1♀ (P. de Biasi, MZSP 4849); 28 Feb. 1967, 1♀(P. de Biasi, MZSP 6122a); Cotia, Dec. 2002, 1♀, 2♂ (A. A. Nogueira,

D. Lahr, MZSP); Paranápiacaba, Estação Ecológica do Alto da Serra, 29 Oct. 1990, 1♂ (R. Baptista, MZSP 12001). *Paraná:* Palmeira, 1 Oct. 1994, 1♀ (R. Bóçon, MCN 26611); São José dos Pinhais, Serra da Farinha Seca, 15–20 Sep. 1995, 1♀, 6♂ (Lab. de Arachnol, MCP 7627, 7655); 15–29 Nov. 1995, 1♀ (A. A. Lise et al., MCP 7617).

### *Mangora anilensis* new species
Figure 418–421; Map 4G

*Holotype.* Male holotype from Parque Nacional da Serra do Divisor, Acre, Brazil, 23 Mar. 1997 (L. Resende, R. Vieira) in IBSP 12400. The specific name is an adjective of a locality in the park.

*Description.* Male holotype. Yellowish white. Abdomen: dorsum with three black marks and paired gray and posterior black marks (Fig. 418, 419); sides with white pigment spots and posterior gray; venter with indistinct light gray median area (Fig. 419). Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.6 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 1.0 diameter apart, 0.2 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Fourth femur with a proximal, ventral macroseta. Total length 3.3 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.6 mm, patella and tibia 1.6, metatarsus 1.1, tarsus 0.7. Second patella and tibia 1.5 mm, third 0.8, fourth 1.4.

The female is not known.

*Diagnosis. Mangora anilensis* is marked with spots on the abdomen (Figs. 418, 419), and the palpus differs from others by having a sclerotized conductor with a triangular point directed toward the median apophysis (Fig. 420).

*Distribution.* Known only from upper Amazon: western Brazil (Map 4G).

*Specimens Examined.* No other specimens have been collected.

### *Mangora apaporis* new species
Figures 422, 423; Map 4G

*Holotype.* Male holotype from Río Pira and Río Apaporis, 0°25′S, 70°15′W, Amazonas, Colombia, 6–16 Feb. 1989 (V. and B. Roth) in CAS. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma yellowish, with eye region black and sides of thoracic region gray. Abdomen: dorsum white with black patches (Fig. 422); venter without marks. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.2 from laterals. Posterior median eyes 0.6 diameter apart, 0.6 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Fourth femur with a proximal, ventral macroseta. Total length 2.5 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. [First and second legs lost.] Third patella and tibia 0.8 mm, fourth 1.3.

The female is not known.

*Variation.* Total length of males 2.5 to 2.7.

*Diagnosis.* Unlike the similar *M. tambo* (Fig. 131), *M. bovis* (Fig. 413), and *M. leticia* (Fig. 429), the *M. apaporis* palpus has a curved, pointed embolus, its tip hidden by the adjacent lobe (Fig. 423).

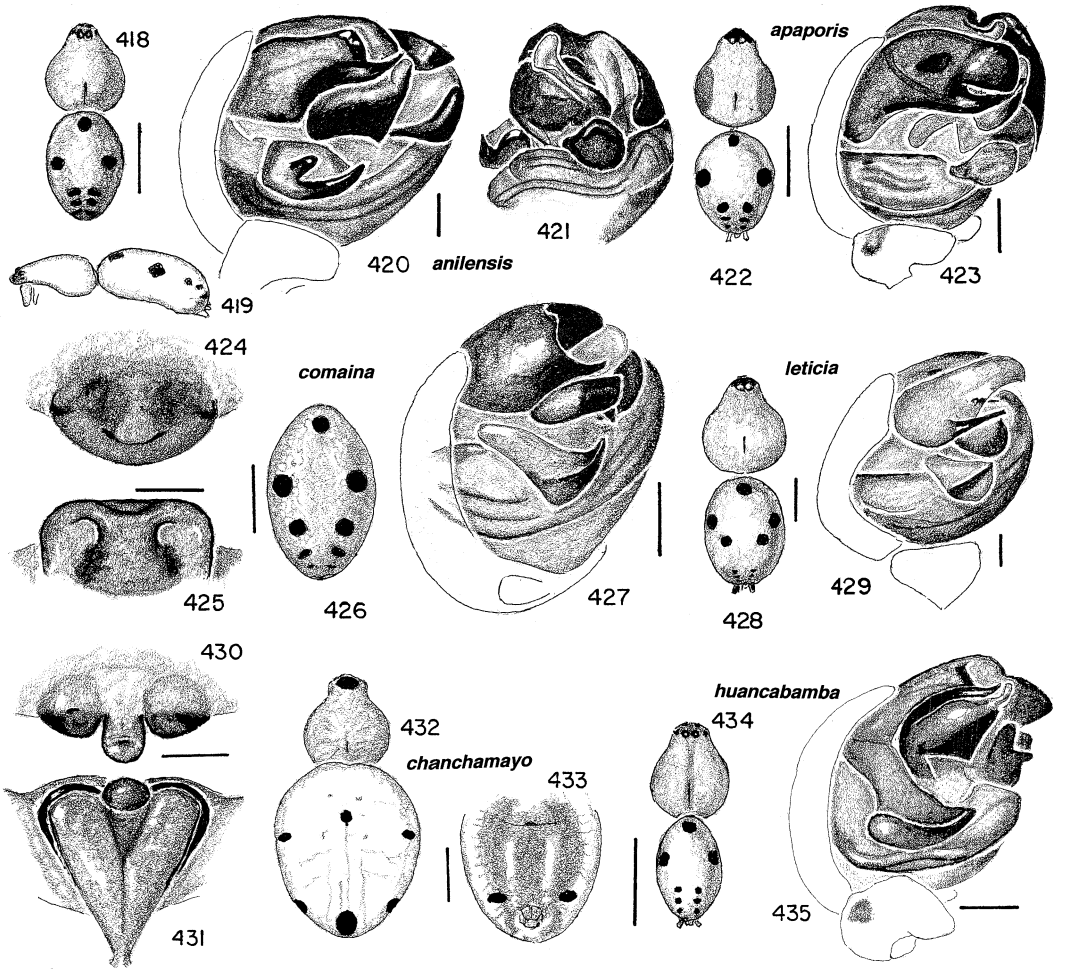
*Distribution.* Upper Amazon region, Colombia and northern Peru (Map 4G).

*Specimens Examined.* PERU *Loreto:* Jenaro Herrera, 100 m, 04°45′S, 73°45′W, 28 Aug. 1988, 1♂ (D. Silva D., MUSM).

### *Mangora comaina* new species
Figures 424–427; Map 4G

*Holotype.* Female holotype, one male and six female paratypes from Cordillera del Cóndor, Alto Río Comaina, Puesto de Vigilancia 22, 900–1,150 m, Amazonas, Peru, 30 Oct. 1987 (D. Silva D.), in MUSM. The specific name is a noun in apposition after the name of the type locality.

*Description.* Female paratype. Prosoma orange, median eye region gray. Abdomen: dorsum with seven round, black patches (Fig. 426). Posterior eye row procurved. Ocular quadrangle slightly longer than wide, posterior slightly widest. Posterior




Figures 418–421. *Mangora anilensis* new species, male. 418, carapace, abdomen, dorsal. 419, carapace, chelicerae, abdomen, lateral. 420, 421, left palpus, 420, mesal; 421 ventral.

Figures 422, 423. *M. apaporis* new species, male. 422, carapace, abdomen. 423, palpus, mesal.

Figures 424–427. *M. comaina* new species. 424–426, female. 424, 425, epigynum. 424, ventral; 425, posterior. 426, abdomen, dorsal. 427, male palpus, mesal.

Figures 428, 429. *M. leticia* new species, male. 428. carapace, abdomen. 429, palpus, mesal.

Figures 430–433. *M. chanchamayo* new species, female. 430–431, epigynum. 430, ventral; 431, posterior. 432, carapace, abdomen. 433, abdomen, ventral.

Figures 434, 435. *M. huancabamba* new species, male. 434, carapace, abdomen. 435, palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

median eyes 1.4 diameters of anterior medians; lateral eyes 0.7 diameters. Anterior median eyes 1.2 diameters apart, 0.5 from laterals. Posterior median eyes 0.9 diameter apart, 0.8 from laterals. Height of clypeus equals 0.3 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.4 mm, patella and tibia 1.5, meta-

tarsus 1.1, tarsus 0.6. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

Male paratype. Coloration as in female. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.7 diameter apart, 0.2 from laterals. Posterior median eyes 0.8 diameter apart, 0.8 from laterals. Height of clypeus equals 0.3 diameter of anterior median eyes. Fourth femur with proximal, ventral macroseta. Total length 2.3 mm. Carapace 1.2 mm long, 1.0 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.4 mm, patella and tibia 1.5, metatarsus 1.2, tarsus 0.6. Second patella and tibia 1.3 mm, third 0.7, fourth 1.3.

Males and females were collected together and have similar markings.

*Variation.* Total length of females 3.0 to 3.5 mm.

*Diagnosis.* The abdomen of *M. comaina* has two more spots than the other spotted species (Fig. 426); unlike other species with round spots, the epigynum rim is a rounded lobe (Fig. 424); posteriorly there are two circular openings close to the ventral margin (Fig. 425).

The male palpus is distinguished by the shape of the embolus and its adjacent rectangular conductor and the single spine of the median apophysis (Fig. 427).

*Natural History.* The specimens came from primary rain forest.

*Distribution.* Only known from upper Amazon region, northern Peru (Map 4G).

*Specimens Examined.* No other specimens have been collected.

### *Mangora leticia* new species
Figures 428, 429; Map 4G

*Holotype.* Male holotype from Leticia, Amazonas, Colombia, 20 Jan. 1965 (P. R. Craig, J. Robb), in CAS. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma yellowish, except eye region black. Abdomen: white; dorsum with black patches (Fig. 428); venter not marked. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.7 diameter apart, 0.7 from laterals. Posterior median eyes 0.7 diameter apart, 0.7 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Fourth femur with proximal, ventral macroseta on left leg only. Total length 2.5 mm. Carapace 1.1 mm long, 0.9 wide in thoracic region, 0.3 wide behind lateral eyes, 0.4 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 1.0, tarsus 0.6. Second patella and tibia 1.2 mm, third 0.6, fourth 1.1.

The female is not known.

*Diagnosis.* The *M. leticia* palpus, unlike that of *M. apaporis* (Fig. 423) and *M. bovis* (Fig. 413), has the lobe above the pointed embolus elongated and distally bent (Fig. 429).

*Distribution.* Only known from upper Amazon: Colombia (Map 4G).

*Specimens Examined.* No other specimens have been collected

### *Mangora chanchamayo* new species
Figures 430–433; Map 3D

*Holotype.* Female holotype from Chanchamayo [10°55′S, 75°18′W, Junín], Peru, Aug. 1941 (F. Weyrauch), in CAS. The specific name is a noun in apposition after the name of the type locality.

*Description.* Female holotype. Prosoma orange, with black eye region. Abdomen: dorsum white, with six black patches (Fig. 432); venter with two median white bands (Fig. 433). Posterior eye row procurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.7 mm. Carapace 1.8 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.8 mm, patella and tibia 1.9, meta-

tarsus 1.6, tarsus 0.8. Second patella and tibia 1.8 mm, third 1.1, fourth 1.8.

The male is not known.

*Diagnosis.* *Mangora chanchamayo*, unlike other species with spots, lacks the anterior median spot (Fig. 432). Females have an epigynum with a narrow scape, which is as long as wide (Fig. 430), and in posterior view, a distinctive, elongate, heart-shaped median plate (Fig. 431) that is distinct from that of *M. mathani* (Figs. 437, 439).

*Distribution.* Upper Amazon region, only known from central Peru (Map 3D).

*Specimens Examined.* No other specimens have been collected.

### *Mangora huancabamba* new species
Figures 434, 435; Map 5D

*Holotype.* Male holotype and immature female from Quebrada Castillo, NW de Iscozacin, 345 m, Huancabamba, 10°10′S, 75°15′W, Pasco, Peru, 8 Sep. 1989 (D. Silva D.), in MUSM. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma orange-yellow, carapace with an indistinct gray median band. Abdomen: dorsum with nine black patches (Fig. 434). Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior slightly widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.8 diameter apart, 0.3 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Fourth femur with a ventral, proximal macroseta (as in Fig. 21). Total length 2.3 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.4 mm, patella and tibia 1.6, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

The female is not known.

*Diagnosis.* The male of *M. huancabamba* palpus (Fig. 435) differs from that of *M. anilensis* (Fig. 420) by lacking the proximal spur of the median apophysis and having a different shape.

*Distribution.* Only known from upper Amazon: central Peru (Map 5D).

*Specimens Examined.* No other specimens have been collected.

### *Mangora mathani* Simon
Figures 436–449, 541, 542; Map 4H

*Mangora mathani* Simon, 1895: 787. Female syntypes from Iquitos [Peru] and São Paulo [de Olivença, Amazonas, Brazil], (M. de Mathan), in MNHN, examined.

*Note.* This species is listed in Roewer's (1942: 774) catalog. Despite the presence of a description in Simon, it is cited as nomen nudum in Bonnet (1957: 2710) and Platnick (2006).

Additional specimens from the type locality in the MNHN were labeled *M. 5-punctata* by Simon.

*Description.* Female from Tambopata, Peru. Prosoma light orange. Abdomen: orange-white with dorsal white pigment spots and three black spots and three pairs of black spots (Fig. 445); venter without white spots. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 diameter apart, 0.3 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.6 mm. Carapace 1.7 mm long, 1.3 wide in thoracic region, 0.7 wide behind lateral eyes, 0.7 high. First femur 1.8 mm, patella and tibia 2.1, metatarsus 1.7, tarsus 0.8. Second patella and tibia 1.8 mm, third 1.3, fourth 2.0 mm.

Male from Napo Prov., Ecuador. Coloration as in female. Posterior eye row procurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.5 diameter apart, 0.4 from laterals. Posterior median eyes 0.8 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. The fourth femur has a ventral, proximal macroseta (as in Fig. 21). Total length 2.2

mm. Carapace 1.2 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.3 mm, patella and tibia 1.6, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.2 mm, third 0.7, fourth 1.3.

Males and females have been collected together.

*Variation.* Total length of females 3.6 to 4.6 mm, males 2.2 to 2.6. The epigyna of some females have their tips torn off (Figs. 442, 443). Figures 436, 437, 445 were made from syntypes. Figures 438, 439, 444 were made from a female from Peru, others from specimens from Colombia, except Figures 541, 542, which were made from a female from Iquitos, Peru, first thought to be a separate species.

*Diagnosis.* The *M. mathani* is distinguished from other species with the black-spotted abdomen (Fig. 445) by the posterior view of the epigynum, which shows a pair of dorsal diagonal pockets (Figs. 437, 439, 441, 444, 542).

Unlike *M. anilensis* (Fig. 420), *M. apaporis* (Fig. 423), *M. leticia* (Fig. 429), and *M. novempupillata* (Fig. 456), the male palpus of *M. mathani* (Figs. 447, 448, 449) has an embolus supported by a truncate, sclerotized conductor bearing a black ventral shield resembling that of *M. pira* (Fig. 36).

*Natural History.* Specimens have been collected from primary forest in Depto. Guainía, Colombia, and from igapo forest (seasonally flooded forest) and tierra firma forest in Colombia.

*Distribution.* Upper Amazon: one record from the central Amazon region (Map 4H).

*Specimens Examined.* COLOMBIA *Guainía:* Inírida, Comunidad Indigena Chorro Bocon, 150 m, Sep. 2003, 1♀ (H. Pulido, ICNB AR-3428). *Vaupés:* Bajo Río Apaporis, Lago Taraira, E. B. Masiro, Estación Biológica Caparú, 200 m, 01°04′S, 69°31′W, Oct. 2002, 1♀ (L. Benavides, ICNB AR-3330); Mpo. Taraira, Serr. Taraira, Caño Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 4♀, 2 imm. (J. Pinzón, ICNB AR-3333). *Amazonas:* Río Pira and Apaporis, 0°25′S, 70°15′W, 7–16 Feb. 1989, 1♂ (V., B. Roth, CAS); Parque Nacional Natural Amacayacu, Laguna Matamata, 03°41′S, 70°15′W, Nov. 2001, 1♀ (ICNB AR-3344); Quebredón El Ayo, La Mathani, 01°35′S, 69°31′W, May 2002, 1♀, 1♂ (J. Pinzón, ICNB AR-3337). ECUADOR *Sucumbíos:* Río Tarapuy, 20 Feb. 1984, 1♀, 1♂ (L. Avilés, MECN); R. F. Cuyabeno, Ecuador 25 July–6 Aug. 1985, 1♀ (M. E. Ordobez, MECN); R. F. Cuyabeno, Lago Grande, 13 Feb. 1989, 3♀ (L. Avilés, MECN). PERU *Loreto:* Iquitos, 1920 (H. S. Parrish, MCZ). *Huánuco:* Dantas, La Molina, SW de Puerto Inca, 270 m, 09°38′S, 75°00′W, 18 May–1 June 1987, 5♀ (D. Silva D., MUSM). *Madre de Dios:* Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 4 June–3 July 1988, 1♀ (D. Silva D., MCZ). BRAZIL *Amazonas:* Manicoré, Rio Atininga, 19 Apr. 1996, 1♀ (IBSP/SMNK, IBSP 15432); Tefé, Fonte Boa, São Paulo de Olivença. pre 1880, 3♀, 2♂ (M. de Mathan, MNHN). *Acre:* Parque Nacional da Serra do Divisor, 10 Nov. 1996, 1♀ (R. S. Vieira, IBSP 9502); 14 Mar. 1997, 3♀ (L. Resende, R. Vieira, IBSP 12611).

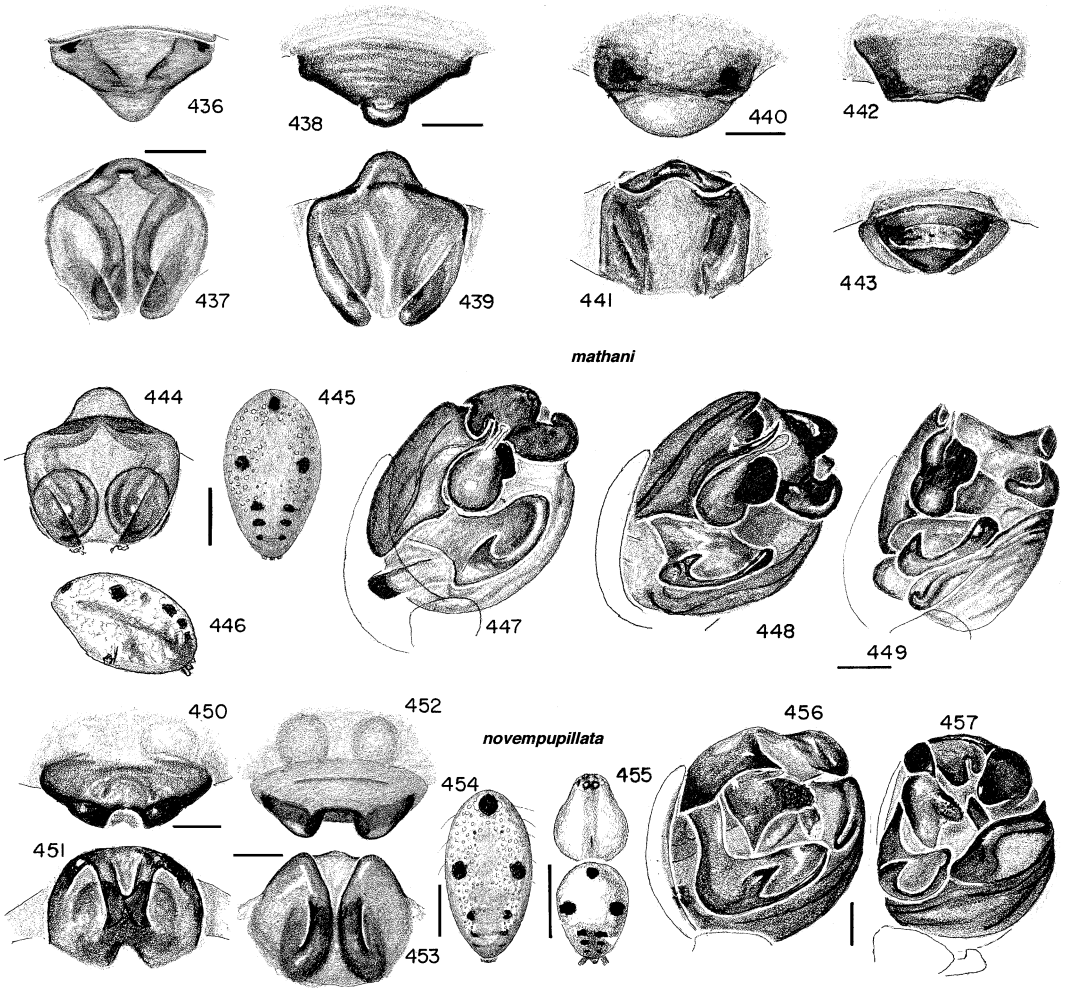
## *Mangora novempupillata* Mello-Leitão
## Figures 450–457; Map 4C

*Mangora 9-pupillata* Mello-Leitão, 1940: 26, figs. 6–8, ♀. Female holotype from Rio Xingu, Pará, Brazil, in MNRJ, examined.
*Mangora novempupillata*:—Platnick, 2006.

*Note.* It is not possible to interpret Mello-Leitão's illustration of the epigynum.

