

**A CONTRIBUTION TO THE KNOWLEDGE OF
ABSOLONIELLA FORMÁNEK, 1913,
A MEDITERRANEAN GENUS OF BLIND WEEVILS
(COLEOPTERA, CURCULIONIDAE)**

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Abstract – The presumed lost holotype of *Absoloniella cylindrica* Formánek, 1913 has been finally found. Moreover, two specimens identified as *A. reitteri* (Müller, 1912), the holotype of which is still considered lost, have been recently collected for the first time very close to the type locality. Therefore, the neotypes of these two recently-designated taxa are here considered as invalid: the first under the terms of Art. 75.8 and the second as not having followed the Art. 75.3.6 of the Code. A new neotype of *Caulomorphus* (currently *Absoloniella*) *reitteri* Müller, 1912 is designated, conforming to all the conditions of the Art. 75.3. Another new species of *Absoloniella* was found as living in Venezia Giulia, but not described since presently known only from remnants of a single specimen. The synonymy of *Ruffodytes* Osella, 1973 with *Absoloniella* Formánek, 1913 is confirmed. In view of these new data, the redescrptions of the genus *Absoloniella* Formánek, 1913 and the species *A. reitteri* (Müller, 1912) are reported, together with a key to all the known species of this genus. The recently proposed synonymies of *A. cylindrica* Formánek, 1913 and *A. hellenica* (Osella, 1973) with *A. reitteri* (Müller, 1912) are rejected and each of these three taxa is considered as a distinct species. A possible placement of *Absoloniella* Formánek, 1913, presently considered as *incertae sedis*, in Curculionidae Curculioninae, is briefly discussed. **Key words:** Curculionidae, Curculioninae, *Absoloniella*, *Caulomorphus*, *Ruffodytes*, *A. cylindrica* Formánek, *A. reitteri* (Müller), synonymy, neotype, cave, Karst.

Riassunto – Un contributo alla conoscenza del genere *Absoloniella* Formánek, 1213, un genere mediterraneo di curculionidi ciechi (Coleoptera, Curculionidae). L'olotipo ritenuto perso di *Absoloniella cylindrica* Formánek, 1913, è stato alla fine ritrovato. Inoltre, due esemplari identificati come *A. reitteri* (Müller, 1912), il cui olotipo è tuttora ritenuto perso, sono stati recentemente raccolti per la prima volta molto vicino alla località tipica. Pertanto, i neotipi di questi due taxa, recentemente designati, sono qui considerati come non validi: il primo in accordo con l'Art. 75.8 ed il secondo non avendo seguito le disposizioni dell'Art. 75.3.6 del Codice. Viene designato un nuovo neotipo di *Caulomorphus* (attualmente *Absoloniella*) *reitteri* Müller, 1912, in accordo con tutte le condizioni dell'Art. 75.3. Viene identificata un'altra nuova specie di *Absoloniella* della Venezia Giulia, ma non descritta per il momento perché nota solo su resti di un unico esemplare. La sinonimia di *Ruffodytes* Osella, 1973 con *Absoloniella* Formánek, 1913 è confermata. Alla luce di questi nuovi dati, sono riportate la ridescrizione del genere *Absoloniella* Formánek, 1913 e della specie *A. reitteri* (Müller, 1912), assieme ad una chiave per tutte le specie note di questo genere. Le sinonimie recentemente proposte di *A. cylindrica* Formánek, 1913 e *A. hellenica* (Osella, 1973) con *A. reitteri* (Müller, 1912) sono respinte e ciascuna di queste specie è considerata come specie distinta. Un possibile inquadramento di *Absoloniella* Formánek, 1913, attualmente considerato come *incertae sedis*, nei Curculionidae Curculioninae viene brevemente discusso.

Parole chiave: Curculionidae, Curculioninae, *Absoloniella*, *Caulomorphus*, *Ruffodytes*, *A. cylindrica* Formánek, *A. reitteri* (Müller), sinonimia, neotipo, grotta, Carso.

1. – Introduction

The blind weevil genus *Absoloniella* was described by FORMÁNEK (1913) on the basis of a single specimen of a new species, *A. cylindrica* Formánek, 1913, that the author referred to as being collected in “Herzegovina North of Zaton”, presently in Bosnia and Herzegovina (*Federacija Bosne i Hercegovine*). After its description, this species remained unknown to all authors, who based their idea of this genus only

on the original description (see OSELLA, 1973). Actually, no author quoted a paper published by the collector of the species after whom the genus was named (ABSOLON, 1943), subsequent to the original description. In that paper the exact type locality (a cave near Popovo Polje on the border between Bosnia Herzegovina and Croatia) and a photo of the holotype in dorsal view are reported. Only very recently GREBENNIKOV (2014) quoted this paper adequately, dealing extensively with this poorly-known genus.

On the basis of the original description, Absolon's illustration, and two specimens collected on Corfu (= Kerkyra) and identified as *A. cylindrica* Formánek, 1913 by Karl Penecke, GREBENNIKOV (2014) concluded that the genus *Ruffodytes* Osella 1973 is synonymous with *Absoloniella* Formánek, 1913 and that the type species of *Ruffodytes* – *R. hellenicus* Osella, 1973 (*loc. typ.*: Corfu) – is synonymous with *A. cylindrica* Formánek, 1913.

He consequently transferred all the other species of *Ruffodytes* – *R. italicus* Osella, 1976, *R. pacei* Osella, 1976, *R. servadeii* Osella, 1982, and *R. nitidipennis* Osella, 1989 – to the genus *Absoloniella* Formánek, 1913.

Moreover, using only the original description as a basis, he also synonymized the second species with *A. cylindrica*, previously included in the genus *Absoloniella* (OSELLA, 1973; COLONNELLI, 2003; ABBAZZI, MAGGINI, 2009; CALDARA, 2011): *A. reitteri* (Müller, 1912) (formerly *Caulomorphus reitteri* Müller, 1912), *loc. typ.*: “Eine kleine Höhle bei Fernetich, zwischen Opčina und Sessana, im Triester Karst” = a small cave near Fernetich (now Ferneti, Trieste municipality, Friuli Venezia Giulia, Italy), between Opčina (now Villa Opicina, municipality of Trieste, Friuli Venezia Giulia, Italy) and Sessana (now Sežana, municipality of Sežana, Slovenian Littoral, Slovenia), in the Triestine Karst (*Carso Triestino*). All Grebennikov's conclusions were very recently reported by MORRONE, HLAVÁČ (2017).

