

## A review of *Huralvioides* (Opiliones, Gonyleptidae, Pachylinae)

by

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### Abstract

The hitherto monotypic genus *Huralvioides* H. SOARES, 1970 is investigated. Besides the type species, poorly known, a new species, *H. hoeferi*, is described from the Amazonas state, Brazil. A key is given for separating the species of *Huralvioides*.

Keywords: Laniatores, Neotropics, biodiversity, taxonomy, Arachnida.

### Resumo

Um estudo é feito sobre o gênero *Huralvioides* H. SOARES, 1970, até agora monotípico. Além da espécie-tipo, imperfeitamente conhecida, uma espécie nova, *H. hoeferi*, é descrita do estado do Amazonas, Brasil. É fornecida uma chave para a determinação das espécies de *Huralvioides*.

## Introduction

The arachnological material from central Amazonia sent to me for identification by Dr. H. HÖFER (Karlsruhe) allowed the discovery of a new species of Gonyleptidae. This species has unusual male genitalia, and its study offered the opportunity to enhance the knowledge of the genus *Huralvioides* H. SOARES, 1970.

This genus was erected by H. SOARES (1970: 333) based on a female and a juvenile male specimens from Lower Amazon, described as the species *Huralvioides paruensis*. *Huralvioides* was then considered to be closest to *Huralvius* MELLO-LEITÃO, 1935, which I consider elsewhere to be a junior synonym of *Neopachylus* ROEWER, 1913 (KURY, unpubl.).

Follow an emended diagnosis for *Huralvioides*, a key to the species and the description of the new species *Huralvioides hoeferi*. Acronyms of repositories are Staatliches Museum für Naturkunde Karlsruhe (SMNK) and Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ). All measurements are in mm.

### *Huralvioides* H. SOARES, 1970

*Huralvioides* H. SOARES, 1970: 333

(type species *H. paruensis* by original designation)

### Diagnosis

Pachylinae with sexual dimorphism in armature of coxa, trochanter, femur and tibia IV and also in free tergites II-III, which in male are keeled and bordered by a row of large tubercles (adult males of *H. paruensis* are unknown). Eye mound elliptic, convex, elevated in cone or with median high spine. Mesotergum divided in four well marked areas. All scutal areas and free tergites unarmed. Scutal grooves III-IV strongly arched anteriorly. Anal opercle with stout median apophysis in male and unarmed in female. Coxa IV with basal depression. Number of tarsal articles 5-6(3), 7-10(3), 6, 6. Ventral plate tagmatized, with distal portion forming a *lamina parva*; stylus short with apex swollen, glans without dorsal process, with cylindrical ventral process. For distinction of nearest genera see Discussion.

### Included species

*H. hoeferi* and *H. paruensis*.

### Distribution

Brazil: Amazonian Forest.

### Key to the species of *Huralvioides*:

- 1) Area I undivided, tarsus I hexamerous ..... *H. paruensis*  
Area I divided, tarsus I pentamerous ..... *H. hoeferi*

***Huralvioides paruensis* H. SOARES, 1970**  
*Huralvioides paruensis* H. SOARES, 1970: 333; fig. 19

**Material examined**

Female holotype and male paratype (MNRJ 05.267) Brazil, Pará state, Rio Paru de Leste, 7.VIII.1952 leg. J.C.M. CARVALHO & F. NOVAIS

**Diagnosis**

Anal opercle of male armed with straight spine. Areas of dorsal scute covered with transverse rows of granules, stouter in the middle. Area I undivided. Rows of tubercles of metatarsus and tibia IV of female well defined. Tarsal joints: 6(3), 9-10(3), 6, 6.

***Huralvioides hoeferi* new species (Figs. 1-11)**

**Etymology**

The species is named after the collector of the type series, Dr. Hubert HÖFER.

**Material examined**

Male holotype and female paratype (MNRJ 05.322) Brazil, Amazonas state, Igapó Tarumã-Mirím, leg. H. HÖFER, 6.IV.1987; 1 male paratype (SMNK) 12.III.1987.

