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# ON THE SPIDER GENUS *RHOICINUS* (ARANEAE, TRECHALEIDAE) IN A CENTRAL AMAZONIAN INUNDATION FOREST

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**ABSTRACT**. The male of *Rhoicinus gaujoni* Simon and the new species *Rhoicinus lugato* are described. They co-occur in a whitewater-inundation forest in central Amazonia, Brazil, but were not found in a nearby, intensively studied blackwater-inundation forest. *Rhoicinus gaujoni* builds complex, irregular sheet webs on the ground with a silk tube as a retreat. This report enlarges the distribution of the genus from western South America to the central Amazon basin.

The spider genus *Rhoicinus* was proposed by Simon (1898a), based on the type species *R. gaujoni*, from Ecuador. Exline (1950, 1960) described five new species in the genus, *R. wallsi* from Ecuador and *R. rothi*, *R. schlingeri*, *R. andinus*, *R. weyrauchi*, all from Peru. The genus was placed in the Amaurobiidae by Lehtinen (1967), followed by Platnick (1989) in his catalogue; but in the most recent philogenetic classification of Lycosoidea, Griswold (1993) placed it in the family Trechaleidae.

Brescovit (1993) transferred the species *Pelayo fuscus*, described by Caporiacco (1947) in the Anyphaenidae to *Rhoicinus*, but as it is an immature specimen, he considered it as species "*incertae sedis*". To date, the male of *R. rothi* is the only known male of the genus.

During sorting and identifying numerous spiders, collected by the first author during an ecological project in a whitewater-inundation forest near Manaus, we found males and females of *R. gaujoni* and the male of an undescribed species. *Rhoicinus gaujoni* was also observed by the collector in the study area.

## COLLECTING AREA AND METHODS

All spiders were collected in 1987/88 during an ecological study by H. Höfer in a whitewater-inundation forest (várzea). The study area is situated on Ilha de Marchantaria (3°15'S, 59°58'W), the first island in the Solimões-Amazon river, approximately 15 km above its confluence with the Rio Negro. The forest is annually flooded between February and September to a depth of 3–5 m. The region is subject to a rainy season (December to May) and a dry season (June to November). Specimens of *Rhoicinus gaujoni* were obtained from circular pitfall traps (see Platnick & Höfer 1990) and observed in their webs. The only specimen of the new species, *R. lugato*, was also collected in a circular pitfall trap.

The material examined is deposited in the following collections: INPA, Instituto Nacional de Pesquisas da Amazônia, Manaus (C. Magalhães); SMNK, Staatliches Museum für Naturkunde, Karlsruhe (H. Höfer); MCN, Museu de Ciências Naturais, Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre (E.H. Buckup); MNHN, Muséum National d'Histoire Naturelle, Paris (C. Rollard).

The format of abbreviations used follows Platnick & Shadab (1975); measurements are in millimeters.

## *Rhoicinus gaujoni* Simon
(Figs. 1–4, 8–11)

*Rhoicinus gaujoni* Simon, 1898a:129 (four female syntypes from Zamora, Depto. Zamora-Chinchipe, Ec-