In 2013 GREBENNIKOV (2014) wrote he had tried to find the type specimen of *A. cylindrica* – which OSELLA (1973) considered destroyed during the Second World War according to Josef Jelinek (*pers. comm.*) – in Formánek's collection (National Museum of Natural History in Prague) and in Absolon's collection (Moravian Museum in Brno) but without success. As regards the holotype of *Caulomorphus reitteri* Müller, 1912 he made no further attempts to find it in Müller's collection (Trieste Natural History Museum), deeming sufficient that it was considered lost by OSELLA (1973).

By 2012 we too had begun to be interested in *Absoloniella*; the senior author, after publication of the catalogue of the Palaearctic Eirrhinidae (CALDARA, 2011), where this genus was doubtfully included in this family – presently considered a tribe of Curculionidae Brachycerinae (OBERPRIELER, 2014) – due to the lack of adequate information; and the junior author following the collection of two “mysterious” blind weevils in a cave near Trieste. GREBENNIKOV (2014) published his work on the same subject when we were still working on our study. Our research to find other blind specimens besides the two previously collected by the junior author is continuing in the caves near Trieste.

2. – Aims

The aim of our paper was fourfold:

- 1) to identify the specimens collected near Trieste by the junior author;
- 2) to find the types of the only two species included in the genus *Absoloniella*, according to CALDARA (2011), *A. cylindrica* and *A. reitteri*;
- 3) to study the relationships between *Absoloniella* and *Ruffodytes*;
and
- 4) following the publication of GREBENNIKOV (2014), to compare his data with ours and to discuss some of the nomenclatural acts proposed therein.

3. – Methods

The first step was to contact Jiri Skuhrovec (Group Function of Invertebrate and Plant Biodiversity in Agrosystems, Crop Research Institute, Prague, Czech Republic) and, following his suggestions, Michael Košťál (Brno), for information about the type specimen of *A. cylindrica*.

We also contacted the Italian weevil specialist Giuseppe Osella (Verona) for more details surrounding his decision to consider the type specimen of *Caulomorphus reitteri* lost (OSELLA, 1973), as well as his placement of the remains of a blind weevil collected and sent him in study by the biospeleologist Fulvio Gasparo (Trieste), later mentioned by the collector (GASPARO, 1995) with the same specific name, according with Osella's determination.

Moreover, the junior author searched personally for the holotype of *Caulomorphus reitteri* in Müller's collection and in the Palaearctic collection, both in the Trieste Natural History Museum.

In addition to Michael Košťál, in 2013 we also informed two other weevil experts – Miguel A. Alonso-Zarazaga (Madrid) and Massimo Meregalli (Turin) about our research, sending them the photos of the specimens being studied to obtain their opinion, especially with regard to an adequate placement of these specimens among the Curculionoidea.

We also looked for information useful to summarize the present knowledge regarding certain collecting localities, with a description of some caves and their associated fauna. The junior author completed these data with research in the field around Trieste, using direct observation or methods such as shaking the tree roots hanging from the ceiling of certain caves in the Italian Karst over an entomological umbrella.

Measurements and photos of the *habitus* of the studied specimens were taken with the photos mentioned in the captions, as inserted in the Archive of Trieste Natural History Museum, being taken with a Leica MC 190 HD camera, and a Leica MZ 16 stereomicroscope, in the microscopy and entomology laboratory of the same museum.

4. – Results and discussion

4.1 – On the type specimens of *Absoloniella cylindrica* Formánek, 1913 and *Caulomorphus reitteri* Müller, 1912

Jiri Skuhrovec informed us that the type specimen of *Absoloniella cylindrica* Formánek, 1913 was not in Prague, but probably in Brno, where Absolon's collection is preserved, although most of his collection was destroyed by fungi and Dermestidae before being moved to the Museum. We asked Michael Košťál for his help and he contacted Petr Banar, the present curator at Museum in Brno, who confirmed what was reported by J. Skuhrovec regarding the placement and conditions of Absolon's collection, but also looked for the holotype, luckily finding it well preserved.

Giuseppe Osella informed us that he had asked Trieste Natural History Museum in the past for the type specimen of *Caulomorphus reitteri* Müller, 1912, where Müller's collection is preserved. The answer came from Renato Mezzena, director between 1960 to 1987, with Giorgio Alberti the curator of entomological collections at the time. Unfortunately, they were not able to find the specimen in that or other museum collections, so OSELLA (1973) had to consider it lost.

Luckily, Osella found the specimen he had received in study from F. Gasparo after 1988, perfectly corresponding to Gasparo's drawing, and he sent it us for our study.

Then, a second attempt at finding the type of *Caulomorphus reitteri* in Trieste museum collections was carried out by the junior author, with particular care being taken with the 15 large entomological boxes of Müller's Curculionidae collection (very rich in specimens from Central Europe and well preserved). Unfortunately, the search of the specimen failed again. It is however worth pointing out that in the original description Müller did not specify where the specimen - collected by one of his students - was deposited as was his usual practice.

The same junior author also looked for *Caulomorphus* in the field, in some rather superficial caves around Trieste, reached by the roots of trees which are supposed to represent a potential habitat of this species (OSELLA, ZUPPA 1998). The search in the *locus typicus* is at present impossible, because it has been unaccessible since 1951 (§ 4.3/*Absoloniella reitteri*/Habitat and ecological notes/Grotta Revolver or Škuretova Jama). This said, he collected two specimens apparently corresponding to the description not far away, in a well-studied cave where the species had never been found before, nor since, in spite of eight subsequent visits in different seasons.

4.2 – On the neotypes of *Absoloniella cylindrica* Formánek, 1913 and *Caulomorphus reitteri* Müller, 1912 designated by GREBENNIKOV (2014)

Since the holotypes of both *Absoloniella cylindrica* and *Caulomorphus reitteri* appeared lost, and not having studied specimens coming from the type localities or around them, GREBENNIKOV (2014) decided to create a neotype of these species using a single specimen from Corfu for both species (to which the unofficial term of

“duplotype” or “redundotype” is usually given). It was almost certainly topotypic with the holotype of *Ruffodytes hellenicus*.

The author considered Corfu as the locality “as close as practically possible to the type localities of *Absoloniella cylindrica* [Popovo Polje in Bosnia Herzegovina] and *Caulomorpha reitteri* [Ferneti near Trieste]”, as requested in Art. 75.3.6 of the Code (INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 1999).

Apart from every other consideration (see treatment of these taxa below) we think that in this case Grebennikov’s interpretation of this paragraph of the Code was inadequate. The distance between Corfu and Popovo Polje is about 400 km and between Corfu and Trieste is about 800 km. Of course in the Code it is not reported what constitutes a “reasonable” distance in km between the *locus typicus* and that of the chosen neotype, given that every case may have a different reasonable distance in accord with the characteristics of the species in question. It is well known that the distribution of hypogean species is often particularly narrow and this also seems to be the case for *Absoloniella*. For this reason alone GREBENNIKOV (2014, p.128) himself stated that “a supposition [that the three taxa are conspecific] does not appear as likely”.

