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Review of the Anillina of Greece (Coleoptera, Carabidae, Bembidiini)

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This work presents one of the results of the program "Research Missions in the Mediterranean Basin" sponsored by the World Biodiversity Association onlus. XXV contribution.

ABSTRACT A revision of the Anillina from Greece is given. *Iason* nov. gen. (type species: *I. argonauta* n. sp.) is described and the genera *Caecoparvus* Jeannel, 1937, *Parvocaecus* Coiffait, 1956, and *Winklerites* Jeannel, 1937, are redefined. The following phyletic series are characterized: a phyletic series of *Prioniomus* Jeannel, 1937 (represented in Greece only by the genus *Prioniomus*), a phyletic series of *Winklerites* (represented in Greece only by the genus *Winklerites* Jeannel, 1937), and a phyletic series of *Caecoparvus* (represented in Greece by the genera *Caecoparvus* Jeannel, 1937, *Parvocaecus* Coiffait, 1956, and *Iason* nov. gen.).
The following new species are described: *Prioniomus peloponnesiacus* n. sp. from O. Ménalon, *P. etontii* n. sp. from northern Greece (nom. Dráma), *P. gabriellae* n. sp. from O. Kaliakoúda, *P. scaramozzinoi* n. sp. from O. Karáva, *P. antonellae* n. sp. from O. Erímanthos, *Winklerites luisae* n. sp. from O. Páïko, *W. casalei* n. sp. from O. Vérmio, *W. zaballosi* n. sp. from O. Vítsi, *W. thracicus* n. sp. from Gérakas (nom. Xánthi), *W. andreae* n. sp. from O. Áskio; *W. imathiae* n. sp. from O. Piéria, *Caecoparvus sciakyi* n. sp. from O. Erímanthos, *C. achaiae* n. sp. from O. Panahaïkó, *C. pavesii* n. sp. from O. Killíni, *C. leonidae* n. sp. from O. Kallídromo, *C. hercules* n. sp. from O. Iti, *C. daccordii* n. sp. from O. Oxià, *C. berrutii* n. sp. from O. Vardoússia, *C. lompei* n. sp. from O. Oxià, *C. marchesii* n. sp. from O. Óthris, *C. karavae* n. sp. from O. Karáva, *Iason argonauta* n. sp. from O. Pílio, *I. paglianoi* n. sp. from O. Mavrovoúni, *I. beroni* n. sp. from O. Karaboutáki, *I. rossii* n. sp. from O. Kaliakoúda, *I. karametasi* n. sp. from O. Karáva, and *I. fulvii* n. sp. from O. Panahaïkó.
Ecological data on the different species are given, the phyletic significance of several morphological characters is discussed and zoogeographical hypotheses are proposed.

KEY WORDS Taxonomy, chorology, zoogeography, new species, new genus

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INTRODUCTION

This paper presents the results of a long series of research campaigns conducted by the authors in Greece since 1991. Some of them (1991, 1993, 1994, 1995 and 1998) were conducted under the joint auspices of the Museum of Natural Sciences of Brescia and the Regional Museum of Natural Sciences of Turin, and others with the authority of one of these Museums (Museum of Natural Sciences of Brescia in 1992 and Regional Museum of Natural Sciences of Turin in 1996, 1999 and 2000). Some expeditions were self-financed (2002, 2003, 2004, 2005, 2006, 2007 and 2008) and carried out in part under the auspices of the non-profit organization World Biodiversity Association under the project "Research Missions in the Mediterranean Basin". Some results of this research, with the description of three species of Anillina new to science, had already been published by the authors in two specific contributions (Giachino, 2001; Vailati, 2002).

The abundance of materials collected so far has made it necessary also to review all species already known for Greece, which were one third of those currently known (15 compared with 27 new species described in this new contribution).

We believe, however, that this knowledge is still very incomplete, since researches did not cover the totality of the territory, were not always conducted in the most favourable season for collection of Anillini (June), and often were not specifically addressed to the study of these Carabidae.

A project specifically devoted to the study of the fauna of Anillini of Greece could thus result to further important improvements of our knowledge.

History. The first report for Greece of a carabid attributable to Anillina dates back to 1874, when Rottenberger described *Microtyphlus perpusillus* from the outskirts of Thessaloniki (Rottenberger, 1874). In the following fifty years other species of Anillina, related to the genera *Scotodipnus* Schaum, 1860, or *Anillus* Jacquelin du Val, 1851, were described: *Scotodipnus muelleri* Ganglbauer, 1900, from Oros Taigetos; *Anillus abnormis* J. Sahlberg, 1900, from the island of Kérkira; *Scotodipnus parnassicus* Breit, 1923, from Oros Parnassos; *Scotodipnus arcadicus* J. Müller, 1935, from Oros Ménalon; *Scotodipnus weiratheri* J. Müller, 1935, from Oros Falakró (= Boz Dag), *Scotodipnus menozzii* Schatzmayr, 1936, from the Island of Ródos, and *Scotodipnus meschniggi* Winkler, 1936, from Oros Aroania (= Chelmos). The first attempt at a natural classification of the Greek species was proposed by Jeannel (1937). This work was largely based on elytral chaetotaxy and identified - within the Anillini treated at the status of a tribe - the subtribes Scotodipnina and Anillina.

Within the subtribe Scotodipnina, Jeannel (1937) recognised the phyletic lineage of *Microtyphlus,* including also the genus *Winklerites* Jeannel, 1937, established for the Balkan species of this lineage. *W. perpusillus* (Rottenberger, 1874) and *W. weiratheri* (J. Müller, 1935) were assigned to the nominal subgenus *Winklerites*, while *W. muelleri* (Ganglbauer, 1900), *W. parnassicus* (Breit, 1923), *W. arcadicus* (J. Müller, 1935) and *W. meschniggi* (Winkler, 1936) were assigned to the subgenus *Caecoparvus* Jeannel, 1937

Within the subtribe Anillina Jeannel (1937) identified the phyletic lineage of *Anillus* which also includes the genera: *Corcyranillus* Jeannel, 1937 (established for the *C. abnomis* (J. Sahlberg, 1900) and *Prioniomus* Jeannel, 1937 (established for *P. moczarskii* Jeannel, 1937). *Scotodipnus menozzii* Schatzmayr, 1936, apparently unknown to the French author, was not taken into account.

