

A new species of *Pherania* Strand, 1942 from southern Brazil (Arachnida: Opiliones: Gonyleptidae)

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Abstract

Pherania giupponii **sp. nov.** is herein described from a coastal island in Santa Catarina state, southern Brazil. The genus *Pherania* Strand, 1942, was hitherto monotypic and the type species, *Pherania pygmaea* (Sørensen, 1932), is known from the nearby mainland. A new diagnosis is given to *Pherania* and the geographic distribution of the two species is illustrated on a map.

Key words: Harvestmen, Neotropical, Atlantic Forest, Santa Catarina, Pachylinae, *Antetriceras*

Introduction

Sørensen (1932) described the new monotypic genus *Phera* in the family Minuidae, based on material from Santa Catarina state (southern Brazil). This placement seemed strange, because it was based on a trivial character and the biogeographical information on Minuidae (typical from Venezuela and later discovered in the Antilles) was conflicting with that of *Phera*. Strand (1942) noticed that the generic name was preoccupied and proposed the variant *Pherania* to amend the homonymy — this change was ignored by all subsequent authors until Kury (1995). No one questioned the placement of *Phera/Pherania* in the Minuidae, but Kury (1995) examined Sørensen's holotype, redescribing it and allocating *Pherania* to the Gonyleptidae Pachylinae. Now, fresh material from a coastal island in Santa Catarina state was brought to the Arachnological Laboratory of the Brazilian National Museum, and it was found to contain specimens of a further species of *Pherania*, very distinct, but sharing some special similarity with *Pherania pygmaea*. This species is described below. Museu Nacional, Universidade Federal do Rio de Janeiro (Brazilian National Museum) is herein abbreviated as MNRJ. All measurements are in mm. Terms relating to anatomy follow Kury & Pinto-da-Rocha (2002).

***Pherania* Strand, 1942**

Phera Sørensen, 1932: 228 [junior homonym of *Phera* Stål, 1864, Homoptera]; Mello-Leitão, 1935:92;1938:138;H.Soares,1966:110(typespecies*Pherapygmaea*Sørensen,1932,bymonotypy).
Pherania Strand, 1942: 399 [valid replacement name for *Phera*]; Kury, 1995: 75; 2003: 187.
Pera [misspelling]: Šilhavý, 1978: 62.

Diagnosis. Eye mound moderately high, elliptic, removed from frontal border of carapace, armed with unpaired tubercle, blunt or sharp. Scute outline bulged in the middle, lateral margins straight at carapace and areas IV-V. Areas III and IV entirely separated. Area I divided in left and right halves by longitudinal groove. All scutal areas and free tergites unarmed. Femur III of male unarmed and without spurs. Coxa IV of male well developed, changing direction abruptly from almost transverse to almost straight, armed with bifid dorso-apical apophysis with two subequal branches and posterior retrolateral apophysis. Trochanter IV of male with one basal-prolateral blunt apophysis + one subbasal retrolateral apophysis + one dorso-subdistal procurved apophysis. Tarsal process much reduced, virtually absent. Tarsal counts: 3(2) / 4(3) / 4-5 / 5. Ventral plate trapezoid, narrowing slightly and gradually distally. Distal border of penis ventral plate with soft notch. Two groups of setae on ventral plate. Basal group of 2-4 short lanceolate setae + two smaller accessory setae. Distal group of 3-4 short straight setae + one smaller accessory seta. Glans without ventral or dorsal processes, stylus with subapical small rounded tubercles.

Included species. *Pherania pygmaea* (Sørensen, 1932) and *Pherania giupponii* new species.

Distribution. Southern Brazil, Santa Catarina state, in the realm of Atlantic Forest. Type localities of both species are about 100 km apart (see map in Fig 14).

***Pherania pygmaea* (Sørensen, 1932)**

Phera pygmaea Sørensen, 1932: 229 [type BMNH, ♂ holotype, examined].