The type locality is uncertain. Rio Xingo is formed by the confluence of three rivers in Mato Grosso and, after 2,100 km, joins the Amazon. The stream with its many loops is probably twice this length. Small collections of spiders were apparently presented to Mello-Leitão from a friend's trip on the Rio Xingu.

*Description.* Female from Peru. Prosoma light yellow, except distal legs darker. Abdomen: whitish; dorsum with white pigment spots and nine gray marks (Fig. 454); venter with two bands of white spots and gray laterally. Posterior eye row procurved. Ocular quadrangle slightly longer than wide, posterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.4 diameter apart, 0.5 from laterals. Posterior median eyes 0.6 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 4.1 mm. Carapace 1.8 mm long, 1.5 wide in thoracic region, 0.8 wide behind




Figures 436–449. *Mangora mathani* Simon. 436–446, female. 436–444, epigynum. 436, 438, 440, 442, ventral; 437, 439, 441, 444, posterior; 443, ventral-posterior. 442, 443, lobe broken off. 444, cleared. 445, abdomen, dorsal. 446, abdomen, lateral. 447–449, left male palpus. 447, submesal; 448, mesal; 449, ventral.

Figures 450–457. *M. novempupillata* Mello-Leitão. 450–454, female. 450–453, epigynum. 450, 452, ventral; 451, 453, posterior. 454, abdomen, dorsal. 455–457, male. 455, carapace, abdomen. 456, 457, male palpus. 456, mesal; 457, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

lateral eyes, 0.8 high. First femur 1.9 mm, patella and tibia 2.1, metatarsus 1.9, tarsus 0.7. Second patella and tibia 1.8 mm, third 1.3, fourth 2.0.

Male from Reserva Florestal Adolpho Ducke, Manaus. Coloration as in female (Fig. 455). Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.7 diameter apart, 0.4 from laterals. Posterior median eyes 0.4 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 2.9 mm. Carapace 1.4 mm long, 1.2 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.5 mm,

patella and tibia 1.6, metatarsus 1.3, tarsus 0.6. Second patella and tibia 1.4 mm, third 0.8. Fourth femur 1.4, patella and tibia 1.7, metatarsus 1.0, tarsus 0.6.

Males and females have been collected together.

*Variation.* Total length of females 3.3 to 4.1 mm, males 2.7 to 3.0. Figures 450, 451 were made from a specimen from Roraima, Brazil; Figures 452–454 from the holotypes; Figures 455–457 from a male from the Manaus area, Brazil.

*Diagnosis.* The median notch of the rim (Figs. 450, 452) of the epigynum and, in posterior view, the median curved, sclerotized ridges (Figs. 451, 453) separate *M. novempupillata* from others with black spots on the abdomen.

The conductor of the palpus, unlike that of other species, has a punctate, swollen shield and a triangle pointing at the median apophysis (Fig. 456).

*Natural History.* Specimens have been collected from rainforest in Roraima.

*Distribution.* Amazon and upper Amazon regions (Map 4C).

*Specimens Examined.* COLOMBIA *Meta:* Hacienda Mozambique, l5 km SW Puerto Lopez [prob. 1970s], 1♀ (W. Eberhard, MCZ); Parque Nacional Natural La Macarena, May 2002, 1♂ (ICNB AR-3342). *Putumayo:* Buena Vista, Putumayo River, 23–29 July 1972, 1♀ (W. Eberhard, MCZ); Puerto Asis, 1972, 1♀ (W. Eberhard 450, MCZ). PERU *Loreto:* Explorama Inn, 40 km NE Iquitos, 19, 21 July 1989, 1♀ (G. B. Edwards, FSCA). *Junín:* Amable María, Prov. Tarma, 640 m, on Río Chanchamayo, Peru, ca. 1870s, 1♀ (K. Jelski, PAN). *Madre de Dios:* 15 km E Puerto Maldonado, ca. 12°33′S, 69°03′W, 200 m, 7 Mar. 1990, 1♂ (D. Silva D., MUSM). BRAZIL *Pará:* Belém, Aug. 1953, 1♀ (J. P. Gerschman, MACN); Caxiuanã, Melgaço, 11 Aug. 1996, 1♂ (A. A. Lise, MCP 9377). *Roraima:* São Gabriel da Cachoeira, Rio Uraricoera, Ilha de Maracá, 18–22 Aug. 1987, 2♀ (R. Gribel, MCN 20039); 4–8 Dec. 1987, 1♀ (E. H. Buckup, MCN 27437a); Ilha de Maracá, 31 Jan.–14 Feb. 1992, 2♀, 1♂ (A. A. Lise, MCP 867). *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 4 Aug. 1987, 1♂ (J. Vidal, MCN 27438); 18–25 Feb. 1992, 1♀ (A. D. Brescovit, MCN 22075); Manaus, Reserva do km 41, Fazenda Esteio, 13 Jan. 1994, 1♀ (A. D. Brescovit, MCN 25359); near Manaus, km 41 Reserve, 17 Apr. 1991, 1♀ (H. G. Fowler et al., MCZ). *Rondônia:* NE Cacaulândia, Fazenda Rancho Grande, 6–15 Dec. 1990, 1♀ (G. B. Edwards, FSCA). *Acre:* Rio Branco, Reserva Extrativista de Catuaba, 9 Apr. 1996, 2♀ (IBSP, SMNK staff, 15912a). *Mato Grosso:* Vera, 12°46′S, 53°30′W, Oct. 1973, 1♂ (M. Alvarenga, AMNH); Sinop, Oct. 1976, 1♂ (M. Alvarenga, AMNH). BOLIVIA *Beni:* Estacion Biologica Beni, on trail from forest camp to Zone 1, 7, 12 Sep. 1987, 1♀, 1♂ (S. Larcher, USNM).

## *Mangora insperata* Soares and Camargo
Figures 458–464; Map 4E

*Mangora insperata* Soares and Camargo, 1948: 374, figs. 29, 29A, ♀. Female holotype and one paratype from Chavantina, Mato Grosso, Brazil, in MZSP no. 1298, examined. Platnick, 2006.

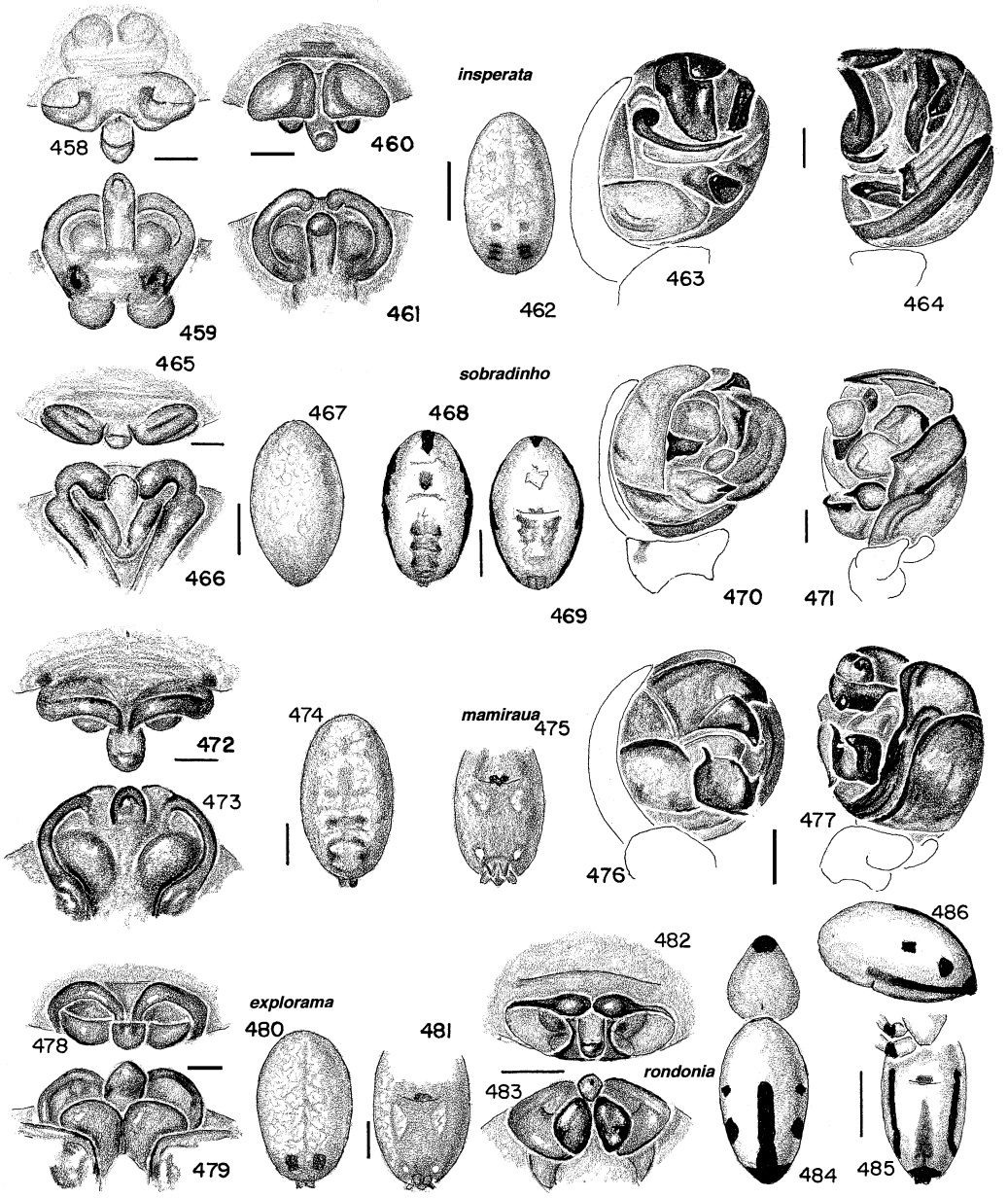
*Description.* Female holotype. Carapace orange-white. Legs light orange-white. Abdomen: orange-white; dorsum with posterior pairs of dark marks (Fig. 462). Posterior eye row recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; anterior lateral eyes 0.6 diameter, posterior medians 0.5. Anterior median eyes 1.0 diameter apart, 1.2 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. The anterior and posterior slopes of the carapace are at an angle of about 85°. Height of clypeus equals 0.9 diameter of anterior median eye. Total length 4.7 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.7 wide behind lateral eyes, 1.2 high. First femur 1.7 mm, patella and tibia 2.1, metatarsus 1.5, tarsus 0.7. Second patella and tibia 2.0 mm, third 1.5, fourth 2.0.

Male from Roraima. Abdomen: dorsum with white pigment spots, indistinct pos-

→

Figures 458–464. *Mangora insperata* Soares and Camargo. 458–462, female. 458–461, epigynum. 458, 460, ventral; 459, 461, posterior. 462, abdomen, dorsal. 463, 464, left male, palpus, 463, mesal; 464, ventral.

Figures 465–471. *M. sobradinho* new species. 465–469, female. 465, 466, epigynum. 465, ventral; 466, posterior. 467, 468, abdomen, dorsal. 469, abdomen, ventral. 470, 471, male palpus. 470, mesal; 471, ventral.




Figures 472–477. *M. mamiraua* new species. 472–475, female. 472, 473, epigynum. 472, ventral; 473, posterior. 474, abdomen, dorsal. 475, abdomen, ventral. 476, 477, male palpus. 476, mesal; 477, ventral.

Figures 478–481. *M. explorama* new species, female. 478, 479, epigynum. 478, ventral; 479, posterior. 480, abdomen, dorsal. 481, abdomen, ventral.

Figures 482–486. *M. rondonia* new species, female. 482, 483, epigynum. 482, ventral; 483, posterior. 484, carapace, abdomen. 485, sternum, abdomen. 486, abdomen, lateral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

terior patches of transverse colorless marks. Posterior eye row procurved. Ocular quadrangle wider than anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.5 diameter apart, 0.5 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Fourth femur with a proximal, ventral macroseta. Total length 3.2 mm. Carapace 1.6 mm long, 1.3 wide in thoracic region, 0.5 wide behind lateral eyes, 0.9 high. First femur 1.6 mm, patella and tibia 1.8, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.6 mm, third 1.4, fourth 1.6.

Males and females have been collected together.

*Variation.* Total length of females 4.7 to 5.5 mm. Figures 458, 459 were made from the holotype; Figures 460, 461 from a female from Mato Grosso; Figures 462–464 from specimens from Roraima.

*Diagnosis. Mangora insperata* (Fig. 462) differs from *M. sobradinho* (Figs. 467–469) in coloration. Also, the *M. insperata* epigynum is lightly sclerotized and in ventral view is distinguished from that of *M. sobradinho* (Figs. 465, 466) by the visible ducts, which turn anteromedially (Figs. 458, 460) and, in posterior view, by the rounded frame encircling a spherical structure (Figs. 459, 461).

Unlike other Mangora species, the male palpus has a transverse saber-like embolus (Fig. 463).

*Natural History.* Specimens were collected in forest canopy in Vaupés, Colombia, and in gallery forest of Mato Grosso by the Xavantina-Cochimbo Expedition.

*Distribution.* Upper Amazon from Colombia to Mato Grosso, Brazil (Map 4E).

*Specimens Examined.* COLOMBIA *Vaupés:* Bajo Río Apaporis, Lago Taraira, Estacíon Biológica Caparú, 200 m, Sep. 2002–May 2003, 1♀ (L. Benavides, ICNB AR-2989). PERU *Madre de Dios:* Manu, Pakitza, 11°56′S, 71°18′W, Trail 1, marker 14, stream, 10–23 Sep. 1989, 1♀ (N. Adams et al., USNM). BRAZIL *Roraima:* São Gabriel da Cachoeira, Rio Uaricoera, Ilha de Maracá, 31 Jan.–14 Feb. 1992, 1♀ (A. B. Bonaldo, MCP 1866); Ilha de Maracá, 25 July 1987, 2♀, 1 imm. (A. A. Lise, MCN 27429); 21–30 Nov. 1987, 1♀, 1♂ (J. A. Rafael, MCN 27440). *Amazonas:* Tefé, Fonte Boa, São Paulo de Olivença, ca. 1880s, 1♀ (M. de Mathan, MNHN). *Mato Grosso:* Santo Antônio de Leverger, 29 July 1992, 2♀ (A. A. Lise, A. Braul, MCP 2396b); 260 km N of Xavantina [Chavantina], 12°49′S, 51°46′W, 400 m, Feb–Apr. 1969, 1♀ (Xavantina-Cachimbo Exped., MCZ).

### *Mangora sobradinho* new species
### Figures 465–471; Map 4I

*Holotype.* Female holotype, one male and three female paratypes from Sobradinho, Rio Grande do Sul, Brazil, 10 Jan. 1985 (A. A. Lise), in MCN 12887. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange-yellow, abdomen white without marks (Fig. 467). Posterior eye row procurved. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.5 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.3 diameters apart, 1.8 from laterals. Posterior median eyes 1.5 diameters apart, 1.0 from laterals. Height of clypeus equals 0.5 diameter of anterior median eyes. Total length 4.7 mm. Carapace 2.0 mm long, 1.6 wide in thoracic region, 0.8 wide behind lateral eyes, 1.1 high. First femur 2.6 mm, patella and tibia 2.8, metatarsus 2.4, tarsus 1.0. Second patella and tibia 2.7 mm, third 1.7. Fourth femur 2.8 mm, patella and tibia 2.8, metatarsus 2.3, tarsus 0.8.

Male paratype. Prosoma orange-yellow; abdomen white with indistinct paired black, transverse streaks on posterior end of dorsum. Posterior eye row recurved. Ocular quadrangle wider than long, posterior widest. Posterior median eyes 1.8 diameters of anterior medians; lateral eyes 0.9 diameter. Anterior median eyes 1.1 diameters apart, 1.5 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with four ventral macrosetae. Total length 3.8 mm. Carapace 1.9 mm long, 1.7 wide in thoracic region, 0.8 wide behind lateral eyes, 0.6 high. First femur 2.4 mm,

patella and tibia 2.7, metatarsus 2.3, tarsus 1.0. Second patella and tibia 2.3 mm, third 1.4, fourth 2.5.

Males and females have been collected together.

*Variation.* Total length of females 3.7 to 5.3 mm, males 3.4 to 3.8. Some specimens (Figs. 468, 469 from São Paulo) were darker colored than the holotype (Fig. 467).

*Diagnosis.* As in *M. mamiraua* (Figs. 472, 473), the epigynum of *M. sobradinho* differs from that of *M. insperata* (Figs. 458, 460) by having the transverse ducts (Fig. 472), visible in ventral view, turning laterally into an anterior transverse position (Fig. 465), and from both species by the heart-shaped outline of the swollen lateral plates in posterior view (Fig. 466).

The palpus differs from those of related species by the triangular embolus (center in Fig. 470).

*Distribution.* Southern Brazil, from São Paulo to Rio Grande do Sul (Map 4I).

*Specimens Examined.* BRAZIL *São Paulo:* São Paulo, Bosque da Saude, 22 Mar. 1942, 2♀ (F. Lane, MZSP 10775); Monte Alegre, 20 Feb. 1943, 1♀ (J. L. Lima, MZSP 4657); Botucatu Rubião Junior, Fazenda Butignoli, 7 Jan. 1987, 1♂ (I. M. P. Rinaldi, L. C. Forti, UBTU). *Paraná:* Três Barras do Paraná, Giacomet-Marundím, 27 Feb. 1993, 1♀ (A. B. Bonaldo, MCN 23049); Capitão Leonidas Marques, Represa de Salto Caxias, Rio Iguaçú, 20–28 Mar. 1993, 1♀ (A. B. Bonaldo, MCN 23304). *Santa Catarina:* Chapecó, 23 Mar. 2001, 1♂ (P. Pergher, MCP 11393). *Rio Grande do Sul:* São Francisco de Paulo, Barragem dos Bugres, 1–4 Feb. 1999, 3♀ (A. B. Bonaldo, MCN 30370); Canela, 20 Mar. 1976, 1♀ (A. A. Lise, MCN 4070); Candelária, Cerro de Botucaraí, 5–9 Feb. 2001, 1♀ (A. Franceschini, MCN 33617); Machadinho, 8–14 Feb. 1989, 1♂ (A. B. Bonaldo, MCN 18190); Rio Apuae [?], Feb. 1989, 1♂ (Itá-Machado, MCP 6459); Espumoso, Salto do Jaru, 14 Jan. 1982, 1♀ (A. A. Lise, MCN 9985); Viamão, 15 Dec. 1995, 1♀ (A. A. Lise et al., MCP 9023).

### *Mangora mamiraua* new species
Figures 472–477; Map 5C

*Holotype.* Female holotype and male paratype from Estação Ecológica do Mamirauá, Tefé, Amazonas, Brazil, 9–13 Oct. 1992 (S. M. Borgas), in MCN 22878. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange, sternum darkest. Abdomen: whitish, dorsum with white spots and posterior black marks (Fig. 474); venter with pair of white pigment spots and a pair of distinct white spots anterior to spinnerets (Fig. 475). Posterior eye row recurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.4 diameter apart, 1.4 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.2 mm. Carapace 2.2 mm long, 1.7 wide in thoracic region, 0.7 wide behind lateral eyes, 1.2 high. First femur 2.8 mm, patella and tibia 2.5, metatarsus 1.7, tarsus 0.8. Second patella and tibia 2.4 mm, third 1.6. Fourth femur 2.3 mm, patella and tibia 2.6, metatarsus 2.1, tarsus 0.8.

Male paratype. Prosoma yellow, eye region gray, and carapace with median gray line. Abdomen: white, dorsum with gray cardiac mark and a transverse line posteriorly; venter with epigastric area and spinnerets gray. Posterior eye row procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.8 diameter apart, 0.4 from laterals. Posterior median eyes 0.5 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 2.0 mm. Carapace 1.1 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.6 high. First femur 1.2 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.4. Second patella and tibia 1.1 mm, third 0.8, fourth 1.1.

Although collected with females, there is doubt whether male and female belong together. The male is smaller than might be expected, and the markings on the abdomen are slightly different from those of the female.

*Variation.* Total length of males 1.8 to 3.1 mm. The distal end of the median apophysis has two points, which were add-

ed to the illustration; the paratype seems to have a truncate end. Perhaps it is broken.

*Diagnosis.* The epigynum *M. mamiraua* (Figs. 472, 473) differs from that of *M. insperata* (Fig. 458), in that the ducts visible in ventral view turn anterolaterally and in the median posteriorly (Fig. 472), and from that of *M. sobradinho* in posterior view by having the median plate oval and the swollen, curved lateral plates encircling semispherical bodies (Fig. 473).

The oval median apophysis of the palpus with three small spines (5 h in Fig. 476) and the bent embolus and lobe above it separates the male from others (Fig. 476).

*Distribution.* Amazon region (Map 5C).

*Specimens Examined.* BRAZIL *Amazonas:* Manaus, Lago do José, 9 Aug. 1979, 1♂ (J. Adis, MCN 27442); Manaus, Paraná do Xiboreninho, 7 Aug. 1979, 1♂ (J. Adis et al., IBSP 17124).

### *Mangora explorama* new species
Figures 478–481; Map 5E

*Holotype.* Female holotype from Explorama Lodge, 80 km NE Iquitos, 100 m, Loreto, Peru, 16–20 July 1989 (G. B. Edwards), in FSCA. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange-yellow. Abdomen: dorsum spotted white with a pair of posterior black rectangles (Fig. 480); venter with a pair of white marks and a pair of white spots anterolateral to spinnerets (Fig. 481). Posterior eye row slightly recurved. Ocular quadrangle slightly wider anterior than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.5 diameter apart, 1.0 from laterals. Posterior median eyes 0.3 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 6.5 mm. Carapace 2.2 mm long, 1.7 wide in thoracic region, 0.7 wide behind lateral eyes, 1.2 high. First femur 2.4 mm, patella and tibia 2.5, metatarsus 1.9, tarsus 0.8. Second patella and tibia 2.4 mm, third 2.3. Fourth femur 2.5 mm, patella and tibia 2.7, metatarsus 2.3, tarsus 0.7.