Coiffait (1956) described *Winklerites* (*Parvocaecus*) for two species from Turkey

In his second monograph on Anillina, Jeannel (1963) assigned a lesser taxonomic value to elytral chaetotaxy and emphasized the significance of the presence/absence of the labial tooth. This approach, as extensively shown on several occasions and by several authors (Casale et al., 1990; Sciaky & Zaballos, 1993; Zaballos & Casale, 1997; Giachino, 2005, 2008), seems less natural than the previous one based on elytral chaetotaxy, and has led - as regards the Greek fauna - to the inclusion of taxonomically related genera and subgenera into systematically distant phylogenetic lineages. Jeannel (1963), in fact, raised *Caecoparvus* to a distinct genus and included it into a "phyletic series of *Caecoparvus*" with *Typhlomicrus* Jeannel, 1963 (from Spain), and *Dicropterus* Ehlers, 1883 (from the Carpathians), while he retained *Parvocaecus* as a subgenus of *Winklerites*. At the same time he maintained in *Winklerites* and *Caecoparvus* the same Greek species he had already allocated in these taxa in his monograph of 1937. He provided drawings of the elytral chaetotaxy of *W. perpusillus* and *W. hercegovinensis* (Winkler, 1925) (Figs. 347, 351) that clearly show the presence of three discal setae. This detail was highlighted by Casale et al. (1990) who spotted an evident error in the drawings since all the *Winklerites* species known at the time (including *W. hercegovinensis*) were characterized by the presence of only two discal setae. As we shall see later this hypothesis is not correct for *W. perpusillus*.

Ten years later, Jeanne (1973) re-examined the classification of Anillina proposing several changes to the classification by Jeannel (1963). In particular, Jeanne (1973) proposed a different view about the evolution of the elytral umbilicate series in this group and pointed out how the lineages with a "scotodipnian umbilicate series" of an Aegean origin present two dilated protarsomeres in males as opposed to the lineages of Tyrrhenian origin which have only

one. With regard to the genera of Aegean origin, Jeanne (1973) identified two distinct phylogenetic lineages, a south-Aegean one (composed of *Parvocaecus* and *Caecoparvus*) and a north-Aegean one (composed of *Winklerites*, *Dicropterus*, *Binaghites* Jeannel, 1937, and *Rhegmatobius* Jeannel, 1937) actually and correctly approaching the genera *Caecoparvus* and *Parvocaecus*. Always Jeanne (1973) included *Corcyranillus* and *Prioniomus* in a distinct phylogenetic lineage, of south-Aegean origin, along with *Turkanillus* Coiffat, 1956.

After the contribution by Jeanne (1973), for several years only descriptions of individual species were published (Casale, 1977, Casale et al., 1990, Giachino, 2001, Vailati, 2002); the contribution by Pavesi (2010) represents the first analysis of the taxa at a supraspecific level.

MATERIALS AND METHODS

Acronyms. The materials used for this study are deposited in the following Museums and private collections:

CCa	Collection Achille Casale, Turin (Italy)
CEt	Collection Mirto Etonti, Tignes di Pieve d'Alpago (Belluno) (Italy)
CGi	Collection Pier Mauro Giachino, Turin (Italy)
CLo	Collection Arved Lompe, Nienburg (Germany)
CPa	Collection Maurizio Pavesi, Milan (Italy)
CSc	Collection Riccardo Sciaky, Milan (Italy)
CVa	Collection Dante Vailati, Brescia (Italy)
CVi	Collection Augusto Vigna Taglianti, Rome (Italy)
CZa	Collection Juan Zaballos, Madrid (Spain)
MRSN	Museo Regionale di Scienze Naturali, Turin (Italy)
MCSNB	Museo Civico di Scienze Naturali, Brescia (Italy)
MCSNM	Museo Civico di Storia Naturale, Milan (Italy)
MHNG	Museum d'Histoire Naturelle, Genève (Switzerland)
NMNHS	National Museum of Natural History, Sofia (Bulgaria)
DEI	Deutsches Entomologisches Institut, Müncheberg (Germany)

For these measurements, the following acronyms are used:

L	The overall length from the tip of mandibles to the end of elytra
UL	Total length from the tip of mandibles at the end of the last urotergite
PL	Length of pronotum
PW	Width of pronotum
EL	Length of elytra
EW	Width of elytra

Materials. Materials gathered by the authors during 16 research campaigns must be added to those collected by Maurizio Pavesi who dedicated years of research to the island of Kérkira (Pavesi, 2010), those collected in Thrace by Mirto Etonti in the years between 1992 and 1994 and those of Arved Lompe dating back to the 2001 survey. For some species it was necessary and possible to examine the type material deposited in the following collections: CCa, MCSNM, MHNG and DEI.

Methods. The detailed examination of the specimens required, for the drawing, the making of microscopic preparations of male genitalia (and female ones when necessary) and, given the small size of the specimens, the inclusion of specimens in toto in Canada balsam. The drawings were made using a camera lucida applied to a Leitz Dialux microscope.

The terms used for geographical names are those of Euro Atlas (1990/91).

In this paper, following the approach of the catalogue by Lorenz (2005), the Anillina Jeannel, 1937, are treated altogether as a subtribe of Bembidiini Stephens, 1827.

Choice of taxonomic characters. The revision of a relatively large number of species, such as those now known for Greece, prompted a preliminary analysis of the characters consistently significant at both generic and

specific levels. Particular attention was directed to the identification of alternative characters to those classically used to date so to obtain a natural classification. They are:

Labial tooth. As mentioned above and shown previously by various authors (Casale et al., 1990; Sciaky & Zaballos, 1993; Zaballos & Casale, 1997; Giachino, 2005, 2008) the presence or absence of a labial tooth in Anillina cannot be used for phylogenetic reconstructions at a suprageneric level. In the case of Anillina of Greece, for example, within a phyletic lineage of *Caecoparvus* (sensu novo) we find *Caecoparvus* provided with a labial tooth while *Parvocaecus* and *Iason* nov. gen. do not have it. At least in the Anillina of Greece so far known this character seems useful only for the discrimination of genera.