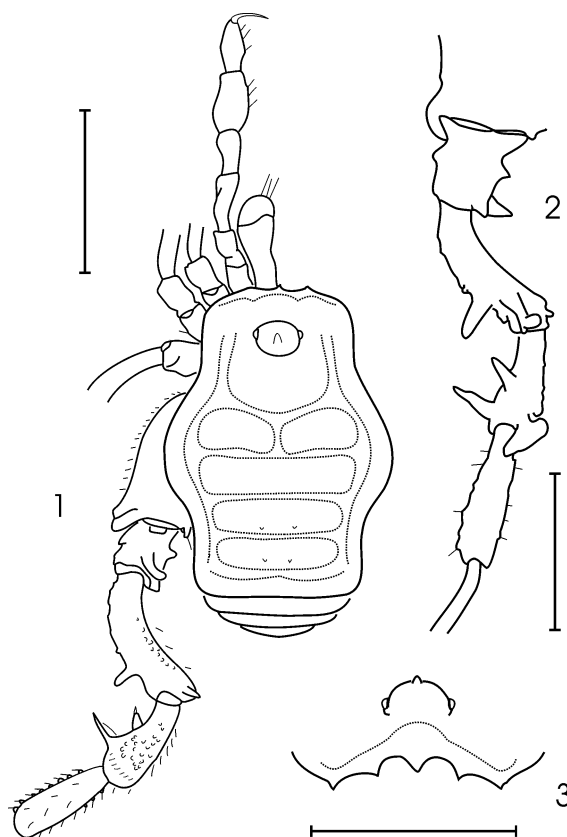
Phera pygmaea: Mello-Leitão, 1935: 90.

Pherania pygmaea: Strand, 1942: 399; Kury, 1995: 75, figs. 1-6 [redescription]; 2003: 187.

Type locality — **BRAZIL. Santa Catarina.** Blumenau (26.92°S, 49.07°W, 25 m).

***Pherania giupponii* Kury sp. nov. (Figs. 1–14)**

Type material: Male holotype, 2 male 3 female paratypes (MNRJ 4494) Brazil. Santa Catarina. Florianópolis, Ilha de Santa Catarina, forest on hill behind buildings of APAE, ÚNICA e SESI (27.61°S, 48.49°W), 15–17 December 1999, leg. A. P. L. Giupponi.



FIGURES 1–3. *Pherania giupponii* Kury **sp. nov.** Male holotype (MNRJ 4494) 1. Habitus, dorsal view; 2. Right leg IV, ventral view; 3. (Male paratype). Eye mound and frontal margin of carapace, anterior view. Scale bars 1 mm.

Etymology. Specific name honors Alessandro P. L. Giupponi, member of our team in the Arachnology Laboratory, who discovered the only known representatives of this species.

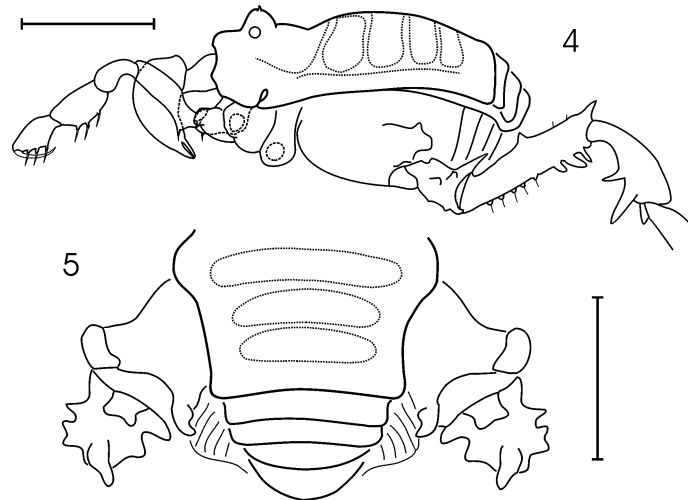
Diagnosis. Can be distinguished from *Pherania pygmaea* by: 1) ventro-retrolateral apophysis of tibia IV of male anvil-shaped (as two tubercles in *Ph. pygmaea*); 2) two stout spiniform ventro-prolateral apophyses of tibia IV of male (only one in *Ph. pygmaea*); 3) tubercle of eye mound rounded (sharp in *Ph. pygmaea*); 4) tarsus of leg III tetramerous (pentamerous in *Ph. pygmaea*).

Description of male holotype (MNRJ 4494)

Measurements. Carapace 0.8 long, 0.9 wide. Eye mound 0.3 wide. Abdominal scutum 1.1 long, 1.4 wide. Posterior margin of scutum 1.0 wide. Stigmatic area 1.1 wide, 0.8 long, distance between stigmata 0.8. Legs: I Fe 0.7, Ti 0.4, Mt 0.6. II Fe 0.9, Ti 0.8, Mt 1.0. III Fe 0.9, Ti 0.7, Mt 0.9. IV Fe 1.1, Ti 0.8, Mt 1.5.

Dorsum (Figs. 1, 3–5): Outline of dorsal scutum sinuous, widest at groove II. Posterior border of scutum straight. Eye mound elliptical, moderately high, well separated from

anterior border of carapace, armed with small unpaired median blunt tubercle. Mesotergum divided into 4 well-defined areas by transverse grooves, area I divided into left and right halves by median groove. All areas and tergites smooth and unarmed, except from a pair of very small paramedian granules on each area III and IV.