The male is not known.

*Diagnosis.* In ventral view, the epigynum (Figs. 478, 479) differs from that of *M. sobradinho* (Fig. 465) and *M. mamiraua* (Fig. 472) by the swollen arches and small cup-like structure on each side of the short scape (Fig. 478) and, in posterior view, two sclerotized circles (Fig. 479).

*Distribution.* Upper Amazon: northern Peru (Map 5E).

*Specimens Examined.* No other specimens have been found.

### *Mangora rondonia* new species
Figures 482–486; Map 5C

*Holotype.* Female holotype from Porto Velho, Rondônia, Brazil, 15 Apr. 1996 (IBSP, SMNK staff), in IBSP 16162. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange-yellow, eye region black (Fig. 484), some coxae with distal black ring, trochanters black (Fig. 485), legs with distal half of femora black and distal leg articles dark orange-yellow. Abdomen: with contrasting, discrete black marks on yellowish white (Figs. 484–486). Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.1 diameters apart, 0.7 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 3.3 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.6, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.4 mm, third 0.8, fourth 1.6.

The male is not known.

*Diagnosis. Mangora rondonia* is distinguished from other species by the contrasting coloration of the abdomen (Figs. 484–486) and by the unique epigynum, which in ventral view has oval structures anterior to the short scape (Fig. 482) and

in posterior view has irregularly shaped structures sitting on the surface of the median plate dorsal of the scape (Fig. 483).

*Distribution.* Upper Amazon: southwestern Brazil (Map 5C).

*Specimens Examined.* No other specimens have been found.

### *Mangora bemberg* new species
Figures 487–490; Map 5F

*Holotype.* Female holotype from Río Uruqua-í, Puerto Bemberg [Puerto Libertad], Pasarela, Misiones, Argentina, 1 Feb. 1950 (A. Giai, W. Partridge), in MACN no. 3140. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish. Abdomen: dorsum with some white pigment spots and a posterior pair of black patches (as in Fig. 494); venter with some white pigment spots [the abdomen of the holotype is in poor condition]. Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.4 diameter apart, 2.0 from laterals. Posterior median eyes 0.2 diameter apart, 2.2 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length ca. 5.2 mm. Carapace 2.6 mm long, 2.0 wide in thoracic region, 0.9 wide behind lateral eyes, 1.6 high. First femur 2.6 mm, patella and tibia 2.9, metatarsus 2.7, tarsus 1.0. Second patella and tibia 2.8 mm, third 1.9. Fourth femur 2.8 mm, patella and tibia 3.3, metatarsus 2.8, tarsus 1.0.

Male paratype. Prosoma yellow. Abdomen: lighter than in female; dorsum with two posterior black patches. Posterior eye row slightly recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 1.2 from laterals. Posterior median eyes 0.4 diameter apart, 2.0 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. First femur with a ventral, proximal macroseta. Total length 5.3 mm. Carapace 2.4 mm long, 2.0 wide in thoracic region, 0.8 wide behind lateral eyes, 1.1 high. First femur 2.8 mm, patella and tibia 3.2, metatarsus 2.7, tarsus 1.1. Second patella and tibia 2.8 mm, third 1.8, fourth 3.1.

Males and females were collected together, but were in separate vials.

*Variation.* Total length of females 5.2 to 6.8 mm, males 4.4 to 5.3. The fourth femur of a male from Minas Gerais had a ventral row of about six macrosetae.

*Diagnosis.* The female epigynum has a tongue (Fig. 487), which in posterior view is distinguished by a constriction (Fig. 488).

The palpus of the male *M. bemberg* has a unique projecting terminal apophysis (1 h in Figs. 489, 490) and a small median apophysis with a spine facing distally, partly hidden by the radix (6 h in Fig. 489).

*Distribution.* Paraná State, southern Brazil, to northeastern Argentina (Map 5F).

*Paratypes.* ARGENTINA *Misiones:* Puerto Bemberg [Puerto Libertad], Pasarela Río Urugua-í, 1 Feb. 1950, 1♀, 3♂ (A. Giai, W. Partridge, MACN 3141, 3142).

*Specimens Examined.* BRAZIL *Minas Gerais:* Lavras, 29 Mar. 1979, 1♂ (W. D. Fronk, MCZ). *Paraná:* General Carneiro, 23 Apr. 1993, 1♀ (R. Bóçon, MCN 23597); Cavinna [?], 1947, 1♀ (A. Maller, AMNH).

### *Mangora eberhardi* new species
Figures 491–496; Map 5B

*Holotype.* Male holotype and female paratype from near Yotoco, 1,600 m elev., Valle, Colombia, Dec. 1976 (W. Eberhard), in MCZ. The species is named after the collector, arachnologist W. Eberhard.

*Description.* Female paratype. Prosoma light yellow with small black circles around posterior median eyes. Abdomen: whitish; dorsum with two posterior black patches and several paired white pigment streaks (Fig. 494). Posterior eye row recurved. Ocular quadrangle slightly longer than wide, anterior slightly widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior

median eyes 1.0 diameter apart, 1.0 diameter from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.6 mm. Carapace 1.3 mm long, 0.9 wide in thoracic region, 0.5 wide behind lateral eyes, 0.9 high. First femur 1.5 mm, patella and tibia 1.6, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.4 mm, third 0.8, fourth 1.4.

Male holotype. Coloration as in female. Posterior eye row recurved. Ocular quadrangle almost square, anterior slightly widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 0.5 diameter from laterals. Posterior median eyes 0.4 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.7 mm. Carapace 1.2 mm long, 1.1 wide in thoracic region, 0.4 wide behind lateral eyes, 0.7 high. First femur 1.4 mm, patella and tibia 1.7, metatarsus 1.0, tarsus 0.6. Second patella and tibia 1.4 mm, third 0.8, fourth 1.2.

Males and females have been collected together.

*Variation.* Total length of females 3.6 to 4.2 mm, males 2.4 to 2.6. The scape of the female paratype, collected with the male holotype, is broken off.

*Diagnosis.* Unlike other species with paired black patches on the posterior of the abdomen, the female of *M. eberhardi* has a projecting epigynum with a long lobed scape (Fig. 491), and the posterior side has a Y-shaped median plate (Fig. 492).

The male palpus differs from others by an indistinct pointed lobe (10 h in Fig. 495) and, in ventral view, by a bent truncate prong, part of the terminal apophysis (Fig. 496).

*Distribution.* Southwestern Colombia (Map 5B).

*Paratypes.* COLOMBIA *Valle:* Yotoco, 1,600 m, Dec. 1976, 2♀, 9♂ (W. Eberhard, MCZ); Aug. 1977, 1♀ (W. Eberhard, MCZ).

*Specimens Examined.* COLOMBIA *Valle:* Cali, 1,000 m, 1976, 1♀ (W. Eberhard, MCZ); nr. Pichinde, 1,700 m, 17 Sep. 1972, 1♀ (W. Eberhard, MCZ); El Silencio, NE Pichinde, 1,700 m, Aug. 1975, 2♀ (W. Eberhard, MCZ); nr. Saladito, 1,700 m, Mar. 1976, 1♀ (W. Eberhard 1061, MCZ); 1,800 m, 1♀ (W. Eberhard 969, MCZ).

### *Mangora kochalkai* new species
### Figures 497–499; Map 5B

*Holotype.* Female holotype from Río Donachui, Sogromen, 1,800 m, Sierra Madre de Santa Marta, Magdalena, Colombia, 1 Jan. 1974 (J. A. Kochalka), in MCZ. The species is named after the collector.

*Description.* Female holotype. Prosoma light yellowish, small black circles around secondary eyes. Abdomen: light yellowish; dorsum with a pair of posterior black patches and a pair of gray patches anterior to black patches (Fig. 499). Posterior eye row slightly recurved. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.8 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 4.3 mm. Carapace 1.4 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.7 mm, patella and tibia 1.9, metatarsus 1.5, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.2, fourth 1.8.

The male is not known.

*Diagnosis.* Unlike the *M. vianai* epigynum (Fig. 500) that of *M. kochalkai* is an

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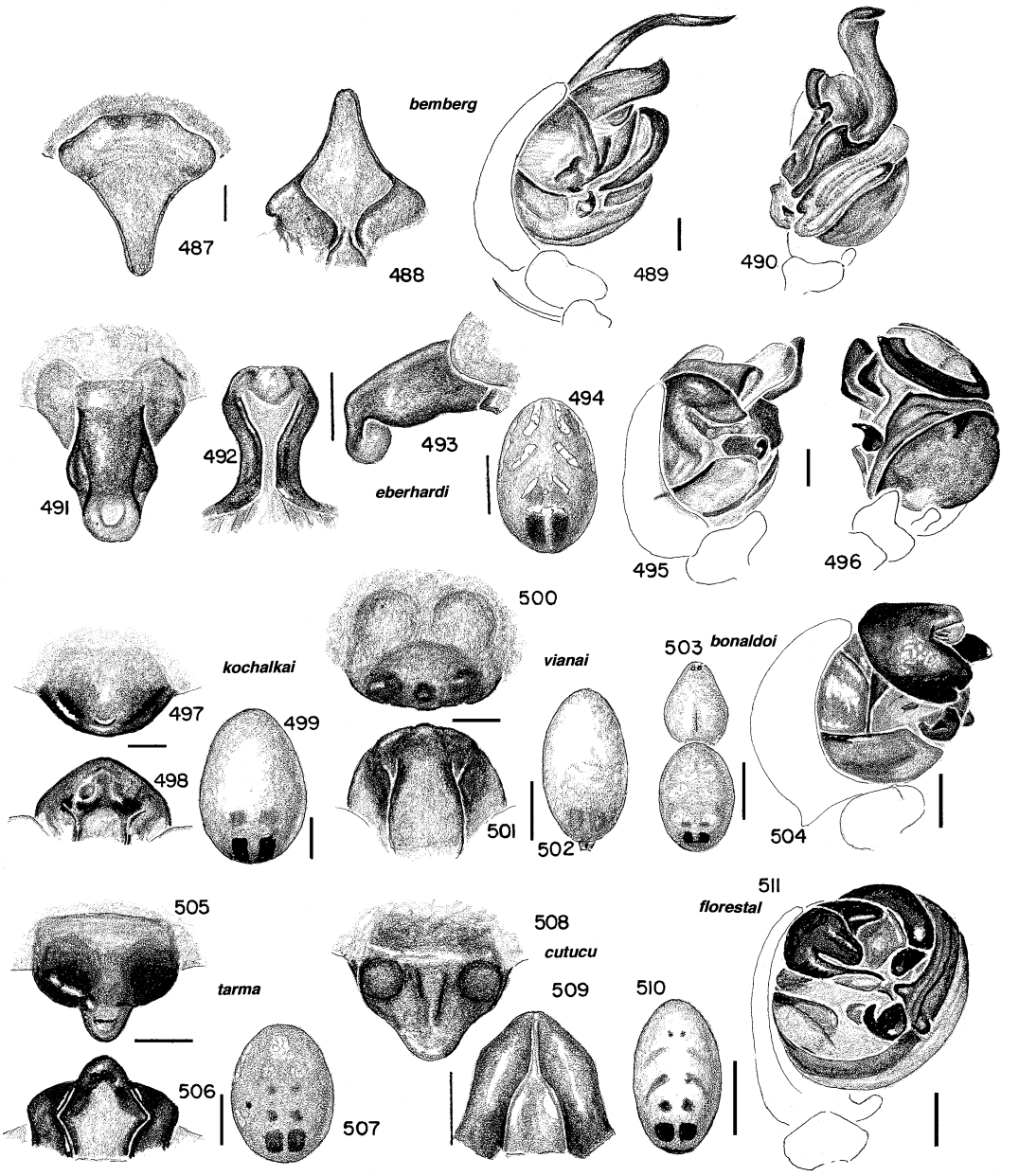
Figures 487–490. *Mangora bemberg* new species. 487, 488, female, epigynum. 487, ventral; 488, posterior. 489, 490, left male, palpus. 489, mesal; 490, ventral.

Figures 491–496. *M. eberhardi* new species. 491–494, female. 491–493, epigynum. 491, ventral; 492, posterior; 493, lateral. 494, abdomen, dorsal. 495, 496, male palpus. 495, mesal; 496, ventral.




Figures 497–499. *M. kochalkai* new species, female. 497, 498, epigynum. 497, ventral; 498, posterior. 499, abdomen, dorsal.

Figures 500–502. *M. vianai* new species, female. 500, 501, epigynum. 500, ventral; 501, posterior. 502, abdomen, dorsal.

Figures 503, 504. *M. bonaldoi* new species, male. 503, carapace, abdomen. 504, palpus, mesal.

Figures 505–507. *M. tarma* new species, female. 505, 506, epigynum. 505, ventral; 506, posterior. 507, abdomen, dorsal.

Figures 508–510. *M. cutucu* new species, female. 508, 509, epigynum. 508, ventral; 509, posterior. 510, abdomen, dorsal.

Figure 511. *M. florestal* new species, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

evenly curved lobe (Fig. 497). In posterior view the median posterior plate has a narrow neck ventrally, forming a septum between two depressions (Fig. 498).

*Distribution.* Northern Colombia (Map 5B).

*Specimens Examined.* COLOMBIA *Magdalena:* Valley NE of Cerro Yosagaca, 1,680 m, Sierra Madre de Santa Marta, 30 Dec. 1973, 1♀ (J. A. Kochalka, MCZ).

### *Mangora vianai* new species
### Figures 500–502; Map 5F

*Holotype.* Female holotype from Santa María, Misiones, Argentina, Nov.–Dec. 1952 (M. J. Viana), in MACN no. 3594a. The species is named after the collector.

*Description.* Female holotype. Prosoma yellowish. Abdomen: whitish; dorsum posterior darker gray with a pair of indistinct gray patches (Fig. 502). Posterior eye row straight. Ocular quadrangle slightly wider than anterior width, anterior widest. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.2 mm. Carapace 1.5 mm long, 1.1 wide in thoracic region, 0.5 wide behind lateral eyes, 1.2 high. First femur 1.3 mm, patella and tibia 1.3, metatarsus 1.2, tarsus 0.5. Second patella and tibia [lost], third 1.1 mm. Fourth femur 1.3 mm, patella and tibia 1.5, metatarsus 1.2, tarsus [0.6 from similarly sized paratype].

The male is unknown.

*Variation.* Total length of females 3.6 to 4.2 mm. The edge of the epigynum is covered by hardened mucus.

*Diagnosis. Mangora vianai* epigynum has an almost straight rim with a median dark mark (Fig. 500). It differs from that of *M. kochalkai* in having a wide posterior median plate between a pair of depressions (Fig. 501).

*Distribution.* Northeastern Argentina (Map 5F).

*Paratypes.* ARGENTINA *Misiones:* Santa María, Nov.–Dec. 1952, 2♀ (M J. Viana, MACN 3594).

### *Mangora bonaldoi* new species
### Figures 503, 504; Map 5F

*Holotype.* Male holotype from Usina Hidroelétrica Serra do Mesa, Minaçú, Goiás, 13°45′S, 47°50′W, Brazil, 1–10 Nov. 1956 (A. Bonaldo and L. Moura), in MCN 27831. The species is named after the collector, arachnologist A. Bonaldo.

*Description.* Male holotype. Specimen yellowish, except for black eye rings and dorsum and sides of abdomen. Abdomen: dorsum patches with white pigment spots, a posterior pair of black patches, and a pair of small gray marks anterior to black patches (Fig. 503); sides with white pigment spots. Posterior eye row slightly procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 0.5 from laterals. Posterior median eyes 1.0 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with a proximal, ventral macroseta. Total length 3.2 mm. Carapace 1.4 mm long, 1.3 wide in thoracic region, 0.6 wide behind lateral eyes, 0.7 high. First femur 1.7 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.7 mm, third 0.8, fourth 1.5.

The female is unknown.

*Diagnosis.* The *M. bonaldoi* palpus is recognized by the heavily sclerotized bilobed sclerite of the terminal apophysis (12–3 h in Fig. 504).

*Distribution.* Only known from southeastern Brazil (Map 5F).

*Specimens Examined.* No other specimens were found.

### *Mangora tarma* new species
### Figures 505–507; Map 5C

*Holotype.* Female holotype and eight female paratypes from Amable María [Dept. Junín, Prov. Tarma, 640 m, on Río Chanchamayo], Peru, ca. 1870s, in PAN. The specific name is a noun in apposition after the type locality.

*Description.* Female paratype. Prosoma yellow, distal articles of legs darker. Abdomen: light yellow; dorsum with anterior patches of white pigment spots, with three pairs of posterior gray spots (Fig. 507). Posterior eye row procurved. Ocular quadrangle as long as posterior width, posterior widest. Posterior median eyes 1.3 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.7 from laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.2 mm. Carapace 1.5 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.6 high. First femur 1.5 mm, patella and tibia 1.5, metatarsus 1.3, tarsus 0.6. Second patella and tibia 1.3 mm, third 1.0. Fourth femur 1.4 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.6.

The male is not known.

*Variation.* Total length of females 3.0 to 3.2 mm.

*Diagnosis.* The *M. tarma* epigynum is heavily sclerotized. In posterior view, the species is distinguished by the diamond shape of its median plate (Fig. 506), but the seams between plates are difficult to see.

*Distribution.* Central Peru (Map 5C).

*Specimens Examined.* PERU *Junín:* Utcuyacu, 1,600–2,000 m, Feb. 1948, 1♀ (F. Woytkowsky, AMNH).

### *Mangora cutucu* new species
Figures 508–510; Map 5C

*Holotype.* Female holotype and three female paratypes from main trail Logroño to Yaupi, 1,700–2,100 m, 02°38′S, 78°30′W, W slope of Cordillera del Cutucu, Morona-Santiago, Ecuador, 1 July 1984 (R. M. Peck), in ANSP. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma dark yellow, sternum darker. Abdomen: dorsum yellow, with posterior black patches and anterior gray marks (Fig. 510). Posterior eye row recurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.8 diameter apart, 0.8 from laterals. Posterior median eyes 0.8 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 2.7 mm. Carapace 1.4 mm long, 1.1 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.5 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.4 mm, third 0.8, fourth 1.4.

The male is not known.

*Variation.* Total length of females 2.7 to 3.1 mm. One female had the dorsum of the abdomen with patches of white pigment spots.

*Diagnosis.* Unlike the epigynum of *M. tarma* (Fig. 506), that of *M. cutucu* has a median posterior plate with a narrow ventral projection (Fig. 509).

*Natural History.* The holotype and paratypes were found in tall, humid forest on a flat ridge top in a remote, large pristine area.

*Distribution.* Known only from southeastern Ecuador (Map 5C).

*Specimens Examined.* No other specimens were found.

### *Mangora florestal* new species
Figure 511; Map 5F

*Holotype.* Male holotype from Horto Florestal, São Paulo, Est. São Paulo, Brazil, 13 Sep. 2001 (H. F. Japyassú), in IBSP no. 27664. The specific name is a noun in apposition after the type locality.

*Description.* Male holotype. Prosoma yellowish. Abdomen: dorsum with two posterior black patches and some anterior indistinct white and gray marks. Posterior eye row procurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.9 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.1 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Fourth femur with proximal, ventral macroseta [only on left leg]. Total length 2.2 mm. Carapace 1.2 mm long, 1.1

wide in thoracic region, 0.3 wide behind lateral eyes, 1.3 high. First femur 1.1 mm, patella and tibia 1.2, metatarsus 1.0, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.8, fourth femur 1.2.

The female is not known.

*Diagnosis.* As in *M. missa* (Fig. 163), the *M. florestal* palpus has a filamentous embolus, with a distal lobe above the filament (11 h in Fig. 511). Also as in *M. missa* (Fig. 163), the median apophysis has a hook on the side toward the cymbium (5 h in Fig. 511). However, details of sculpturing of the terminal apophysis differ.

*Distribution.* Only known from São Paulo, southeastern Brazil (Map 5F).

*Specimens Examined.* No other specimens have been found.

### *Mangora oxapampa* new species
### Figures 512–515; Map 5G

*Holotype.* Female holotype from 1.3 km south of Mina Pichita, 2,100 m, Junín, Peru, night collecting, 23 Aug. 1980 (B. Alvarado), in MUSM. The specific name is a noun in apposition after the collecting site of a specimen.

*Description.* Female holotype. Prosoma yellow; median eye region gray, carapace with short median posterior streak. Abdomen: dorsum with a pair of posterior black patches, two pairs of dark gray patches anterior black; white patches of pigment spots anteriorly (Fig. 515); venter whitish; sides with white pigment spots. Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.2 diameters apart, 0.8 from laterals. Posterior median eyes 0.9 diameter apart, 1.2 from laterals. Height of clypeus equals 0.9 diameter of anterior median eyes. Total length 3.7 mm. Carapace 1.5 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.6 mm, patella and tibia 1.7, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.5 mm, third 1.1, fourth 1.7.

The male is not known.

*Variation.* Total length of females 3.7 to 4.1 mm. The illustrations were made from the female holotype.

*Diagnosis.* The *M. oxapampa* epigynum is similar to that of *M. bovis* (Figs. 410, 411) but has a longer, bent scape (Figs. 512, 514) with a recessed posterior median plate (Fig. 513).

*Distribution.* Upper Amazon: Central Peru (Map 5G).