Cephalic chaetotaxy. The chaetotaxy of the ocular area of the head, usually represented dorsally by the two supraocular setae (Figs. 1, 2), seems to have a phylogenetic meaning at a suprageneric level. While it is normal in *Prioniomus* and *Winklerites*, it shows a supernumerary seta, which we may call "ocular seta" in the genera of the phyletic lineage of *Caecoparvus* (Figs. 3-5).

Chaetotaxy of the pronotum. In this case the position of the basal seta of the pronotum seems to assume a phylogenetic value, being it inserted at the basal angle in the phyletic lineages of *Prioniomus* and *Winklerites* (Figs. 6-8), and shifted forwards in the genera of the phyletic lineage of *Caecoparvus* (Figs. 9-14).

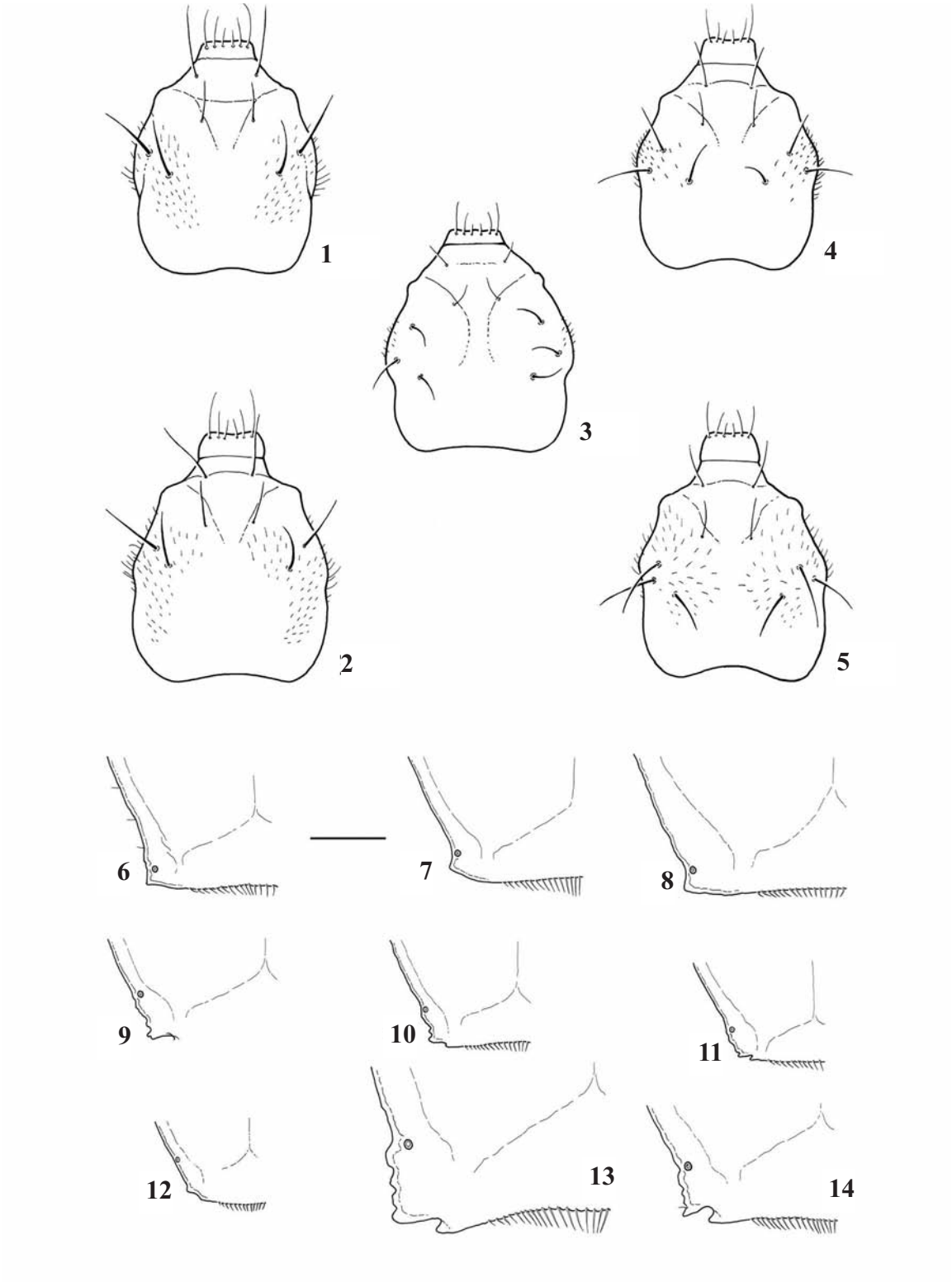
Elytral umbilicate series. An initial analysis was made by Jeannel (1937) who, in the presence of a series always composed of 9 pores, identified two different morphologies. An umbilicate series of the "*Scotodipnus* type" with the main pores (bearing longer setae) represented by the 2nd, 6th and 9th ones, and a series of the "*Anillus* type" in which the main pores are the 2nd, 6th and 8th ones (and where the 8th and 9th pore approach to form a geminate pair).

Then always Jeannel (1963), thanks to the increased taxonomic knowledge on this group, identified three different types of umbilicate series and stressed at the same time that the most primitive type is that with 10 non-aggregated pores presented by the species of the genus *Pelocharis* Jeannel, 1960. A first kind of evolution would be due to the loss of the 8th pore (Fig. 15), which, according to Jeannel (1963), would bring to an umbilicate series of "type A" (corresponding to the "*Anillus* type" of Jeannel 1937); therefore the 9th (one of the main pores) becomes the 8th and the 10th one becomes the 9th. A second type of umbilicate series, defined by Jeannel (1963) "type B" (corresponding to the "*Scotodipnus* type" of Jeannel 1937), would be simply obtained by the disappearance of the 10th pore. The third type of series, with 8 pores, called by Jeannel (1963) "type C" would be obtained by derivation from the series of "type B" due to the loss of the 8th pore (in this case the 9th becomes the 8th one).

