

A new species of the spider genus *Matta* Crosby from Brazil (Araneae: Tetrablemmidae)

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Abstract

Matta angelomachadoi new species from the states of Alagoas and Bahia, Brazil, is described and details of the female internal genitalia are presented. This is the second species of *Matta* described from South America and it seems to be restricted to the Atlantic Forest in the Brazilian coast.

Keywords: spiders, Araneae, Tetrablemmidae

Introduction

Tiny spiders of the family Tetrablemmidae are badly known and poorly collected in the Neotropical region. Although these spiders seem to be very common in the soil litter, they are still poorly represented in zoological collections, probably due to the rare use of soil sampling techniques to collect arachnids in Neotropical areas, such as Brazil (Brescovit & Rheims, in press). The best-known tetrablemmid fauna is that of the Oriental region, covered in the ample revision presented by Lehtinen (1981).

The genus *Matta* Crosby includes only two species, the type-species, *M. hambletoni*, described by Crosby (1934) from the state of Minas Gerais, Brazil, and *M. mackenziei* described by Shear (1978) from Campeche, Mexico. The genus was included in the subfamily Tetrablemminae, tribe Mattini, by Lehtinen (1981) and is easily recognized by the carapace with only two widely spaced eyes that can be reduced (Lehtinen, 1981: figs. 297-298).

In this paper, a new species of *Matta* collected in northeastern Brazil is described and, with great pleasure, dedicated to Dr. Angelo Machado, for his long-standing interest in Brazilian dragonflies (Odonata) and his tireless work for the conservation of the endangered Brazilian fauna.

Material and methods

Description format follows Brescovit et al. (2004) and genitalia terminology follows Lehtinen (1981). All material is deposited in the collection of the Instituto Butantan, São Paulo (IBSP, A.D. Brescovit). The epigynum was dissected and immersed in clove oil for visualization of internal structures. All measurements are given in millimeters. Micrographs were obtained with a JEOL (JSM 840A) scanning electron microscope

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Matta angelomachadoi sp. n.

Figs. 1-21

Types. Male holotype and female allotype from CEPLAC Preservation Area, Ilhéus, Bahia, Brazil, 10.VII.1998, no coll., deposited in IBSP 51170. Paratypes: male and female from Estação Ecológica de Murici, Murici, Alagoas, Brazil, 09°15'S, 35°51'W, 13-22.IX.2003, Equipe Biota coll. Deposited in IBSP 51174.

Diagnosis. The male of *Matta angelomachadoi* sp.n. is similar to *M. hambletoni* Crosby in the conformation of male palp (see Lehtinen, 1981: fig. 314) but can be distinguished by the rugose ventral face of the palpal tibiae and for the longer embolus and its long basal projection (Figs 13-14; 18-19). The females are distinguished from the remaining Mattinae by the epigynum, with a large and triangular inner ventral plate and narrow epigynal fold (Fig. 21).