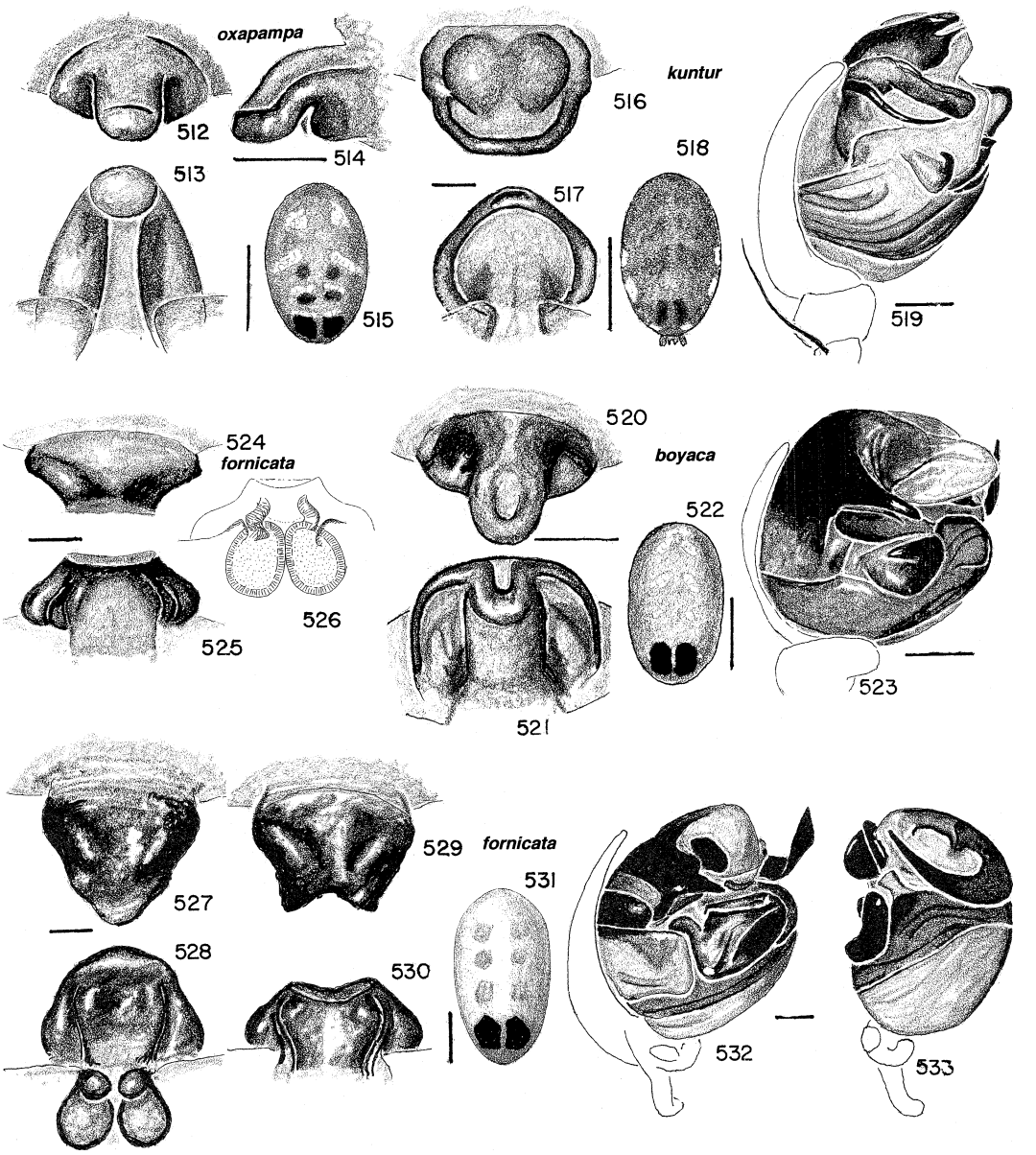
*Specimens Examined.* PERU *Pasco:* 15 km SE Oxapampa, ca. 1,800 m, 20 June 1986, 1♀ (D. Silva D., MUSM).

### *Mangora kuntur* new species
### Figures 516–519; Map 5G

*Holotype.* Female holotype, 10 female and three male paratypes, from Puesto de Vigilancia 22, Alto Río Comaina, Cordillera del Cóndor, 850–1,150 m, Amazonas, Peru (D. Silva D.), in MUSM. The specific name is a noun in apposition after the type locality. The collector suggested the name. Kuntur is the Quechua word for condor.

*Description.* Female paratype. Prosoma orange-yellow, labium, endites dark gray, sternum black, legs gray. Abdomen: dorsum dark gray, two posterior darker gray patches with area around patches lighter (Fig. 518); venter lighter gray; sides with two or three light areas containing white pigment spots (Fig. 518). Carapace very high, sternum convex. Posterior eye row straight. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 0.7 diameter apart, 1.2 from laterals. Height of clypeus equals 1.4 diameters of anterior median eyes. Total length 2.7 mm. Carapace 1.0 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.2 mm, patella and tibia 1.2, metatarsus 0.8, tarsus 0.7. Second patella and tibia 1.2 mm, third 0.8, fourth 0.7.

Male paratype. Coloration as in female. Posterior eye row straight. Ocular quadrangle longer than wide, rectangular. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.7 diameter. An-




Figures 512–515. *Mangora oxapampa* new species, female. 512–514, epigynum. 512, ventral; 513, posterior; 514, lateral. 515, abdomen, dorsal.

Figures 516–519. *M. kuntur* new species. 516–518, female. 516, 517, epigynum. 516, ventral; 517, posterior. 518, abdomen dorsal. 519, left male palpus, mesal.

Figures 520–523. *M. boyaca* new species. 520–522, female. 520, 521, epigynum. 520, ventral; 521, posterior. 522, abdomen, dorsal. 523, male palpus, mesal.

Figures 524–533. *M. fornicate* (Keyserling). 524–531, female, 524–530, epigynum. 524, 527, 529, ventral; 525, 526, 528, 530, posterior. 524–526, syntype. 526, cleared. 524–526, 529, 530, lobe broken off. 531, abdomen, dorsal. 532, 533, male palpus. 532, mesal; 533, ventral.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

terior median eyes 1.0 diameter apart, 0.6 from laterals. Posterior median eyes 0.9 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Carapace very high, sternum convex. No coxal hook. Total length 1.8 mm. Carapace 0.7 mm long, 0.7 wide in thoracic region, 0.3 wide behind lateral eyes, 0.8 high. First femur 1.0 mm, patella and tibia 1.2, metatarsus 0.7, tarsus 0.4. Second patella and tibia 1.1 mm, third 0.7, fourth 0.9.

Males and females were collected together.

*Diagnosis. Mangora kuntur* and *M. semiatra* differ from most South American *Mangora* by their coloration: a black abdomen with light patches on sides (Fig. 518). The epigynum of *M. kuntur* differs from all others, except *M. leverger*, (Fig. 15) by a transverse depression with a thick rim (Fig. 516) and from *M. leverger* by the oval posterior median plate (Figs. 517).

The male palpus differs from that of *M. insperata* (Fig. 463) by having a slightly curved thin embolus and median apophysis with one distal, pointed hook (4 h in Fig. 519).

*Natural History.* The specimens came from primary rain forest.

*Distribution.* Only known from northern Peru (Map 5G).

*Specimens Examined.* No other specimens have been collected.

### *Mangora boyaca* new species
Figures 520–523; Map 5G

*Holotype.* Female holotype and three male and two immature paratypes from Santa María, Vereda Caño La Rapida, Cuchilla Negra, 1,600–1,700 m, Boyacá, Colombia, 17–18 Nov. 2003 (A. Gomez), in ICNB AR-2810. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish. Abdomen: dorsum with large posterior, longitudinal black patches, anterior and on sides patches with white pigment spots (Fig. 522). Posterior eye row straight. Ocular quadrangle square. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.9 diameter apart, 1.0 from laterals. Posterior median eyes 0.7 diameter apart, 1.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.4 mm. Carapace 1.4 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.3 mm, patella and tibia 1.7, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.1 mm, third 0.9, fourth 1.5.

Male paratype. Coloration as in female. Posterior eye row slightly recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.0 diameter apart, 0.7 from laterals. Posterior median eyes 1.0 diameter apart, 0.8 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length ca. 2.0 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.3 wide behind lateral eyes, 0.7 high. First femur 1.2 mm, patella and tibia 1.3, metatarsus 0.9, tarsus 0.5. Second patella and tibia 1.2 mm, third 0.7, fourth 1.1.

Males and females were collected together.

*Diagnosis.* The ventral view of the *M. boyaca* epigynum (Fig. 520) is similar to that of *M. tarma* (Fig. 505) and *M. oxapampa* (Fig. 512). It differs in posterior view: *M. boyaca* has the median plate flanked by deep grooves (Fig. 521), whereas *M. tarma* and *M. oxapampa* lack these grooves (Fig. 506, 513).

Males lack a macroseta on the venter of the fourth femur and are distinguished from others by the large, distal spine of the terminal apophysis of the palpus, whose edge is visible (2 h of Fig. 523), and by the thin embolus between a sclerotized, pointed median apophysis and conductor (center of Fig. 523).

*Natural History.* The specimens were collected at the edge and interior of a forest.

*Distribution.* Only known from central Colombia (Map 5G).

*Specimens Examined.* No other specimens have been collected.

### *Mangora fornicate* (Keyserling)
Figures 524–533; Map 5H

*Epeira fornicata* Keyserling, 1864: 134, pl. 7, figs. 18–20, ♀. Two female syntypes from Bogota [Colombia], in BMNH, no. 1890.7.1.4693, examined. Keyserling, 1893: 245, pl. 12, fig. 183, ♀.
*Mangora fornicata*:—Simon, 1895: 789, fig. 854, carapace. Platnick, 2006.

*Note.* Keyserling's description and measurements fit the syntypes examined. However, his illustration of the epigynum differs. He pictured a diamond-shaped epigynum, wider than long, with a pair of dark patches, rounded at the tip. The tip of the syntype's epigynum may have broken off later. The epigynum of Keyserling's specimen is less sclerotized than recently collected specimens. They also have only one pair of spermathecae. Either the second pair was overlooked, being under tissues, or the specimens were preserved just after a molt and the second pair had not sclerotized.

Mello-Leitão's (1941: 150) citation of this species from Brazil is a misidentification.

*Description.* Female syntype. Prosoma yellowish. Abdomen: dorsal posterior abdominal black patches (Fig. 531). Posterior eye row slightly recurved. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 0.8 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. First and fourth legs subequal in length. Total length 4 mm. Carapace 1.6 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 1.0 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.6. Second patella and tibia 1.6 mm, third 1.1. Fourth femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.6.

Male from Santander. Coloration as in female. Posterior eye row straight. Ocular quadrangle is as long as anterior width, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.8 diameter apart, 1.2 from laterals. Posterior median eyes 0.6 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.0 mm. Carapace 1.6 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 1.2 high. First femur 1.8 mm, patella and tibia 2.0, metatarsus 1.5, tarsus 0.8. Second patella and tibia 1.7 mm, third 1.0, fourth 1.7.

Males and females have been collected together.

*Variation.* Total length of females 3.7 to 4.7 mm. Figures 524–526, 531 were made from syntypes, others of specimens from Santander. Apparently the epigynum breaks after mating, making a second mating more difficult. Just handling may break the tip. The collections examined contained 18 specimens with tips and 11 with broken tips.

*Diagnosis.* The epigynum is heavily sclerotized. No other species of *Mangora* has a tongue-shaped epigynum like that of *M. fornicata* (Fig. 527). In the broken epigynum (Figs. 524, 529), the almost rectangular median plate (Figs. 525, 530) is diagnostic.

The male palpus, unlike that of other species, has a massive median apophysis, and the terminal apophysis has a large prong near its tip (Figs. 532, 533).

*Natural History.* The specimens were collected on their webs.

*Distribution.* Central Colombia (Map 5H).

*Specimens Examined.* COLOMBIA *Santander:* Piedecusta, Estacion Experimental Demostrativa El Rasgón, 2,240–2,320 m, July 2000–Feb. 2002, 29♀, 3♂ (E. Blanco, ICNB AR-1951); Tona, vereda El Brasil, 1,800 m, 23 June 2004, 1♀ (L. Benavides, ICNB AR-3425).

### *Mangora taboquinha* new species
Figures 534–537; Map 5H

*Holotype.* Female holotype from Taboquinha, Parque Nacional da Serra do Divisor, Acre, Brazil, 17 Nov. 1996 (R. S. Vieira), in IBSP 9219. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange-yellow, posterior median eyes with black rings. Abdomen: dorsum with a pair of posterior black patches, smaller patches anterior of black ones (Fig. 536); venter lighter gray; sides with posterior dark gray patch (Fig. 537). Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 0.8 diameter apart, 2.0 from laterals. Posterior median eyes 0.3 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth legs are longer than the first. Total length 6.3 mm. Carapace 2.3 mm long, 2.0 wide in thoracic region, 0.9 wide behind lateral eyes, 1.3 high. First femur 2.7 mm, patella and tibia 3.2, metatarsus 2.6, tarsus 1.0. Second patella and tibia 2.9 mm, third 2.0. Fourth femur 3.0, patella and tibia 3.4, metatarsus 2.7, tarsus 0.9.

The male is not known.

*Diagnosis.* The small tongue of the epigynum, about as long as wide, resembles that of *M. chacobo* (Figs. 324–327). Unlike *M. chacobo, M. taboquinha* has a raised oval median plate in posterior view (Fig. 535).

*Distribution.* Upper Amazon: western Brazil (Map 5H).

*Specimens Examined.* No other specimens have been found.

### *Mangora manglar* new species
Figures 538–540; Map 5H

*Holotype.* Female holotype from 16 km S Manglar Alto, Guayas, Ecuador, 30 Jan. 1955 (E. I. Schlinger, E. S. Ross), in CAS. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: whitish; dorsum with white pigment spots and with two posterior gray pigment patches (Fig. 540); venter with white spots, anterior and lateral to spinnerets. Posterior eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.3 diameter apart, 1.0 from laterals. Height of clypeus equals 0.7 diameter of anterior median eye. Total length 4.7 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 1.3 high. First femur 1.5 mm, patella and tibia 1.5, metatarsus 1.2, tarsus 0.7. Second patella and tibia 1.8 mm, third 1.1. Fourth femur 1.8 mm, patella and tibia 1.8, metatarsus 1.6, tarsus 0.7.

The male is not known.

*Diagnosis.* The *M. manglar* epigynum has a tongue as long as wide, but unlike that of *M. taboquinha* (Fig. 534), the tongue has a lip and is flanked by a notch (Fig. 538).

*Distribution.* Only known from coastal southern Ecuador (Map 5H).

*Specimens Examined.* No other specimens were found.

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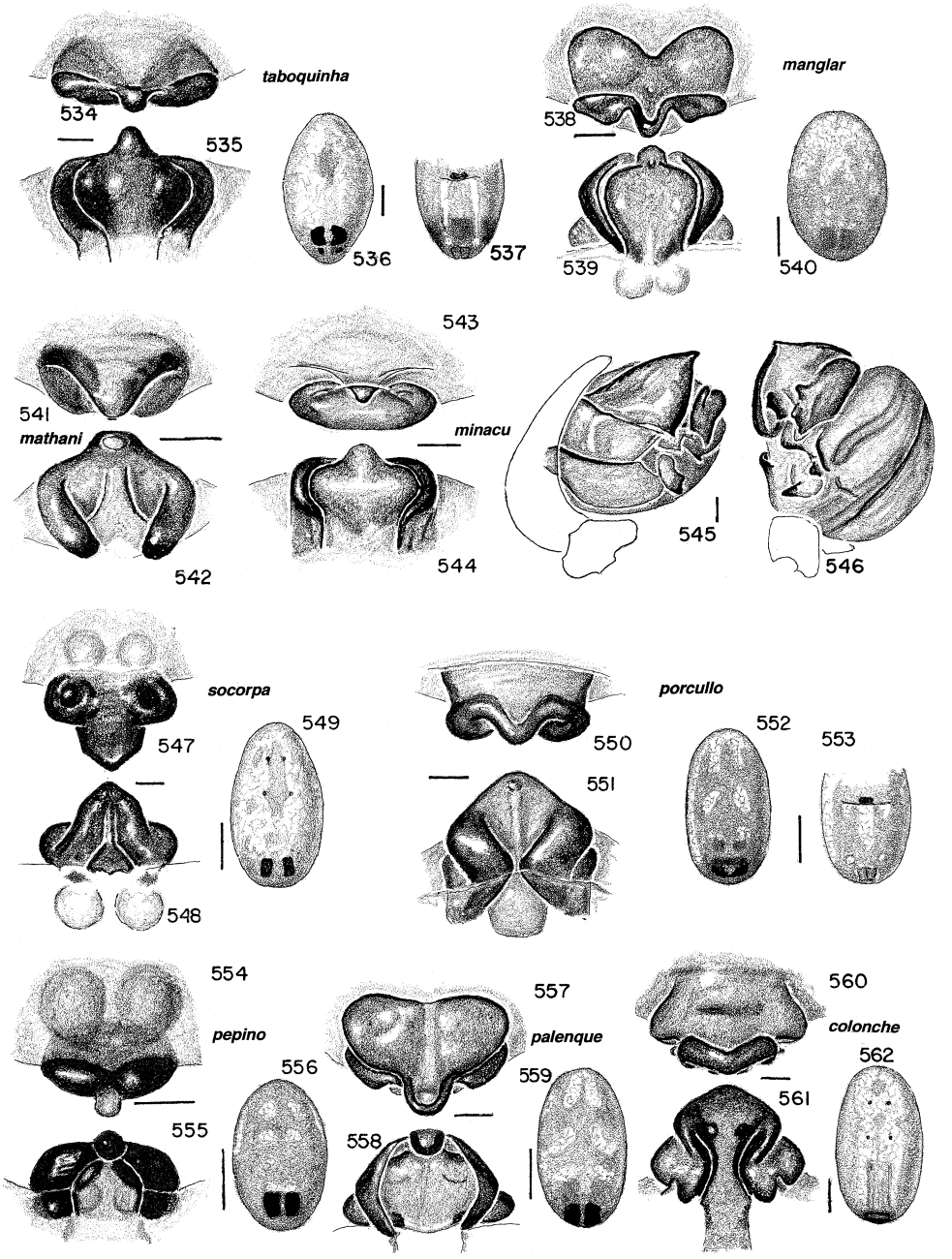
Figures 534–537. *Mangora taboquinha* new species, female. 534, 535, epigynum. 534, ventral; 535, posterior. 536, abdomen, dorsal. 537, abdomen, ventral.

Figures 538–540. *M. manglar* new species, female. 538, 539, epigynum. 538, ventral; 539, posterior. 540, abdomen, dorsal.

Figures 541, 542. *M. mathani* Simon, female, epigynum. 541, ventral; 542, posterior.

Figures 543–546. *M. minacu* new species. 543, 544, female, epigynum. 543, ventral; 544, posterior. 545, 546, left male palpus. 545, mesal; 546, ventral.

Figures 547–549. *M. socorpa* new species, female. 547, 548, epigynum. 547, ventral; 548, posterior. 549, abdomen, dorsal.




Figures 550–553. *M. porcullo* new species, female. 550, 551, epigynum. 550, ventral; 551, posterior. 552, abdomen, dorsal. 553, abdomen, ventral.

Figures 554–556. *M. pepino* new species, female. 554, 555, epigynum. 554, ventral; 555, posterior. 556, abdomen, dorsal.

Figures 557–559. *M. palenque* new species, female. 557, 558, epigynum. 557, ventral; 558, posterior. 559, abdomen, dorsal.

Figures 560–562. *M. colonche* new species, female. 560, 561, epigynum. 560, ventral; 561, posterior. 562, abdomen, dorsal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

### *Mangora minacu* new species
Figures 543–546; Map 4D

*Holotype.* Female holotype and male paratype from Usina Hidroelétrica de Serra da Mesa Minaçú, Goiás [13°43′S, 47°50′W], Brazil, 1–10 Nov. 1996 (A. Bonaldo and L. Moura), in MCN 27830. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish. Abdomen: dorsum with pigment spots and two black posterior patches (as in Fig. 536); venter with lateral bands of white pigment spots and a white patch on each side anterior and lateral of spinnerets. Posterior eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 1.3 from laterals. Posterior median eyes 0.3 diameter apart, 2.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 6.0 mm. Carapace 2.1 mm long, 1.7 wide in thoracic region, 0.8 wide behind lateral eyes, 1.3 high. First femur 2.4 mm, patella and tibia 2.7, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.5 mm, third 1.7. Fourth femur 2.7 mm, patella and tibia 2.8, metatarsus 2.3, tarsus 0.8.

Male paratype [just molted]. Prosoma orange. Posterior eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.2 diameters apart, 1.0 from laterals. Posterior median eyes 0.8 diameter apart, 2.0 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Total length 4.6 mm. Carapace 2.0 mm long, 1.7 wide in thoracic region, 0.7 wide behind lateral eyes, 1.3 high. First femur 2.4 mm, patella and tibia 2.5, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.2 mm, third 1.4, fourth 2.4.

Male and female have been collected together.

*Diagnosis.* The *M. minacu* epigynum (Figs. 543, 544) is similar to that of *M. taboquinha* (Figs. 534, 535), but differs by having the posterior median plate shorter (Fig. 544).

The male palpus in mesal view, unlike palpi of other species, has the terminal apophysis with a large triangular shield hiding the embolus (12 h in Fig. 545).

*Distribution.* Only known from Goyás, Brazil, Amazon region (Map 4D).

*Specimens Examined.* No other specimens have been found.