Jeanne (1973) criticized in part this reconstruction accepting the disappearance of the 10th pore, proposed by Jeannel (1937, 1963) for the series of the "scotodipnian type" and of the 7th one (although actually Jeannel had always mentioned the 8th one) for the "anillian type", but noting the presence of another type of umbilicate series not deriving from any of the previous two ones and which he called "typhlocharian type". According to this author, this is an aggregate, discontinuous, reduced umbilicate series, with perfectly aligned pores, in which no main pores can be distinguished ("fixé" in the sense of this author). We do not enter, here, on the merits of the umbilicate series of the "typhlocharian type" (sensu Jeanne, 1973), since this analysis is beyond the scope of this paper.

It may be noted that, for the achievement of a chaetotaxy of the "anillian type" - if we leave out the fact that it is the 8th pore for Jeannel to disappear while for Jeanne it is the 7th one - in both authors a similar result would be produced, with the migration of the 10th pore toward the disc so to precede the 9th one.

In the reconstructions proposed by these two authors (Jeannel, 1937, 1963; Jeanne, 1973), we seem to find a very casual and less "parsimonious" use, not only of the loss of one or another pore of the umbilicate series (due more to the author's needs rather than to any logical evolutionary path), but also of the transformation of the pores from normal umbilicate ones (with short setae) to main ones (bearing Jeannel's "grands fouets"). We would like to emphasize here that, if the "main pores", with long setae, are



Figures 1-5. Cranium of Greek Anillina in dorsal view, with supraocular chaetotaxy of two setae (1, 2) and three setae (3-5). 1: *Prioniomus giachinoi*; 2: *Winklerites thracicus* n. sp.; 3: *Parvocaecus perpusillus*; 4: *Caecoparvus karavae* n. sp.; 5: *Iason paglianoi* n. sp. (drawings not with the same scale).

Figures 6-14. Basal angle of the pronotum in Anillina from Greece, showing the morphology of the base of the lateral border and the position of the basal seta. 6: *Prioniomus scaramozzinoi* n. sp.; 7: *Winklerites imathiae* n. sp.; 8: *Winklerites thracicus* n. sp.; 9: *Caecoparvus daccordii* n. sp.; 10: *Caecoparvus hercules* n. sp.; 11: *Caecoparvus arcadicus*; 12: *Parvocaecus perpusillus*; 13: *Iason argonauta* n. sp.; 14: *Iason karametasi* n. sp. (scale 0.1 mm).

15

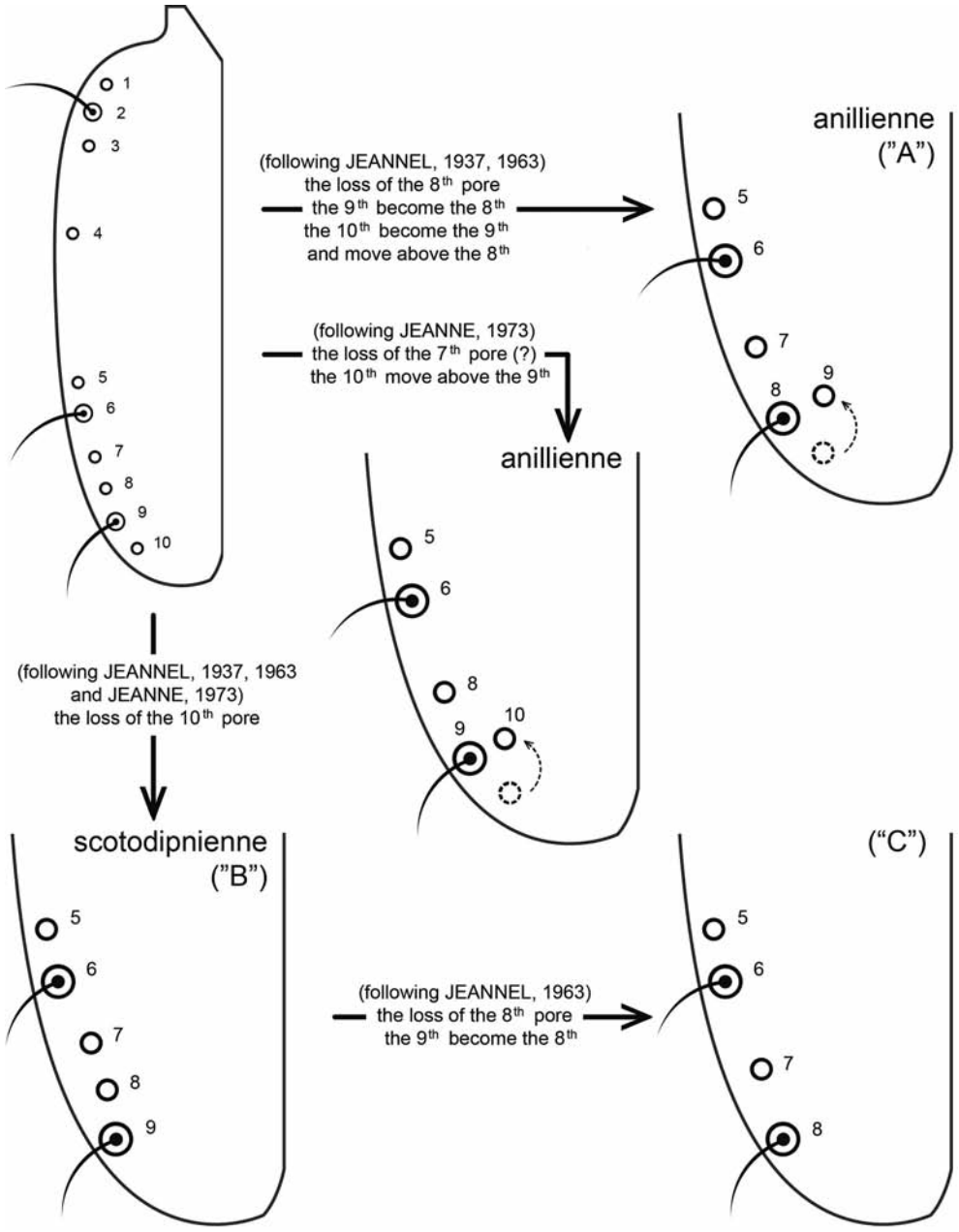


Figure 15. Evolution of the apical grouping of the umbilicate series, represented in a schematic way, in the interpretation by Jeannel (1937 and 1963) and Jeanne (1973). Starting from a hypothetical series of 10 pores, one can see a similar pattern, not only for the type "scotodipnienne" but also for the type "anillienne", although Jeanne (1973) mentions the loss of the 7th pore instead of the 8th pore. In both authors, it would be the 10th pore to migrate over the 9th (explanation in the text).