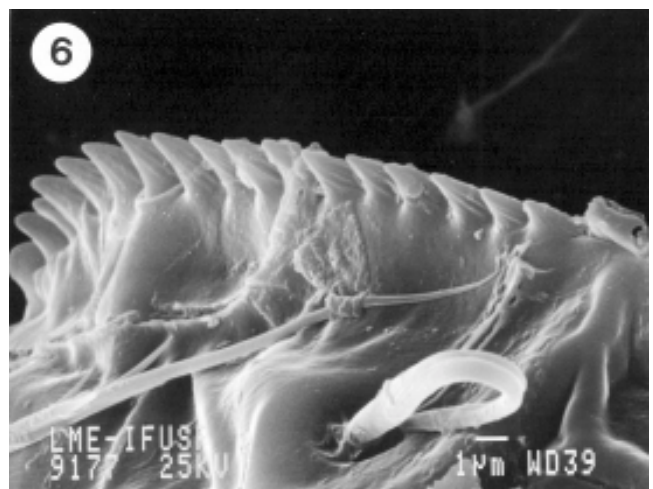
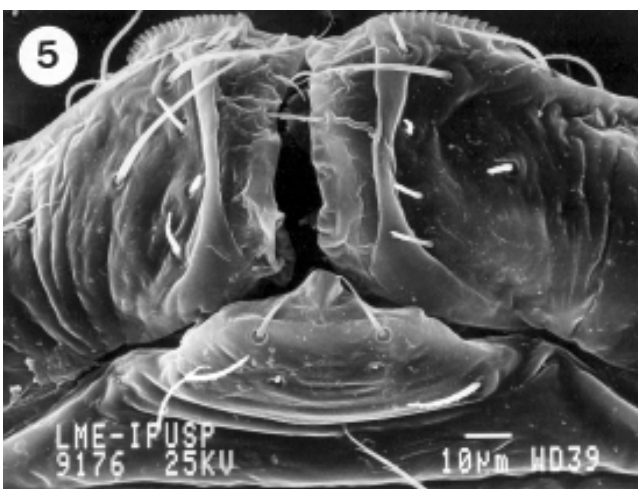
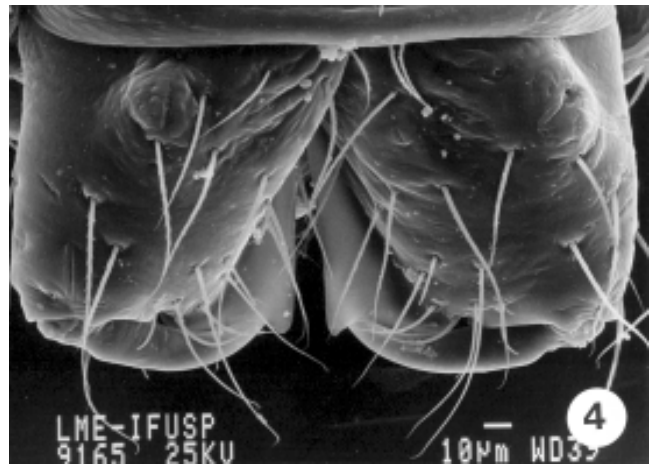
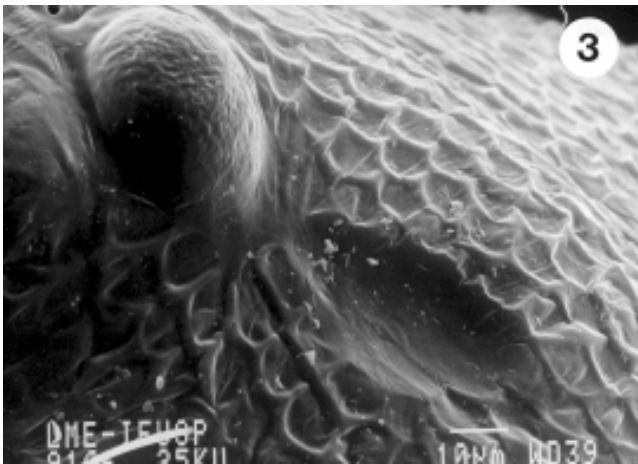
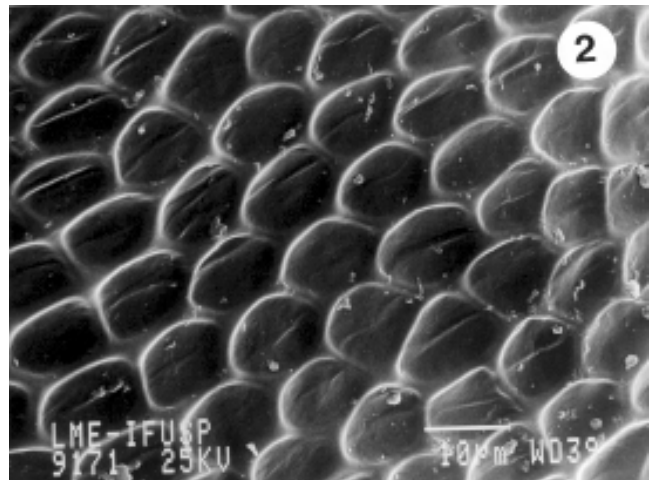
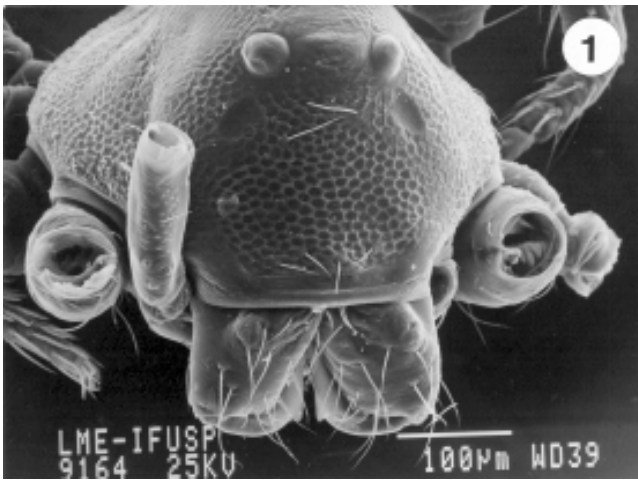
Description. *Male* (holotype). Carapace, chelicerae, labium, endites and sternum orange. Legs and pedipalps yellow, except leg trochanters white. Spinnerets white.

