

NEW SPECIES AND RECORDS OF THE GROUND SPIDER FAMILY GALLIENIELLIDAE (ARANEAE, GNAPHOSOIDEA) FROM MADAGASCAR

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ABSTRACT. The females of *Gallieniella blanci* Platnick and *Legendrena perinet* Platnick are described for the first time, as are two new species: *Legendrena rothi* and *Legendrena spiralis*.

Recent fieldwork in Madagascar by several colleagues has resulted in much new information on the unusual ground spiders of the family Gallieniellidae, once thought to be endemic to that island but now known also from the Comoro Islands, Africa, and Australia (Platnick 1990a). As the Malagasy members of the family have been treated by Platnick (1984, 1990b, 1993), it seemed best to update that coverage by supplying new records and describing newly discovered taxa. Material was kindly made available from the collections of the California Academy of Sciences, San Francisco (CAS), by Charles Griswold and Darrell Ubick, the Museum of Comparative Zoology, Harvard University (MCZ), by Herbert Levi and Laura Leibensperger, and the National Museum of Natural History, Smithsonian Institution (USNM) by Jonathan Coddington and Scott Larcher. The illustrations are by Mohammad Shadab of the American Museum of Natural History. The format of the descriptions follows that of the original revision (Platnick 1984); all measurements are in mm.

Gallieniella mygaloides Millot

New records.—MADAGASCAR. *Fianarantsoa*: Maharira summit, Ranomafana National Park, Apr. 9, 1992 (Albert, MCZ), 1♀; Ranomafana National Park, Apr. 1992, pitfall trap (V., B. Roth, CAS), 1♂1♀.

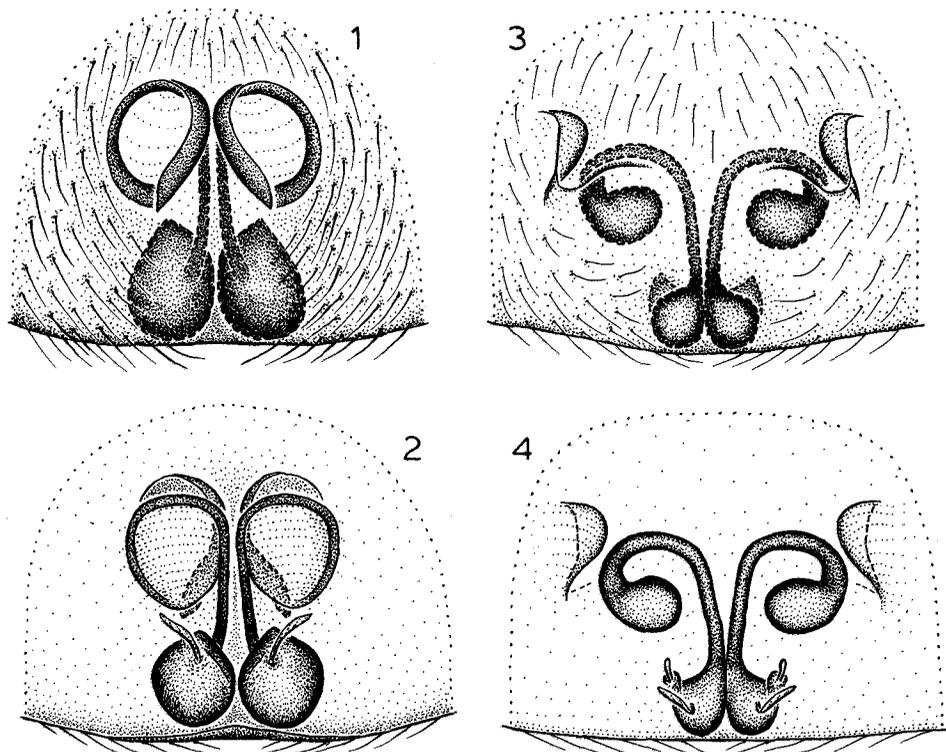
Gallieniella blanci Platnick (Figs. 1, 2)

Note.—The female here assigned to this species was not taken with a male, but is paired on the basis of genitalic similarities of both males and females to those of *G. mygaloides* (Figs. 1, 2).

Diagnosis.—The newly described female can easily be separated from those of the other known species by the relatively large spermathecae, which approach the coiled anterior ducts in size.