FIGURES 4-5. *Pherania giupponii* Kury **sp. nov.** Male holotype (MNRJ 4494) 4. Habitus, lateral view; 5. Posterior part of scutum, free tergites and coxa IV, dorso-posterior view. Scale bars 1 mm.

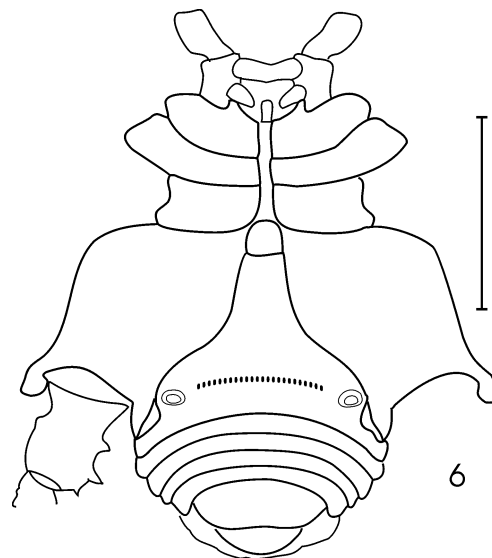
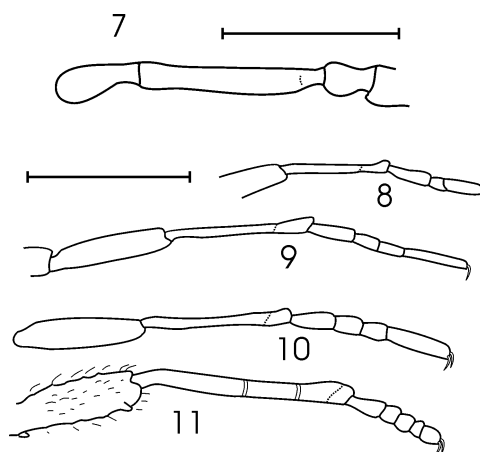


FIGURE 6. *Pherania giupponii* Kury **sp. nov.** Male holotype (MNRJ 4494) 6. Habitus, ventral view. Scale bar 1 mm.

Venter (Fig 6): Coxae I-IV, stigmatic area, sternites and anal opercle finely granular, without remarkable processes. Stigmatic area well separated from coxa IV, T-shaped. Stigmata clearly visible. Coxa IV with ventro-apical apophysis applied against free sternite I.

Mouth parts. Chelicerae not swollen. Basicheicerite without well-defined bulla. Pedipalpal trochanter with one basal setiferous tubercle; femur with ventro-basal setiferous tubercle; patella unarmed. Tibia and tarsus armed with weak spines (Fig 4). Tibia with 3 (Ili) ectal and mesal spines. Tarsus with 3 mesal (Iii) and 3 ectal (Iii) spines.

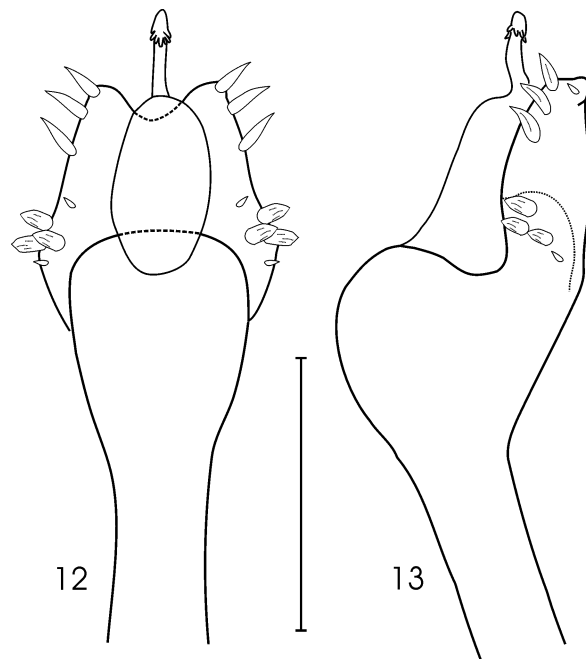
Legs. Femur I with a ventral row of delicate setiferous granules. Coxa IV (Figs. 1, 5) with bifurcate dorso-apical apophysis with two subequal branches and ventro-apical apophysis with subdistal secondary branch. Trochanter IV (Figs. 1–2, 4–6) with well-developed square sclerite, a strong subdistal dorsal recurved apophysis, one ventro-retrolateral spiniform apophysis and two prolateral spiniform apophyses. Femur IV (Figs. 1–2, 4) sub-sigmoid, with strong subdistal prolateral spiniform apophysis and subdistal ventral bifid apophysis. Patella IV (Figs. 1–2) with stout median ventro-prolateral spiniform apophysis and still larger distal prolateral spiniform apophysis, and one ventro-apical anvil-shaped apophysis. Tibia IV with two rows of small blunt granules. Tarsal joints: 3(2) / 4(3) / 4 / 5. Tarsal claws unpectinate, tarsal process absent.