Total length 0.58. Carapace projected, 0.24 long, 0.21 wide, with rugose surface (Figs 1-2). Sternal surface tenuously reticulate. Clypeus long, oblique (Fig. 1). Eye diameters and interdistance: AME 0.03, AME-AME 0.04; with smooth, oval subocular furrow (Figs. 1-3). Cheliceral process short, rounded, with long hairs and translucent median lamina (Figs 4). Endites large, with parallel carina, presenting modified, distally sulcated hair; serrula with 15-17 conical teeth (Figs 5-6). Labium trapezoidal, with narrowed apex and four long setae (Fig. 5). Leg measurements: I - femur 0.18/ patella 0.07/ tibia 0.14/ metatarsus 0.09/ tarsus 0.11/ total 0.59; II - 0.17/ 0.07/ 0.13/ 0.08/ 0.11/ 0.56; III - 0.13/ 0.06/ 0.10/ 0.08/ 0.09/ 0.46; IV - 0.18/ 0.07/ 0.16/ 0.10/ 0.11/ 0.62. Leg formula 4123. Leg

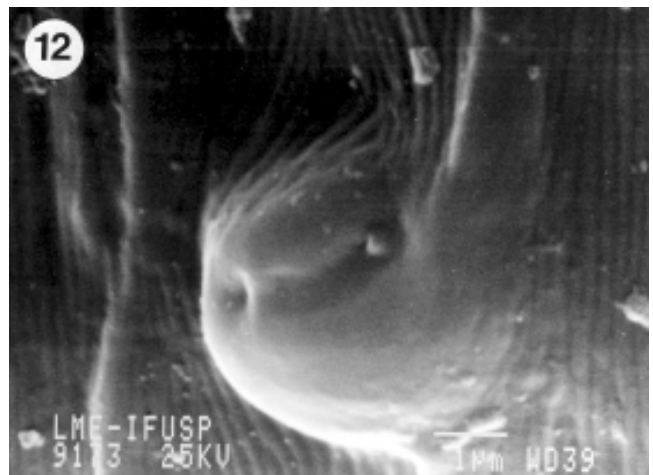
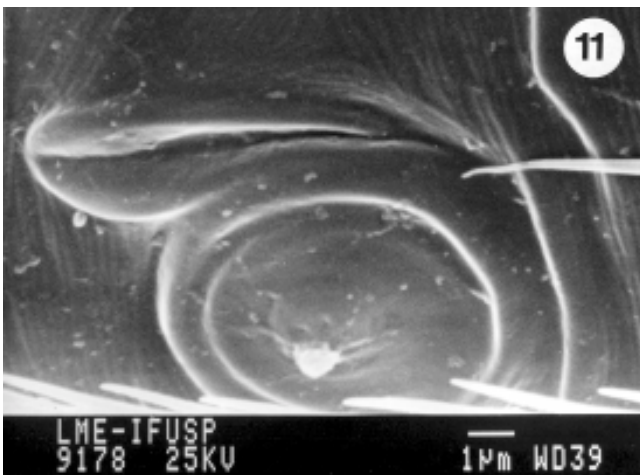
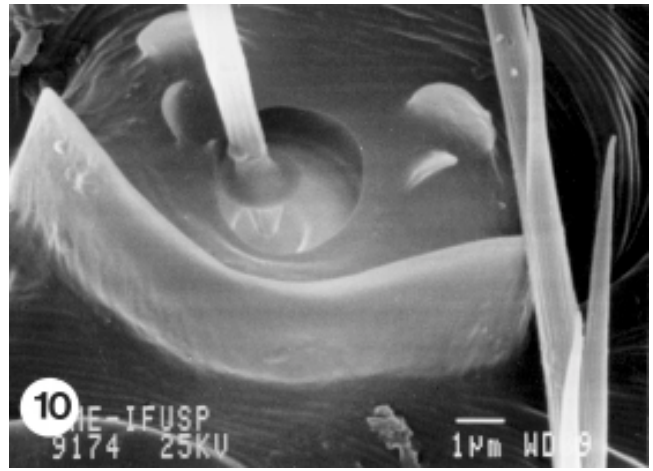
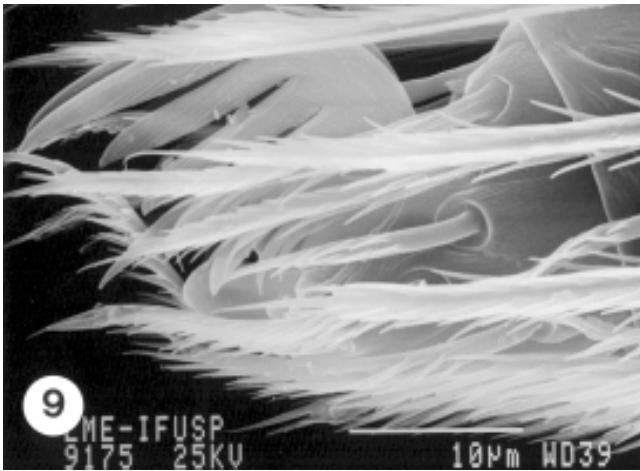
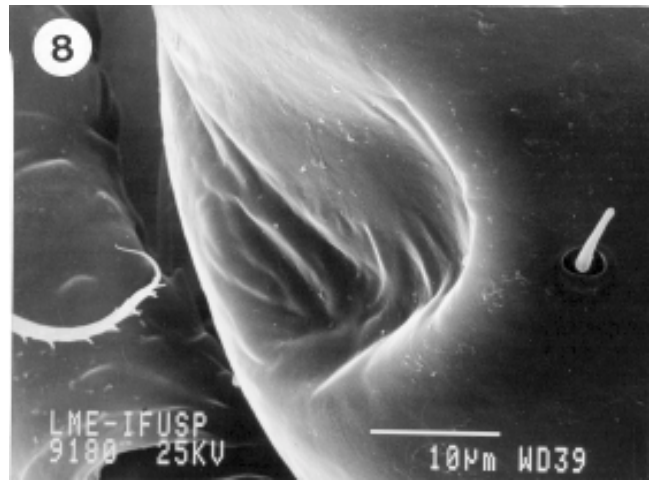
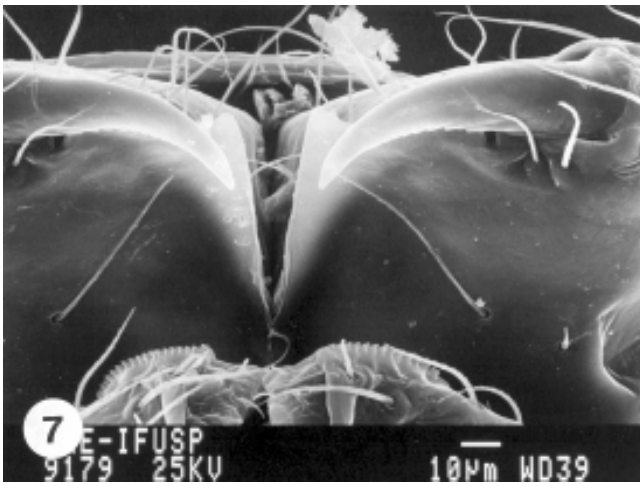