### *Mangora socorpa* new species
Figures 547–549; Map 5I

*Holotype.* Female holotype from Finca San José, 8 km SE Socorpa Mission, Sierra de Perija, 1,450–1,500 m [10°06′N, 73°04′W Depto. César], Colombia, 27–31 July 1968 (B. Malkin), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange, dorsum of carapace and distal articles of legs darker, very small black circles around secondary eyes. Abdomen: orange-white; dorsum with two posterior black rectangles (Fig. 549); venter with white pigment; sides orange-white with a white spot anterior and lateral to spinnerets. Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 2.0 from laterals. Posterior median eyes 0.3 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.5 mm. Carapace 2.1 mm long, 1.6 wide in thoracic region, 1.1 wide behind lateral eyes, 1.2 high. First femur 2.3 mm, patella and tibia 2.6, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.4 mm, third 1.4, fourth 2.3.

The male is not known.

*Diagnosis.* The ventral view of the *M. socorpa* epigynum differs from all others by having a pair of depressions on lobes flanking the tongue (Fig. 547) and, in posterior view, unlike others with a similar scape, a triangular median plate with a

narrow, median, ventral extension (Fig. 548).

*Distribution.* Northern Colombia (Map 5I).

*Paratypes.* COLOMBIA *César:* Finca San José, 8 km SE Socorpa Mission, Sierra de Perija, 1,500–1,600 m, forest trail, 16–17 Aug. 1968, 7♀ (B. Malkin, AMNH), 1,450–1,500 m, 27–31 July 1968, 1♀ (B. Malkin, AMNH).

### *Mangora porcullo* new species
### Figures 550–553; Map 5I

*Holotype.* Female holotype and one female paratype from ravines west of Porcullo, Central Cordillera, Cajamarca, Peru, 15, 19 May l967 (A. F. Archer, S. Risco), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female. Prosoma yellow. Abdomen: dorsum with many white pigment spots, and posterior black, connected rectangles (Fig. 552). Posterior eye row recurved. Ocular quadrangle square. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 1.5 from laterals. Posterior median eyes 0.8 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.0 mm. Carapace 2.0 mm long, 1.8 wide in thoracic region, 0.8 wide behind lateral eyes, 1.1 high. First femur 2.3 mm, patella and tibia 2.6, metatarsus 2.3, tarsus 0.9. Second patella and tibia 2.5 mm, third 1.6. Fourth femur 2.3 mm, patella and tibia 2.7, metatarsus 2.0, tarsus 0.7.

The male is not known.

*Variation.* Total length of females 5.0 to 5.2 mm.

*Diagnosis. Mangora porcullo* is smaller than *M. colonche* (Figs. 560–562), and the epigynum differs by having a more acute tongue flanked by a lobe (Fig. 550). In both species, the posterior median plate has a constriction (Figs. 551, 561).

*Distribution.* Northwestern Peru (Map 5I).

*Specimens Examined.* PERU *Piura:* Canchaque, 05°23′S, 79°37′W, 1,750–1,800 m, 4 May 1956, 1♀ (H. W. and M. Koepcke, MUSM).

### *Mangora pepino* new species
### Figures 554–556; Map 6B

*Holotype.* Female holotype and one female paratype from El Pepino [Pepino, Putumayo, 01°03′N, 76°38′W], Colombia, 21 Feb. 1973 (N. Leist), in IBSP 10769a. The specific name is a noun in apposition after the type locality. Pepino is a cucumber in Spanish.

*Description.* Female holotype. Prosoma yellow, with gray shadows on sides of carapace. Abdomen: light yellowish; dorsum with anterior paired areas of white spots and a pair of posterior black patches (Fig. 556). Posterior eye row procurved. Ocular quadrangle as long as posterior width, posterior widest. Posterior median eyes 1.1 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 0.8 from laterals. Posterior median eyes 1.0 diameter apart, 1.0 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. Total length 3.3 mm. Carapace 1.3 mm long, 1.2 wide in thoracic region, 0.6 wide behind lateral eyes, 0.8 high. First femur 1.5 mm, patella and tibia 1.7, metatarsus 1.3, tarsus 0.8. Second patella and tibia 1.6 mm, third 1.0, fourth 1.6.

The male is not known.

*Diagnosis.* The *M. pepino* epigynum, unlike others, in ventral view has a pair of wide, heavily sclerotized swelling along the rim (Fig. 554) and heavily sclerotized short lateral plates in posterior view (Fig. 555).

*Distribution.* Only known from southern Colombia (Map 6B).

*Specimens Examined.* No other specimens have been found.

### *Mangora palenque* new species
### Figures 557–559; Map 6B

*Holotype.* Female holotype from Río Palenque, 47 km SW Santo Domingo de los Colorados, road to Quevedo, Los Ríos, Ecuador, 16 Mar. 1982 (Y. Lubin 367), in MCZ. The specific name is a noun in apposition after the type locality.

*Description.* Female paratype. Prosoma orange. Abdomen: orange-white; dorsum with anteriorly paired fields of white pigment spots and posterior pair of black

patches (Fig. 559); venter with a pair of white pigment spots anterior and lateral to spinnerets. Posterior eye row slightly procurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.5 diameter apart, 0.6 from laterals. Posterior median eyes 0.3 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.8 mm. Carapace 2.0 mm long, 1.6 wide in thoracic region, 0.6 wide behind lateral eyes, 1.1 high. First and fourth legs subequal in length. First femur 2.1 mm, patella and tibia 2.2, metatarsus 1.7, tarsus 0.7. Second patella and tibia 2.1 mm, third 1.4. Fourth femur 2.1 mm, patella and tibia 2.3, metatarsus 1.8, tarsus 0.7.

The male is not known.

*Variation.* Total length of females 3.6 to 5.0 mm.

*Diagnosis.* The epigynum of *M. palenque* (Fig. 557) in ventral view is similar to that of *M. manglar* (Fig. 538), but the sclerotized base (Fig. 557) lacks the anterior median notch and lips along the rim flanking the tongue (Fig. 557).

*Natural History.* One specimen was collected in a Malaise trap.

*Distribution.* Ecuador (Map 6B).

*Paratypes.* ECUADOR *Los Ríos:* Río Palenque, 47 km SW Santo Domingo de los Colorados, road to Quevedo, 14 Mar. 1982, 1♀ (Y. D. Lubin 369, MCZ); Río Palenque, 3 Mar. 1985, 1♀ (L. Arrea, MECN); Río Palenque, 47 km S Santo Domingo, Pichincha, 5 May–25 June 1985, 1♀ (S. and J. Peck, AMNH).

*Specimens Examined.* ECUADOR *Pichincha:* Tinalandia, ca. 830 m, 12 km E Santo Domingo de los Colorados, 11–17 May 1986, 2♀ (G. B. Edwards, FSCA).

## *Mangora colonche* new species
## Figures 560–562; Map 6B

*Holotype.* Female holotype from Colonche, Guayas, Ecuador, 1941 (R. W. Landes), in the Exline-Peck Collection of CAS. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange. Abdomen: dorsum with a posterior black patch and a median gray band fading anteriorly surrounded by white pigment spots (Fig. 562). Posterior eye row recurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.2 diameters apart, 2.0 from laterals. Posterior median eyes 0.6 diameter apart, 2.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. First and fourth legs of subequal length. Total length 5.5 mm. Carapace 2.7 mm long, 2.3 wide in thoracic region, 1.0 wide behind lateral eyes, 1.2 high. First femur 3.6 mm, patella and tibia 3.9, metatarsus 3.6, tarsus 1.3. Second patella and tibia 3.7 mm, third 2.3. Fourth femur 3.6 mm, patella and tibia 3.9, metatarsus 3.8, tarsus 1.2.

The male is unknown.

*Variation.* Total length of females 5.5 to 5.9 mm.

*Diagnosis. Mangora colonche* is larger than *M. porcullo*, and the epigynum differs in ventral view by having a shorter, wider tongue (Fig. 560). (The tongue is bent ventrally in Fig. 560.) In posterior view both species, unlike others, have a median plate with a neck (Figs. 551, 561).

*Distribution.* Southwestern Ecuador and northwestern Peru (Map 6B).

*Specimens Examined.* PERU *Tumbes:* Matapalo, Río Zarumilla, 27–29 Apr. 1956, 1♀ (H. W. and M. Koepcke, MUSM). *Piura:* Canchaque, 05°23′S, 79°37′W, 1,750–1,800 m, 4 May 1956, 1♀ (H. W. and M. Koepcke, MUSM).

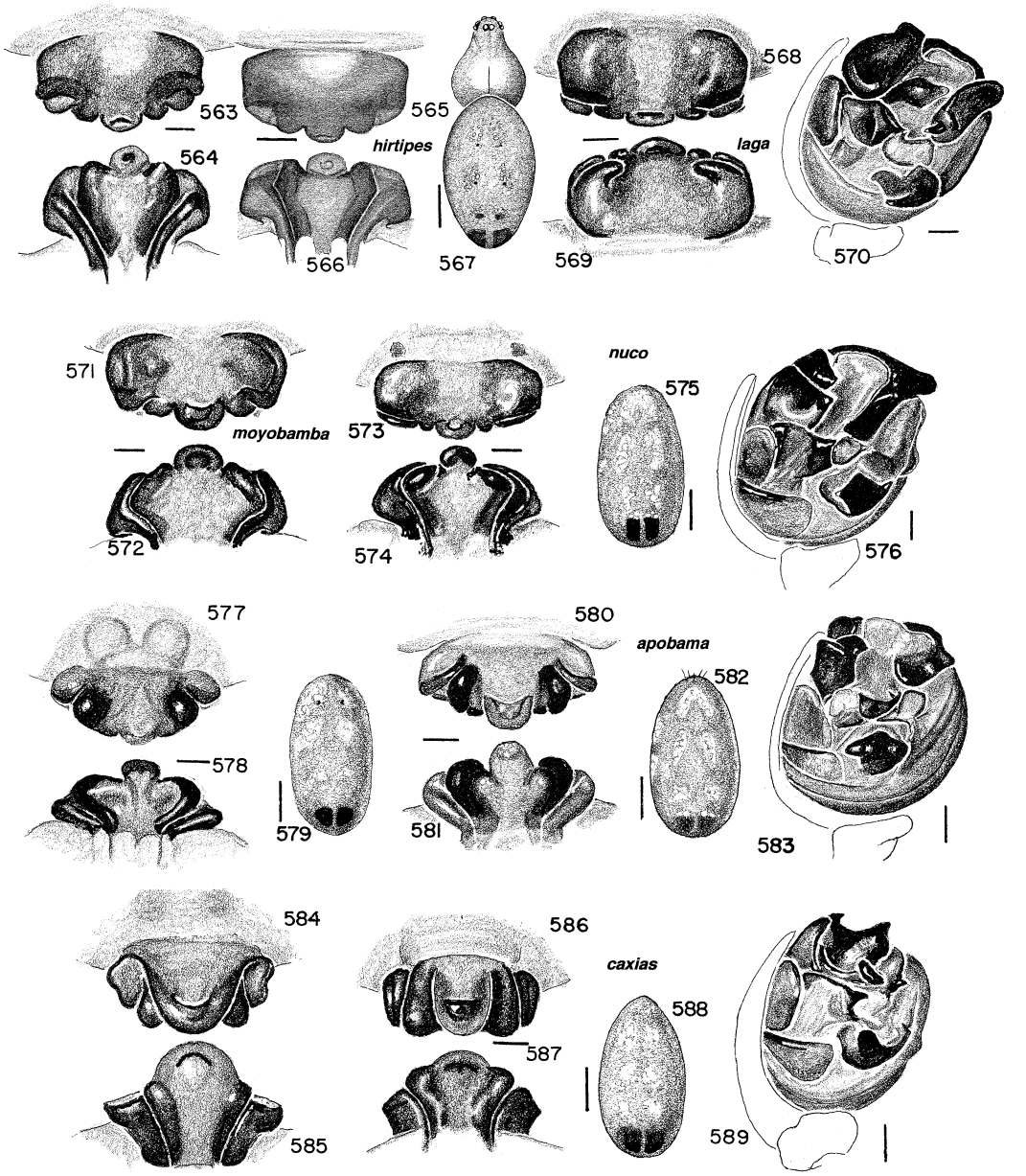
## *Mangora hirtipes* (Taczanowski)
## Figures 563–567; Map 5E

*Epeira hirtipes* Taczanowski, 1878, 164: pl. 2, fig. 15, ♀. Female lectotype and one female paralectotype,

→

Figures 563–567. *Mangora hirtipes* (Taczanowski), female. 563–566, epigynum. 563, 565, ventral; 564, 566, posterior. 567, carapace, abdomen.

Figures 568–570. *M. laga* new species. 568, 569, female, epigynum. 568, ventral; 569, posterior. 570, left male palpus, mesal.




Figures 571, 572. *M. moyobamba* new species, female, epigynum. 571, ventral; 572, posterior.

Figures 573–576. *M. nuco* new species. 573–575, female. 573, 574, epigynum. 573, ventral; 474, posterior. 575, abdomen, dorsal. 576, male palpus, mesal.

Figures 577–583. *M. apobama* new species. 577–582, female. 577, 578, 580, 581, epigynum. 577, 580, ventral; 578, 581, posterior. 579, 582, abdomen, dorsal. 583, male palpus, mesal.

Figures 584–589. *M. caxias* new species. 584–588, female. 584–587, epigynum. 584, 586, ventral; 585, 587, posterior. 588, abdomen, dorsal. 589, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

here designated, from Amable María [Dept. Junín, Prov. Tarma, 640 m, on Río Chanchamayo], Peru, ca. 1870s, in PAN, examined.

*Aranea hirtipedata* Roewer, 1942: 844. (Replacement name for *Aranea hirtipes* which is preoccupied.)

*Mangora hirtipes*:—Levi, 1991: 177. Platnick, 2006.

*Description.* Female holotype. Prosoma orange. Abdomen: light orange; dorsum with a pair of posterior black patches and pairs of patches containing white pigment spots (Fig. 567). Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 diameter apart, 1.0 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 5.3 mm. Carapace 2.2 mm long, 1.7 wide in thoracic region, 0.8 wide behind lateral eyes, 1.3 high. First femur 2.1 mm, patella and tibia 2.3, metatarsus 1.7, tarsus 0.7. Second patella and tibia 2.2 mm, third 1.5. Fourth femur 2.2 mm, patella and tibia 2.4, metatarsus 1.8, tarsus 0.8.

The male is not known.

*Variation.* Total length of females 4.5 to 5.6 mm. Figures 565–567 were made from the female lectotype, Figures 563, 564 from a specimen from the Upper Amazon, Brazil.

*Diagnosis.* The *M. hirtipes* epigynum has the wide tongue flanked by two lobes (Figs. 563, 565) and can be distinguished from others by the posterior view of the epigynum (Figs. 564, 566), with V-shaped openings anterior to the depression between sclerites (Figs. 564, 566).

*Distribution.* Guyana and Amazon region (Map 5E).

*Specimens Examined.* GUYANA Canje Ikuruwa River, 05°50′N, 57°50′W, Aug.–Dec. 1961, 4♀ (G. Bentley, AMNH). BRAZIL *Pará:* Caxiuanã, Melgaço, 6–16 Aug. 1996, 5♀ (A. A. Lise, MCP 9317, 9378, 9379, 9381); Rio Mapuera, 16 km S of the equator, 1♀ (AMNH). *Amazonas:* Parque Nacional do Pico da Neblina, 12 Oct. 1990, 1♀ (A. A. Lise, MCP); Tefé, Fonte Boa, São Paulo de Olivença, before 1880, 1♀ (M. de Mathan, MNHN); Tefé, Nov.–Dec. 1919, 1♀ (H. S. Parrish, MCZ). *Acre:* Rio Purus, W of Sena Madureira, Boca do Chandless, 5 Sep. 1973, 1♀ (B. Patterson, MCZ).

## *Mangora laga* new species
## Figures 568–570; Map 5E

*Holotype.* Female holotype from Cucharas, Huallaga Valley, Dept. Huánuco, Peru, Feb.–Apr. 1954 (F. Woytkowski), in CAS. The specific name is an arbitrary combination of letters.

*Description.* Female holotype. Prosoma orange-yellow. Abdomen: whitish; dorsum with areas of white pigment spots and a pair of posterior black patches (as in Fig. 575). Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.6 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length ca. 4.0 mm. Carapace 1.7 mm long, 1.5 wide in thoracic region, 0.7 wide behind lateral eyes, 1.1 high. First femur 1.7 mm, patella and tibia 2.1, metatarsus 1.6, tarsus 0.7. Second patella and tibia 2.1 mm, third 1.4. Fourth femur 2.1 mm, patella and tibia 2.3, metatarsus 1.6, tarsus 0.8.

Male. Coloration as in female. Posterior eye row procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.6 diameter apart, 0.4 from laterals. Posterior median eyes 0.3 diameter apart, 1.1 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Fourth femur with ventral, proximal macroseta. Total length 3.3 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 1.1 high. First femur 2.0 mm, patella and tibia 2.1, metatarsus 1.5, tarsus 0.7. Second patella and tibia 1.8 mm, third 1.3, fourth 2.0.

Male and female were matched because both are relatively small specimens, with a pair of black patches on the posterior of the abdomen, and were collected in the

same vicinity of Huánuco, Peru. The match is uncertain.

*Diagnosis.* *Mangora laga* female can be separated from others by the posterior view of the epigynum, which has a pair of fingers near the rim, pointing at each other (Fig. 569).

The palpus of the male is separated from others by the spine of the median apophysis, which points toward the cymbium (5 h in Fig. 570), and by the triangular embolus (center of Fig. 570).

*Distribution.* Upper Amazon: Central Peru (Map 5E).

*Specimens Examined.* PERU *Huánuco:* Monzón Valley, Tingo María, Peru, 18 Dec. 1954, 1♂ (E. I. Schlinger, E. S. Ross, CAS).

### *Mangora moyobamba* new species
Figures 571, 572; Map 5I

*Holotype.* Female holotype from 32 km southeast of Moyobamba, San Martín, Peru, June 1947 (F. Woytkowski), in AMNH. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish. Abdomen: dorsum with patches of anterior white pigment spots and two posterior gray patches (as in Fig. 567). Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; anterior lateral eyes 0.7 diameter, posterior 0.6. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.3 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Leg four longer than first. Total length 4.7 mm. Carapace 1.8 mm long, 1.4 wide in thoracic region, 0.7 wide behind lateral eyes, 1.3 high. First femur 1.8 mm, patella and tibia 2.2, metatarsus 1.5, tarsus 0.7. Second patella and tibia 2.0 mm, third 1.5. Fourth femur 2.1 mm, patella and tibia 2.4, metatarsus 1.6, tarsus 0.8.

The male is not known.

*Diagnosis.* The *M. moyobamba* epigynum can be separated from that of *M. nuco* (Fig. 573) by the longitudinal swelling on each side of the base in ventral view (Fig. 571) and from most similar species by the wider, rounded median plate in posterior view (Fig. 572).

*Distribution.* Upper Amazon: eastern Peru (Map 5I).

*Specimens Examined.* No other specimens have been found.

### *Mangora nuco* new species
Figures 573–576; Map 6A

*Holotype.* Female holotype and 15 female, two male, and four immature paratypes from Cucharas, Huallaga Valley, Dept. Huánuco, Peru, Feb.–Apr. 1954 (F. Woytkowski), in CAS. The specific name is a noun, an arbitrary combination of letters.

*Description.* Female holotype. Prosoma orange-yellow. Abdomen: orange-white, dorsum with anterior patches of white pigment spots, and a pair of posterior black patches (Fig. 575). Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; anterior lateral eyes 0.7 diameter, posterior 0.5. Anterior median eyes 0.7 diameter apart, 0.7 from laterals. Posterior median eyes 0.4 diameter apart, 1.5 from laterals. Height of clypeus equals 0.6 diameter of anterior median eyes. First legs and fourth subequal in length. Total length 5.2 mm. Carapace 2.1 mm long, 1.6 wide in thoracic region, 0.7 wide behind lateral eyes, 1.1 high. First femur 2.2 mm, patella and tibia 2.6, metatarsus 2.0, tarsus 0.7. Second patella and tibia 2.3 mm, third 1.6. Fourth femur 2.2 mm, patella and tibia 2.6, metatarsus 2.0, tarsus 0.7.

Male paratype. Color as in female. Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.5 from laterals. Posterior median eyes 0.5 diameter apart, 1.4 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. First and fourth legs of equal length. Fourth femur with a proximal, ventral large macroseta. Total length 3.2 mm. Carapace 1.8 mm long, 1.6 wide in tho-

racic region, 0.6 wide behind lateral eyes, 1.0 high. First femur 1.9 mm, patella and tibia 2.2, metatarsus 1.6, tarsus 0.7. Second patella and tibia 1.9 mm, third 1.3. Fourth femur 1.9 mm, patella and tibia 2.1, metatarsus 1.7, tarsus 0.7.

Males and females have been collected together.

*Variation.* Total length of females 4.4 to 5.2 mm.

*Diagnosis.* The *M. nuco* epigynum can be separated from that of *M. moyobamba* (Fig. 571) by lacking longitudinal swellings on each side of the base in ventral view (Fig. 573), and in posterior view having the median plate widest ventrally (Fig. 574).

The male median apophysis of the palpus differs from all others by the wide, truncate end (4 h in Fig. 576) and the conductor hides the embolus tip (center in Fig. 576).

*Natural History.* Specimens were collected sweeping the understory of secondary forest in San Ramón, Peru.

*Distribution.* Central Peru, upper Amazon region (Map 6A).

*Specimens Examined.* PERU *San Martín:* Hara, 32 km SE Moyobamba, June 1947, 1♀ (F. Woytkowski, AMNH). *Huánuco:* Cucharas, Huallaga Valley, Feb.–Apr. 1954, 1♀ (F Woytkowski, CAS); Estacion Dantas, La Molina, SW de Puerto Inca, 270 m, 09°38′S, 75°00′W, 18 May–1 June 1987, 5♀ (D. Silva D., MUSM). *Junín:* San Ramón de Pangoa, 40 km S Satipo, 750 m, 26 Jan. 1974, 1♀ (R. T. Schuh, AMNH).