Female.—Total length, not including chelicerae, 4.57. Carapace 2.00 long, 1.92 wide, dark chestnut brown; pars thoracica with recumbent white scales. From above, anterior eye row recurved, posterior row slightly recurved; from front, both rows very slightly procurved; eye sizes and interdistances: AME 0.06, ALE 0.08, PME 0.06, PLE 0.05; AME-AME 0.13, AME-ALE 0.03, PME-PME 0.15, PME-PLE 0.06, ALE-PLE 0.07; MOQ length 0.20, front width 0.25, back width 0.27. Clypeal height at AME about 1.6 times their diameter. Chelicerae extending forward distance about one-third of carapace length, bearing long fang without distinct ventral tubercle but abruptly narrowed at about one-third its length, narrow portion much paler than thicker portion; most distal promarginal tooth widely separated from other two subequal teeth, all promarginal teeth larger than two widely separated retromarginal teeth. Leg spination: femora II-IV d1-0-0; tibiae: III p0-1-0, v2-2-0, r0-1-0; IV p0-0-1, v4-2-2, r0-0-1; metatarsus IV v1p-0-0. Legs light brown except sides of femora I, II, IV light yellow. Abdomen dark gray, dorsum with two longitudinal white stripes at sides, stripes connected posteriorly by seven chevrons; venter paler than sides. Palpal femur and more distal segments with dorsal spines grading into bristles, tibia and tarsus each with proximal prolateral spine as well. Spermathecae almost as large as anterior, coiled epigynal ducts (Figs. 1, 2).

New record.—MADAGASCAR. *Toliara*: Mahafaly, nr. Eleotse, by Lac Tsimanampetsoa, 24°10'S, 43°45'E, Sept. 15-16, 1992 (V., B. Roth, CAS), 1♀.



Figures 1–4.—1, 2. *Gallieniella blanci* Platnick, epigynum: 1, ventral view; 2, dorsal view. 3, 4. *Legendrena perinet* Platnick, epigynum: 3, ventral view; 4, dorsal view.

Legendrena perinet Platnick
(Figs. 3, 4)

Diagnosis.—Females can be recognized easily by the anteriorly curled epigynal ducts (Figs. 3, 4).

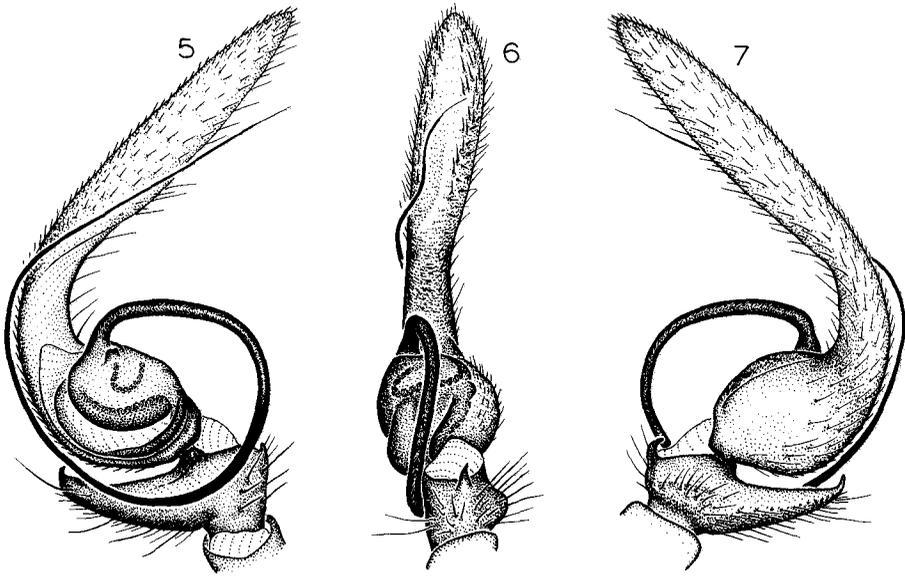
Female.—Total length, not including chelicerae, 3.50. Carapace 1.84 long, 1.52 wide, light brown, without scales. From above, anterior eye row recurved, posterior row slightly recurved; from front, anterior row very slightly recurved, posterior row slightly procurved; eye sizes and interdistances: AME 0.06, ALE 0.09, PME 0.08, PLE 0.09; AME-AME 0.06, AME-ALE 0.01, PME-PME 0.11, PME-PLA 0.04, ALE-PLA 0.03; MOQ length 0.19, front width 0.18, back width 0.27. Clypeal height at AME only slightly greater than their diameter. Chelicerae extending forward distance greater than one-third of carapace length, bearing relatively short fang without ventral tubercle but slightly narrowed, lightened at about one-third its length; three promarginal teeth closely spaced, middle one largest; two retro-marginal teeth enlarged, widely separated. Leg spination: femora I–IV d1-0-0. Femora, patellae,