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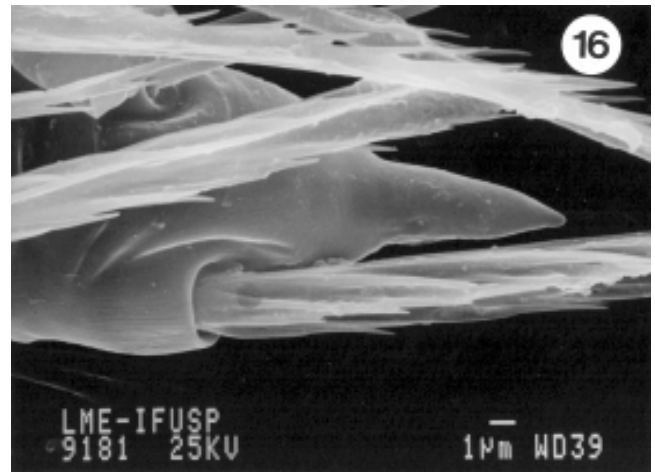
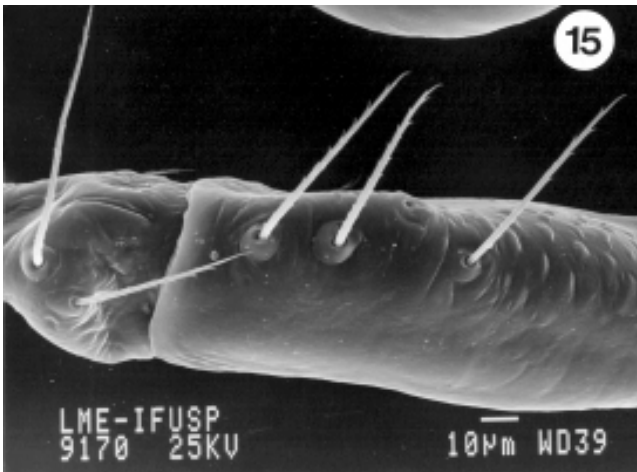
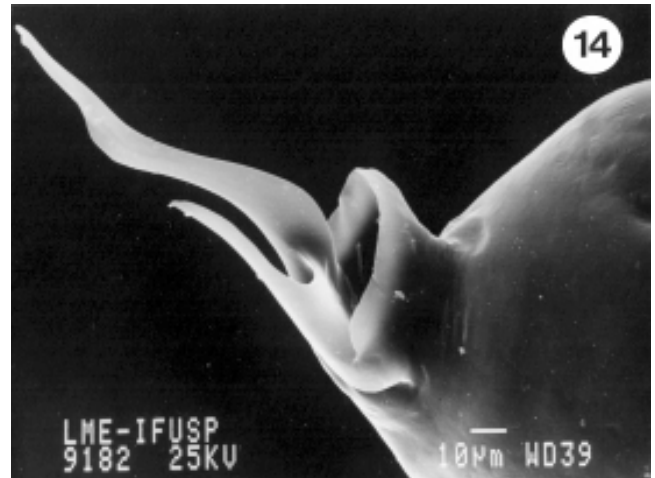
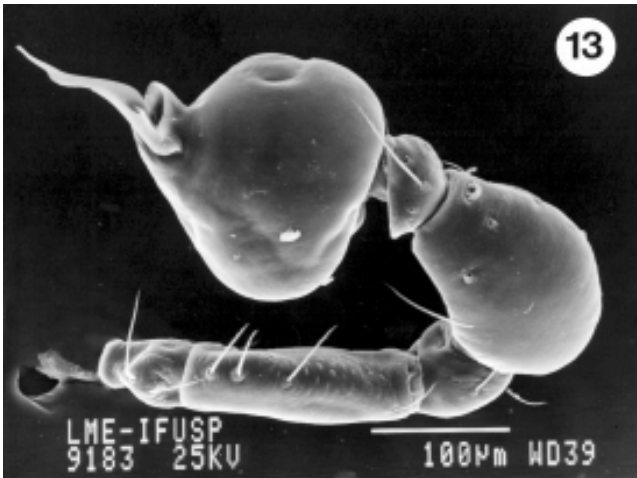
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Figures 1-6 - *Matta angelomachadoi* sp. n., male: 1. male body, frontal view; 2. Surface of carapace, dorsal; 3. Subocular furrow, dorsal; 4. Chelicerae process, frontal; 5-6. Endites, ventral; 5. Carinae; 6. Teeth and modified hair of serrula.