### *Mangora apobama* new species
### Figs. 577–583; Map 6A

*Holotype.* Female holotype and male paratype from Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, Madre de Dios, Peru, 14 May–13 June 1988 (D. Silva D.), in MCZ. The name is a noun in apposition of an arbitrary combination of letters.

*Description.* Female holotype. Prosoma orange, with distal articles of legs darker. Abdomen: dorsum orange-white with paired patches of white pigment spots, and a pair of posterior dark gray patches (Figs. 579, 582). Posterior eye row slightly recurved. Ocular quadrangle wider than long, anterior widest. Fourth legs slightly longer than first. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.4 diameter apart, 0.4 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.3 mm. Carapace 2.2 mm long, 1.7 wide in thoracic region, 0.7 wide behind lateral eyes, 1.8 high. First femur 2.2 mm, patella and tibia 2.4, metatarsus 1.7, tarsus 0.7. Second patella and tibia 2.2 mm, third 1.6. Fourth femur 1.8 mm, patella and tibia 2.5, metatarsus 1.8, tarsus 0.8.

Male from paratype. Coloration as in female. Posterior eye row slightly recurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 0.5 from laterals. Posterior median eyes 0.5 diameter apart, 1.2 from laterals. Height of clypeus equals 1.2 diameters of anterior median eyes. Fourth femur with proximal, ventral macroseta. Total length 3.2 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 1.1 high. First femur 1.6 mm, patella and tibia 1.8 metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.3. Fourth femur 1.7 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.7.

Males and females have been collected together.

*Variation.* Total length of females 4.3 to 5.3 mm, males 3.0 to 3.2.

*Diagnosis.* The ventral view of the epigynum of *M. apobama* differs from that of *M. hirtipes* (Figs. 563, 565) and *M. caxias* (Figs. 584, 586) by having differently shaped lobes (Figs. 577, 580) and, in posterior view, a wider median plate (Figs. 578, 581). Unlike *M. caxias* (Figs. 584, 586) the tongue is just a short lobe of the rim.

The male palpus differs from others by the blunt projection of the median apophysis (6 h in Fig. 583) and the short, pointed, embolus (center in Fig. 583).

*Natural History.* Bottomland swamp forest in Pakitza, Peru.

*Distribution.* Southeastern Peru, western Brazil, and northern Bolivia, upper Amazon region (Map 6A).

*Paratypes.* PERU *Madre de Dios:* Zona Reservada Tambopata, 290 m, 12°50′S, 69°17′W, 4 June–3 July 1988, 2♀, 2♂ (D. Silva D., MUSM); 13 June 1988, 1♂ (J. Coddington, USNM); Río Tambopata, 30 Mar. 1988 (J. Palmer, D. Smith, MCZ); Río de la Torre, Río Tambopata, 12°50′S, 69°17′W, July–Aug. 1979, 3♀, 3♂ (A. Rypstra, USNM).

*Specimens Examined.* PERU *Madre de Dios:* 15 km E Puerto Maldonado on Río Madre de Dios, 200 m, 23, 28 June 1983, 3♀ (G. C. Hunter, CAS); 15 km E Puerto Maldonado, Río Madre de Dios, 3–27 June 1983, 3♀ (G. C. Hunter, CAS); Zona Reservada del Manu, Puesto de Vigil, Pakitza, 11°58′S, 71°18′W, 2, 3, 7 Oct. 1987, 3♀ (D. Silva D., J. Coddington, USNM). BRAZIL *Acre:* Pimenteira, Xapurí, 5–7 Apr. 1996, 1♀ (IBSP/SMNK, IBSP 16038); Reserva Extrativista Humaitá, Rio Branco, 12 Apr. 1996, 5♀ (IBSP, SMNK staff, IBSP 15725). BOLIVIA *Beni:* Chacobo Indian Village, Río Benicito, 12°30′S, 66°W, 10–20 July 1960, 5♀ (B. Malkin, AMNH).

## *Mangora caxias* new species
## Figures 584–589; Map 4F

*Holotype.* Female holotype, one female and one male paratypes from Salto Caxias, Rio Iguaçú, Capitão Leônidas Marques, Paraná, Brazil, 20–28 March 1993 (A. B. Bonaldo), in MCN 23306. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: dorsum whitish with median and transverse rows of pigment spots and two posterior black patches (Fig. 588). Posterior eye row procurved. Ocular quadrangle almost rectangular, slightly longer than wide. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.1 diameters apart, 1.0 from laterals. Posterior median eyes 0.6 diameter apart, 1.5 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 4.7 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.6 wide behind lateral eyes, 0.9 high. First femur 1.8 mm, patella and tibia 2.2, metatarsus 1.4, tarsus 0.7. Second patella and tibia 1.8 mm, third 1.3. Fourth femur 1.9 mm, patella and tibia 2.2, metatarsus 1.7, tarsus 0.7.

Male paratype. Coloration as in female. Posterior eye row slightly procurved. Ocular quadrangle as long as wide, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.8 diameter apart, 0.6 from laterals. Posterior median eyes 0.6 diameter apart, 1.2 from laterals. Height of clypeus equals 1.3 diameters of anterior median eyes. Fourth femur with a ventral, proximal macroseta. Total length 3.2 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.7 wide behind lateral eyes, 1.2 high. First femur 1.7 mm, patella and tibia 1.8, metatarsus 1.3, tarsus 0.7. Second patella and tibia 1.7 mm, third 1.1. Fourth femur 1.7 mm, patella and tibia 1.8, metatarsus 1.4, tarsus 0.7.

Males and females were collected together.

*Variation.* Total length of females 4.3 to 5.0 mm, males 3.2 to 3.4.

*Diagnosis.* The *M. caxias* epigynum is separated from that of *M. apobama* (Figs. 577, 580) by having sclerites flanking the tongue in a longitudinal, rather than diagonal, orientation (Figs. 584, 586) and, in posterior view, by having wide lateral plates (Figs. 585, 587). The tongue, unlike that of *M. apobama* (Figs. 577, 580), is attached on the anterior of the epigynum (Figs. 584, 586).

The male palpus differs from that of *M. apobama* (Fig. 583) in having the median apophysis projection wider (4 h in Fig. 589), the embolus smaller, and its tip bent proximally (center in Fig. 589).

*Distribution.* Southern Brazil and northeastern Argentina (Map 4F).

*Specimens Examined.* BRAZIL *São Paulo:* Porto Cabral, Rio Paraná, 1941, 1♀ (L. T. Filho, MZSP 4767). *Mato Grosso:* Santo Antônio de Leverger, 29 July 1992, 1♀ (A. A. Lise, A. Braul, MCP 2395). *Paraná:* Foz do Iguaçú, 29–30 Mar. 1993, 1♀, 1♂ (A. B. Bonaldo, MCN 23490). ARGENTINA *Misiones:* Parque Nacional Iguazú, 8–15 Feb. 1993, 2♀ (M. J. Ramírez, MACN).

## *Mangora alinahui* new species
## Figures 590–594; Map 6A

*Holotype.* Female holotype from Alinahui, 450 m, 20 km E Puerto Napo, 01°00′S, 77°25′W, Napo, Ec-

uador, Nov., Dec. 1995 (E. S. Ross), in CAS. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma golden yellow, distal leg articles darker. Abdomen: dorsum with anterior patches of white pigment spot, with a pair of posterior gray patches (Fig. 592). Posterior eye row slightly recurved. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.5 diameter apart, 1.2 from laterals. Posterior median eyes 0.5 diameter apart, 2.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 6.5 mm. Carapace 2.5 mm long, 1.8 wide in thoracic region, 0.9 wide behind lateral eyes, 1.3 high. First femur 2.4 mm, patella and tibia 2.7, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.6 mm, third 1.7. Fourth femur 2.6 mm, patella and tibia 3.0, metatarsus 2.3, tarsus 0.9.

Male from Circuata Cajuta, Bolivia. Prosoma orange, eye region gray. Abdomen: dorsum with pairs of white pigment spots and a posterior pair of black squares anterior to which are a pair of gray marks; venter with white pigment spots. Posterior eye row slightly recurved. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 1.0 diameter apart, 1.0 from laterals. Posterior median eyes 1.0 diameter apart, 1.2 from laterals. Height of clypeus equals 1.5 diameters of anterior median eyes. Total length 3.0 mm. Carapace 1.3 mm long, 1.1 wide in thoracic region, 0.3 wide behind lateral eyes, 0.5 high. First femur 1.3 mm, patella and tibia 1.5, metatarsus 1.1, tarsus 0.5. Second patella and tibia 1.4 mm, third 0.8, fourth 1.3.

Male and females have not been collected together but were collected from adjacent localities in Bolivia. Because the male is smaller than expected, they may not belong together.

*Variation.* Total length of females 5.2 to 6.5 mm.

*Diagnosis.* In ventral view, the epigynum of *M. alinahui* has a scape, constricted at its origin, flanked by two lobes, the outside one larger (Fig. 590); whereas in *M. lechugal*, the sides of the scape are straight and the outside lobe is less sclerotized (Fig. 595). In posterior view, *M. alinahui* has a median plate with slightly rounded sides (Fig. 591), whereas in *M. lechugal*, the median plate is narrow and constricted (Fig. 596).

Unlike those of other *Mangora* species, the male palpus has various unusual structures (center to 12 h in Fig. 594). Their homology could not be ascertained.

*Distribution.* Amazon region: Ecuador, Brazil, and Bolivia (Map 6A).

*Specimens Examined.* BRAZIL *Amazonas:* Manaus, Reserva Florestal Adolpho Ducke, 18 Dec. 1987, 1♀ (A. A. Lise, MCN 27428). BOLIVIA *La Paz:* Yungas Mapiri, N La Paz [above 4,000 m], 11–17 Aug. 1989, 1♀ (L. E. Peña, AMNH); Yungas La Paz, Circuata Cajuta, 2,400 m, 3–7 Dec. 1984, 1♂ (L. E. Peña, AMNH).

### *Mangora lechugal* new species
### Figures 595–599; Map 6A

*Holotype.* Female holotype and one female paratype from Lechugal [Tumbes Prov.], Peru, 1875–1885 (J. Sztolcman), in PAN. The specific name is a noun in apposition after the type locality.

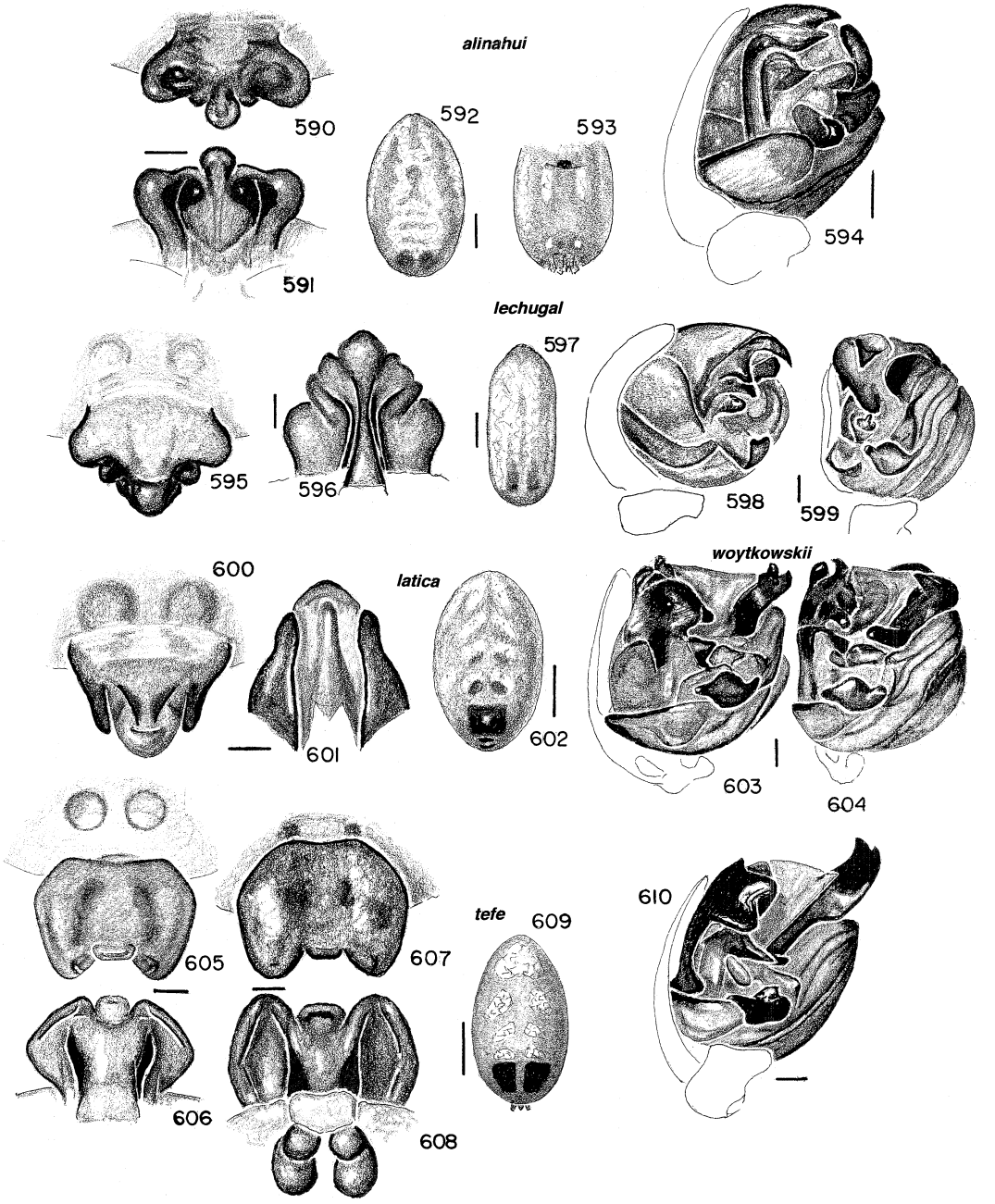
*Note.* Lechugal is on Río Zarumilla (Levi, 1964).

*Description.* Female holotype. Prosoma

→

Figures 590–594. *Mangora alinahui* new species. 590–593, female. 590, 591, epigynum. 590, ventral; 591, posterior. 592, abdomen, dorsal. 593, abdomen, ventral. 594, left male palpus, mesal.

Figures 595–599. *M. lechugal* new species. 595–597, female. 595, 596, epigynum. 595, ventral; 596, posterior. 597, abdomen, dorsal. 598, 599, male palpus. 598, mesal; 599, ventral.




Figures 600–602. *M. latica* new species, female. 600, 601, epigynum. 600, ventral; 601, posterior. 602. abdomen, dorsal.

Figures 603, 604. *M. woytkowskii* new species, male palpus. 603, mesal; 604, ventral.

Figures 605–610. *M. tefe* new species, female. 605–609, epigynum. 605, 607, ventral; 606, 608, posterior. 609, abdomen, dorsal. 610, male palpus, mesal.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

yellow. Abdomen: slender, with black rectangles fading anteriorly (Fig. 597); venter anterior on sides with some white pigment spots. Posterior eye row straight. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 1.2 from laterals. Posterior median eyes 0.3 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.8 mm. Carapace 2.1 mm long, 1.8 wide in thoracic region, 0.8 wide behind lateral eyes, 1.4 high. First femur 3.0 mm, patella and tibia 3.3, metatarsus 3.1, tarsus 1.2. Second patella and tibia 3.1 mm, third 2.0. Fourth femur 2.7 mm, patella and tibia 3.3, metatarsus 3.1, tarsus 1.0.

Male from Palmal. Coloration as in female except with less black eye pigment. Posterior eye row straight. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.5 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Venter of fourth femur with proximal macroseta. Total length 4.2 mm. Carapace 2.1 mm long, 1.7 wide in thoracic region, 0.7 wide behind lateral eyes, 0.8 high. First femur 2.6 mm, patella and tibia 2.9, metatarsus 2.8, tarsus 1.2. Second patella and tibia 2.7 mm, third 1.6, fourth 2.8.

The association of male and female is uncertain.

*Diagnosis.* The epigynum of *M. lechugal* is weakly sclerotized (Fig. 595) and is distinguished from that of *M. alinahui* in posterior view: *M. alinahui* (Fig. 591) has a wide median plate, whereas *M. lechugal* has a very narrow, constricted one (Fig. 596).

The male palpus (Figs. 598, 599) has a terminal apophysis with two spurs in mesal view, resembling those of *M. pia* (Fig. 614) and *M. bambusa* (Fig. 620). It differs by the shape of the median apophysis (4 h in Fig. 598) and the large lobe of the terminal apophysis in ventral view (2 h in Fig. 599).

*Distribution.* Upper Amazon: southern Ecuador, northwestern Peru (Map 6A).

*Specimens Examined.* ECUADOR Palmal [Palmales, El Oro, 03°41′S, 80°07′W, 93 m (Paynter, 1993)], 1875–1885, 1♂ (J. Sztolcman, PAN).

### *Mangora latica* new species
Figures 600–602; Map 6C

*Holotype.* Female holotype from 10 km E Santa Leticia, Huila, Finca Meremberg, 2,300 m, Colombia, Mar. 1979 (W. Eberhard), in MCZ. The name is an arbitrary combination of letters.

*Description.* Female holotype. Carapace yellow. Labium, endites, sternum orange. Legs, including coxae, yellow. Abdomen: whitish; dorsum has areas with white pigment spots and black and gray patches (Fig. 602); venter with a pair of small areas of white pigment spots. Posterior eye row straight. Ocular quadrangle longer than wide, anterior slightly widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes their diameter apart, 1.0 from laterals. Posterior median eyes 0.6 diameter apart, 1.4 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 4.4 mm. Carapace 1.7 mm long, 1.4 wide in thoracic region, 0.7 wide behind lateral eyes, 0.9 high. First femur 1.8 mm, patella and tibia 2.1, metatarsus 1.7, tarsus 0.8. Second patella and tibia 1.9 mm, third 1.2, fourth 1.9.

The male is unknown.

*Variation.* Total length of females 3.7 to 4.4 mm.

*Diagnosis.* In ventral view, the distinctive *M. latica* epigynum, has a tongue flanked by a pair of lobes and a median keel terminating in the distal pocket of the scape (Fig. 600). The posterior view, a longer than wide median plate, has a keel (Fig. 601); the median sides of the pointed lateral plates are parallel (Fig. 601).

*Natural History.* A specimen was col-

lected in secondary cloud forest in Depto. Cundinamarca, Colombia.

*Distribution.* Upper Amazon: Colombia (Map 6C).

*Paratype.* COLOMBIA *Huila:* La Plata, Reserva Meremberg, 2,300 m, 13 Oct. 1992, 1♀ (E. Flórez, ICNB AR-167).

*Specimens Examined.* COLOMBIA *Cundinamarca:* San Antonio de Tequendama, Vereda la Rapida, Bosque de Ermitaño, 2,000 m, Dec. 1997, June 1998, 1♀ (S. Forero R., ICNB AR-2459).

### *Mangora woytkowskii* new species
Figures 603, 604; Map 6C

*Holotype.* Male holotype from Divisoria, 1,400 m, Huánuco, Peru, 23 Sep.–3 Oct. 1946 (F. Woytkowski), in AMNH. The species is named after the collector.

*Description.* Male holotype. Prosoma light orange. Abdomen: lighter, dorsum with paired patches of white pigment spots, a posterior pair of black patches, a pair of light gray patches anterior to black patches. Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.8 diameter apart, 0.6 from laterals. Posterior median eyes 0.8 diameter apart, 1.3 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Venter of fourth femur with proximal macroseta. Total length 3.3 mm. Carapace 1.7 mm long, 1.6 wide in thoracic region, 0.7 wide behind lateral eyes, 0.8 high. First femur 1.9 mm, patella and tibia 2.3, metatarsus 1.6, tarsus 0.7. Second patella and tibia 1.9 mm, third 0.8, fourth 2.1.

The female is not known.

*Variation.* Total length of males 2.7 to 3.3 mm.

*Diagnosis. Mangora woytkowskii* palpus differs from that of *M. tefe* (Fig. 610) by having a shorter projection on the terminal apophysis (2 h in Fig. 603) and a shorter, triangular embolus (center of Fig. 603).

*Distribution.* Upper Amazon region in Central Peru (Map 6C).

*Specimens Examined.* PERU *Huánuco:* Dantas, La Molina, SW de Puerto Inca, 270 m, 09°38′S, 75°00′W, 18 May–1 June 1987, 2♂ (D. Silva D., MUSM). *Ucayali:* Bosque Alexander von Humboldt, "El Caobal", km 8, 3 Aug. 1986, 1♂ (D. Silva D., MUSM). BRAZIL *Pará:* Jacareacanga, Oct. 1959, 2♂ (M. Alvarenga, AMNH).

### *Mangora tefe* new species
Figures 605–610; Map 6C

*Holotype.* Female holotype and 10 female and three immature paratypes from Tefé, Fonte Boa, São Paulo [de Olivença, Amazonas, Brazil, ca. 1880s, probably M. de Mathan], in MNHN 2068A. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellowish-white. Abdomen: dorsum with anterior white pigment patches, a pair of posterior black patches (Fig. 609). Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 1.0 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.4 diameter apart, 1.0 from laterals. Posterior median eyes 0.3 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 4.8 mm. Carapace 1.8 mm long, 1.4 wide in thoracic region, 0.7 wide behind lateral eyes, 1.2 high. First femur 1.6 mm, patella and tibia 2.2, metatarsus 1.6, tarsus 0.7. Second patella and tibia 2.0 mm, third 1.4. Fourth femur 1.8 mm, patella and tibia 2.2, metatarsus 1.7, tarsus 0.7.