We think, moreover, that the term “practically possible” used in the Code does not exclusively refer to the material that an author was able to find in museums or institutions and available for study at the moment of a designation of a neotype. In this specific case, lacking adequate material, “practically possible” may also mean personal research in the field as close as possible to the type localities or at least consulting biospeleologists and entomologists who are known to visit caves in those areas. These attempts were not reported by GREBENNIKOV (2014).

When, in fact, there are no “urgent” taxonomic nomenclatural questions to solve (complex synonymical problems or taxonomical revisions, old *nomina dubia* that can modify the current taxonomy, or species that are important for biological control, etc.), we think it might be better to maintain nomenclature stability and to refrain from designating a neotype based on insufficient data. All of which are also necessary to avoid further nomenclatural complications – as in this particular case as well, reported by GREBENNIKOV (2014, p. 128): who “eventually re-sampled representative [of *A. cylindrica* and *A. reitteri* from type localities] might perhaps be named as new species –.

So, having consulted the above mentioned weevil experts (§ 3), we deemed both neotypes created by Grebennikov as invalid, not having followed all the qualifying conditions requested in Art. 75.3.6 of the Code. Moreover, the proven existence of the holotype of *A. cylindrica* Formánek, 1913 automatically sets aside the neotype created for this taxon by GREBENNIKOV (2014), thus according with the Art. 75.8 of the Code.

4.3 – Descriptions, taxonomical accounts and ecological notes

***Absoloniella* Formánek, 1913**

Absoloniella FORMÁNEK, 1913: 135; OSELLA, 1973: 491; ABBAZZI, OSELLA, 1992: 336; ABBAZZI et al., 1994: 39; COLONNELLI, 2003: 93; ABBAZZI, MAGGINI, 2009: 114; CALDARA, 2011: 193; GREBENNIKOV, 2014: 122; OBERPRIELER, 2014: 440. MORRONE, HLAVÁČ, 2017: 4, 8.

Ruffodytes OSELLA 1973: 491; ABBAZZI, OSELLA, 1992: 336; ABBAZZI et al., 1994: 39; COLONNELLI, 2003: 93; ABBAZZI, MAGGINI, 2009: 114; CALDARA, 2011: 196; GREBENNIKOV, 2014: 122; OBERPRIELER, 2014: 440. MORRONE, HLAVÁČ, 2017: 8.

REDESCRIPTION

Male. Length 2.40-4.50 mm (rostrum excluded). **Body:** long, subelliptical, with completely reddish integument. **Rostrum:** long (Rl/Rw 6.0-7.5), subcylindrical; weakly to moderately curved in lateral view, almost of same width from base to apex; in dorsal view with subparallel sides from base to antennal insertion, then slightly enlarged; scrobes in lateral view parallel to oblique compared to length of rostrum, in dorsal view not visible or more or less visible at antennal insertion, with rows of deep and dense punctures divided by narrow carinae. **Antennae:** inserted at apical third of rostrum; scape moderately long, 5.0x longer than wide; funicle 7-segmented, slightly longer than scape, first segment 2.5x as long as wide, slightly stouter and 1.5x longer than second segment which is 1.5x as long as wide, segments 3-7 transverse, similar in shape and width; club oval, moderately elongated to subspherical. **Eyes:** lacking. **Pronotum:** nearly as long as to weakly longer than wide, with weakly to moderately rounded sides, widest at middle, flattened, with more or less dense and more or less regular punctures. **Elytra:** long (El/Ew 1.70-1.80), subelliptical, at base moderately concave, with sides weakly rounded to subparallel in basal two thirds, weakly convex on disc; interstriae flattened, smooth; striae usually clearly visible and with regular deep punctures (except *A. nitidipennis*). **Legs:** femora clavate, profemora without or with a small tooth, meso- and metafemora toothed; tibiae more or less elongate, protibiae with inner margin at basal third dentate, usually with praemucro, with sharp uncus, with outer margin at apical third more or less directed outward, metatibiae usually denticulate along inner margin; first tarsomere 1.5x longer than wide, second tarsomere as long as wide, third tarsomere bilobed and slightly wider than second tarsomere, onychium twice as long as third tarsomere; claws thin, equal in length, separated from base, 0.5x as long as onychium. **Venter:** prosternum without rostral canal. Procoxae very near each other, abdomen with more or less dense and regular punctures, Ventrites 1 and 2 weakly concave. **Aedeagus:** of pedal type, in general poorly differentiated between species. Penis short, wide, with dorsum and venter weakly sclerotized, with apex broadly rounded; endophallus with two large flat lateral orificial sclerites, with long flagellum more or less enlarged at its base, without other sclerites. Tegmen with more or less large tegminal rings, with parameroid lobes long and moderately wide, with moderately long apodeme.

Female. Rostrum on dorsum with less dense rows of punctures, intervals between rows flat. Protibiae indented at basal third along inner margin and without praemucro. Ventrites 1 and 2 moderately convex. Spermatheca bean-shaped, with indistinct ramus and nodus. Ovipositor with large gonocoxites and distinct styli.

REMARKS AND COMPARATIVE NOTES

We have compared *A. cylindrica* with the holotype and three paratypes of the type species of *Ruffodytes*, *R. hellenicus* (Solari's collection, Milan Natural History Museum), and two other specimens of this species more recently collected at Corfu, Ropa

village, 9.XII.1995, by sifting deep soil, leg. M. Pavese (Caldara's private collection). Due to the shape of rostrum (gibbous at base in lateral view, distinctly longitudinally striate), prothorax, elytra and legs (tibiae with broad tooth before middle along inner margin, with praemucro), it is in our opinion unjustified to ascribe them to a different genus. Therefore, we agree with the synonymy of these two genera as proposed by GREBENNIKOV (2014).

However, neither *A. hellenica* nor the other species described as *Ruffodytes* by Osella are synonymous with *A. cylindrica*.

We also agree with GREBENNIKOV (2014) that probably *R. nitidipennis* Osella, 1989 from Cyclades Islands, still treated here as *Absoloniella*, does not actually belong to this genus because of various characters, first of all the dorsal position of the antennal scrobes.

***Absoloniella cylindrica* Formánek, 1913**

Absoloniella cylindrica FORMÁNEK, 1913: 135; ABSOLON, 1943: 196; OSELLA, 1973: 490; CALDARA, 2011: 193; GREBENNIKOV, 2014: 122. **Resurrected name.**

REMARKS

Our photo of the specimen found in Absolon's collection, compared with that reported by ABSOLON (1943), confirms it as being the holotype of *A. cylindrica*. The only difference shown by the specimen in Absolon's photo compared with ours is that the animal now lacks the funicle of the right antenna.