and tibiae light brown except distal half of tibia I and distal tip of tibiae III, IV lightened; metatarsi and tarsi light orange. Abdomen dark gray, dorsum unmarked, venter with two pale longitudinal stripes near sides. Palpal femur and more distal segments with dorsal spines grading into bristles, tibia and tarsus each with proximal pro-lateral spine as well. Epigynum with pair of anterolateral pockets (Fig. 3), ducts curling anteriorly (Fig. 4).

New records.—MADAGASCAR. *Fianarantsoa*: Ranomafana National Park, Apr. 1992, pitfall trap (V., B. Roth, CAS), 3♂♀; 200 m N research cabin, Ranomafana National Park, Mar. 25, 1992, in leaf litter (S. Kariko, V. Roth, MCZ), 1♂♀.

Legendrena steineri Platnick

New records.—MADAGASCAR. *Fianarantsoa*: 7 km W Ranomafana, Feb. 23–28, 1990, elev. 900 m, flight intercept-yellow pan trap in malaise trap in small clearing, montane rain forest (W. E. Steiner, USNM), 1♂; Ranomafana National Park, Apr. 1992, pitfall trap (V., B. Roth,



Figures 5-7.—*Legendrena rothi* new species, left male palp: 5, prolateral view; 6, ventral view; 7, retrolateral view.

CAS), 1♂1♀, May 1992 (S. Kariko; V., B. Roth, CAS), 1♀; Ranomafana National Park, ca. 21°12'S, 47°27'E, Mar.–Apr. 1992, forest foliage (V., B. Roth, MCZ), 1♀, Apr. 1992, forest (V., B. Roth; S. Kariko, CAS), 1♀.

Legendrena rothi new species
(Figs. 5-7)

Type.—Male holotype from Claire's camp, Vatoaranana, Ranomafana National Park, Fianarantsoa, Madagascar (May 9, 1992; V. Roth), deposited in CAS.

Etymology.—The specific name is a patronym in honor of the collector.

Diagnosis.—The basally incrassate tibia I, palpal tibial apophysis bearing cusps, and elongate embolus indicate that this is the sister species of *L. steineri*, from which it differs in having the embolus originating distally, rather than proximally, on the palpal bulb (Figs. 5-7).

Male.—Total length, not including chelicerae, 5.19. Carapace 2.14 long, 1.62 wide, dark chestnut brown, without scales. From above, anterior eye row recurved, posterior row slightly recurved; from front, both rows very slightly procurved; eye sizes and interdistances: AME 0.07, ALE 0.09, PME 0.08, PLE 0.07; AME-AME 0.08, AME-ALE 0.03, PME-PME 0.14, PME-PLE 0.04, ALE-PLE 0.04; MOQ length 0.18, front width 0.22, back width 0.30. Clypeal height at