specializations to particular sensory functions (although currently unknown) of the normal pores (Jeannel, 1937, 1963, Juberthie et al., 1975), it is logical to expect both a less propensity to move and to disappear and a lower probability that, following the disappearance of a specialized pore, its function is taken up by a normal pore that becomes in turn a main pore.

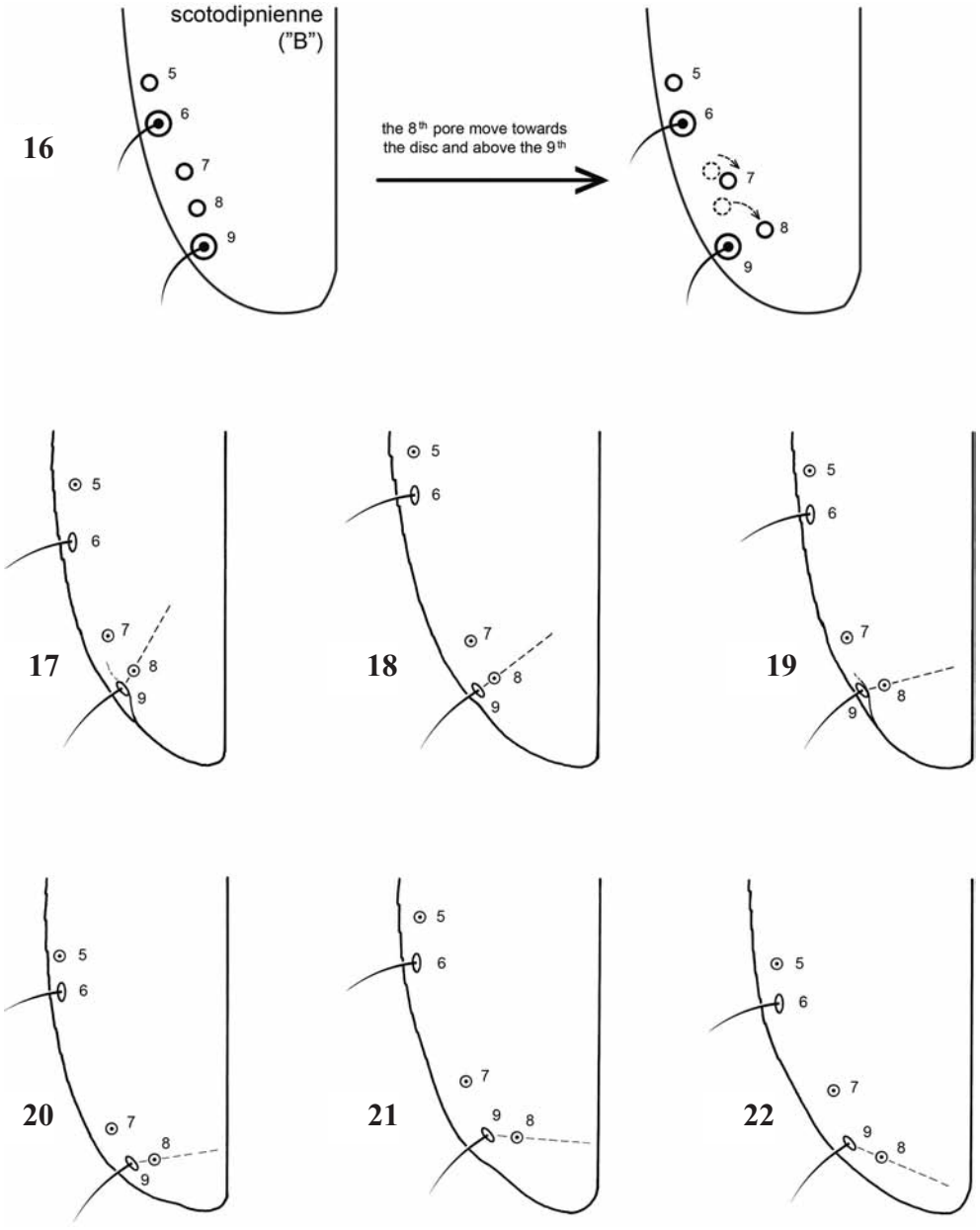
If, apart from the species of the genus *Pelocharis*, all Anillina have umbilicate series of not more than 9 pores and if for this feature we accept that it is the loss of 10th pore to make the umbilicate series of 9 pores typical of the species with "type B" series, we see no reason why such a loss cannot be considered as a synapomorphy of the whole subtribe (with the exception of only *Pelocharis*). In this way, it is unnecessary to cite the loss of a different pore, the 8th one, and the migration of another pore, which was originally the 10th one, to reach the geminate series of "type A". It would be enough to hypothesize, after the loss of the 10th one, the simple migration of the 8th one before the 9th (Fig. 16). Also in this case the umbilicate series of "type C" represents a further evolution of the "type B" series for the loss of the 8th pore. This kind of interpretation has the evident advantage that the (specialized) main pores remain the same (2nd, 6th and 9th), in evolutionary terms this hypothesis is more parsimonious than those by Jeannel (1937, 1963) and Jeanne (1973). In particular, in our case, the (specialized) 9th pore is never lost, but it is the 8th one (not specialized) which migrates toward the disc and in some cases goes before the 9th one, if not over the latter in a more distal position, until, perhaps, to disappear in the series of "type C" (sensu Jeannel, 1963). The hypothesis of a gradual migration on the disc, and before 9th pore, of the 8th one seems corroborated by the sequence given in Figs. 17-22, where in the same genus, in this case *Prioniomus*, there are species in which the 8th pore is clearly placed before the 9th one (*P. scaramozzinoi* n. sp., *P. gabriellae* n. sp. *P. giachinoi*, *P. peloponnesiacus* n. sp., *P. abnormis* and others) and other cases in which it has even gone beyond, moving to the rear compared to the 9th one (*P. menozzii*, *P. cassiopaeus*, *P. moczarskii*, *P. antonellae* n. sp. *P. etontii* n. sp.). On the other hand, we can see that even in those genera of the phyletic lineage of *Caecoparvus*, the 8th pore, compared to the 7th-9th alignment, is always apart, tending to move away from the elytral margin to migrate toward the disc. This trend occurs also in many cases, although to a lesser extent, for the 7th pore.