As already discussed (§ 4.2), the proven existence of the holotype, a male, automatically sets aside the neotype created by GREBENNIKOV (2014) according to Art. 75.8 of the Code.

The original description by FORMÁNEK (1913) was accurate and we have nothing relevant to add.

We did not find other specimens of this species. Therefore we decided not to dissect the genitalia of the holotype for fear of further damaging this single unvaluable specimen.

COMPARATIVE NOTES

Morphologically, *Absoloniella cylindrica* looks intermediate between *A. reitteri* (see comparative notes of this species below) and *A. hellenica*.

As far as the males are concerned (the female of *A. cylindrica* is unknown), with the latter it shares: rostrum at its base in lateral view distinctly gibbous along upper margin, with scrobe slightly oblique compared to length of rostrum although partly visible to its base, protibiae with a triangular tooth at middle and a praemucro at internal margin, and with lateral margin directed outward only near apex proximity.

They differ as follows:

Absoloniella cylindrica. Rostrum in dorsal view slightly enlarged at antennal insertion with scrobe weakly visible, in lateral view with scrobe slightly oblique compared to length of rostrum although partly visible to its base, and with upper margin distinctly sinuate at middle third. Pronotum nearly as long as wide (Pw/Pl 0.97), nearly as wide as elytra (Pw/Ew 0.95), with distinctly rounded sides, with punctures



Fig. 1: a. *Absoloniella cylindrica* Formánek, 1913, holotype: *habitus* in dorsal view. b. *Absoloniella hellenica* (Osella, 1973), Male, Ropa village (Corfu): *habitus* in dorsal view. Ph. V. Fogato.

large, distinctly distanced between each other, with interval between punctures usually broader than width of punctures. All femora with small tooth.

Absoloniella hellenica. Rostrum in dorsal view not enlarged at antennal insertion with scrobe not visible, in lateral view with scrobe parallel to length of rostrum and with upper margin slightly sinuate at middle third. Pronotum longer than wide (Pw/Pl 0.81), moderately narrower than elytra (Pw/Ew 0.82), with moderately rounded sides, with punctures smaller and less distanced between each other, with intervals between punctures at most as broad as width of punctures. Only meso- and metafemora with small tooth.

Absoloniella reitteri (Müller, 1912)

Caulomorphus reitteri MÜLLER, 1912: 303; MÜLLER, 1930: 19; OSELLA, 1969: 388; 1973: 498.

Absoloniella reitteri (MÜLLER) ABBAZZI, OSELLA, 1992: 336; ABBAZZI et al., 1994: 39; COLONNELLI, 2003: 93; ABBAZZI, MAGGINI, 2009: 114; CALDARA, 2011: 193; GREBENNIKOV, 2014: 122.

REDESCRIPTION

NEOTYPE: Female. Length 4.43 mm (rostrum excluded). **Body:** long, subelliptical, with completely reddish integument. **Rostrum:** long (Rl/Rw 7.5, Rl/Pl 1.02), subcylindrical; in lateral view weakly curved, almost of same width from base to

apex; in dorsal view with subparallel sides from base to antennal insertion, where they are slightly enlarged, slightly narrowed in front of barely visible scrobes, then again slightly widened to apex, with moderately deep and moderately dense punctures from base to apex. **Antennae:** inserted at apical third of rostrum; scape moderately long, 5.0x longer than wide; funicle slightly longer than scape, first segment 2.5x as long as wide, slightly stouter and 1.5x longer than second segment which is 1.5x as long as wide, segments 3-7 transverse, similar in shape and width; club oval, moderately elongated. **Pronotum:** longer than wide (Pw/Pl 0.87), slightly narrower than elytra (Pw/Ew 0.84), with weakly rounded sides, widest at middle, flattened, with dense and irregular punctures, intervals between punctures narrow, smooth and shining, with short erect setae placed inside punctures. **Elytra:** long (El/Ew 1.77), subelliptical, moderately concave at base, with sides almost subparallel in basal two thirds, weakly convex on disc; interstriae flattened, smooth, with sparse erect short setae; striae clearly visible, with regular deep punctures. **Legs:** femora thin, clavate, profemora without tooth, mesofemora with very small tooth, metafemora with small tooth; tibiae elongate, protibiae with inner margin at basal third angulate but indented, without praemucro, with distinct sharp uncus, with outer margin at apical third distinctly directed outward; tarsi reddish, first tarsomere 1.5x longer than wide, second tarsomere as long as wide, third tarsomere bilobed and slightly wider than second tarsomere, onychium twice as long as third tarsomere; claws thin, equal in length, separated from base, 0.5x as long as onychium. **Genitalia:** not examined.

REMARKS

The exact name of the cave where this species was discovered is not quoted in the original description, and the locality of Ferneti is just on the border between Italy and Slovenia. Following this indication GREBENNIKOV (2014) pointed out that it is impossible to establish the country of the type locality, although Italy is generally reported (OSELLA 1973, COLONNELLI 2003, ABBAZZI, MAGGINI 2009, CALDARA 2011). Actually, several years after this description MÜLLER (1930) specified the name of the cave: Škuretova Jama, with the cadastral number 205 VG, as quoted by BERTARELLI, BOEGAN (1926) (the historical cadaster number, correspondent to present number 213 of the regional cadaster of Friuli Venezia Giulia).

The position of the cave shows it to be in Italy (Friuli Venezia Giulia, municipality of Trieste, Ferneti).

As reported above, at present the holotype of this species (according to the original description lacking antennae and legs) has to be considered lost.

About 25 years ago, remnants of a weevil identified by Osella as *A. reitteri* was collected by F. Gasparo (GASPARO 2002) in the cave named the “Caverna Moser” (476/1096 VG, near Bristie, a municipality of Sgonico in Trieste province) (§ 4.3/ *Absoloniella* sp./Remarks). An unpublished sketch by the collector was considered for a long time the only drawing of the species (Fig. 4c).