**Diagnosis**

Anal opercle of male armed with stout and curved spine. Dorsal scute smooth, densely covered by fine hair-tipped granules. Area I divided by a median groove. Tubercles of tibia and metatarsus IV of female scattered, not forming rows. Tarsal joints: 5(3), 7-8(3), 6, 6.

**Description of male holotype**

**Measurements**

Carapace 3.17 wide, 2.07 long; abdominal scute 5.03 wide, 2.97 long. Interocular distance 1.07.

**Body (Figs. 1, 3-4)**

Prosomatic scute subsquare with straight sides. Eye mound elliptic, strongly convex, situated far away from the frontal border of carapace, armed with median oblique long spine. Frontal border of carapace with four setiferous tubercles in each side and frontal median hump with two paramedian setiferous tubercles. Opisthosomatic scute with sides arched, widest at area II. Area I divided by longitudinal groove. Areas III-IV not fused. All scutal areas and free tergites unarmed. Free tergites each with middle transverse row of setiferous tubercles, forming a dense cluster in the sides. Tergite III keeled at sides. Dorsal anal opercle with a stout median spine curved downwards. Free sternites granulous. Stigmata clearly visible. Body densely covered with minute setiferous granules.

### **Mouth parts (Figs. 3-6)**

Pedipalpal segments relatively short, trochanter with basal setiferous tubercle, femur and patella unarmed, tibia with 4 mesal (IiIi) and 4 ectal (IiIi) spines, tarsus with 3 mesal (IiI) and 3 ectal spines (IiI).

### **Legs (Figs. 1, 4, 7-9)**

Coxa IV with dorsoapical outer single-branched apophysis and ventroapical inner bifurcated apophysis, this connected with spiniform apophysis of stigmatic area. Femora, patellae, tibiae and metatarsi of legs I-IV with longitudinal rows of setiferous tubercles. Trochanter IV with ventroapical inner spine. Femur IV curved dorsally at base, with four apical larger tubercles. Tibia IV with inner row of unequal sized spines. Ratio calcaneus/astragalus of metatarsi I-IV: 0.21/0.11/0.22/0.09. Tarsal joints: 5(3)-8(3)-6-6.

### **Color**

Body and appendages mahogany brown. Scutal areas darker, contrasting with grooves. Free tergites dark brown. Pedipalps, trochanter I-III, tarsi I-IV and spine of anal opercle dark yellow.

### **Genitalia (Figs. 10-11)**

Distal portion of truncus swollen. Ventral plate more or less defined and separated from truncus. Basal portion of ventral plate wide, with four pairs of basal setae. Distal part of ventral plate low and narrow with three pairs of long distal setae. Glans with cylindrical tapered ventral process, stylus short, with apex swollen, truncate.

### **Remarks on female paratype**

Anal opercle unarmed. Coxa IV with depression as in male. Trochanter IV unarmed. Free tergites not keeled. Tarsal joints: 5(3)-7(3)-6-6.

### **Discussion**

Judging by armature of eye mound, outline of body, scutal grooves and coxa IV, *Huralvioides* can be referred to the Pachylinae, and within this subfamily it is probably closely related to *Acrographinotus* ROEWER, 1929 and *Punrunata* ROEWER, 1952, which have species described from Peru and Brazil. In the species of these genera the leg IV is more strongly armed and the anal opercle is unarmed, the glans penis has no ventral process and the stylus is long and sinuous. The monophyly of *Huralvioides* is supported by the presence of median armature in anal opercle, and probably also by the shape of ventral plate of penis.

