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A new araneid genus from the Galapagos Islands (Araneae: Araneidae)

Herbert W. Levi

ABSTRACT

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A new araneid, *Galaporella thaleri* sp. nov., similar to species of the genus *Mangora* is described from the Galapagos Islands.

Keywords: Taxonomy, Araneae, Araneidae, new genus, new species, Galapagos Islands.

Introduction

For some years I have been puzzled about the generic placement of a male specimen from the Galapagos Islands. Additional specimens, including females, recently became available to me. All come from the Galapagos Islands and look superficially like *Mangora*, but on careful examination lack some *Mangora* characters. African genera related to *Mangora* are described by Grasshoff (1971).

One hesitates to describe a new genus containing only one species, but the differences from *Mangora* are too great to include it in that genus. It is unclear whether the differences result from loss of *Mangora* characters or are precursors of *Mangora*'s specialization.

Methods

The method used was the same as in Levi (2005, 2007). The eye placement and measurements are rough estimates made by viewing from above and slightly anterior. Sizes and distances of eyes are given in numbers to avoid verbiage, not to indicate accuracy. Eyes are measured relative to their diameter.

A hypothetical line behind the eyes of the posterior row is measured. The ocular quadrangle is measured by drawing an imaginary line around the eyes.

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

In illustrations of the posterior view (Figs. 9, 12), the epigyna have the venter up and dorsum down. Directions for locating structures of the palpus in the illustrations (h) refer to the numbers on the face of a clock. Grasshoff (1973) studied the palpus of *Mangora acalypha*. Labeled illustrations of the palpi of some South American species are in Levi (2007).

Abbreviations used:

AMNH American Museum of Natural History, New York

CAS California Academy of Science, San Francisco

MCZ Museum of Comparative Zoology, Harvard University, Cambridge, Mass.

Description

Galaporella gen. nov.

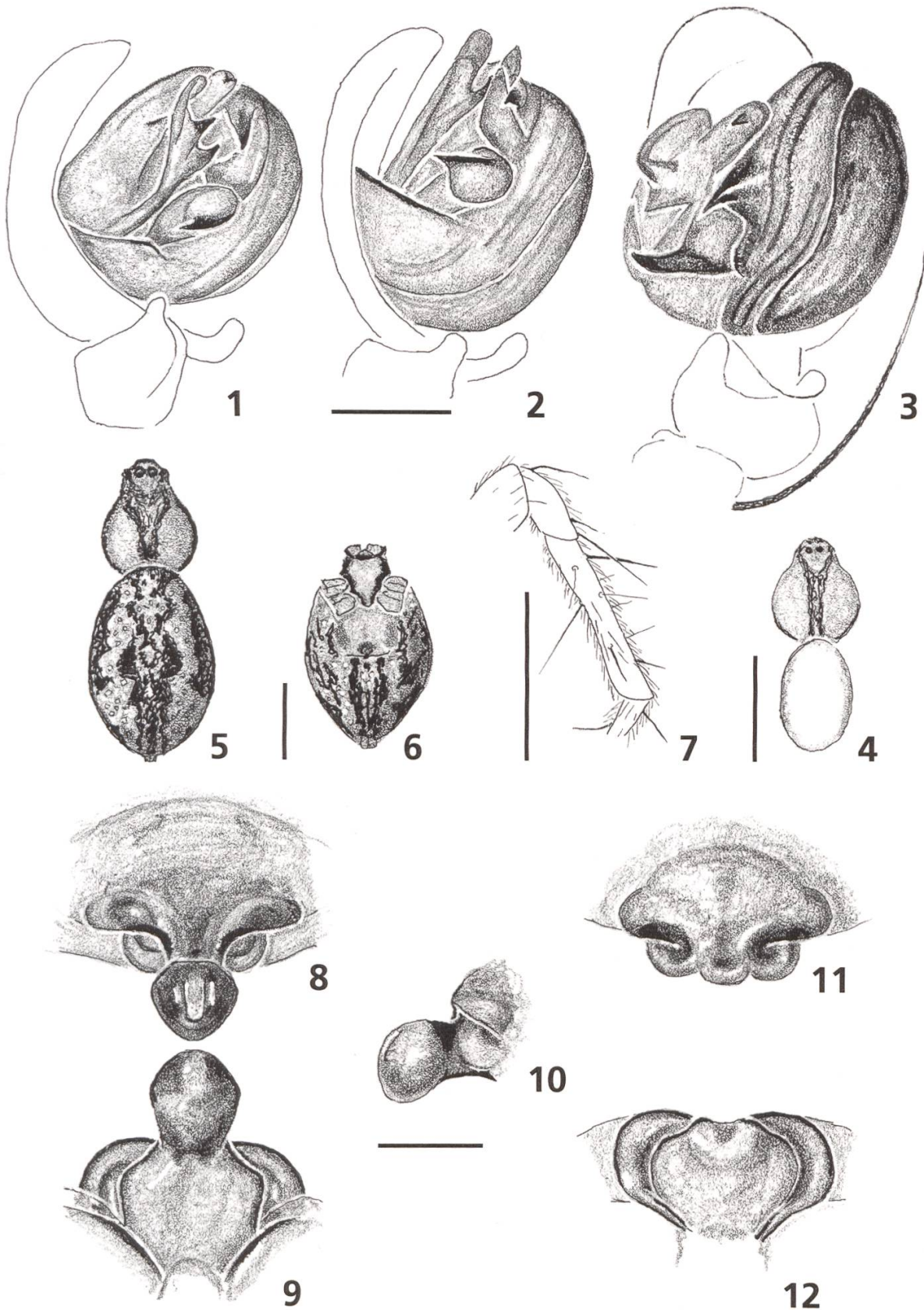
Type species: *Galaporella thaleri* sp. nov. The generic name is an arbitrary combination of letters, partly based on the name of the type locality of *G. thaleri* sp. nov. The generic name is feminine.