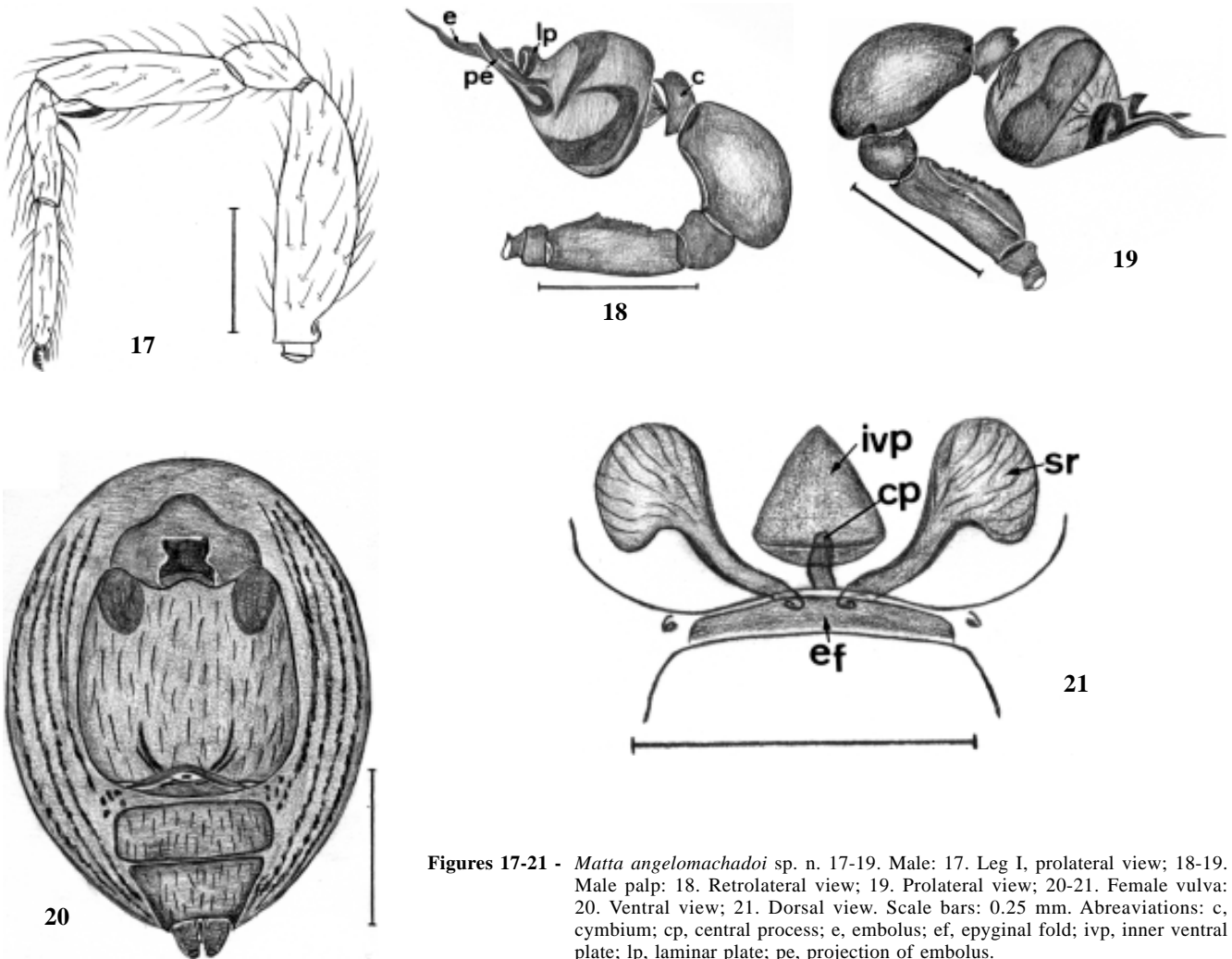
Figures 7-12 -*Matta angelomachadoi* sp. n.: 7-8. Chelicerae of female: 7. Fangs and translucent median lamina, ventral view; 8. Lateral basal groove, prolateral view; 9-12. Male: 9. Tarsal claw, lateral view; 10. Trichobothria, dorsal view; 11. Tarsal organ, dorsal view; 12. Glands on metatarsus I, lateral view.