The hitherto unknown male genitalia of the species of *Huralvioides* are still incompletely known, since there are no reported adult males of *H. paruensisi*. The genitalia of *Huralvioides* (judging only from *H. hoeferi*) can be referred to the Gonyleptidae type, although secondarily modified. The long and convergent spines of the *lamina parva* are similar to that of Gonyleptidae Bourguyiinae (KURY, 1994). The structure of the ventral plate, divided into two regions: a base flanked by setae and a short and rounded

*lamina parva* suggests an affinity with the Tricommatidae - the distal portion of the ventral plate in *H. hoeferi* is strongly reminiscent of the *lamina parva* of the Tricommatidae (KURY, 1992). *H. hoeferi* shows some other resemblances to the tricommatids, such as the armature of eye mound and ventroapical apophysis of coxa IV. Using *Huralvioides* as an intermediate phylogenetical step, it is tempting to speculate if the tricommatids after all are no more than highly modified gonyleptids which have lost the tarsal process and had the coxae IV regressed to the ancestral condition present in other families of Laniatores. This would explain as synapomorphies (and not convergences) the ventral process of glans (present only in Tricommatidae and Gonyleptidae), special sexual dimorphism of coxa, trochanter and femur IV. This new hypothesis of Tricommatidae being a specialized offshoot of the *Huralvioides*-like Gonyleptidae Pachylinae gains strength if we regard genera like *Camarana* MELLO-LEITÃO (removed from Bourguiiinae by KURY, 1994) as an early lineage of Tricommatidae, evolved before the regression of coxa IV, typical of other genera. This is a line of research out of the scope of the present paper, but which deserves to be continued in the connection of Laniatorid phylogeny.

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Table 1: Comparison of counts and measurements (in mm) for the two known female specimens of the two species of *Huralvioides*.

	Tarsal counts	Ratio calcaneus/ astragalus I-IV	Fe I	Fe II	FeIII	FeIV
<i>H. paruensis</i> holotype	6-6/9-10/6-6/6-6	0.11/0.08/0.20/0.07	3.4-3.4	5.5-5.7	4.6-4.6	6.0-6.0
<i>H. hoeferi</i> paratype	5-5/7-?/6-6/6-6	0.14/0.13/0.14/0.09	2.8-3.0	4.5	3.5-3.9	4.8-4.8