Subsequently no other finding of this species was reported until five years ago, when in another cave on the Karst, the Grotta dei Partigiani (698/3477 VG, near Gropada, a village in the municipality of Trieste), the junior author collected the two

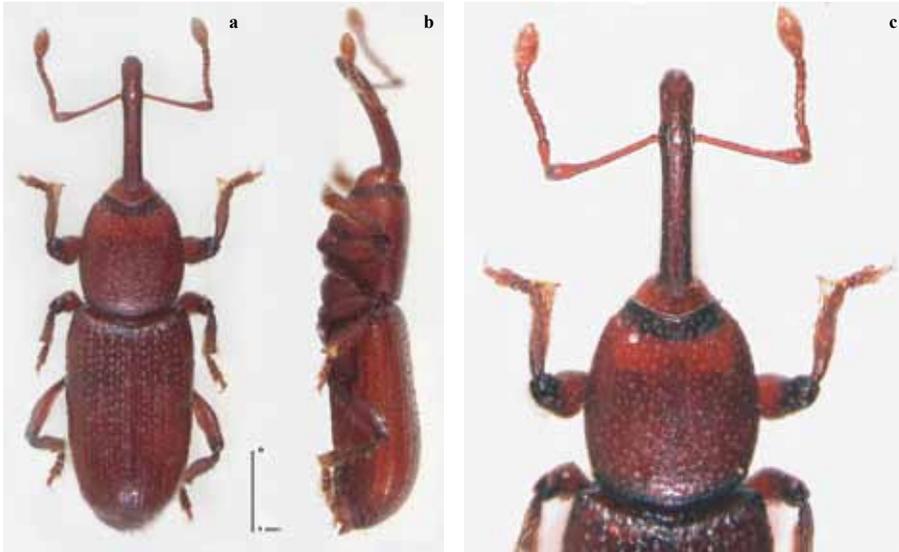


Fig. 2: *Absoloniella reitteri* (Müller, 1912), neotype: a. *habitus* in dorsal view; b. *Id.*, in lateral view; c. Detail of the anterior half. Ph. A. C., archive of Trieste Natural History Museum.

afore-mentioned intact specimens of a blind weevil (§§ 2, 4.1), differing from each other only in size (3.11 and 4.43 mm respectively). This cave is only 7.4 km from the cave Škuretova Jama.

COMPARATIVE NOTES

We compared the two specimens recently collected in the “Grotta dei Partigiani” (3477 VG) with the specimen from the “Caverna Moser” (1096 VG) received in study from Osella (§ 4.1). This specimen, corresponding well to Gasparo’s drawing, is undoubtedly different from the two collected in the cave 3477 VG. With regard to the prothorax (moderately convex, with dense punctures variable in size and elytra twice as long as wide), only the first two specimens completely agree with the original description of *Caulomorphus reitteri*, whereas the remnants collected by F. Gasparo differ in the flat and sparsely punctured pronotum and the distinctly shorter elytra (§ 4.3/*Absoloniella* sp./Remarks).

Therefore, we decided to designate the larger specimen of the two collected by the junior author as the neotype of this taxon (fig. 2). It was designated with the express purpose of clarifying the taxonomic status of *Caulomorphus reitteri* Müller, 1912. It was labelled “Italia, Friuli Venezia Giulia/ prov. TS, com. Trieste, Baso-/vizza, Grotta dei Partigiani/ (3477 VG), q. ingr. m 371/22.VI.2011, leg. Colla, Lukic”. The following red cards labelled “*Caulomorphus reitteri* Müller/Neotype/des. R. Caldara, A. Colla, 2017// *Absoloniella reitteri* (Müller)/det. R. Caldara, A. Colla, 2017” were added. Moreover, before this designation we also satisfied the Recommendation 75B of the Code by consulting the following Colleagues: M.A. Alonso-

Zarazaga, Enzo Colonnelli, V. Grebennikov, and M. Meregalli, who did not raise objections to our new designation.

The neotype is preserved in Colla's collection, Trieste Natural History Museum; the smaller specimen, with the same collection data, is in Caldara's private collection.

These two specimens were not dissected for the same reasons explained in *A. cylindrica* above. It will be surely done when other specimens, possibly also males, will be available.

We agree with OSELLA (1973) that *Caulomorphus reitteri* belongs to the genus *Absoloniella*. Due to the scrobe visible in dorsal view at the antennal insertion, this species is more similar to *A. cylindrica* than to the other species of the genus. However, the two species differ distinctly as follows (sexual characters impossible to compare due to lack of male of *A. reitteri* and of female of *A. cylindrica*):

Absoloniella reitteri. Rostrum at its base in lateral view slightly gibbous along dorsal margin, with scrobe parallel to length of the rostrum, with upper margin not sinuate. Pronotum longer than wide (Pw/Pl 0.87), moderately narrower than elytra (Pw/Ew 0.84), with sides only weakly rounded, with punctures variable in width, moderately large to small, very thick, moderately shallow, irregularly distanced each other. Meso- and metafemora with small tooth. Protibiae with lateral margin distinctly directed outward at apical third.

Absoloniella cylindrica. Rostrum at its base in lateral view distinctly gibbous along dorsal margin, with scrobe slightly oblique compared to length of rostrum although partly visible to its base and with upper margin distinctly sinuate at middle third. Pronotum nearly as long as wide (Pw/Pl 0.97), nearly as wide as elytra (Pw/Ew 0.95), with sides distinctly rounded, with punctures large, similar each other, deep and regularly distanced. All femora with small tooth. Protibiae with lateral margin slightly directed outward only at apex proximity.

HABITAT AND ECOLOGICAL NOTES

Both caves are located in the Italian part of the "Classical Karst":

"Grotta Revolver" or "Škuretova Jama" (213/205 VG) (fig. 3a)

(Revolver Cave or "Škuretova" Cave)

Position (WGS-84): lat. 45° 41' 30.0515", long. 13° 48' 53.1831"

Altit. + m 317, depth m 20.00; devel. m 80.00

This is a rather short, but wide cave, subhorizontal, with a broad entrance in the bottom of a doline on the right side of the road from Opicina to Ferneti (municipality of Trieste, Friuli Venezia Giulia, Italy), 1.7 km from the closest point of the border with Slovenia. The entrance is the beginning of a wide descendent gallery; after which there is an ending chamber decorated with beautiful stalagmitic columns (BERTARELLI, BOEGAN, 1926). Unfortunately the cave, explored in 1894, is now unaccessible because in 1951 the doline and the entrance itself was completely filled with rubbish (mainly rice chaff, but also inert material) (AA.VV., 2017).

The cave is the *locus typicus* of *A. reitteri* (Müller, 1912) (MÜLLER, 1930).