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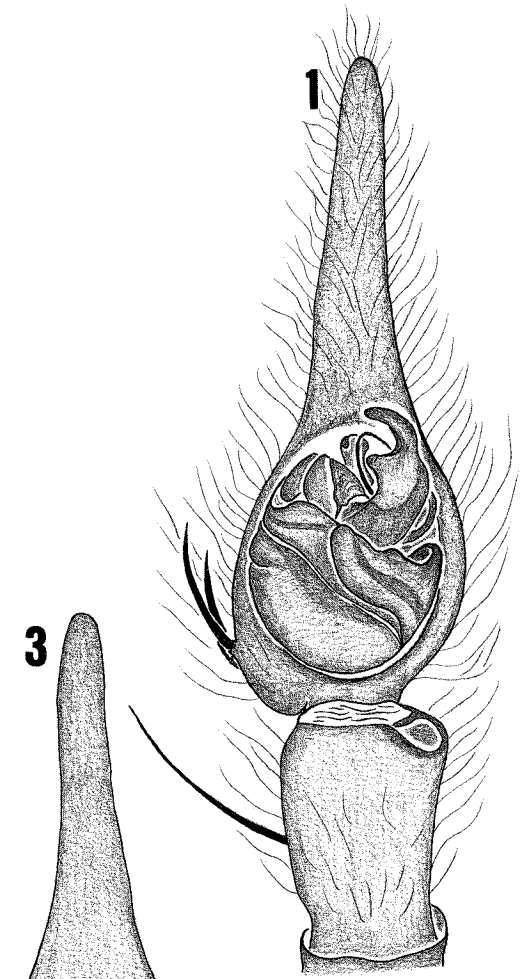
Figures 1-4.—*Rhoicinus gaujoni* Simon: 1, left male palp, ventral view; 2, same, retrolateral view; 3, same, dorsal view; 4, cleared epigynum, ventral view. Scales = 1.0 mm.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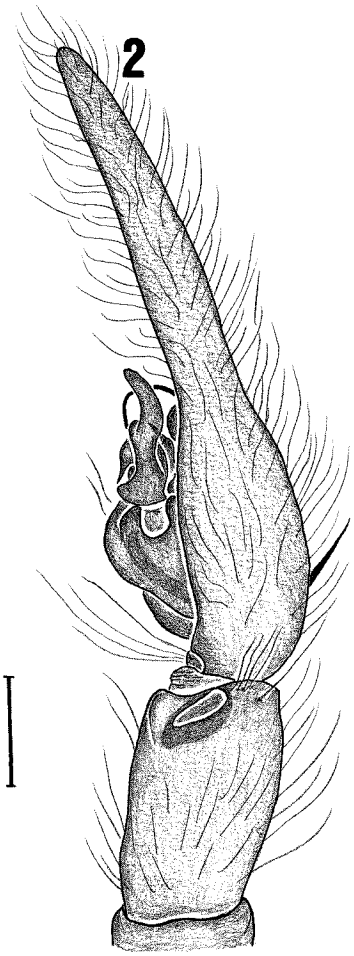
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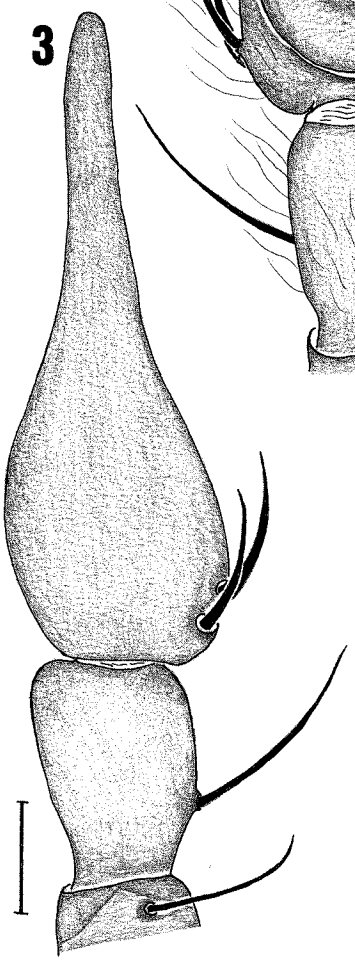
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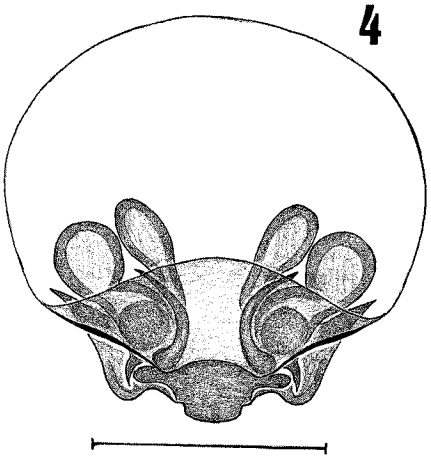
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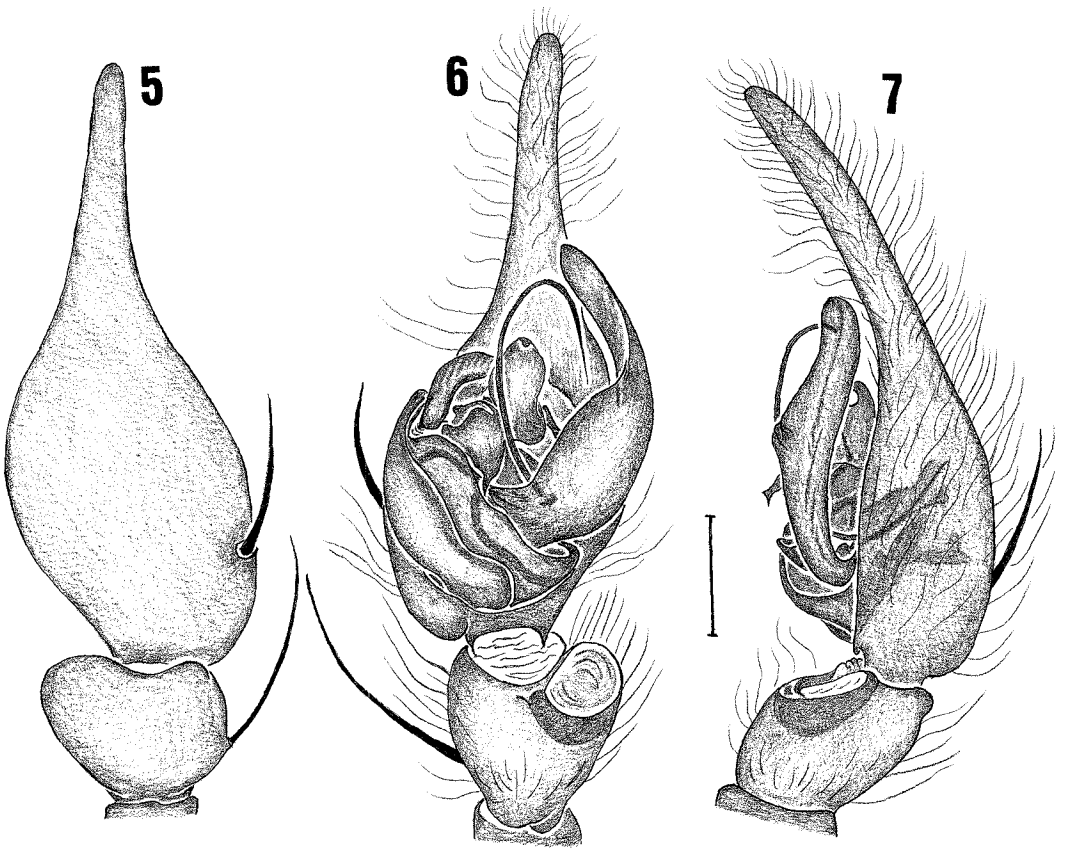


