

***Pediobius erdoesi* sp.n., a new species
collected from cynipid galls**

(Insecta: Hymenoptera: Eulophidae)

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Abstract

A new species of *Pediobius* WALKER, 1846, is described, *P. erdoesi* sp.n., which was discovered in the study of the typical series of *Plagiotrochus coriaceus* (= *Andricus coriaceus* MAYR, 1882) gathered in Italy and kept in the collection of the Naturhistorisches Museum Wien. This new species is characterised by having a morphology similar to that of *P. rotundatus* (DE FONSCOLOMBE, 1832) but which differs not only in its colouration but also in the lower depressions of the notauli, which are wide, bright and smooth.

Key words: Eulophidae, Chalcidoidea, *Pediobius*, new species, Italy, cynipid galls, oak.

Zusammenfassung

Eine neue Art der Gattung *Pediobius* WALKER, 1846, *P. erdoesi* sp.n., wird beschrieben. Diese ist bei der Studie der Typenserien von *Plagiotrochus coriaceus* (= *Andricus coriaceus* MAYR, 1882) entdeckt worden, die in Italien gesammelt worden und in der Sammlung des Naturhistorischen Museums in Wien aufbewahrt ist. Die Morphologie dieser neuen Art ist *P. rotundatus* (DE FONSCOLOMBE, 1832) ähnlich, unterscheidet sich aber nicht nur in der Färbung, sondern auch durch eine schwächere Vertiefung der Notauli, welche breit, hell und glatt sind.

Resumen

Se describe, a partir del estudio de la serie típica de *Plagiotrochus coriaceus* (= *Andricus coriaceus* MAYR, 1882), recolectada en Italia y depositada en el Naturhistorisches Museum Wien, una nueva especie de *Pediobius* WALKER, 1846, *P. erdoesi* sp.n., que se caracteriza por presentar una morfología similar a *P. rotundatus* (DE FONSCOLOMBE, 1832) de la cual difiere no sólo por la coloración sino también por presentar las depresiones inferiores de los notaulos anchas, brillantes y lisas.

Introduction

There are four European species of *Pediobius* which can be detected in cynipid galls (BOUČEK 1965): *Pediobius lysis* (WALKER, 1839), *P. clita* (WALKER, 1839), *P. chilaspidis* (BOUČEK, 1965), and *P. rotundatus* (DE FONSCOLOMBE, 1832); to which we must probably add *P. sublaevis* ERDÖS, 1957 (ASKEW 1963, BOUČEK & ASKEW 1968). Therefore, it is possible that there are six different parasite species inhabiting cynipid galls (always located in *Quercus*) if we include this new species.