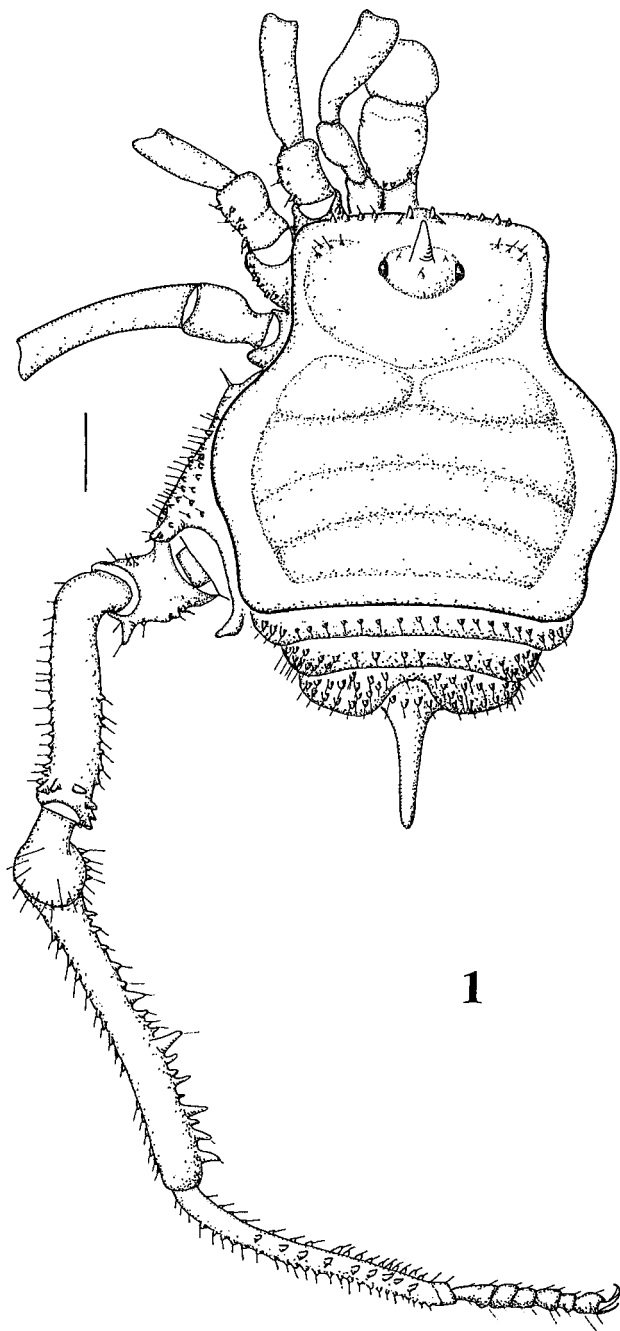


Fig. 1:  
*Huralvioides hoeferi* new species, male holotype, habitus, dorsal view. Scale bar = 1.0 mm.