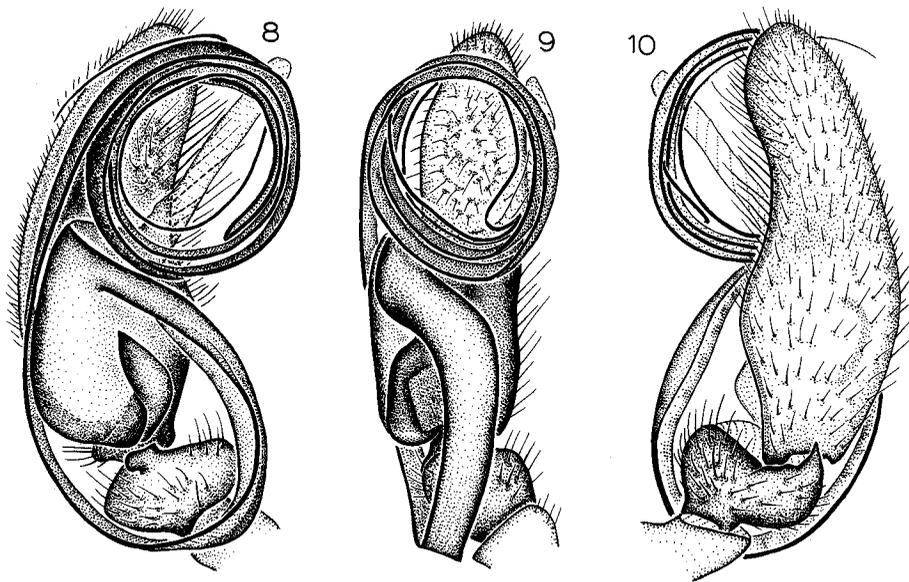
AME only slightly greater than their diameter. Chelicerae extending forward distance less than one-third of carapace length, bearing relatively short fang without ventral tubercle but slightly narrowed, lightened at about half its length; three promarginal teeth closely spaced, middle one largest; two retromarginal teeth enlarged, widely separated. Leg spination: femora III, IV d1-0-0. Coxae and trochanters yellow; femora dark gray, I-III with dorsal yellow longitudinal stripe; patella I dark gray, II, III yellow with lateral dark stripes; IV yellow; tibia I incrassate, dark gray, with ventral fringe of long setae proximally, yellow distally, other tibiae yellow with dark lateral longitudinal stripes; anterior metatarsi and tarsi light orange, posteriors yellow. Abdomen dark gray, dorsum without distinct scutum, with vaguely indicated transverse white stripe at about one-third its length. Palpal tibia with elongate dorsal apophysis bearing retrolateral row of cusps; embolus originating distally, extending almost to tip of elongated cymbium (Figs. 5-7).

Female.—Unknown.

Distribution.—Known only from southeastern Madagascar.

Legendrena spiralis new species
(Figs. 8-10)

Type.—Male holotype taken on foliage along Namorona River, Ranomafana National Park,



Figures 8–10.—*Legendrena spiralis* new species, left male palp: 8, prolateral view; 9, ventral view; 10, retrolateral view.

Fianarantsoa, Madagascar (May 18, 1992; B. Roth), deposited in CAS.

Etymology.—The specific name refers to the coiled embolus.

Diagnosis.—Males can easily be separated from those of the other known species by the distally coiled embolus (Figs. 8–10).

Male.—Total length, not including chelicerae, 3.89. Carapace 1.73 long, 1.46 wide, dark chestnut brown, without scales. From above, anterior eye row recurved, posterior row slightly recurved; from front, anterior row slightly recurved, posterior row almost straight; eye sizes and interdistances: AME 0.06, ALE 0.06, PME 0.08, PLE 0.07; AME-AME 0.05, AME-ALE 0.02, PME-PME 0.15, PME-PLE 0.06, ALE-PLE 0.07; MOQ length 0.19, front width 0.23, back width 0.25. Clypeal height at AME only slightly greater than their diameter. Chelicerae extending forward distance less than one-third of carapace length, bearing relatively short fang without ventral tubercle but slightly narrowed, lightened at about half its length; three promarginal teeth closely spaced, middle one largest; two retromarginal teeth widely separated but not enlarged. Leg spination: femora I–IV d1-0-0. Coxae and trochanters yellow, I–III with dark lateral stripes; femora dark gray, I with lateral light stripes along ventral half of sides, II, III with dorsal yellow longitudinal stripe; patella I dark gray, II, III

yellow with lateral dark stripes, IV yellow proximally, dark gray distally; tibia I not incrassate or fringed, dark gray proximally, yellow distally, other tibiae dark orange with dark lateral longitudinal stripes; anterior metatarsi and tarsi light orange, posteriors yellow. Abdomen dark gray, dorsum without distinct scutum, with vaguely indicated transverse white stripe at about one-third its length. Palpal tibia with short, hook-shaped retrolateral tibial apophysis; embolus originating distally, broadened proximally, coiling at tip of cymbium (Figs. 8–10).

Female.—Unknown.

Distribution.—Known only from southeastern Madagascar.

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