The associated fauna includes *Laemostenus (Antisphodrus) cavicola cavicola* (Schaum, 1858) (Coleoptera, Carabidae), *Vulda (Typhlodes) mihoki* (Bernhauer, 1914) (Coleoptera, Staphylinidae) and *Otiorhynchus (Troglorhynchus) anophthal-*

a

213/205VG

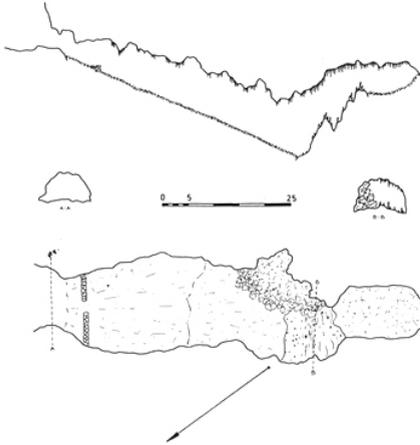
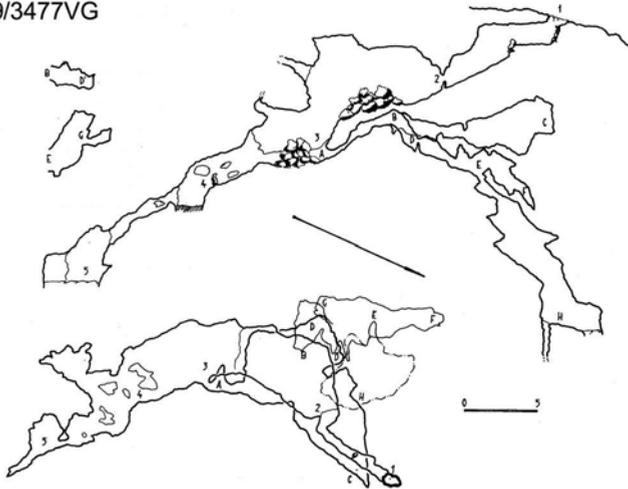


Fig. 3: a. “Grotta Revolver” or “Škuretova Jama” (Revolver Cave or “Škuretova” Cave), 213/205 VG, near Ferneti (municipality of Trieste, Italian Karst), *locus typicus* of *Absoloniella reitteri* (Müller, 1912); b. “Caverna presso Basovizza” or “Grotta dei Partigiani” (“Caverna” near Basovizza or Partisans Cave), 689/3477 VG, near Basovizza (municipality of Trieste, Italian Karst), collecting place of the neotype of *Absoloniella reitteri* (Müller, 1912). Catasto Regionale delle Grotte del Friuli Venezia Giulia, (www.catastogrotte.it).

b

689/3477VG



mus (F. Schmidt, 1854) (Coleoptera, Curculionidae) (MÜLLER, 1930; Pretner, unpublished manuscript).

“Caverna presso Basovizza” or “Grotta dei Partigiani” (689/3477 VG) (fig. 3b)
 (“Caverna” near Basovizza or Partisans Cave)

Position (WGS-84): lat. 45° 39' 12.184”, long. 13° 51' 23.3415”

Altit. + m 371, depth m 24.7; devel. m 82.5

This is a rather small cave, that consists of some interconnected chambers. It opens to the outside through a small hidden opening near the road connecting the villages of Basovizza and Gropada (municipality of Trieste, Friuli Venezia Giulia,

Italy), on the right side in direction of Gropada, close to a doline. Because of the narrow entrance, the exchange of air appears quite limited and therefore the cave shows only small variations in temperature in the course of the year. The first chamber is rather superficial, so that its ceiling is reached by the roots of some trees (FANCIULLI, COLLA, DALLAI, 2005).

The cave is the collecting place of the neotype of *A. reitteri* (Müller, 1912).

The associated fauna is rather rich and interesting for such a small cave, including *Troglochthonius doratodactylus* Von Helversen, 1968 (Pseudoscorpionida, Chthoniidae), *Meta menardi* (Latreille, 1804) (Araneae, Tetragnathidae), *Metellina merianae* (Scopoli, 1763) (Araneae, Tetragnathidae), Gen. cf. *Eukoenia* sp. (Palpigradi, Eukoeniidae), *Titanethes dahli* Verhoeff, 1926 (Isopoda, Trichoniscidae), *Alpioniscus strasseri* (Verhoeff, 1927) (Isopoda, Trichoniscidae), *Brachydesmus* sp. (Diplopoda, Polydesmidae), *Disparrhopalites tergestinus* Fanciulli, Colla, Dallai, 2005 (Collembola, Sminthuridae), *Troglopedetes pallidus* Absolon, 1907 (Collembola, Paronellidae), *Oncopodura* sp. (Collembola, Oncopoduridae), undetermined Collembola (Neelidae and Paronellidae), *Troglophilus neglectus* Krauss, 1879 (Orthoptera, Rhabdophoridae), *Laemostenus (Antisphodrus) cavicola cavicola* (Schaum, 1858) (Coleoptera, Carabidae), *Leptinus testaceus* Müller, 1817 (Coleoptera, Leiodidae), *Otiorhynchus* sp. (Coleoptera, Curculionidae), *Limonia nubeculosa* Meigen, 1804 (Diptera, Limoniidae), *Triphosa dubitata* (Linnaeus, 1758), (Lepidoptera, Geometridae), *Zospeum* sp. (Gastropoda, Carychiidae), *Glis glis* (Linnaeus, 1766) (Rodentia, Myoxidae), and other troglonexes (GASPARO, 1995, 2002; FANCIULLI, COLLA, DALLAI, 2005; Colla, Bedek, Lukič leg., 22.VI.2011).

The presence of the endemic troglobitic *Disparrhopalites (locus typicus)* is worthy of note.

***Absoloniella* sp.**

REMARKS AND COMPARATIVE NOTES

This species is known only from the remnants (Fig. 4) collected on 12.VI.1988 in the cave named the “Caverna Moser” (476/1096 VG) by F. Gasparo, a biospeleologist from Trieste (GASPARO, 1995, 2002). As already discussed (§ 4.3/*Absoloniella reitteri*/Remarks), the attribution to *A. reitteri* proposed by G. Osella, according with Müller’s original description, is clearly contradicted by the morphology of the neotype of *A. reitteri*. In fact, even if damaged and incomplete (only dislocated body parts, lacking antennae and legs), the specimen from the cave 1096 VG shows enough differences to exclude its attribution to the same species, such as the flat and sparsely punctured pronotum, with very smooth and shiny intervals between punctures, and proportionally shorter elytrae.

Nevertheless, at present we do not consider it worthwhile describing a new species on only these remnants of a single specimen, in the hope of finding other ones in better condition.

The sample, still under study, will be preserved in Osella’s private collection, Verona.