Male from Alto Solimões, Brazil. Light yellowish. Abdomen: lighter, dorsum with a pair of posterior black squares. Posterior eye row slightly procurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.5 diameter apart, 0.5 from laterals. Posterior medians 1.0 diameter of anterior median eyes. Fourth femur with a long, ventral, proximal macroseta. Total length 3.7 mm. Carapace 1.8 mm long, 1.5 wide in thoracic region, 0.6 wide behind lateral eyes, 1.2 high. First femur 1.8 mm, patella and tibia 2.2, meta-

tarsus 1.5, tarsus 0.8. Second patella and tibia 1.8 mm, third 1.2, fourth 2.0.

Males and females have been collected together.

*Variation.* Total length of females 3.8 to 5.4 mm, males 2.8 to 3.7 mm. Figures 605, 606, 609 were illustrated from the holotype, Figures 607, 608 from a specimen from Ecuador.

*Diagnosis. Mangora tefe* epigynum differs from that of all other *Mangora* by having a broad plate at the base of the epigynum, wider than long, and a short, wide tongue within a notch of the plate (Figs. 605, 607). In posterior view, the raised median plate is flanked by a pair of elongate depressions (Figs. 606, 608).

The *M. tefe* male palpus differs from that of *M. woytkowskii* (Fig. 603) by having a longer terminal apophysis projection (2 h in Fig. 610) and a longer, triangular embolus (center in Fig. 610).

*Natural History.* Specimens have been collected in moist tropical forest in Depto. Meta, and in forest canopy in Depto. Vaupés, Colombia.

*Distribution.* Upper Amazon: Colombia, Ecuador and western Brazil (Map 6C).

*Specimens Examined.* COLOMBIA *Meta:* Macarena, Río Duda, 450 m, Dec. 1992, 3♀, 4 imm. (A. Calixto, ICNB AR-2997); Parque Nacional Natural Macarena, Centro de Investigaciones Ecologicas, 150 m, 29 Oct. 1998, 1♀ (A. Calixto, ICNB AR-3486). *Vaupés:* Taraira, Serr. Taraira, Caño Pintadillo, 01°01′S, 69°39′W, Mar. 2002, 5♀, 1♂, 2 imm. (J. Pinzón, ICNB AR-3335); Bajo Río Apaporis, Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, Sep. 2002–May 2003, 9♀, 3♂, 9 imm. (L. Benavides, ICNB AR-2989A, 3327, 3329); Bajo Rio Apaporis, Lago Taraira, Estación Biológica Caparú, 01°04′S, 69°31′W, May 2001, 2♀ (J. Pinzón, Y. A. Sabogal, ICNB AR-3340). *Amazonas:* Corr. La Mathani, Quebradón El Ayo, 01°35′S, 69°31′W, May 2002, 1♀, 1♂, 3 imm. (J. Pinzón, MCZ). ECUADOR *Napo:* Reserva Forestal Cuyabeno, Lago Grande, 27 July 1985, 1♀ (L. Avilés, MECN). BRAZIL *Amazonas:* Alto Solimões, Dec. 1979, 1♂ (A. A. Lise, MCN 8893). *Acre:* Parque Nacional da Serra do Divisor, Várzea Gibralta-Pedro, 19 Nov. 1996, 1♀ (R. S. Vieira, IBSP 9336).

## *Mangora pia* Chamberlin and Ivie Figures 611–615; Map 5H

*Mangora pia* Chamberlin and Ivie, 1936: 58, pl. 12, fig. 112, ♀. Female holotype from Barro Colorado Island, Panama, in AMNH, examined. Chickering, 1954: 208, figs. 18–21, ♀♂; Levi, 2005: 176, figs. 200–207, ♀♂; Platnick, 2006.

*M. belligerens* Chamberlin and Ivie, 1936: 60, pl. 12, fig. 113, ♂. Male holotype from Barro Colorado Island, Panama, in AMNH, examined. First synonymized by Chickering, 1954.

*M. wiedenmeyeri* Schenkel, 1953: 18, fig. 15, ♀. Female holotype from El Pozón, Falcón, Venezuela, in NHMB, examined. Synonymized by Levi, 2005.

*Description.* Description in Levi (2005). Total length of females 5.0 to 6.7 mm, males 3.3 to 4.3.

*Diagnosis. Mangora pia* epigynum is heavily sclerotized and is distinguished from others by having a median notch in ventral view, framed by sclerotized folds (Fig. 611).

The male palpus is distinguished from others by the projecting terminal apophysis (12 h in Figs. 614, 615) and a single median projection from the median apophysis (5 h in Fig. 614).

*Natural History.* Specimens have been found in forest in Panama.

*Distribution.* Panama to northern Brazil (Map 5H).

*Specimens Examined.* Central American specimens were listed in Levi (2005). COLOMBIA *Bolívar:* St. Catalina, Hacienda da El Ceibal, 20 m, Oct. 1999, 1♀ (E. Flórez, ICNB AR-1587). *Valle:* nr. Cali, 1,000 m, 3♀ (W. Eberhard 1128, 1131, 1132, MCZ); Río Jamundi nr. Jamundi, 9 Dec. 1969, 1♀ (W. Eberhard, MCZ). BRAZIL *Roraima:* São Gabriel da Cachoeira, Ilha de Maracá, May 1992, 1♀ (M. Nascimento, MCP 1961).

## *Mangora bambusa* new species Figures 616–621; Map 6B

*Holotype.* Female holotype and three female paratypes from Cali, Valle, Colombia, 1,000 m, 30 Dec.

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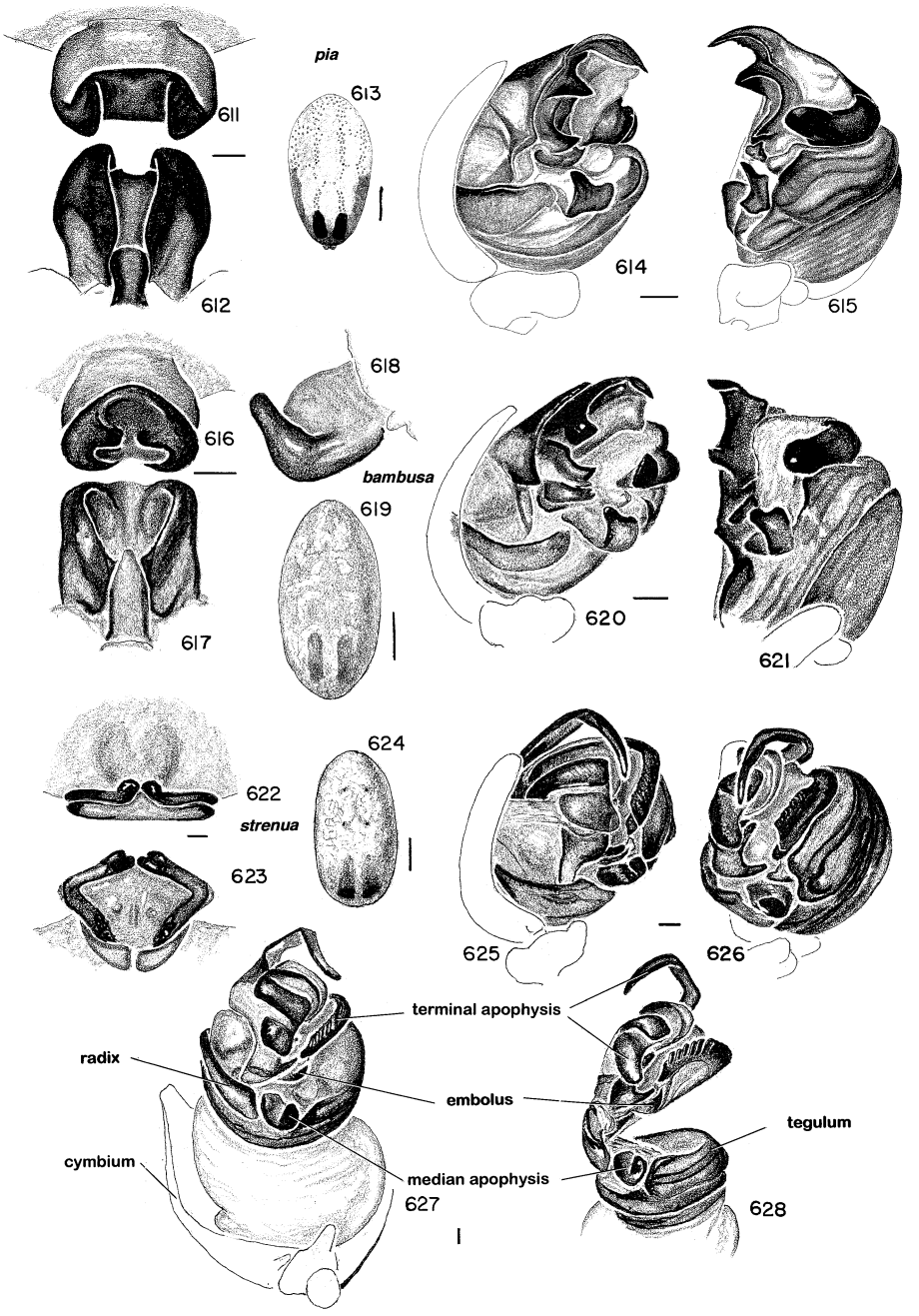
Figures 611–615. *Mangora pia* Chamberlin and Ivie. 611–613, female. 611, 612, epigynum. 611, ventral; 612, posterior. 613, abdomen, dorsal. 614, 615, left male palpus. 614, mesal; 615, ventral.




Figures 616–621. *M. bambusa* new species. 616–619, female. 616–618, epigynum. 616, ventral; 617, posterior; 618, lateral. 619, abdomen, dorsal. 620, 621, male palpus. 620, mesal; 621, ventral.

Figures 622–628. *M. strenua* (Keyserling). 622–624, female. 622, 623, epigynum. 622, ventral; 623, posterior. 624, abdomen, dorsal. 625–628, male palpus. 625, mesal; 626, ventral. 627, 628, palpus expanded.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

1976 (H. Levi), in MCZ. The species is named after its habitat of bamboo forest; the name is a noun in apposition.

*Description.* Female holotype. Prosoma light yellowish. Abdomen: lighter; dorsum with areas of white spots and two posterior rectangular gray patches (Fig. 619); venter with a pair of white spots anterior and lateral to spinnerets; sides with white spots. Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 0.7 diameter apart, 1.1 from laterals. Posterior median eyes 0.2 diameter apart, 1.2 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Abdomen narrow (Fig. 619). Total length 5.3 mm. Carapace 2.2 mm long, 1.6 wide in thoracic region, 0.7 wide behind lateral eyes, 1.4 high. First femur 2.6 mm, patella and tibia 2.9, metatarsus 2.3, tarsus 1.0. Second patella and tibia 2.6 mm, third 1.7. Fourth femur 2.7 mm, patella and tibia 2.8, metatarsus 2.2, tarsus 0.9.

Male paratype. Coloration as in female. Posterior eye row recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 0.7 diameter of anterior medians; lateral eyes 0.5 diameter. Anterior median eyes 0.6 diameter apart, 0.6 from laterals. Posterior median eyes 0.4 diameter apart, 1.2 from laterals. Height of clypeus equals 0.7 diameter of anterior median eye. Fourth femur with proximal, ventral macroseta. Total length 3.8 mm. Carapace 2.0 mm long, 1.6 wide in thoracic region, 0.7 wide behind lateral eyes, 0.9 high. First femur 2.2 mm, patella and tibia 2.7, metatarsus 2.3, tarsus 0.9. Second patella and tibia 2.2 mm, third 1.4. Fourth femur 2.3 mm, patella and tibia 2.3, metatarsus 2.1, tarsus 0.8.

The male and female were collected in adjacent areas.

*Variation.* Total length of females 4.8 to 6.0 mm. The epigynal depressions of all specimens were filled with white mucus, which was difficult to remove. The illustrations were made from the female holotype and male paratype.

*Diagnosis.* The *M. bambusa* epigynum (Fig. 616) differs from all other species by having two pairs of depressions in ventral view (Fig. 616). In posterior view there is a triangular depressions containing the median plate (Fig. 617).

The male palpus is similar to that of *M. pia* (Figs. 614, 615), but the embolus tip appears notched (center pointing toward 3 h in Fig. 620), and most sclerites are slightly differently shaped (Figs. 620, 621).

*Natural History.* Females were collected from bamboo forest and the male from a grazed field adjacent to the bamboo.

*Distribution.* Southwestern Colombia (Map 6B).

*Paratypes.* COLOMBIA *Valle:* Cali, 1,000 m, 30 Dec. 1976, 1♂ (H. Levi, MCZ).

*Specimens Examined.* No other specimens have been collected.

### *Mangora strenua* (Keyserling)
### Figures 622–628; Map 6D

*Epeira strenua* Keyserling, 1893: 257, pl. 13, fig. 192, ♀. Female holotype from Taquara, Rio Grande do Sul [Brazil], in BMNH, lost.

*Araneus strenuus*:—Petrunkevitch, 1911: 318.

*Mangora strenua*:—Mello-Leitão, 1943: 184; Platnick, 2006.

*Note.* Although the holotype has been lost, Keyserling's (1893) illustration makes this large common species recognizable.

*Description.* Female. Prosoma orange. Abdomen: dorsum with white pigment spots and two posterior black patches, fading out anteriorly (Fig. 624). Posterior eye row recurved. Ocular quadrangle rectangular, slightly longer than wide. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 2.0 from laterals. Posterior median eyes 0.6 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 7.2 mm. Carapace 2.5 mm long, 2.1 wide in thoracic region, 0.9 wide behind lateral eyes, 1.7 high. First femur 2.8 mm, patella and tibia 3.2, meta-

tarsus 2.8, tarsus 1.0. Second patella and tibia 3.0 mm, third 2.1. Fourth femur 3.0 mm, patella and tibia 3.2, metatarsus 2.7, tarsus 1.0.

Male. Abdomen: dorsum with posterior fading black marks, four indistinct anterior gray patches, white near gray patches and along two lateral lines on dorsum. Posterior eye row recurved. Ocular quadrangle slightly wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.8 diameter. Anterior median eyes 1.0 diameter apart, 1.4 from laterals. Posterior median eyes 0.5 diameter apart, 1.5 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Fourth femur with a proximal, ventral small macroseta. Total length 5.7 mm. Carapace 2.7 mm long, 2.3 wide in thoracic region, 0.8 wide behind lateral eyes, 1.4 high. First femur 2.8 mm, patella and tibia 3.3, metatarsus 2.7, tarsus 1.2. Second patella and tibia 3.0 mm, third 2.0. Fourth femur 3.0 mm, patella and tibia 3.3, metatarsus 3.0, tarsus 1.0.

Males and females have been collected together.

*Variation.* Total length of females 5.5 to 7.2 mm, males 5.3 to 7.1.

*Diagnosis. Mangora strenua* females differ from all other species by having an unusual epigynum: In ventral view two transverse dark folds along the rim meet at midline (Fig. 622) and in posterior view is a large diamond-shaped median plate framed by dark folds (Fig. 623).

The male is distinguished by a distal terminal apophysis projection bent toward the mesal side (12 h in Figs. 625–628).

*Natural History.* The species has been found in forest on Pico da Tijuca and in bamboo undergrowth in Teresópolis.

*Distribution.* Southern Brazil, northeastern Argentina (Map 6D).

*Specimens Examined.* BRAZIL *Minas Gerais:* Lavras, 29 Mar. 1979, 1♀ (W. D. Fronk, MCZ). *Rio de Janeiro:* Rio de Janeiro, 1♀ (C. F. de Mello-Leitão, MNRJ 279); Parque Nacional da Tijuca, Pico da Tijuca, 500–950 m, 17 Apr. 1965, 1♀ (H. Levi, MCZ); Teresópolis, Parque Nacional da Serra dos Orgãos, 1,000–1,800 m, 19 Apr. 1965, 3♀ (H. Levi, MCZ); Teresópolis, 900–1,000 m, Mar. 1946, 2♀, 1♂ (H. Sick, AMNH). *São Paulo:* Botucatu, Parque Municipal de Botucatu, 12 Feb. 1987, 2♀, 1♂ (I. M. P. Rinaldi, L. C. Forti, UBTU); Salesópolis, Estação Biológica de Boracéia, 10 Feb. 1997, 1♂ (L. S. Rocha, IBSP 11957); Cocaia, May 1951, 1♀ (H. Urban, MZSP 9531); Cotia, Mar. 2003, 5♀, 3♂ (A. A. Nogueira, H. Y. Yamaguti, MZSP); Salesópolis, Estação Ecológica de Boracéia, 10 Apr. 2000, 1♀ (A. D. Brescovit et al., IBSP 27090); 15 km E Guapiara, Fazenda Intervales, Feb. 1990, 2♀, 1♂ (W. Eberhard 3568, 3583, MCZ); Mogi das Cruzes, 4 Jan. 1995, 4♀ (R. Martins, IBSP 14248); São Paulo, Jardim Botânico, 19 Mar. 1985, 1♀ (H., L. Levi, MCZ); São Paulo, Mata do Governo, Instituto de Botânica, 4 Mar. 1959, 1♂ (L. Lane, AMNH). *Paraná:* Curitiba, 4♀ (Z. Rohr, MNRJ); Rio Branco do Sul, 16 Apr. 1987, 4♀ (A. D. Brescovit, MCN 17141); Almirante Tamandaré, Terra Boa, 5 Apr. 1987, 1♀ (A. D. Brescovit, MCN 16952); Rio Azul, 3 Apr. 1993, 1♂ (R. Bóçon, MCN 23608); Ponta Grossa, Vila Velha, 23 Feb. 1987, 1♂ (Equipe Profaupar, MCN 20353). *Santa Catarina:* Rio Negrinho, Distrito de Volta Grande, 7–10 Apr. 2001, 2♀ (A. Chagas-Jr., MNRJ 2102). *Rio Grande do Sul:* Bom Jesus, Fazenda Aver, 24 Mar. 1989, 3♀ (A. B. Bonaldo, MCN 18420); Cambará do Sul, 11–13 Apr. 1994, 9♀ (M. A. L. Marques, MCN 25408); Cambara do Sul, Itaimbézinho, 16 June 1983, 1♀; 27 April 1985, 1♀, 1♂ (A. Lise, MCN); 10 June 1985, 1♀ (A. A. Lise, MCN 13302); Campo Bom, 29 Apr. 1998, 1♂ (C. J. Becker, MCN 19434); Canela, 20 Mar. 1976, 1♀ (A. A. Lise, MCN 3886); 5 May 1984, 1♀ (M. Hoffmann, MCN 12196); 3 July 1965, 1♀ (A. A. Lise, MCN 4088); Curitiba, 24 Feb. 1978, 1♂ (R. Yzmota, MCN 9151); Arroio do Tigre, Itaúba, 19 Apr. 1978, 1♀ (H. Bischoff, MCN 7967); Maquiné, Estação Experimental da Fepagro, 6–8 Mar. 1998, 11♀, 1♂ (A. B. Bonaldo, MCN 29001); Machadinho, 8–14 Feb. 1983, 1♂ (A. B. Bonaldo, MCN 18188); Machadinho, Linha do Tigre, 9–10 May 2001, 1♀ (R. Ott, L. Moura, MCN 33836); Nova Petrópolis, 7 Apr. 1973, 1♀ (A. A. Lise, MCN 828); 7 July 1973, 1♀ (A. A. Lise, MCN 1446); Novo Hamburgo, 17 June 1986, 2♀ (C. J. Becker, MCN 15162); Porto Alegre, 15 May 1966, 2♀ (A. A. Lise, MCN 163); Porto Alegre, Morro Santana, 5 Jan. 1968, 1♀ (A. A. Lise, MCN 461); Porto Alegre, Belém Novo, 27 June 1993, 1♀ (R. Balestrin, MCP 3472); São Francisco de Paula (many collections); Serra do Pinto, Josafaz, Terra de Areia, 20 May 1996, 1♀ (T. Strehl, MCN 27619); Três Cachoeras, 25 Feb. 1989, 1♀ (L. Moura, MCN 19596); Torres, 8 May 1994, 1♀ (A. A. Lise, MCP 4837); Triunfo, 16–17 Mar. 1998, 1♀ (L. Moura, MCN 29161); Vacaria, 21–25 Apr. 1982, 2♀ (A. A. Lise, MCN 10236); Viamão, 1959, 1♀ (A. A. Lise, MCN 9333); Viamão, Parque Saint Hilaire, 7 Jan. 1976, 1♀ (E. H. Buckup, MCN 4248); 30 Apr. 1976, 1♀ (A. A. Lise, MCN 4153); Vila Oliva, 5, 6 Apr. 1975, 11♀, 3♂ (A. Lise, MCN 2674, 2675); 4 Apr. 1975, 3♀ (C. Becker, MCN 2679); 15 Jan. 1976, 1♀

(E. H. Buckup, MCN 3700). ARGENTINA *Misiones:* Tobuna, July–Aug. 1959, 1♀ (O. De Ferraris, AMNH).

### *Mangora nonoai* new species
Figures 629–632; Map 2D

*Holotype.* Female holotype from Parque Florestal Estadual de Nonoai, Nonoai, Rio Grande do Sul, Brazil, 14 Jan. 1985 (A. A. Lise), in MCN 12822. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma orange; carapace with symmetrical light areas (Fig. 631). Abdomen: dorsum with three pairs of white patches and a pair of posterior dark gray patches (Fig. 631); venter with a pair of white spots anterior and lateral to spinnerets; sides with some white spots. Posterior eye row slightly recurved. Ocular quadrangle longer than wide, anterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.2 diameters apart, 2.0 from laterals. Posterior median eyes 0.3 diameter apart, 2.0 from laterals. Height of clypeus equals 0.8 diameter of anterior median eyes. Total length 7.0 mm. Carapace 2.6 mm long, 2.1 wide in thoracic region, 0.9 wide behind lateral eyes, 1.6 high. First femur 2.5 mm, patella and tibia 3.0, metatarsus 2.2, tarsus 0.9. Second patella and tibia 2.7 mm, third 1.8. Fourth femur 2.8 mm, patella and tibia 3.0, metatarsus 2.7, tarsus 0.9.