We finally want to keep the name of umbilicate series of type "A", "B" and "C" proposed by Jeannel (1963), whereas, in our sense, the specialized pore of the apical grouping (Jeannel's "grand fouet") is always the 9th one and it will be indicated as such in the descriptions.

CHAETOTAXY OF THE ELYTRAL DISC. Relatively neglected by several authors, when not openly subject to errors of interpretation (see what mentioned above the history concerning *Winklerites*), it seems to play an important role at a generic level. For example, all the currently known *Winklerites* species have 2 discal setae, while in the genus *Prioniomus*, but also in the phyletic lineage of *Caecoparvus* all known species of the genera *Caecoparvus*, *Parvocaecus* and *Iason* nov. gen. have 3 discal setae.

SHAPE OF THE PRONOTUM. So far neglected by many authors, the shape of the pronotum, and in particular of its base and basal angles, have instead an important taxonomic meaning at least at generic level. The base of the pronotum may be in fact more or less straight as in *Prioniomus*, *Winklerites* and *Parvocaecus* (Figs. 6-8, 12), or deeply incised laterally before the basal angles, as in *Caecoparvus* and *Iason* nov. gen. (Figs. 9-11, 13-14). Similarly, the lateral border of the pronotum before the basal angles can be almost smooth as in *Prioniomus*, smooth as is *Winklerites* (Figs. 6-8), bearing a single and evident tooth as in *Parvocaecus* (Fig. 12), or strongly dentellate as in *Caecoparvus* and *Iason* nov. gen. (Figs. 9-11, 13-14).

MORPHOLOGY OF ELYTRA. Elytral characters, and in particular the apical reduction of the elytra, have been widely used in the past by various authors (Jeannel, 1937, 1963; Jeanne, 1973) in the systematics of this group. With regard in particular to the Greek species, there is no need to add anything on this subject: the whole elytra identify the phyletic lineage of *Prioniomus*, while a more or less pronounced elytral reduction is present in *Winklerites*, *Caecoparvus*, *Parvocaecus* and *Iason* nov. gen.



Figures 16-22. 16: Evolution of the apical grouping of the umbilicate series, represented in a schematic way, in the interpretation of the authors of this paper. Starting from the normal series of 9 pores of the "scotodipnienne" type, there would be merely a migration of the 8th pore towards the disc and its placement over the 9th and then shifting beyond the latter (explanation in the text). Below, some examples in the genus *Prioniomus* in which one can see, in sequence, the progressive shift of the 8th pore compared to the 9th, emphasized by the dotted line that rotates clockwise. 17: *P. scaramozzinoi* n. sp.; 18: *P. giachinoi*; 19: *P. gabriellae* n. sp.; 20: *P. menozzii*; 21: *P. cassiopaeus*; 22: *P. moczarskii*.

MORPHOLOGY OF THE MANDIBLES. None of the Greek species of this group presents the phenomena of mandibular hypertrophy known for example in the genus *Scotodipnus* (Jeannel, 1963). The issue of a low taxonomic value of the more or less forward position of the mandibular tooth in *Prioniomus* has been exhaustively discussed by Pavesi (2010).

MALE PROTARSI. The problem of the supposed tetramery in the male of *Corcyranillus abnormis* (now *Prioniomus abnormis*) (Jeannel, 1937, 1963) was brilliantly solved by Pavesi (2010), who showed that in reality this is only an apparent tetramery and the male protarsi in *P. abnormis* should be considered pentamerous. Noteworthy is instead the fact, already reported by Jeanne (1973), that the lineages with a "scotodipnian umbilicate series" of Aegean origin present two dilated protarsomeres in the males, while the lineages of Tyrrhenian origin bear only one of them.

MALE GENITALIA. The morphology of the aedeagus, and in particular of the median lobe, is widely used in this contribution, not only for the identification of different species, but also for the incorporation of the same first in groups of species and then into genera. The morphology of the apical blade of the median lobe of the aedeagus in dorsal view appears significant in many cases, in addition to the classic lateral view.

RESULTS

Key to the genera of Anillina of Greece

1. Elytra not reduced apically, covering the pigidium.....***Prioniomus*** Jeannel, 1937
–. Elytra reduced apically, one or more abdominal tergites uncovered.....2

2. Elytra emarginate at the apex at the level of the 7th pore of the umbilicate series; elytral disc with two setae. Base of pronotum without lateral incisions; sides of pronotum, before the basal angles, not denticulate (Figs. 7, 8). Ocular seta absent (Fig. 2).....***Winklerites*** Jeannel, 1937
–. Elytra not emarginate at the apex at the level of the 7th pore of the umbilicate series; elytral disc with 3 setae. Base of pronotum with or without lateral incisions; sides of pronotum, before the basal angles, with one or more teeth. Ocular seta present (Figs. 3-5).....3

3. Base of pronotum without lateral incisions; sides of pronotum, before the basal angles, bearing a single tooth (Fig. 12).....***Parvocaecus*** Coiffait, 1956
–. Base of pronotum bearing a deep lateral incision; sides of pronotum denticulate before the basal angles (Figs. 9-11, 13-14).....4

4. Labial tooth absent. Frontal bossing, when present, located in the middle of the frons (Fig. 125). Species of larger size (L> 2.10 mm).....***Iason*** nov. gen.
–. Labial tooth present. Frontal horn or bossing, when present, located on the epistome (Figs. 122-124). Species of smaller size. (L <2.10 mm).....***Caecoparvus*** Jeannel, 1937

Phyletic series of ***Prioniomus*** (sensu Jeanne, 1973)

This phyletic series is composed of only one genus *Prioniomus* Jeannel, 1937.

