

A NEW ORIBATID GENUS AND SPECIES,
BALOGHEREMAEUS CHIMAERA FROM SOUTHEASTERN
SPAIN (ACARIFORMES, ORIBATIDA, PLATEREMAEIDAE)

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A new genus and species, *Balogheremaeus chimaera* gen. et sp. n. is described after a specimen found in a dry riverbed in Southeastern Spain. A comparison with the rest of the family Plateremaeidae is made. The new genus and species is differentiated from the rest of the family Plateremaeidae due to its smaller size, its convex notogaster, the presence of three pairs of anal setae and the presence of well developed laminated excrescences or crests in its legs, both dorsally and ventrally.

Key words: Acari, Oribatids, *Balogheremaeus chimaera*, new genus, new species, Plateremaeidae, taxonomy, Spain.

INTRODUCTION

The family Plateremaeidae TRÄGARDH, 1931 was recently revised by PASCHOAL (1987) who included five genera: *Plateremaeus* BERLESE, 1900, *Allodamaeus* BANKS, 1947, *Lopheremaeus* PASCHOAL, 1987, *Paralopheremaeus* PASCHOAL, 1987 and *Calipteremaeus* PASCHOAL, 1987. Species belonging to this family are characterized by: 1) species medium sized, 2) nymphs retain exuviae from previous instars while adults do not retain them, 3) body covered by a deep layer of cerotegument, 4) notogastral cuticle smooth or foveolated, 5) lamellar setae very lateral and close to the rostral setae, 6) interlamellar setae very short, 7) bothridia dorsally opened and close to the notogastral edge, 8) sensilla long, flagellated or fusiform at their distal end, 9) notogaster picnonotic and flat with its centro-dorsal setae absent and with six pairs of postero-lateral notogastral setae, 10) dorsal lyrifissures small, 11) with epimeral neotrichy, 12) genital and anal apertures almost circular, 13) seven pairs of genital setae arranged in, at least, two longitudinal rows, 14) adgenital setae between genital and anal plates, 15) anal plates with four to eight pairs of setae, 16) adanal setae lateral to the plates, 17) without pedotecta, but with apophysis P present, 18) leg articulation with sockets, 19) tarsi I and II with distal apophyses present, 20) tarsi pedicels long and narrow and 21) legs tridactylous with small claws being the median one strongest.

We have recently studied one Spanish specimen which agrees with previous features except for its smaller size, its convex notogaster and for having only three

pairs of anal setae. For these reasons, together with other features we have decided to propose a new genus.

As the specimen has only three pairs of anal setae it could be considered as belonging to the family Pheroliodidae PASCHOAL, 1987, but species belonging to this family have never smooth notogaster nor flagellated sensilla. Moreover pheroliodids have greater dorsal lyrifissures, genital setae are always arranged in one longitudinal row, epimeral neotrichy is always absent and tarsi pedicels are short.

The new genus could be also be considered as belonging to the family Nooliodidae PASCHOAL, 1989 as it has three pairs of anal setae and a smooth notogaster but nooliodids have not flagellated sensilla or epimeral neotrichy. The presence of long tarsi pedicels and seven pairs of genital setae (instead of eight) also excludes this family.

Balogheremaeus gen. n.

Diagnosis: Plateremaeidae small sized, convex notogaster, bothridia dorsally opened and close to the notogastral edge, sensilla long, smooth. Three pair of anal setae instead of expected four to eight pairs. All the legs bareing well developed laminated excrescences or crests both dorsally and ventrally.

Derivatio nominis: The name of the genus is after the great Hungarian oribatologist Dr. JÁNOS BALOGH. Specific epithet is after the strange and "monstrous" look of the specimen.

Type species: *Balogheremaeus chimaera* sp. n.

Remarks: The new genus must be considered as a remnant of a relictual fauna as it belongs to a tropical family. This fauna appears preserved in several endogenous environments from southern Spain where another species of this family, *Paralopheremaeus hispanicus* (RUIZ *et al.* 1990) was previously described.

Balogheremaeus chimaera sp. n.

(Figs 1–2)

Material studied: One specimen (holotype) from Pego (Alicante province, Southeast of Spain). The specimen was sampled in a dry riverbed, (May-2-1997, J. P. Zaballos leg.). The specimen is stored in the collection of the Department of Zoology, Faculty of Biology, Complutense University (Madrid).

Derivatio nominis: Specific epithet is after the strange and "monstrous" look of the specimen.

Dimensions: The body size is 340 μm long and 185 μm wide (excluding the cerotegumentary layer)

Tegument: slightly yellowish as the body is not very sclerotized. The body, included the legs, are covered with a thick cerotegumentary layer except the smooth notogaster (perhaps due to the presence of nymphal exuviae, lost in the adult instar).

Prodorsum (Fig. 1): It is difficult to observe due to the thick cerotegumentary layer. Lamellar setae almost at the same level of the rostral setae, being both lamellar and rostral setae arched, strong and slightly barbulated. Very small interlamellar setae. Prodorsal bulges poorly developed. Bothridia are dorsally opened and the sensilla are long, smooth and flagellated. Apophysis P are well developed with a small dorsal tooth.