Figures 13-16 - *Matta angelomachadoi* sp. n. 13-15. Male palp: 13. retrolateral view; 14. distal area, retrolateral view; 15. Palpal femur, retrolateral view; 16. Female, distal area of female pedipalp.

spination: tibiae with distal spine, metatarsi with small, ventral, basal spine. Tarsal claw pectinate, with 5 teeth and well-developed onychium rounded at tip (Fig. 9). Trichobothria with one large, transverse plate opposite pair of smaller, short plates (Fig. 10). Tarsal organ round, with elevated borders and projected receptor at center (Fig. 11). Metatarsus I with projected conical glands, presenting small central opening (Fig. 12). Metatarsi I-IV with long-haired ventral scopulae. Male palp with trochanter short, bearing two long setae; femur with four basal long setae, distally with short, projected plates (Fig. 15); tibia strongly swollen, rounded posteriorly; cymbium strongly reduced; bulbus pear-shaped, with distal, curved laminar plate [termed conductor in Brignoli (1974: 180) and Lehtinen (1981: 9)]; embolus long, sinuous, originating from distal area of bulbus, with short, laminar basal projection (Figs 13-14; 18-19); ejaculatory duct forming ring at base of embolus (Fig. 18).

Female (Allotype). Coloration pattern as in male. Total length 0.68. Carapace as in male, 0.28 long, 0.22 wide. Clypeus and sternum as in male. Eye diameters and interdistance: AME 0.03, AME-AME 0.04. Chelicerae with inconspicuous boss, with ventral translucent hyaline keel, as in male, and basal and lateral, deep, striate groove (Figs 7-8). Endites and labium as in male. Leg measurements: I - femur 0.15/ patella 0.08/ tibia 0.13/ metatarsus 0.09/ tarsus 0.12/ total 0.57; II - 0.15/ 0.07/ 0.12/ 0.09/ 0.11/ 0.55; III - 0.14/ 0.06/ 0.11/ 0.09/ 0.10/ 0.50; IV - 0.17/ 0.07/ 0.16/ 0.11/ 0.0.11/ 0.62. Trichobothria, tarsal organ and glands as in male. Pedipalpal tarsus ending in acuminate, smooth pit (Fig. 16). Abdomen with large, squared ventral pulmonary plate, narrow post-genital plate, rectangular pre-anal plate and subtriangular anal plate (Fig. 20). Vulvae externally with base seminal receptacle ducts visible by transparency; narrow post genital plate and thin central opening (Fig. 20).



Figures 17-21 - *Matta angelomachadoi* sp. n. 17-19. Male: 17. Leg I, prolateral view; 18-19. Male palp: 18. Retrolateral view; 19. Prolateral view; 20-21. Female vulva: 20. Ventral view; 21. Dorsal view. Scale bars: 0.25 mm. Abreaviations: c, cymbium; cp, central process; e, embolus; ef, epyginal fold; ivp, inner ventral plate; lp, laminar plate; pe, projection of embolus.

Internally with large seminal receptacle with sclerotized ducts; epyginal fold narrow, as long as posterior border of postgenital plate; central process short, igitiiform (Fig. 21).

Natural History. The specimens of *M. angelomachadoi* were collected from the ground litter, using winkler extractors, and pitfall traps, in Atlantic Forest areas in the states of Alagoas and Bahia, repectively. The Atlantic Forest is distributed approximately parallel to the Brazilian coast, from Rio Grande do Norte to Rio Grande do Sul and is composed of forest vegetation on deep soils of perennial drainage. The climate is characterized by two seasons, defined mainly by the rainfall regime, with annual temperatures ranging from 24°C, in the northeast, to -6°C in the southeast and south (Fonseca & Por, 1998; Fernandes, 1998; Barros, 2000). The distribution of *Matta angelomachadoi* suggests that this species is restricted to northeastern Brazil, while *M. hambletoni* seems to be restricted to “cerrado” areas. The latter is a characteristic Brazilian fitogeographical region that is characterized by very old and

deep soils and by a regular and moderate dry season with temperatures ranging from 22°C to 25°C (Rizzini, 1997). It is found mainly in central Brazil, covering the states of Rondônia to Piauí, between the Amazonian forest and the northeastern Caatinga (Fernandes, 1998).

Etymology. The specific name is a patronym in honor of Dr. Angelo Machado.

Distribution. Known from the Brazilian states of Bahia and Alagoas.

Other material examined. BRAZIL. Alagoas: Murici, Estação Ecológica de Murici (09°15’S, 35°51’W), 1 male, 13-22.IX.2003, Equipe Biota coll. (IBSP 51173); Ilhéus, CEPLAC Preservation Area, 1 male, 10.VII.1998, no coll. (IBSP 51172, scanning of carapace); Porto Seguro, 1 female, 1998, no coll. (IBSP 51171, scanning of carapace);

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