Genus ***Prioniomus*** Jeannel, 1937

TYPE SPECIES. *P. moczarskii* Jeannel, 1937

Prioniomus Jeannel, 1937: 348.
Corcyranillus Jeannel, 1937: 346.
Turkanillus Coiffait, 1956: 82.
Corcyranillus Jeannel: Jeannel, 1963: 58.
Turcanillus (sic!) Coiffait: Jeannel, 1963: 59.
Prioniomus Jeannel: Jeannel, 1963: 60.
Prioniomus Jeannel: Coiffait, 1956: 82.
Corcyranillus Jeannel: Coiffait, 1956: 82.
Prioniomus Jeannel: Jeanne, 1973: 91.
Corcyranillus Jeannel: Jeanne, 1973: 91.
Turkanillus Coiffait: Jeanne, 1973: 91.
Prioniomus Jeannel: Giachino, 2001: 180.

Prioniomus Jeannel: Vailati, 2002: 298.
Corcyranillus Jeannel: Löbl & Smetana, 2003: 238.
Prioniomus Jeannel: Löbl & Smetana, 2003: 238.
Turkanillus Coiffait: Löbl & Smetana, 2003: 238.
Corcyranillus Jeannel: Lorenz, 2005: 202.
Turkanillus Coiffait: Lorenz, 2005: 202.
Prioniomus Jeannel: Lorenz, 2005: 202.
Prioniomus Jeannel: Pavesi, 2010: 424.
Corcyranillus Jeannel: Pavesi, 2010: 424. (syn.)
Turkanillus Coiffait: Pavesi, 2010: 424. (syn.)

Diagnosis and redescription. A genus of Anillina of the phyletic lineage of *Prioniomus* (sensu Jeanne, 1973), characterized by medium-sized species (1.6-2.6 mm), with pentamerous and not dilated male protarsi (only in *abnormis*, the protarsi seem, at a first superficial analysis, tetramerous while they are actually pentamerous).

Head robust, anophthalmous, with temporal carinae well developed; antennae of medium length (exceeding the base of the pronotum when stretched backwards), slender, moniliform or with antennomeres slightly elongated. Two supraorbital setae on each side. Mandibles elongated, with no dorsal crests, left premolar tooth more or less developed or absent and right basal tooth sometimes split in two. Labial tooth present. Maxillary palps with the last article large, ovoidal, and the last one small, poorly differentiated.

Pronotum with sides curved, sinuate before the base, more or less distinctly crenellate before the basal angles. Base slightly emarginate laterally, before the basal angles. Anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior quarter, together with other 1-4 slightly shorter supernumerary setae; basal setae inserted almost on the posterior angles.

Elytra more or less oval, elongated, parallel-sided and with the elytral apex not reduced, post-humeral margin denticulate, with a more or less evident crenellation. Disc without any trace of striae, umbilicate series of type A (sensu Jeannel, 1963), discal setae three in number and shifted outwards, at about the level of the 5th stria.

Aedeagus with the median lobe of a different shape depending on the group of species, in some species regularly arcuate, in others significantly bent in the median area, in others abruptly folded in the prebulbar part. Each paramere bearing 3-4 apical setae.

Key to the species of the genus *Prioniomus*

1. Protarsi pseudotetramerous in males (fourth and fifth protarsomere partially fused as in Fig. 57). Aedeagus as in Fig. 59. L = 1.8 mm. Species of the island of Kérkira....***P. abnormis*** (Sahlberg, 1900)
–. Protarsi normally pentamerous in the male.....2

2. Species of larger sizes (L ≥ 2.5 mm). Aedeagus as in Fig. 43). Species of Northern Greece (nom. Dráma).....***P. etontii*** n. sp.
–. Species of smaller size (L ≤ 2.5 mm).....3

3. Species of small size (L < 1.8 mm).....4
–. Species of medium size (L ≥ 1.8 mm).....5

4. Median lobe of the aedeagus sharply bent in the median region Fig. 54. Species of O. Karáva.....
.....***P. scaramozzinoi*** n. sp.
–. Median lobe of the aedeagus bent in the basal fourth. Fig. 35. Species of O. Mélalon.....
.....***P. peloponnesiacus*** n. sp.

5 (3). Marginal groove of the elytra very wide anteriorly, 3rd and 4th pore of the umbilicate series not aligned with the 1st and 2nd, clearly shifted toward the inner edge of the groove (Fig. 23). Aedeagus as in Fig. 25. Species of the island of Kérkira .....***P. moczarskii*** Jeannel, 1937
–. Marginal groove of the elytra anteriorly of a normal width, 3rd and 4th pore of the umbilicate series aligned with the 1st and 2nd, not or only slightly shifted toward the inner edge of the groove 6

6. Second discal seta inserted at the level of the 5th pore of the umbilicate series (Fig. 68). L = 2.30 mm. Species of O. Elikón.....***P. vailatii*** Giachino, 2001
–. Second discal seta inserted behind the level of the 5th pore of the umbilicate series.....7

7. Bigger sizes (L > 2.10 mm). Aedeagus as in Fig. 29. Species of the island of Kérkira.....
.....***P. cassiopaeus*** Pavesi, 2010
–. Smaller sizes (L < 2.10 mm).....8

8. Smaller sizes (L ca 1.80 mm). Aedeagus as in Fig. 66. Species of the O. Gióna.....
.....***P. giachinoi*** Vailati, 2002
–. Bigger sizes (L > 1.90 mm).....9

9. Species of the island of Ródos .....***P. menozzii*** (Schatzmayr, 1936)
–. Species of continental Greece and the Peloponnese 10

10. Eighth pore of the umbilicate serie placed behind the 9th. Species of O. Erimanthos.....***P. antonellae*** n. sp.
–. Eighth pore of the umbilicate series place befor th 9th. Aedeagus as in Fig. 4. Species of the O. Kaliakouda.....***P. gabriellae*** n. sp.

