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**MEDIOPPIA PRODUCTA**: A NEW OPPIID MITE
(ACARIDA, ORIBATIDA, OPPIIDAE)
FROM THE BASQUE COUNTRY (NORTHERN SPAIN)

by Juan Carlos ITURRONDOBEITIA* and Antonio ARILLO**

SUMMARY: Medipia producta, a new species of oppiid mite resembling Medipia melisi (Valle, 1949), is described from a cave in Biscay (northern Spain).

In the material collected in Otxas Cave (Yurre, Biscay, Northern Spain) by several members of the speleology team of the University of The Basque Country, in January 1981, six specimens were found of a species belonging to the family Oppiidae Grandjean. This find was the subject of a paper published some time ago (ITURRONDOBEITIA, 1982). It was then suspected that this species could well be considered as Oppia melisi (now placed in the genus Medipia), described by Valle in 1949. However, it could not be asserted with certainty that they were the same species, due to the fact that the Italian author made a very poor description of his species and the type material has disappeared. The only source we had to compare our species with was the original description, especially the drawings. The differences found in some characters might have been due to the distance between the caves (Bernini, pers. comm.). Fifteen years later, now that more detailed studies have been made and as there is no new material or references to be compared, we consider that there are reasons to separate the two species. We therefore name the Spanish species as Medipia producta and take this opportunity to publish new and more detailed data about this taxon.

Without entering into a discussion about the systematics of the family and generic characters, the new species is placed in the genus Medipia (Subiás & Minguez, 1985). The complexity of the Oppiidae is well known (Subiás & Balogh, 1989), and the family is currently being revised and studied by several authors.

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FIG. 1-3: Medioppia producta n. sp.
1. — Dorsal side: notogaster and prodorsum. 2. — Ventral side without legs. 3. — Sensillum.
**Medioppia producta** new species

Size and colour: mean dimensions 550 µm long by 250 µm wide; no differences observed between males and females; colour dark brown.

Prodorsum (fig. 1): the most important characteristic of this part of the body is its extraordinary distal stretching into a prominent, lengthened rostrum; base of prominence with insertions of rostral setae, which are strong and apparently slightly barbed; sensillus (fig. 3) pectinate, slightly widened in its third distal, with 4 (sometimes 3) relatively long branches. Another remarkable characteristic is the form of the central part of the border with the notogaster where two corniculi, characteristic of the genus, appear. The lamelar, interlamelar and exobothridial setae are thin and long.

Notogaster (fig. 1): with 10 pairs of fine and well developed setae, distribution normal for the genus; fissures im clearly visible. Specimens slightly flattening dorso-ventrally.

Ventral Region (fig. 2): without discriminating characteristics; main features are the 6 pairs of fine and lengthened setae of the genital plates, arranged in two parallel lines: 3 anterior pairs next to the inner margin of valves and 3 posterior pairs close to the external margin; epimeres 1 and 3 + 4 very long; fissures iad located parallel and close to lateral edges of anal plates, being difficult to locate in some cases; formula of epimeral setae normal, 3:1:3:3.

Legs (Fig. 4): all single-clawed; chaetotaxy as shown in figure 4, being normal in most features. Nevertheless, some remarks should be made: leg 1 with tibial ϕ₂ long (usually being shorter); tarsal ω₁ blunt and ω₂ sharpen; leg 2 with ρ" missing from tarsus, which is common in other Medioppiniae; leg 3: tarsus lacks j₁, which is frequently lacking in other Medioppiniae. Remaining features of legs normal for the genus.

Ecology: the material consists of 2 males and 4 females. The location where they were taken corresponds to a “cathole”, or a narrow corridor, located well inside the cave (some 20 m from entrance), which presented very little organic matter. This fact obscures the origin of the captured specimens if, furthermore, we take into account that they present few troglobitic characteristics, having a strongly coloured cuticle and normally-developed legs and sensilli. These characteristics are in contrast to true troglobitic forms, which possess depigmented cuticle and extraordinarily-developed legs and sensilli.

Most cave-dwelling oribatids have been reported from organic matter, which is either exogenous, due to human activities, or transported by stream water. Other cases involve matter of endogenous origin, excreted by animals sheltering in the caves. In the first case, high specific diversity is generally found, whereas in the second, few species are present but in greater numbers and showing adaptations to troglobitic environments (LEBRUN, 1967; PEREZ-INIGO, 1969, 1975).

In the case of Otxas Cave, the origin of the organic matter is clearly of the exogenous type, probably resulting from the human influence, since the sampled location is not crossed by any river or stream.

**DISCUSSION**

As noted above, the new species is most similar to *O. melisi* in terms of general morphology and numbers of setae. However, more detailed study reveals interesting differences between the two species. The differentiating features are as follows. The length of the Otxas specimens is greater than those from Spippola Valley (550 µm compared to 500 µm, respectively), while the widths coincide (250 µm). The dorso-sejugal suture is a sinuous line in *O. producta*, compared to an almost straight suture in *O. melisi*. The prodorsum of the new species is long and pointed (hence the name *producta*, meaning growing towards), versus normal in *melisi*. Acetabulum of leg 1 very open in *producta*, but normal in *melisi*. Sensillus with 3-4 branches and setiform in shape, whereas Valle’s species has 5 and is clubbed. The interlamelar setae are longer than lamelar ones, while in *O. melisi* the reverse is the case. The locations of the notogastral setae are also rather different in the two species, though we are suspicious about the notogastral setation of the Italian species, since it is rather unusual and probably erroneous. Epimere 1 is very long and the discidium blunt in *producta*, as opposed to and normal and acute, respectively, in *melisi*. 
Fig. 4: *Medioppia producta* n. sp.
A. — Leg I. B. — Leg II. C. — Leg III. D. — Leg IV.
Whereas the comparison of *M. producta* and *M. melisi* may be controversial, the relationship with the other species of the genus is easier and clear in our opinion. SUBÍAS and BALOGH (1989) recognized the following 12 species as belonging to *Medioppia*:


We are not going to discuss the taxonomic position of each of the 21 species, because ARILLO is preparing a review of the Oppiidae, including the genus *Medioppia*. Nevertheless it can be noted that *M. acutirostris* is considered to be a synonym of *M. ordinensis* (ARILLO & SUBÍAS, in press).

In summary, these species can be divided into four groups:

a) Species with entire rostrum: 2, 3, 4, 5(?), 7, 8, 11, 12, 13 and 20;

b) Species with a rostrum with a small central tooth: 1, 10, 14 and 18;

c) Species with a three-toothed rostrum, with the teeth similar: 9;

d) Species with a three-toothed rostrum with the central tooth larger: 6, 15, 16, 17, 19 and 21.

The position of species 5, *M. parva*, is uncertain because it has been very poorly described and incompletely drawn, so that it is impossible to know the shape of the rostrum. However LOMBARDINI (1952) stated that it closely resembles *M. melisi*, differing only in size. *M. producta* differs clearly from groups b, c, and d in the shape of the rostrum and from group a by its size and development of the prodorsum.

It is clear that continued researching on cavedwelling faunas is needed in order to clarify the origin of the present species, but the differences presented here must be taken as conclusive of its validity in view of the observed facts.

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