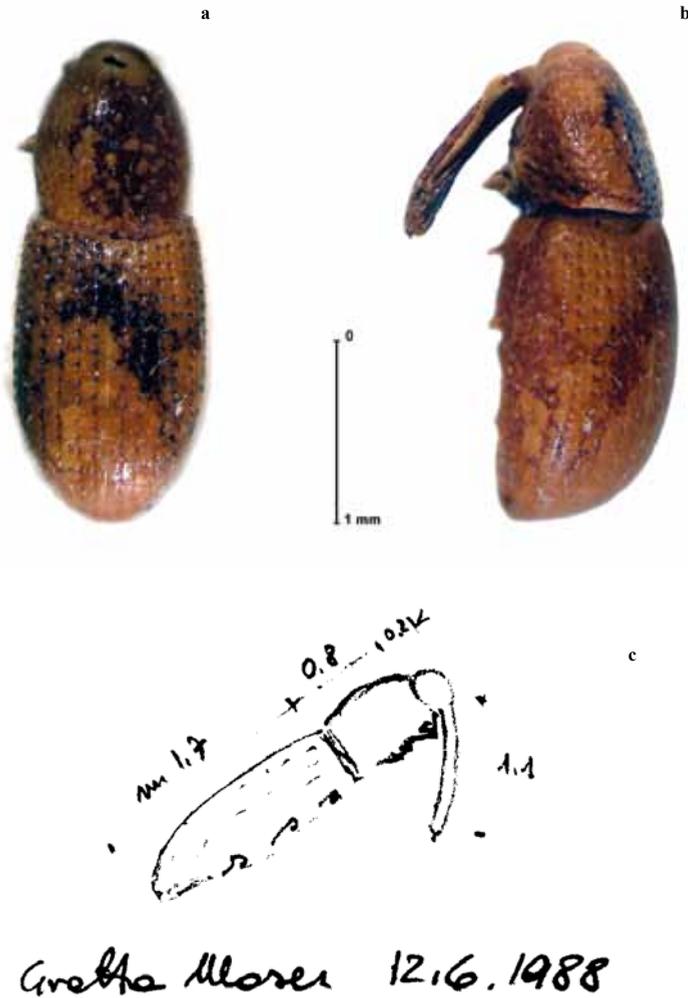


Fig. 4: *Absoloniella* sp.: a. Remnants in dorsal view; b. *Id.*, in lateral view; c. The same, in the original sketch by F. Gasparo. a, b: Ph. archive of Trieste Natural History Museum (camera Leica MC 190 HD on stereomicroscope Leica MZ 16).

HABITAT AND ECOLOGICAL NOTES

“Caverna Moser” (476/1096 VG) (fig. 5)

(“Caverna Moser” cave)

Position (WGS-84): lat. 45° 44' 50.5997”, long. 13° 42' 16.7091”

Altit. + m 206, depth m 02; devel. m 26

A small horizontal cave in the Karst of Trieste, between the villages of Bristie and Aurisina (municipality of Duino-Aurisina, Friuli Venezia Giulia, Italy). This is

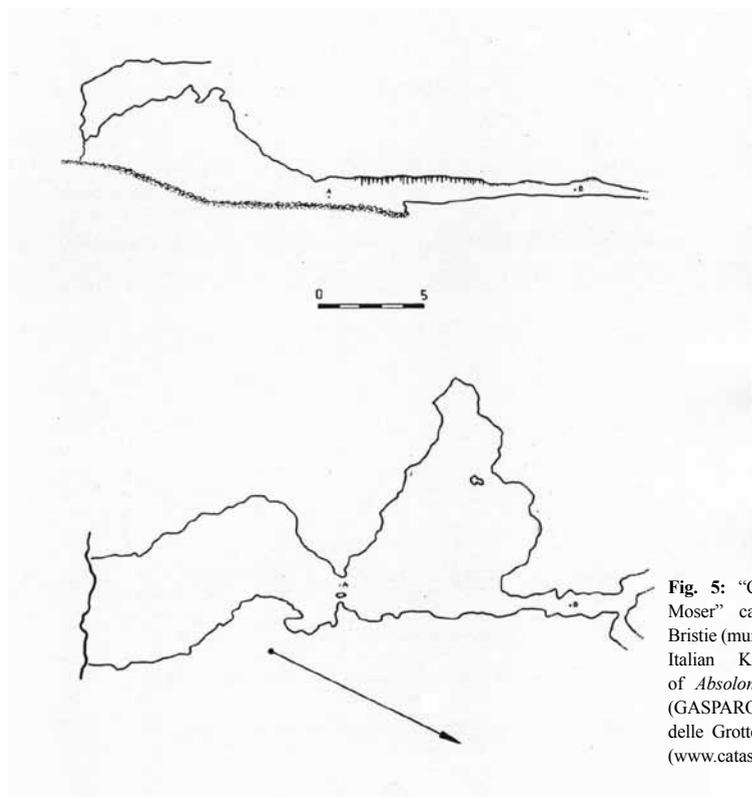


Fig. 5: “Caverna Moser” (“Caverna Moser” cave), 476/1096 VG, near Bristie (municipality of Duino-Aurisina, Italian Karst), collecting locality of *Absoloniella* sp., F. Gasparo leg. (GASPARO, 2002). Catasto Regionale delle Grotte del Friuli Venezia Giulia, (www.catastogrotte.it).

a cavity containing prehistoric interest and dedicated to the Austrian palaethnologist Ludwig Karl Moser (1845 - 1918), who excavated the cave from 1894 to 1898 (GUIDI P., 2009; MONTAGNARI KOKELJ, 2014). The cave begins with a rather wide entrance in a doline, and develops with a first chamber still illuminated, followed, after a passage, by a second, darker chamber with squat stalagmitic concretions in the middle, and some narrow and muddy tunnels on the right. Both in the first and the second room there are few roots of trees hanging from the ceiling.

The associated fauna of the cave 1096 VG includes *Chthonius* (*Chthonius*) *cf. ressl*i Beier (Pseudoscorpionida, Chthoniidae), *Chthonius* (*Globochthonius*) *spelaeophilus histricus* Beier (Pseudoscorpionida, Chthoniidae), undetermined Isopoda and Diplura, *Laemostenus* (*Antisphodrus*) *cavicola cavicola* (Schaum, 1858) (Coleoptera, Carabidae), *Sphaerobathyscia hoffmanni* (Motschulsky, 1856) (Coleoptera, Leiodidae), *Bathysciotes khewenhuelleri tergestinus* G. Müller, 1922 (Coleoptera, Leiodidae), *Gasparobythus tergestinus* Poggi, 1992 (Coleoptera, Staphylinidae), *Otiorhynchus* (*Thalycrynychus*) *perdix* (Olivier, 1807) (Coleoptera, Curculionidae), (Colla, personal research; GASPARO, 1995, 2002; Lukič, Bedek, pers. comm.).

The presence of the endemic endogean *Gasparobythus* (*locus typicus*) is remarkable.

5. – Conclusions

5.1 – Synonymies, invalidation and new designation of neotypes, new species

In conclusion, the generic synonymy of genus *Ruffodytes* Osella, 1973 with *Absoloniella* Formánek, 1913 is confirmed. On the contrary, the specific synonymy of *A. cylindrica* Formánek, 1913 with *A. reitteri* (Müller, 1912), *A. hellenica* (Osella, 1973), or any other species formerly described by Osella as *Ruffodytes*, is rejected and the aforementioned three species have to be considered as distinct ones.