Male from São Paulo State. Coloration as in female but fewer white spots. Posterior eye row slightly recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.4 diameter. Anterior median eyes 0.6 diameter apart, 1.2 from laterals. Posterior median eyes 0.3 diameter apart, 1.6 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 4.8 mm. Carapace 2.2 mm long, 1.8 wide in thoracic region, 0.7 wide behind lateral eyes, 1.3 high. First femur 2.3 mm, patella and tibia 2.6, metatarsus 2.0, tarsus 0.8. Second patella and tibia 2.2 mm, third 1.6, fourth 2.5.

Males and females have been collected together.

*Variation.* Total length of females 6.6 to 7.0 mm, males 4.6 to 4.8.

*Diagnosis.* The *M. nonoai* epigynum, unlike others, has a median notch in ventral view, framed by two transverse folds (Fig. 629). In posterior view, two wide lateral plates are separated by a seam in midline (Fig. 630).

In the male, the palpus differs from others by the median apophysis that has moved distally and ventrally (3 h in Fig. 632). The finger-shaped sclerite in the center is probably part of the terminal apophysis.

*Natural History.* Eberhard (personal communication) writes that his specimens were found in "early second growth, 2 ft. [60 cm] above ground, male in curled retreat at top anchor of web. The web was inclined, closer to horizontal than to vertical".

*Distribution.* Southern Brazil (Map 2D).

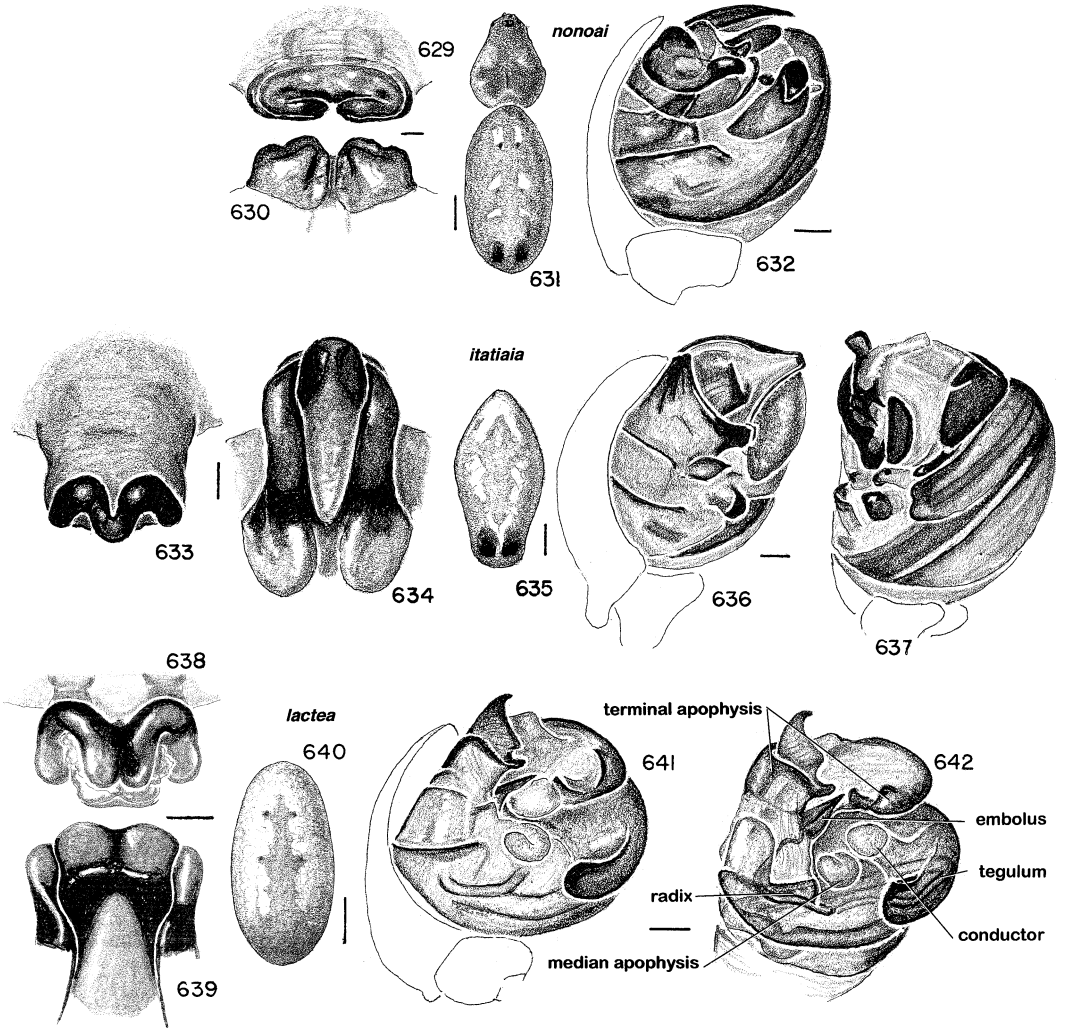
*Paratypes.* BRAZIL *São Paulo:* 15 km E Guapiara, Fazenda Intervales, 700 m, Feb. 1990, 2♀, 1♂ (W. Eberhard 3577, MCZ).

*Specimens Examined.* No other specimens have been found.

### *Mangora itatiaia* new species
Figures 633–637; Map 4I

*Holotype.* Female holotype from Parque Nacional do Itatiaia, Itatiaia, Rio de Janeiro, Brazil, June 2001 (H. F. Japyassú et al.), in IBSP no. 28915. The specific name is a noun in apposition after the type locality.

*Description.* Female holotype. Prosoma yellow. Abdomen: lighter yellowish; dorsum with patches of white pigment spots, posterior with a pair of black patches fading anteriorly (Fig. 635); venter with median line of white spots. Posterior eye row straight. Ocular quadrangle as long as anterior width, anterior widest. Posterior median eyes 1.2 diameters of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 1.0 diameter apart, 1.2 from laterals. Posterior median eyes 0.5 diameter apart, 2.0 from laterals. Height of clypeus




Figures 629–632. *Mangora nonoai* new species. 629–631, female. 629, 630, epigynum. 629, ventral; 630, posterior. 631, carapace, abdomen. 632, left male palpus, mesal.

Figures 633–637. *M. itatiaia* new species. 633–635, female. 633, 634, epigynum. 633, ventral; 634, posterior. 635, abdomen, dorsal. 636, 637, male palpus. 636, mesal; 637, ventral.

Figures 638–642. *M. lactea* Mello-Leitão. 638–640, female. 638, 639, epigynum. 638, ventral; 639, posterior. 640, abdomen, dorsal. 641, 642, male palpus. 641, mesal; 642, expanded.

*Scale lines:* 1.0 mm; genitalia, 0.1 mm.

equals 1.0 diameter of anterior median eyes. Total length 6.7 mm. Carapace 2.6 mm long, 2.2 wide in thoracic region, 1.0 wide behind lateral eyes, 1.4 high. First femur 3.1 mm, patella and tibia 3.3, metatarsus 2.7, tarsus 1.2. Second patella and tibia 3.0 mm, third 2.0. Fourth femur 3.1 mm, patella and tibia 3.4, metatarsus 2.4, tarsus 0.8.

Male from Espírito Santo. Coloration as in female. Posterior eye row straight. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 di-

ameter. Anterior median eyes 1.2 diameters apart, 1.2 from laterals. Posterior median eyes 1.0 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 6.0 mm. Carapace 2.5 mm long, 2.2 wide in thoracic region, 0.8 wide behind lateral eyes, 1.3 high. First femur 2.5 mm, patella and tibia 3.0, metatarsus 2.4, tarsus 0.8. Second patella and tibia 2.6 mm, third 1.6, fourth, 2.8.

Males and females were not collected together; their match is uncertain. Similarities are the size, coloration, and shape of abdomen.

*Diagnosis.* The *M. itatiaia* epigynum (Fig. 633) is similar to that of *M. lactea* (Fig. 638), but in ventral view, a swollen fold is curved along the midline forming a notched tongue, flanked by two loops (Fig. 633), whereas in *M. lactea*, the folds have fused in midline (Fig. 638). In posterior view, *M. itatiaia* differs from all other species by having a long median plate framed by long lateral plates fused dorsally (Fig. 634), whereas in *M. lactea*, the sides are separated (Fig. 639).

The heavily sclerotized palpus differs by having a central truncated sclerite (center of Fig. 636).

*Distribution.* Southeastern Brazil (Map 4I).

*Specimens Examined.* BRAZIL *Espírito Santo:* Reserva Florestal Vale da Rio Doce, São Mateus, 5–12 Jan. 1998, 1♂ (A. D. Brescovit, IBSP 16540).

### *Mangora lactea* Mello-Leitão
### Figures 638–642; Map 6E

*Mangora lactea* Mello-Leitão, 1944: 331, fig. 16, ♀. Female holotype from Los Talas, Prov. Buenos Aires, Argentina, in MLP no. 15965, examined. Platnick, 2006.

*Description.* Female from Corrientes. Prosoma yellowish. Abdomen: sprinkled with white pigment spots (Fig. 640) but without posterior black marks. Posterior median eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 1.3 from laterals. Posterior median eyes 0.8 diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 5.8 mm. Carapace 2.2 mm long, 1.8 wide in thoracic region, 0.8 wide behind lateral eyes, 1.2 high. First femur 2.3 mm, patella and tibia 2.6, metatarsus 2.2, tarsus 0.8. Second patella and tibia 2.2 mm, third 1.6, fourth 2.6. First and fourth legs subequal in length.

Male from Prov. Buenos Aires. Color as in female. Posterior median eye row recurved. Ocular quadrangle wider than long, anterior widest. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.6 diameter. Anterior median eyes 1.0 diameter apart, 1.1 from laterals. Posterior median eyes 0.3 their diameter apart, 2.0 from laterals. Height of clypeus equals 1.0 diameter of anterior median eyes. Total length 3.7 mm. Carapace 1.8 mm long, 1.5 wide in thoracic region, 0.6 wide behind lateral eyes, 1.0 high. First femur 2.2 mm, patella and tibia 2.5, metatarsus 2.1, tarsus 0.8. Second patella and tibia 2.0 mm, third 1.4, fourth 2.3.

Males and females have been collected together.

*Variation.* Total length of females 4.8 to 6.0 mm, males 3.2 to 4.2. The epigynum usually has a mucus plug, making it difficult to examine. Figures 638, 639 were made from the female holotype, the male specimens from Buenos Aires Prov.

*Diagnosis. Mangora lactea* is the only large-sized *Mangora* without a pair of black patches on the posterior of the abdomen (Fig. 640). The epigynum in ventral view has two loops meeting and touching along the midline (Fig. 638), whereas in *M. itatiaia*, the loops form a tongue (Fig. 633). In posterior view, the lateral plates are separated in *M. lactea* (Fig. 639), whereas in *M. itatiaia*, they fuse dorsally embracing the long median plate (Fig. 634).

The *M. lactea* terminal apophysis of the male palpus has a projecting distal hook

(11 h in Figs. 641, 642), and the median apophysis has no spine (Fig. 642), whereas the palp of *M. itatiaia* lacks the distal hook, and the median apophysis is pointed at its distal end (Fig. 636).

*Distribution.* Southeastern Bolivia, southern Brazil, and northern Argentina (Map 6E).

*Specimens Examined.* BRAZIL *São Paulo:* Amparo, 18 Feb. 1943, 1♀, 1♂ (J. Lima, MZSP 13254). *Paraná:* Guarapuava, 28 Apr. 1967, 1♀ (P. de Biasi, MZSP 7036). *Rio Grande do Sul:* Bom Jesus, Fazenda Santa Cruz, 28–31 Mar. 1998, 1♀ (A. B. Bonaldo, MCN 29286). URUGUAY *"Kuinta y Kis" [Treinta y Tres?]:* Río Alimar Chico, 25 km WSW "Kuinta y Kis" [Treinta y Tres], 13 Apr. 1963, 1♀ (J. K. Bausiman, AMNH). BOLIVIA *Chuquisaca:* San Antonio de Parapetí, Río Parapetí, 15–25 July 1964, 1♀ (B. Malkin, AMNH). ARGENTINA *Corrientes:* Corrientes, ca. 1945, 1♀ (BMNH). *Catamarca:* El Rodeo, Jan. 1957, 1♀ (M. E. Galiano, MACN). *Córdoba:* Calamuchita, Mar. 1956, 3♀ (M. J. Viana, MACN); Jesus María, June 1944, 1♀ (Maldonado, MLP). *Entre Ríos:* Paraná, J. Catalina, 25 Feb. 1934, 8♀, 3♂ (D. Jurado, J. B. Daguerre, MACN); Parque Nacional El Palmar, Feb. 1951, 2♀ (P. Goloboff, MACN). *Buenos Aires:* Buenos Aires, Apr. 1940, 3♀ (F. Monrós, MACN); Reserva Ribera Norte, Mar. 1999, 2♀ (M. Pandolfi, MACN); Tigre, Apr. 1927, 1♀ (J. Brethes, MACN); May 1949, 1♀ (J. M. Viana, MACN); Punta Lara, Feb. 1941, 1♀ (F. Monrós, MACN); Feb. 1967, 3♀, 3 ♂ (M. E. Galiano, MACN, MCZ); Isla Martín García, 1940, 1♀ (J. M. Viana, MACN); Delta, Arroyo Caraguatá, La Violeta, 6 Feb. 1951, 1♀ (A. Bachmann, MACN 3222).

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## LITERATURE CITED

BONNET, P. 1957. Bibliographia Araneorum. Toulouse, France: Les Artisants de L'Imprimerie Douladure. Vol. 2, No. 3. Pp. 1927–3026.

CAMBRIDGE, F. O. P.- 1904. Arachnida, Araneidea and Opiliones. 2: 465–545. Biologia Centrali-Americana, Zoologia (London).

CAMBRIDGE, O. P.- 1889. Arachnida, Araneidea. 1: 1–56. Biologia Centrali-Americana, Zoologia (London).

CAPORIACCO, L. 1948. Arachnida of British Guiana collected by Prof. Beccari. Proceedings of the Zoological Society of London, 118: 607–747.

CARICO, J. 1986. Web removal patterns in orb-weaving spiders, pp. 306–318. *In* W. A. Shear (ed.), Spiders. Webs, Behavior and Evolution. Stanford, California: Stanford University Press.

CHAMBERLIN, R. V., AND W. IVIE. 1936. New spiders from Mexico and Panama. Bulletin of the University of Utah, Biological Series, 27(5): 1–103.

CHICKERING, A. M. 1954. The Genus *Mangora* (Argiopidae) in Panama. Bulletin of the Museum of Comparative Zoology, 111: 193–215.

CRAIG, C. L. 1987a. The significance of spider size to the diversification of spider-web architectures and spider reproductive modes. The American Naturalist, 129: 47–68.

———. 1987b. The ecological and evolutionary interdependence between web architecture and web silk spun by orb web weaving spiders. Biological Journal of the Linnaean Society, 30: 135–162.

———. 1988. Insect perception of spider orb webs in three light habitats. Functional Ecology, 2: 277–282.

———. 1989. Alternative foraging modes of orb web weaving spiders. Biotropica, 21: 257–264.

EBERHARD, W. G. 1982. Behavioral characters for the higher classification of orb-weaving spiders. Evolution, 36(5): 1067–1095.

GRASSHOFF, M. 1971. Die Tribus Mangorini, IV. Die *Mangora*-Gruppe (Arachnida: Araneae: Araneidae-Araneinae). Senckenbergiana Biologica, 52: 293–311.

———. 1973. Bau und Mechanik der Kopulationsorgane der Radnetzspinne *Mangora acalypha*

(Arachnida, Araneae). Zeitschrift für Morphologie der Tiere, 74: 241–252.

KEYSERLING, E. 1864. Beschreibung neuer und wenig bekannter Arten aus der Familie Orbitelae Latrl. oder Epeiridae Sund. Sitzungs-Berichte der naturwissenschaftlichen Gesellschaft Isis, Dresden, 1863: 119–154.

———. 1881. Neue Spinnen aus Amerika. Verhandlungen der k. k. zoologisch-botanischen Gesellschaft in Wien, 30: 547–582.

———. 1893. Die Spinnen Amerikas, Epeiridae. Nürnberg: Verlag von Bauer und Raspe, 4: 1–377.

KOCH, C. L. 1837. Die Arachniden. Nürnberg. 3: 1–120 (not seen).

———. 1840. Crustacea, Myriapoda et Arachnides *in* A. F. Fürnrohr, Naturhistorische Topographie von Regensburg, 3: 298–416 (not seen).

LEVI, H. W. 1964. Nineteenth century South American araneology. Papeis Avulsos do Deptamento de Zoologia, Secretaria da Agricultura, São Paulo, 16(1): 9–19.

———. 1967. Habitat observations, records, and new South American theridiid spiders (Araneae, Theridiidae). Bulletin of the Museum of Comparative Zoology, 136(2): 21–37.

———. 1974. The orb-weaver genus *Zygiella*. Bulletin of the Museum of Comparative Zoology, 146: 267–290.

———. 1975. The American orb-weaver genera *Larinia, Cercidia* and *Mangora* north of Mexico (Araneae, Araneidae). Bulletin of the Museum of Comparative Zoology, 147(3): 101–135.

———. 1991. The Neotropical and Mexican species of the orb-weaver genera *Araneus, Dubiepeira* and *Aculepeira* (Araneae: Araneidae). Bulletin of the Museum of Comparative Zoology, 152: 167–315

———. 1997. The American orb weavers of the genera *Mecynogea, Manogea, Kapogea* and *Cyrtophora* (Araneae: Araneidae). Bulletin of the Museum of Comparative Zoology, 155: 215–255.

———. 2005. The orb weaver genus *Mangora* of Mexico, Central America and the West Indies (Araneae: Araneidae). Bulletin of the Museum of Comparative Zoology, 158: 139–182.

LUBIN, Y. 1978. Seasonal abundance and diversity of web-building spiders in relation to habitat structure on Barro Colorado Island, Panama. Journal of Arachnology, 6: 31–51.

MELLO-LEITÃO, C. F. DE. 1940. Aranhas do Xingu colhidas pelo Dr. Henry Leonardos. Annaes da Academia Brasileira de Sciencias, 12: 21–32.

———. 1941. Las arañas de Córdoba, La Rioja, Catamarca, Tucuman, Salta y Jujuy collectadas por los Profesores Birabén. Revista del Museo de La Plata (Nueva Serie) Zoología, 2: 99–198.

———. 1943. Catálogo das aranhas do Rio Grande do Sul. Archivos do Museu nacional, Rio de Janeiro, 37: 147–245.

———. 1944. Arañas nuevas de la Provincia de Buenos Aires. Revista del Museo de La Plata (Nueva Serie) Zoología, 3: 311–393.

———. 1947. Aranhas de Carmo do Rio Claro (Minas Gerais) coligidas pelo naturalista José C. M. Carvalho. Boletim do Museu Nacional, Rio de Janeiro (N.S., Zool.), 80: 1–34.

———. 1948. Contribuição ao conhecimento da Fauna Araneológica da Guianas. Anais da Academia Brasileira de Ciencias, 20: 151–196

PAYNTER, R. A. 1993. Ornithological Gazetteer of Ecuador. Cambridge, Massachusetts: Museum of Comparative Zoology, Harvard University.

PETRUNKEVITCH, A. 1911. A synonymic index-catalogue of spiders of North, Central and South America with all adjacent islands. Bulletin of the American Museum of Natural History, 29: 1–791.

PLATNICK, N. I. 2006. The World Spider Catalog, Ver. 6.5. American Museum of Natural History. Available at: http://research.amnh.org/entomology/spiders/catalog/index.html.

ROEWER, C. F. 1942. Katalog der Araneae von 1758 bis 1940. Vol. 1. Bremen: Kommissions-Verlag von "Natura". 1040 pp.

SCHENKEL, E. 1953. Bericht über einige Spinnentiere aus Venezuela. Verhandlungen der naturforschenden Gesellschaft, Basel, 64: 1–57.

SIMON, E., 1895. Histoire Naturelle des Araignées. Paris: Libraire Encyclopédique de Roret. Vol. 1, fasc. 4, pp. 761–1084.

———. 1896. (1897). Etudes arachnologiques. 27e Mémoire. XLII. Descriptions d'espèces nouvelles de l'ordre des Araneae. Annales de la Société entomologique de France, 65: 465–510.

SOARES, B. A. M., AND H. F. DE ALMEIDA CAMARGO. 1948. Aranhas coligidas pela Fundação Brasil-Central (Arachnida-Araneae). Boletim do Museu Paraense E. Goeldi, 10: 355–409.

TACZANOWSKI, L. 1874. Les aranéides de la Guyane française. Horae Societatis entomologicae Rossicae, St.-Petersbourg, 10: 56–115.

———. 1878. Les Aranéides du Pérou Central. Horae Societatis entomologicae Rossicae, St.-Petersbourg, 14: 140–175.

WIEHLE, H. 1931. Spinnentiere vi. Agelenidae, Araneidae in Die Tierwelt Deutschlands und der angrenzenden Meeresteile. 23 Teil. Jena: Gustav Fischer. 136 pp.

YIN, CHANGMIN. 1997. Araneae: Araneidae, Arachnida. Beijing: Fauna Sinica, Science Press. 460 pp.

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