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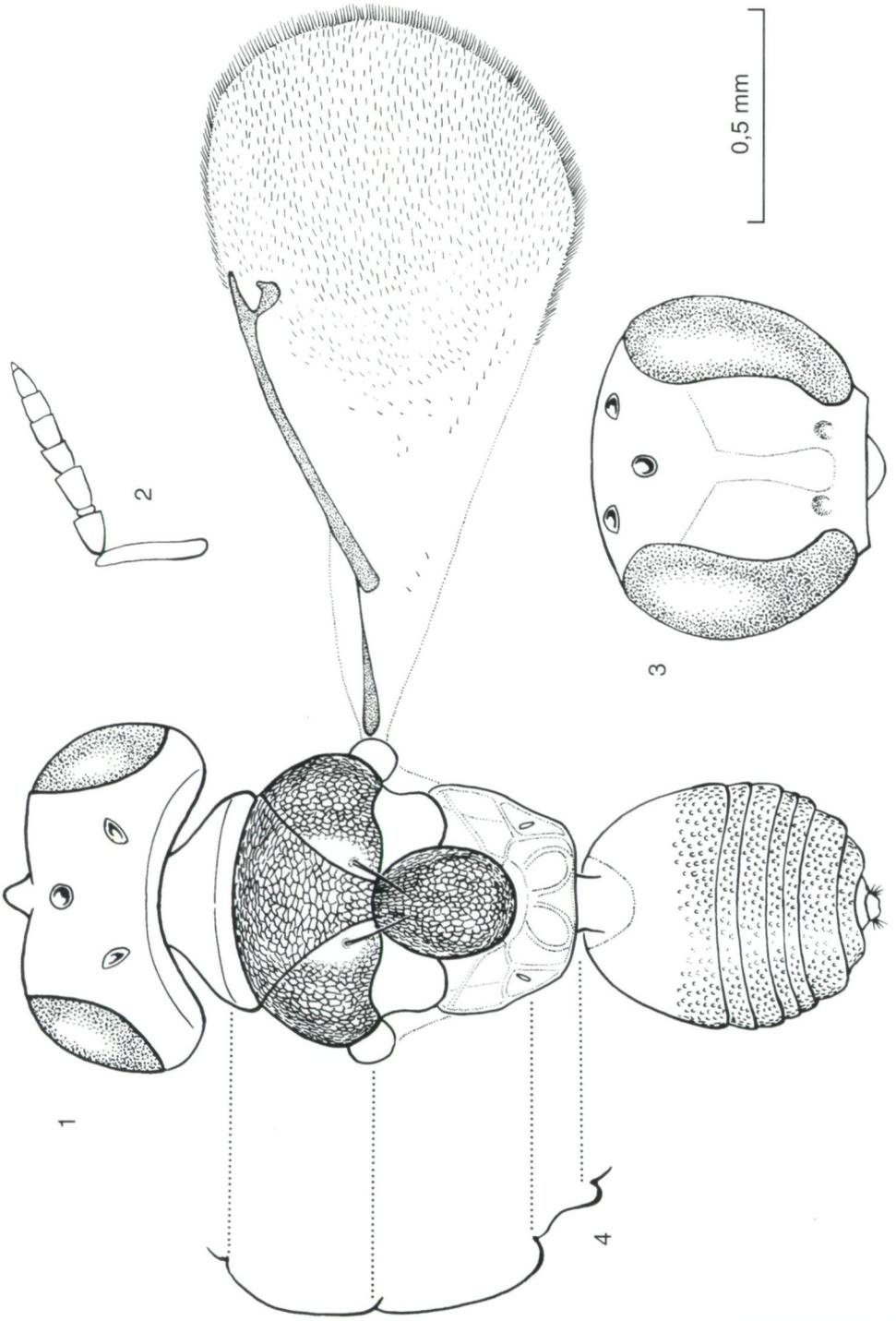


Fig. 1.- 4: Female of *Pediobius erdoesi* sp.n. (1) Body in dorsal view. (2) Antenna. (3) Head in frontal view. (4) Contour of the thorax in lateral view.

Acknowledgements

The author thanks Dr. M. Fischer (Naturhistorisches Museum Wien) for having kindly send the typical series of *Andricus coriaceus* MAYR and the paratype series of *Pediobius chilaspidis* BOUČEK for examination.

Pediobius erdoesi sp.n.

(Fig. 1 - 4)

Type material: 4 females belonging to the typical series of *Andricus coriaceus* MAYR.

The **holotype** has the following notes: "*coriac.*, Italien, juins, VI-83", "Italien, Coll. G.Mayr", "*And. coriaceus*, det. G.Mayr Tp.", "*Andricus pseudococcus* Kieff.", "*Rhopalopus ?plagiostrochi* Erdös (Chalc.)", "*Pediobius erdoesi* Pujade, det Pujade-93." (white labels) and "Holotipus, desig. J.Pujade" (red label).

The **paratypes** (3 ♀♀) have the same labels as the holotype, except the red label.

All types are deposited in the Naturhistorisches Museum Wien.

Locus typicus: Italy.

Nominal derivation: When the aforementioned typical series of *Andricus coriaceus* MAYR was studied, the *Pediobius* specimens included in it were determined by Erdös as doubtful examples of *Rhopalopus plagiostrochi* ERDÖS (nowadays *P. rotundatus*). We dedicate the specific name of this new species to this great Hungarian specialist, József Erdös (1900-1971), expert on eulophids and others Chalcidoidea, because he saw certain discrepancies in these specimens with the nominal form of *P. rotundatus* described by him.

Description: Length. female 2.2 - 2.4 mm.

Colouration. In general, dark metallic green. Head dark (blackish) with no metallic reflections. Antennae brown with dark metallic green areas. Propodeum, part of the pronotum, lateral supero-posterior angle of the pronotum, lower half of the notauli, and first segment of the gaster are bright metallic green. Femora and tibiae dark with metallic green reflections; tarsi brown. Wings are translucent with testacic nerviation.