Diagnosis: *Galaporella* differs from most araneid genera by having few setae and a narrow eye region, one-half or less of the total width of the carapace. The abdomen is oval, longer than wide. The thin legs have strong macrosetae that stand up, and do not lie pressed against the appendage. First legs are subequal to the fourth, the third are shortest.

Galaporella differs from *Mangora* by lacking the feathered trichobothria on the tibia of the third leg, and by lacking the bulging thoracic portion of the carapace.

Galaporella differs from *Amazonpeira* LEVI, 1989, by having a longer, differently shaped carapace (Fig. 5), with a median thoracic groove, by lacking the narrow annulate scape of the epigynum, and by the large terminal apophysis of the palpus.

Placement: Despite the male palpus of *Galaporella* having only one patellar macroseta, as in *Mangora*, the genera are close to *Araneus* (Levi 2005), because all have a large terminal apophysis and lack a paramedian apophysis in the palpus.



Figs. 1–12. *Galaporella thaleri* sp. nov. – 1–4: male; – 1–3: left palpus; – 1: mesal; – 2: submesal; – 3: ventral; – 4: carapace and abdomen; – 5–12: female; – 5: carapace and abdomen; – 6: sternum and abdomen; – 7: patella and tibia of third leg; – 8–12: epigynum; – 8, 11: ventral; – 9, 12: posterior; – 10: lateral; – 11, 12: with lost tip. Scalelines: 1 mm; genitalia, 0.1 mm.

***Galaporella thaleri* sp. nov.** (Figs. 1–12)

Holotype: Female holotype from Los Gemelos, 585 m, Santa Cruz Island, Galapagos Islands, Ecuador, June 1981 (Y. Lubin), in MCZ.

Etymology: The species is named after my late colleague Konrad Thaler.

Description: Female holotype. Prosoma yellowish with black thoracic rim, grey between anterior median eyes, a median grey to black band (Fig. 5). Chelicerae with a grey patch; labium black; endites with a black streak; sternum with black frame; black spots at bases of macrosetae on legs may continue ventrally as black bands. Abdomen with black marks and scattered white pigment spots (Figs. 5, 6). Posterior eye row slightly recurved. Ocular quadrangle slightly wider than long, rectangular. Posterior median eyes 0.9 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.8 diameter apart, 1.0 from laterals. Posterior median eyes 1.1 diameters apart, 1.2 from laterals. Height of clypeus equals 0.7 diameter of anterior median eyes. Total length 4.0 mm. Carapace 2.1 mm long, 1.6 wide in thoracic region, 0.8 wide behind lateral eyes, 0.8 high. First femur 2.6 mm, patella and tibia 2.8, metatarsus 2.3, tarsus 1.0. Second patella and tibia 2.4 mm, third 1.5, fourth 2.3.