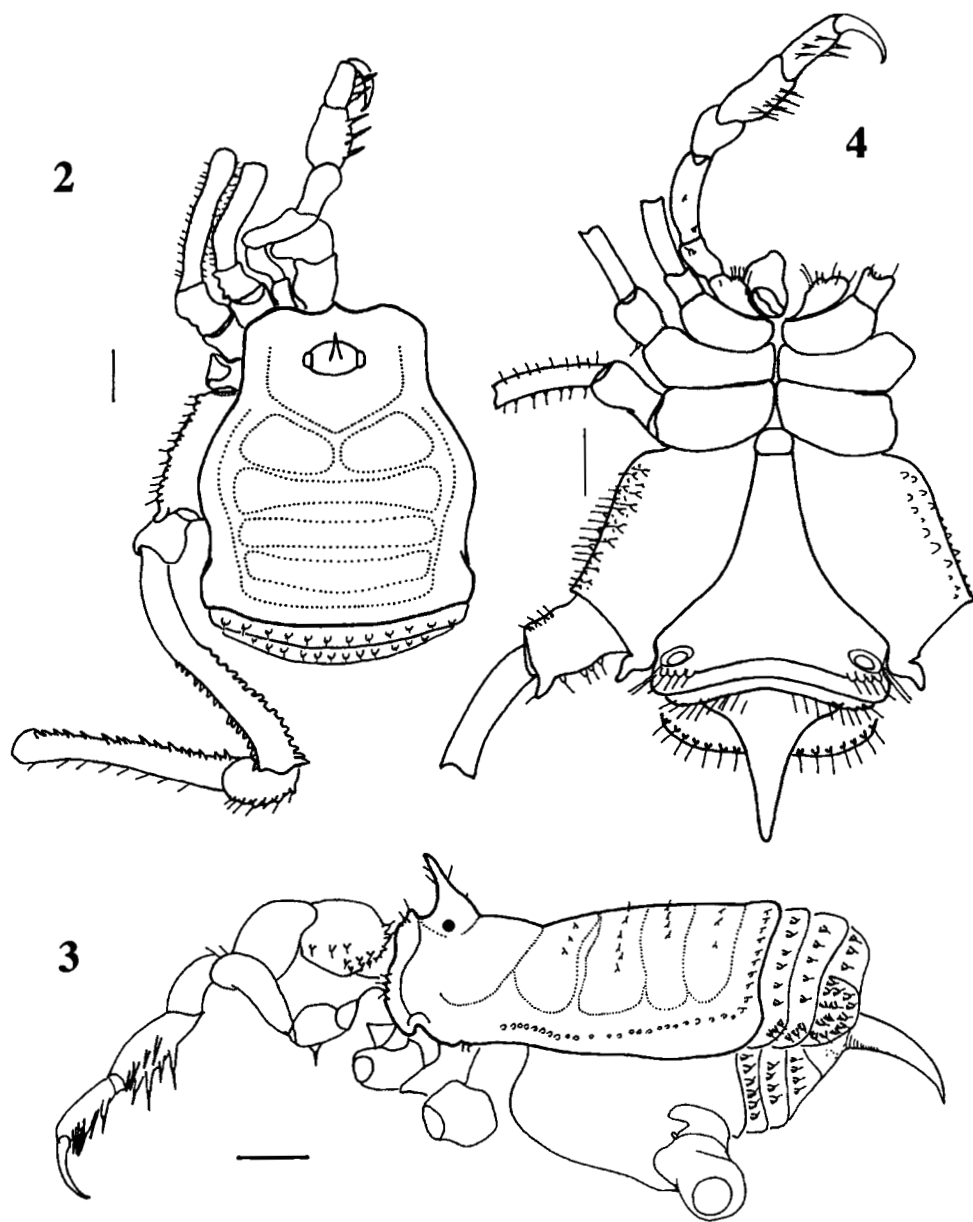


Fig. 2-4:  
*Huralvioides hoeferi* new species. 2: female paratype, habitus, dorsal view; 3: male holotype, habitus, ventral view; 4: same, habitus, lateral view. Scale bars = 1.0 mm.