Head. Reticulate excepting part of the frons which is bright slightly sculptured or alutaceous or smooth. Head in frontal view is oval, approximately 1.3 times as broad as long. Visible frontal haes, united in a well-marked longitudinal median carina which emerges between toruli. Distance between compound eyes slightly shorter than their height (13 : 15). Distance between compound eye and mouth slightly greater than space between eye and insertion point of antennae (3 : 2.5). Antennae with clava whose diameter is equal in length to second funicle segment which is slightly thicker and shorter than the first one; scape as long as first funicle segment. Head in dorsal view twice as long as broad and broader than thorax (22 : 18). Occiput margined behind ocelli by a clearly defined carina. Relationship POL : OOL : OCO as 6 : 2 : 4, the diameter of ocellus being 2; lateral ocelli in dorsal view with oval aspect. **Thorax.** Reticulate with the exception of propodeum and pronotal collar, which are smooth and shiny, lower halves of notauli, which are also smooth and shiny, and pleura, which is only transversely reticulate; reticle longer and superficial to scutellum. Mesonotum about twice as long as pronotum and as long as scutellum. Propodeum 0.5 times length of scutellum, with two carinae clearly separated in the middle and diverging posteriorly forming an almost circular space. Forewings with

pubescent aspect; marginal vein : stigmal vein : postmarginal vein as 18 : 3 : 2.5; speculum open inferiorly. **Gaster.** Narrower than thorax (10 : 12), longer than broad (12 : 10), and about equal in length as scutum plus propodeum. Petiole reticulate, 0.75 times as long as propodeum and slightly transverse. First segment superficially reticulate in the dorsal posterior half; the rest slightly reticulate. Borders of tergites in dorsal view are straight.

Discussion

Pediobius erdoesi sp.n. belongs together with *P. lysis*, *P. clita*, *P. chilaspidis*, *P. sublaevis* and *P. rotundatus*, to the "lysis" group which is characterised by the possession of two funicular segments in the antennae of female specimens and also by being a primary parasite in different kinds of Cynipini galls, although there are some doubts regarding *P. sublaevis* (BOUČEK 1965).

On the one hand, *P. erdoesi* sp.n. differs markedly from *P. sublaevis* in the reticulate sculpture of its head and thorax. On the other hand, this new species resembles *P. chilaspidis* in the lack of sculpture in the lower depressions of notauli, but differs from it in its darker colouration and its speculum opens inferiorly, among other features. However, *P. erdoesi* sp.n. is similar to *P. clita* because they also have a mesonotum area with no sculpture and their speculum opens inferiorly, but differs in its darker colouration, head frontally oval, less profound reticulation, and sculptured part of the first segment of gaster; the type of host they attack is also different (*Plagiotrochus* MAYR by this new species and *Neuroterus* HARTIG mainly by *P. clita* and *P. lysis*).

Finally, we should consider the discrepancies between *P. erdoesi* sp.n. and *P. rotundatus*, similar species regarding their external morphological aspect. Actually, there are many coincidences between these two species such as their dark colouration (though it is not so black in *P. erdoesi* sp.n.), their cephalic proportions, their similar wings (though in *P. rotundatus* the speculum can be open or closed as reported by ASKEW (1963), BOUČEK (1965), and PUJADE (1992)), the carinae of their propodeum, and the type of host they attack. In spite of these similarities, we can also distinguish marked differences with regard to the sculpture of scutellum in the area where notaules are impressed, the clava being thinner than the funicle, the presence of a well-marked facial carina that stands out from the toruli in *P. erdoesi* sp.n., less relative impression of the body reticulation, and the presence of sculpture in part of the first abdominal tergites in this new species.

References

- ASKEW, R.R. 1963: Some species of *Pediobius* WALKER (Hym., Eulophidae) inhabiting cynipid oak galls. – Entomophaga 4: 337-342.
- BOUČEK, Z. 1965: Studies of European Eulophidae, IV: *Pediobius* WALK. and two allied genera. – Acta ent. Mus. Nat. Pragae 36: 5-90.
- BOUČEK, Z. & R.R. ASKEW 1968: Palearctic Eulophidae (excl. Tetrastichinae). – Index Entomoph. Ins., edit. V. Delucchi and G. Remaudiere. Le Francois Paris. 254 pp.
- PUJADE, J. 1992: Sobre les espècies de *Pediobius* WALKER, 1846, obtingudes de galles de cinípid a Catalunya (Hym., Chalcidoidea, Eulophidae). – Historia Animalium 1: 63-69.