Figures 5–7.—***Rhoicinus lugato***, new species: 5, left male palp, dorsal view; 6, same, ventral view; 7, same retrolateral view. Scale = 1.0 mm.

uador (Gaujon col.), in MNHN 10382, examined); 1898b:322; Exline 1960:587–590, figs. 4–6, 8–11; Lehtinen 1967:444, fig. 195.

**Diagnosis.**—*Rhoicinus gaujoni* seems closest to *R. rothi*, but males can be distinguished by the presence of two dorsal spines near the base of the cymbium (Fig. 3) and a more elongated median apophysis with a broad base (Figs. 1, 8, 10). Females are distinguished by an irregular posterior rim of the epigynal plaque (Exline 1960: 591, fig. 10) and widely spaced spermathecae (Fig. 4).

*Male:* Carapace orange-brown. Chelicerae dark-brown. Labium, endites and sternum brown. Abdomen dark gray, with anterior dorsal white spots. Legs orange. Total length 12.00. Carapace 5.80 long, 2.10 wide. Clypeus 0.45 high, ⅓ larger than diameter of AME. Chilum with median invagination at base. From front and above anterior eye row recurved (1.30), posterior eye row recurved (1.65). Eye sizes and interdistances: AME 0.30, ALE 0.25, PME 0.25, PLE 0.25, AME-AME 0.10, AME-ALE 0.10, PME-PME 0.20, PME-PLE 0.35, ALE-PLE 0.15. MOQ length 0.50, front width 0.62, back width 0.65. Chelicerae 2.80 long with 3 promarginal and 3 retromarginal teeth. Prominent boss present anterolaterally. Abdomen 6.20 long, 1.70 wide. Leg formula 1243. Length of legs: I - femora 6.00, patellae 2.40, tibiae 5.80, metatarsi 6.60, tarsi 2.70, total 23.50; II - 6.00, 2.30, 5.70, 6.20, 2.50, total 22.70; III - 5.40, 2.00, 4.00, 4.80, 2.00, total 18.20; IV - 6.00, 1.80, 5.40, 6.40, 2.60, total 22.20. Leg spination: femora I p1-1-1, d1-1-1, r1-1-1, II p1-1-1, d1-1-1, r-1-1-1, III p1-1-1-1, d1-1-1, r1-1-1, IV p1-1-1, d1-1-1, r0-0-1; patellae I–IV p1, r1; tibiae I–II p1-1-0, v2-2-2, r1-1-0, III–IV p1-1-0, v2-2-2, r1-1-0; metatarsi I-II p1-1-0, v2-2-1r, III–IV p1-1-1, v2-2-2, r1-1-1. Palpal tibiae with one very long, heavy spine on prolateral side. Cymbium elongate, greatly narrowed distally (Fig. 1), dorsally near base with


Figures 8–11.—*Rhoicinus gaujoni* Simon, scanning electron micrographs of left male palp. 8, ventral view 50×; 9, retrolateral view 80×; 10, ventral view of palpal bulb 200×; 11, interior view of bulb of expanded palpus 180×. c = conductor; e = embolus; ma = median apophysis; ta = terminal apophysis.

two long, very heavy spines (Fig. 3). Conductor short, membranous. Median apophysis heavily sclerotized, with broad base and long, narrow, curved tip. Embolus long, partially coiled (Figs. 1–2, 8–10).