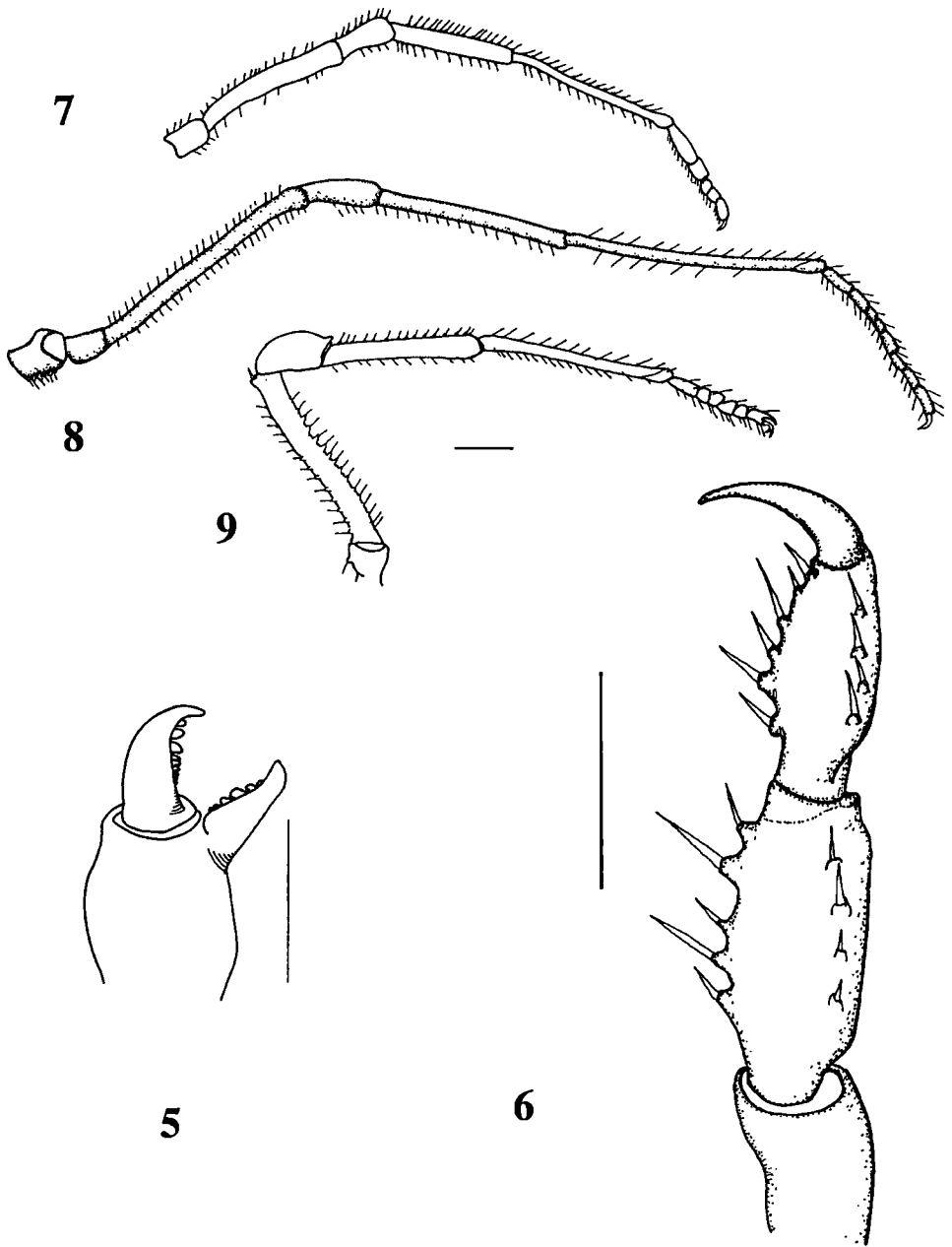


Fig. 5-9:  
*Huralvioides hoeferi* new species, male holotype. 5: righthelicera, ventral view; 6: left pedipalpal tibia and tarsus, ventral view; 7: righth leg I; 8: righth leg II; 9: righth leg III. Scale bars - 1.0 mm.



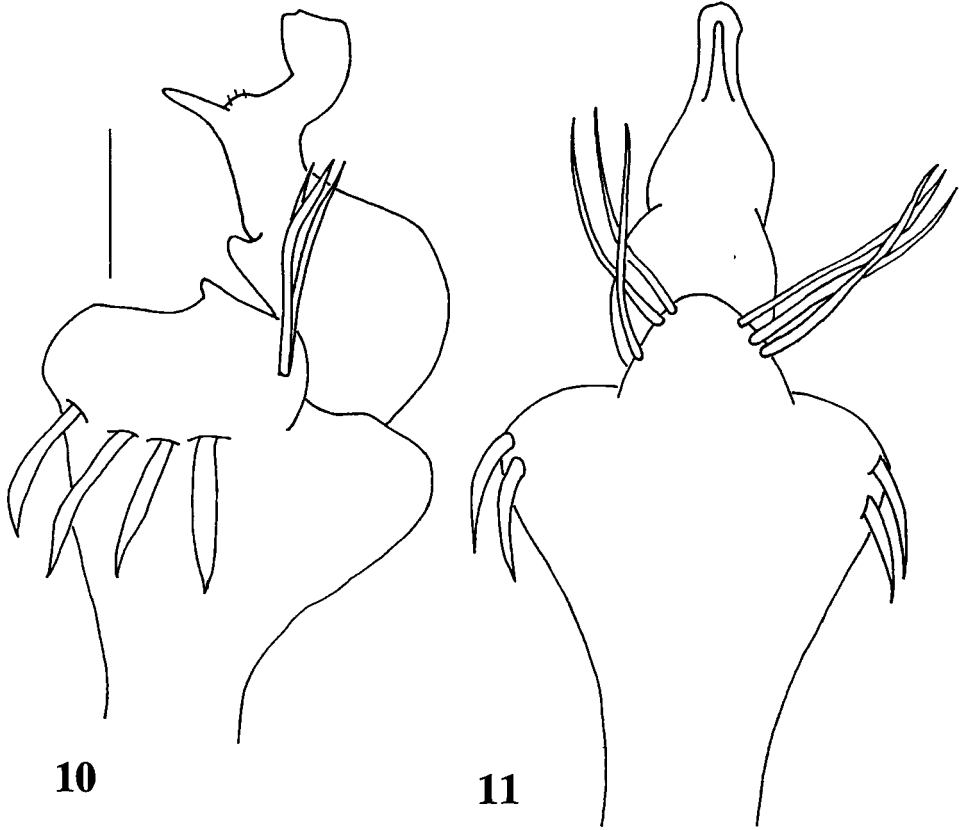


Fig. 10-11:  
*Huralvioides hoeferi* new species, male holotype, penis, distal part. 10: lateral view;  
11: ventral view. Scale bar = 0.1 mm.