Male paratype. Prosoma yellowish, carapace with a wide longitudinal band (as in Fig. 4). Sternum yellow, legs with black spots at bases of macrosetae. Abdomen [damaged] with sides dark. Posterior eye row procurved. Ocular quadrangle slightly wider than long, slightly widest anteriorly. Posterior median eyes 0.8 diameter of anterior medians; lateral eyes 0.7 diameter. Anterior median eyes 0.9 diameter apart, 0.4 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 2.0 mm. Carapace 1.2 mm long, 0.8 wide in thoracic region, 0.4 wide behind lateral eyes, 0.4 high. First femur 1.7 mm, patella and tibia 1.9, metatarsus 1.6, tarsus 0.7. Second patella and tibia 1.5 mm, third 0.8, fourth 1.4.

Variation: Total length of females 3.8 to 4.0 mm, males 1.6 to 2.0. Figs. 1 and 3 are from a male paratype from Santa Cruz Island; Figs. 2, 4 from Pinta Island. Figs. 5, 6, 8–10 are from the female holotype; Figs. 11, 12 from San Cristobal Island; Fig. 7 from a female paratype.

Diagnosis: Epigynum is very small, the scape has a large swollen tip with a fold, (Figs. 8–10). The tip is broken in some specimens; it probably fractured when mating (Figs. 11, 12). (Two of the seven females collected had the tip, others had lost it.)

The male palpus has a median apophysis tipped by a large spine (4 h in Fig. 1, 8 h in Fig. 3), a soft conductor (above the median apophysis in Fig. 2),

and the tegulum has a thorn (center of Fig. 3). The palpus, as in *Mangora* has a large terminal apophysis (12 h in Figs. 1, 2; 11 h in Fig. 3). The complicated palpus looks different in slight shifts of view.

Natural history: The holotype from Los Gemelos was collected "in the humid zone", a female from San Cristobal was found "in web under an overhang of a stream bank", and a male came "from sweepnet samples at low elevation in grassland" on Pinta Island (Lubin, personal communication).

Paratypes: Ecuador, Galapagos Islands, Santa Cruz Island: Los Gemelos, 586 m, June 1981, 1 ♀ (Y. Lubin 321, MCZ); 4 km N of Bellavista Media Luna, 620 m, Miconia Zone, 14 May to 13 July 1985, 1 ♂ (S. and J. Peck, AMNH); Table Mountain, 440 m, 16 Apr. 1964, 3 ♀ (D. Q. Cavagnaro, CAS).

Specimens examined: Ecuador, Galapagos Islands, San Cristobal Island: Encanyada del platano, ca. 1560 m, 27 Apr. 1982, 1 ♀ (Y. Lubin 414, MCZ). Pinta Island: Abingdon, 400 m, 7 Feb. 1982, 1 ♂ (Y. Lubin 364, MCZ). Fernandina Island: west side, 330 m, 5 Feb. 1964, 1 ♀ (D. Q. Cavagnaro, CAS).

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References

- Grasshoff, M. (1971): Die Tribus Mangorini, IV. Die *Mangora*-Gruppe (Arachnida: Araneae: Araneidae-Araneinae). — *Senckenbergiana biologica* 52: 293–311.
- Grasshoff, M. (1973): Bau und Mechanik der Kopulationsorgane der Radnetzspinne *Mangora acalypha* (Arachnida, Araneae). — *Zeitschrift für Morphologie der Tiere*. 74: 241–252.
- Levi, H.W. (2005): The orb-weaver genus *Mangora* of Mexico, Central America and the West Indies (Araneae: Araneidae). — *Bulletin of the Museum of Comparative Zoology*, 158: 139–181.
- Levi, H.W. (2007): The orb weaver genus *Mangora* of South America (Araneae: Araneidae). — *Bulletin of the Museum of Comparative Zoology* 159: 1–144.

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