The proven existence of the holotype of *A. cylindrica* Formánek, 1913 automatically sets aside the neotype created for this taxon by GREBENNIKOV (2014) according with the Art. 75.8 of the Code. The study of the holotype revealed this species as morphologically intermediate between *A. reitteri* (Müller, 1912) and *A. hellenica* (Osella, 1973).

Moreover, since the neotype of *A. reitteri* (Müller, 1912) designated by GREBENNIKOV (2014) has to be considered invalid, not having followed the qualifying condition of Art. 75.3.6 of the Code, a new neotype respecting all “qualifying conditions” requested by Art. 75.3 of the Code is designated and described here.

Finally, it is shown that at least another new species of *Absoloniella* it is present in Venezia Giulia, but it was not described here since its presently known only from remnants of a single specimen.

5.2 – Key to the presently described species of *Absoloniella* Formánek, 1913

Six of the seven species (except *A. hellenica*) are known only from a single male or female. Therefore, some sexually dimorphic characters were not used here.

In the key we also included *A. nitidipennis* Osella, 1989, even if it probably does not belong to genus *Absoloniella* Formánek, 1913 (§ 4.3/*Absoloniella*).

1. - Elytral striae almost indistinct, with very small and shallow punctures. Scrobes clearly visible at dorsal apex of rostrum in dorsal view. Club subspherical. Heraklia (Cyclades, Greece) *nitidipennis* (Osella)
- Elytral striae clearly distinct, with robust and deep punctures. Scrobes not visible or slightly visible at sides of rostrum in dorsal view. Club oval. 2
2. - Punctures of pronotum fine and sparse. Calabria (southern Italy). . *pacei* (Osella)
- Punctures of pronotum more robust and denser 3
3. - Protibiae without praemucro and with lateral margin distinctly outwards at apical third. Punctures of pronotum smaller and variable in size, irregularly arranged and dense with interval between punctures smaller than larger punctures. Venezia Giulia (north-eastern Italy) *reitteri* (Müller)
- Protibiae with praemucro and with lateral margin only slightly outwards near apex. Punctures of pronotum big and regularly arranged, sometimes divided into two parts by a ridge 4

4. - Punctures of pronotum large, not divided into two parts by a ridge. 5
- Punctures of pronotum divided into two parts by a ridge. 6
5. - Profemora with distinct small tooth. Scrobes in dorsal view slightly visible at sides of rostrum, in lateral view slightly oblique compared to length of rostrum and with upper margin distinctly sinuate at middle third. Pronotum nearly as long as wide, nearly as wide as elytra, with distinctly rounded sides, with punctures big, distinctly distanced each other, with interval between punctures usually broader than width of punctures. Bosnia Herzegovina *cylindrica* Formánek
- Profemora without tooth. Scrobes in dorsal view not visible at sides of rostrum, in lateral view parallel to length of rostrum and with upper margin slightly sinuate at middle third. Pronotum longer than wide, moderately narrower than elytra, with moderately rounded sides, with punctures smaller and less distanced each other, with intervals between punctures at most as broad as width of punctures. Corfu, Epirus (Greece) *hellenica* (Osella)
6. - Tooth of meso- and metafemora robust and sharp. Puglia (southern Italy) *servadeii* (Osella)
- Tooth of meso- and metafemora small and obtuse. Campania (southern Italy) *italica* (Osella)

5.3 – On the systematic position of *Absoloniella* Formánek, 1913

In his first paper OSELLA (1973) placed his new genus *Ruffodytes* together with *Absoloniella* in the subfamily Eriirrhinae. This was subsequently broken up in order to contain only those genera with pedotectal-type male genitalia and considered at the higher rank of family (THOMPSON, 1992, ALONSO-ZARAZAGA, LYAL, 1999, CALDARA, 2011), or, more recently, at the lower rank of a tribe of the Brachycerinae (OBERPRIELER, 2014).

This proposed taxonomy was followed in all the faunistic catalogues (ABBAZZI, OSELLA, 1992, ABBAZZI *et al.*, 1994, COLONNELLI 2003, ABBAZZI, MAGGINI, 2009) and recently, although doubtfully, in the Catalogue of the Palearctic Curculionoidea (CALDARA 2011). More recently, however, OBERPRIELER (2014) excluded *Absoloniella*, together with *Ruffodytes* and *Hypoglyptus* Gerstaecker, 1855, from the Brachycerinae Eriirrhini, not only for the pedal-type male genitalia but also for the toothed femora. However Oberprieler's opinion was subsequently misinterpreted by MORRONE, HLAVÁČ (2017), who continued to include *Absoloniella* in Brachycerinae Eriirrhini.

In fact, the genus most related to *Absoloniella* would appear to be *Hypoglyptus*, another poorly known genus the revision of which is in progress (Caldara, *pers. comm.*) with which they share the general *habitus*, the shape of the rostrum and that of the genitalia.

Due to these characters, other two genera presently *incertae sedis*, *Pachytychius* Jekel, 1861 and *Aubeonymus* Jacquelin du Val, 1855 (OBERPRIELER 2014, CALDARA *et al.* 2014), appear related to *Hypoglyptus*, and, thus to *Absoloniella*. Again due to the pedal-type of the male genitalia, *Pachytychius*, *Aubeonymus* and several

other genera were not included in the Eirrhiniini - where they were traditionally placed - by KUSCHEL (1971). The latter did not however propose a novel tribe for them. MORRIS (1995) suggested transferring them to the Curculioninae Styphlini, but subsequently MORRIS, BOOTH (1997) proposed a new subfamily, Pachytychiinae, which remained *nomen nudum* since it was not accompanied by any description (ALONSO-ZARAZAGA, LYAL 2002). On the other hand, ALONSO-ZARAZAGA, LYAL (1999) included *Pachytychius* and *Aubeonymus* in the Curculioninae Storeini, a decision rejected by OBERPRIELER (2014) and CALDARA *et al.* (2014). Very recently, data based on morphological characters of the imagoes and immatures and on a molecular study seem to conclude that *Pachytychius* might be more closely related to the Curculioninae Smicronychini than to other tribes (A.E. Marvaldi, pers. comm.). This genus might form a new subtribe into Smicronychini or a new tribe as proposed by MORRIS, BOOTH (1997). which should also include, as reported above, *Aubeonymus*, *Hypoglyptus* and *Absoloniella*.

As noted by CALDARA *et al.* (2014), however, it is worth emphasizing that several tribes of Curculioninae lack good apomorphies and the affiliation of many genera to a tribe is only due to more or less clear similarities with other genera of that tribe. This also would seem to be the case in the four above-mentioned genera. Therefore, as a result of these premises, we do not consider it worthwhile for the time being to create other taxa in this subfamily at the tribe or subtribe rank.

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