*Female:* Described by Exline (1960). Internal cleared epigynum shows four spermathecae with short ducts (Fig. 4).

*Variation:* Four males: total length 11.00–12.00; carapace 4.50–5.80; femora I 5.00–6.10. Eight females: total length 10.00–13.20; carapace 4.80–5.60; femora I 4.60–5.40.

**Material examined.**—BRAZIL: Amazonas: Rio Solimões, várzea Ilha da Marchantaria (3°15'S, 59°58'W), 20.X.1987–26.I.1988 (H. Höfer), 8 ♂♂, 5 ♀♀ (INPA, SMNK 328, 329, 866, 867, 868, MCN 22194, 22195).

**Distribution.**—Ecuador and northern Brazil.

**Natural history.**—*Rhoicinus gaujoni* was frequently observed during the non-inundated period (October to December) in webs on the ground, often at the base of tree trunks, sometimes touching webs of pholcids (*Blechroscelis* spp.). Webs are complex, irregular sheet webs with a silken tube as a retreat. They are easily confused with webs of the co-occurring diplurid species *Ischnothele guyanensis*. Webs of both species often contain kleptoparasitic bugs (Heteroptera), which mimic an ant (Höfer 1990). We

also found uloborid webs (*Philoponella vittata*) associated with *Rhoicinus* webs.

### *Rhoicinus lugato* new species
(Figs. 5–7)

**Type.**—Male holotype from a várzea inundation forest on Ilha de Marchantaria (3°15'S, 59°58'W), Rio Solimões, Amazonas, Brazil. Collected by circular pitfall trap (13.XII.1987, H. Höfer), deposited in INPA.

**Etymology.**—The specific name is an arbitrary combination of letters.

**Diagnosis.**—*Rhoicinus lugato* is a distinct species, easily recognized by the presence of a very large ring on the palpal tibiae and an extremely developed median apophysis compared with the other species (Figs. 5–6).

*Male:* Coloration as in *R. gaujoni* Simon, except orange colored abdomen. Total length 7.30. Carapace 3.50 long, 2.60 wide. Clypeus: 0.31 high, twice diameter of AME. Chilum slightly invaginated in middle of base. From front and above, anterior eye row recurved (0.79), posterior eye also recurved (1.08). Eye size and interdistances: AME 0.16, ALE 0.18, PME 0.25, PLE 0.25, AME-AME 0.05, AME-ALE 0.05, PME-PME 0.12, PME-PLE 0.21, ALE-PLE 0.15, MOQ length 0.39, front width 0.40, back width 0.45. Chelicerae 1.90 long, with 3 promarginal and 3 retromarginal teeth. Prominent boss present anterolaterally. Abdomen 3.70 long, 2.20 wide. Leg formula 1423. Length of legs: I - femora 4.00, patellae 1.30, tibiae 4.20, metatarsi 4.50, tarsi 2.10, total 16.10; II - 4.00, 1.30, 3.90, 4.10, 1.90, total 15.20; III - 3.50, 1.15, 2.80, 3.30, 1.50, total 12.25; IV - 4.0, 1.10, 4.20, 4.70, 1.95, total 15.95. Leg spination: femora I p0-1-1, d-1-1-1, r1-1-1; II p1-1-1, d1-1-1, r1-1-1; III p1-1-1, d1-1-1, r1-1-1; IV p1-1-1, d1-1-1, r0-1-1; patellae p1, d1, r1; tibiae I–IV p1-1-0, v2-2-2, r1-1-0; metatarsi I–II p1-1-1, v2-2-1, r1-1-1, III–IV p1-1-1, v2-2-2, r1-1-1. Palpal tibiae shorter than in *R. gaujoni*, with more enlarged ring and one very long, heavy spine on prolateral side (Fig. 5). Cymbium elongate, greatly narrowed distally, dorsally near base with one long and very heavy spine (Fig. 7). Conductor short, membranous. Median apophysis heavily sclerotized, extremely developed, with very broad base and long, enlarged, uncurved tip. Terminal apophysis large, with curved tip. Embolus very long, partially coiled (Figs. 5–6). *Note:* The legs I and IV of the right side of the holotype are lacking.

*Female.*- Unknown.

**Material examined.**—Only the holotype.

**Distribution.**—Known only from the type locality.

**Natural history.**—Unknown.

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