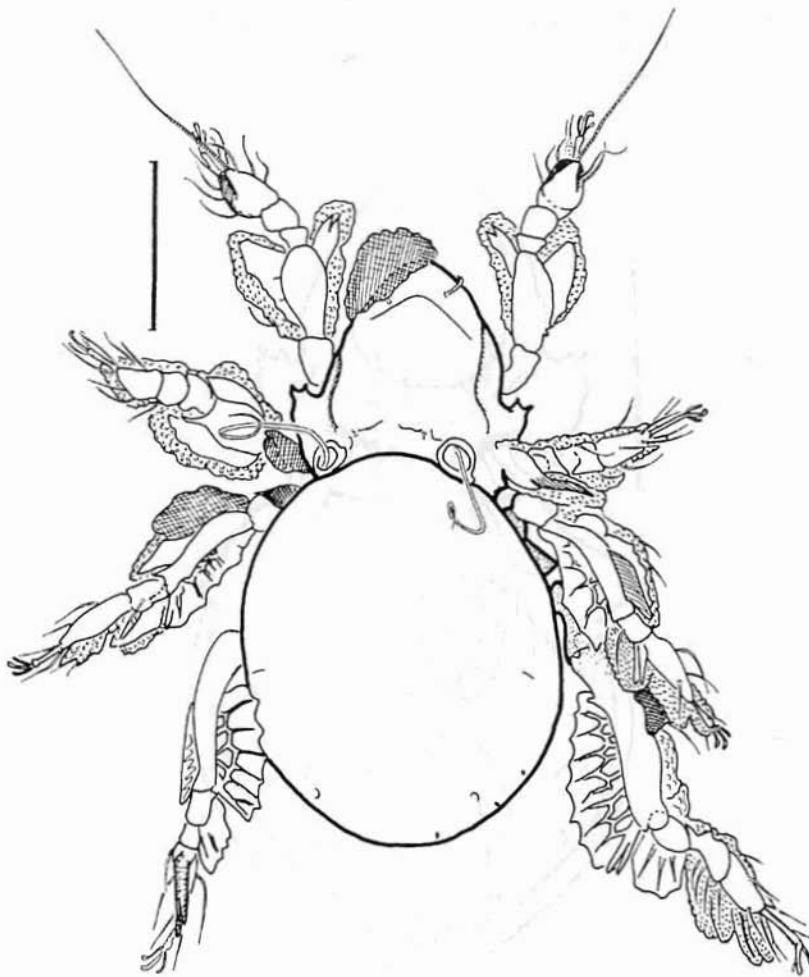


Fig. 1. *Balogheremaeus chimaera* gen. et sp. n., dorsal view. Scale bar: 100 μm

Notogaster (Fig. 1): Elliptical and smooth, with the dorsal lyrifissures poorly developed. Notogastral setae are very short and only developed in the postero-lateral margin.

Ventral region (Fig. 2): Apodemata II and *sj* are uncomplete but well developed while apodemata III and IV are barely visible. Strong epimeral neotrichy with thin, smooth and moderate sized setae, all with a similar length. Anal and genital plates with a great size. Genital plates with seven pairs of very small genital setae arranged in two rows: the inner row has four pairs of setae while the external row has only three pairs. Three pairs of anal setae (bigger than genital setae) arranged in the inner edge of each plate. Adanal and adgenital setae are similar to epimeral setae, being *ad1* in a paraanal position.

Legs (Fig. 1): Strong and well developed legs, being the legs IV longer than the rest. All the legs have well developed laminated excrescences or crests both dorsally and ventrally. These crests are covered with the cerotegumentary layer. The specimen has a bizarre look mainly due to the presence of these crests and the cerotegument. Tarsi of leg I have very protruding and rounded apophyses with a solenidia in their distal edge. All the legs have a long and narrow tarsal pedicel with three small claws being the medial claw stronger than the lateral claws.

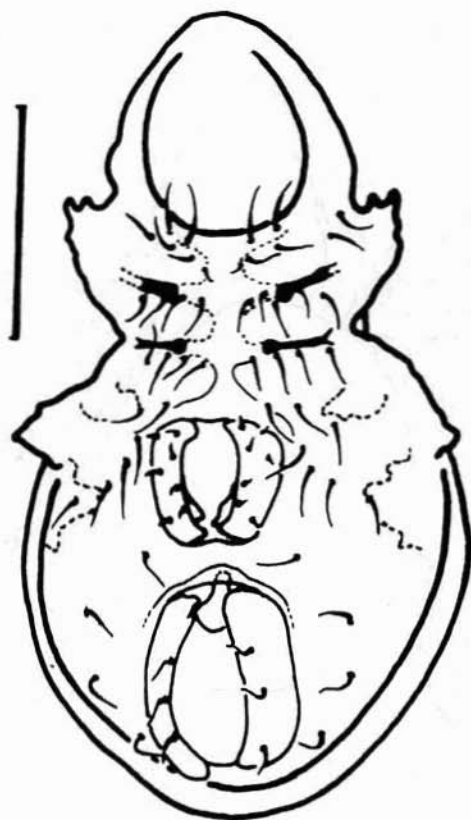


Fig. 2. *Balogheremaeus chimaera* gen. et sp. n., ventral view. Scale bar: 100 μ m

REFERENCES

- PASCHOAL, A. D. (1987) A revision of the Palteremaeidae (Acari: Oribatei). *Revista Brasileira de Zoologia* 3(6): 327–356.
- RUIZ, E., KAHWASH, M. A. M. & SUBÍAS, L. S. (1990) Cuatro nuevos Gymnodamaeoideos del sur de España. (Acari, Oribatida, Gymnodamaeoidea). *Boletín de la Real Sociedad Española de Historia Natural (Sección Biológica)* 85: 39–49.

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