FIGURES 7–11. *Pherania giupponii* Kury **sp. nov.** Male holotype (MNRJ 4494) 7. Left femur III, dorsal view; 8–11. Metatarsi + Tarsi I–IV, lateral view. Dotted lines are the boundaries calcaneus X astragalus of metatarsi. Scale bars 1 mm.

Color. Body and appendages background dark yellow. Scutal areas I–IV are dark brown with slightly lighter areas in the middle. A sharp dark brown band follows outline of scutum on lateral areas and posterior margin. Sparse dark brown mottling on legs I–IV and even sparser very faint on pedipalps, chelicerae and venter (coxa + stigmatic area + sternites).

Genitalia. Ventral plate trapezoid narrowing slightly and gradually distally. Distal border of penis ventral plate with soft notch. Two groups of setae on ventral plate. Basal group of three short lanceolate setae + two accessory smaller ones. Distal group of three short straight setae + one accessory smaller. Glans without ventral or dorsal processes, stylus with subapical small rounded tubercles.



FIGURES 12–13. *Pherania giupponii* Kury **sp. nov.** Male paratype (MNRJ 4494) 12. Distal part of penis, dorsal view. 13. Same, lateral view. Scale bar 0.1 mm.

Discussion — Affinities of *Pherania*

Relationships among genera of Pachylinae are still unclear. However, it is possible at this stage to advance one possible closest relative of *Pherania*. *Antetriceras* Roewer, 1949, monotypic genus, only recently transferred from the Tricommatinae to the Pachylinae (Kury, 2003) seems to be very closely related to *Pherania*. The single species of described *Antetriceras* is known from Santa Catarina (Roewer, 1949). As I have not examined any material of *Antetriceras signatus* Roewer, 1949, my discussion can be supported only by Roewer's illustrations of exomorphology. *Antetriceras signatus* shares with the species of *Pherania* the presumable synapomorphies: 1) shape of coxa IV starting transversal and then becoming straight more or less abruptly; 2) dorso-apical apophysis of coxa IV of male with two subequal branches; 3) powerful curved dorso-subdistal apophysis on trochanter IV of male; 4) strong subdistal prolateral apophysis on femur IV of male; 5) loss of the tarsal process (which led *Antetriceras* to be originally included in the Tricommatinae and *Pherania* in the Minuidae). Moreover, the shape of pedipalps with the delicate spines and outline of dorsal scute are very similar. *Antetriceras* has meaningful differences to *Pherania*, such as the strong unpaired spine on scutal area III, trimerous distitarsus I, strong spines on frontal margin of carapace, spine of eye mound high and curved to the front, but not forming a massive hook such as in *Pseudopachylus* Roewer, 1912.

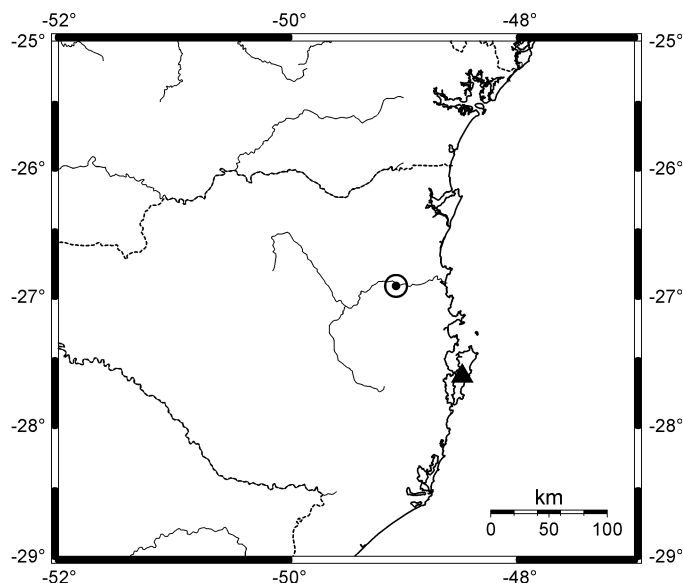


FIGURE 14. Eastern Santa Catarina State, Brazil, showing distribution of *Pherania pygmaea* (dotted circle) and *Pherania giupponii* (triangle). Thin lines are rivers and dotted lines are state boundaries.

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