Within the genus *Prioniomus* one can distinguish three distinct groups of species, mainly based on the morphology of the median lobe of the aedeagus:

- a group of *P. moczarskii* including *P. moczarskii* Jeannel, 1937, *P. cassiopaeus* Pavesi, 2010, *P. peloponnesiacus* n. sp. and *P. etontii* n. sp.;
- a group of *P. gabriellae* including *P. gabriellae* n. sp. and *P. scaramozzinoi* n. sp.;
- a group of *P. abnormis* including *P. abnormis* (Sahlberg, 1900) and *P. giachinoi* Vaillancourt, 2002.

P. menozzii (Schatzmayr, 1936), *P. vailatii* Giachino, 2001 and *P. antonellae* n. sp., which are currently known from single females, are provisionally placed among the species of *incertae sedis*.

«Group of *P. moczarskii*»

Diagnosis. A group characterized by species with median lobe of the aedeagus abruptly bent and remarkably bottle-necked in the prebulbar part, not twisted on the right side, with the apical blade elongated into a pronounced yet rounded beak, not sharp. Endophallus bearing a sclerified copulatory piece of an elongated shape, with a sharp anterior part.

Prioniomus moczarskii Jeannel, 1937

Locus typicus. Corfou, Gasturi.

Prioniomus moczarskii Jeannel, 1937: 349.
Prioniomus moczarskii Jeannel: Jeannel, 1963: 61.
Prioniomus moczarskii Jeannel: Löbl & Smetana, 2003: 238.
Prioniomus moczarskii Jeannel: Lorenz, 2005: 202.
Prioniomus moczarskii Jeannel: Pavesi, 2010: 431.

Examined material (Figs. 23-26). 1 male, GR, Kerkyra, Vouniatades, 10.V.1996, leg. M. Pavesi; 1 male, 1 female, GR, Kerkyra, Vouniatades, 31.III.1998, leg. M. Pavesi; 1 male, GR, Kerkyra, Ag. Mattheos, Pantocrator, m 450, 24.II.1996, leg. M. Pavesi.

Diagnosis and redescription. A *Prioniomus* of mm 2.40-2.45, closely related to *P. cassiopaeus* of the island of Kerkira, *P. peloponnesiacus* n. sp. of the O. Ménalon and *P. etontii* n. sp. of the Maara cave (O. Meníkio) for the shape of the median lobe of the aedeagus. It differs from *P. cassiopaeus* in the bigger sizes, the less advanced position of the 3rd discal pore toward the base, the median lobe of the aedeagus more squat, and the different shape of the copulatory piece.

Body (Fig. 23) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform but with slightly elongated articles, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow poorly distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines clearly convergent backwards. Mandibles very elongated, simple, without dorsal ridges, left premolar tooth developed, right premolar tooth small and placed at the level of the anterior margin of the labrum which is provided with 6 marginal anterior setae.

Pronotum transverse (PW/PL = 1.21 male, 1.19 female), with the maximum width at the base of the anterior third, significantly narrower at the base, with arcuate sides, distinctly sinuate and crenellate before the basal angles. Base slightly emarginate laterally before the basal angles. Anterior angles rounded, slightly prominent, posterior ones almost right and marked. Disc feebly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, distinctly enlarged near the base; marginal setae inserted inside the marginal groove, at the the level of the anterior third, along with other two supernumerary setae on each side, slightly shorter; basal setae inserted almost on the posterior angles.

Elytra oval, elongated and parallel-sided (EL/EW = 1.59 male, 1.68 female), with the maximum width at the centre, not emarginate but broadly rounded externally in the preapical area. Disc convex; shiny integuments, an evident microsculpture with an isodiametric mesh, and a long, sparse and erect pubescence. Humeri well marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation up to the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A, 2nd and 3rd pore slightly closer than the 1st and 2nd ones; the distance between the 3rd and 4th pore twice that between the 2nd and 3rd ones; 3rd and 4th pore significant shifted toward the disc, 5th and 6th pore paired and placed almost at the apical third; 7th, 9th and 8th pore not equidistant from each other, the 8th and 9th forming a "geminate" pair; the 8th one nearly aligned with the posterior discal seta and shifted slightly behind the 9th one. Discal pores three in number and not well aligned with each other: the 1st and 3rd one placed respectively at the level of the 4th and 9th pore of the umbilicate series, while the 2nd one is placed at the height of the 6th pore of the umbilicate series; the 3rd pore is much more shifted towards the elytral suture than the 1st and 2nd.

Aedeagus (Fig. 25) big; median lobe considerably bottle-necked in the prebulbar part, elongated, flexed sharply in the prebulbar part, not twisted on the right side, with apical blade elongated into a pronounced beak, slightly bent downwards, acute yet rounded, not sharp. Endophallus provided with a small sclerified copulatory piece, slightly elongated in shape and sharp. Parameres bearing each four apical setae.

Distribution and ecology. According to Pavesi (2010) it is found in the deep clayey layer of the soil.

Prioniomus cassiopaeus Pavesi, 2010

Locus typicus. Greece, Kerkira, 2 km W Kassiopi.

Prioniomus cassiopaeus Pavesi, 2010: 427.

Examined material (Figs. 27-30). Holotypus male, 4 paratypi males, females (CPa, CGi).

Diagnosis and redescription. A *Prioniomus* of 2.18-2.50 mm, closely related to *P. moczarskii* of the island of Kérkira, *P. peloponnesiacus* n. sp. of O. Ménalon and *P. etontii* n. sp. of the Maara cave (O. Meníkio) for the shape of the median lobe of the aedeagus. It differs from *P. moczarskii* in the smaller sizes, the more forward position of the

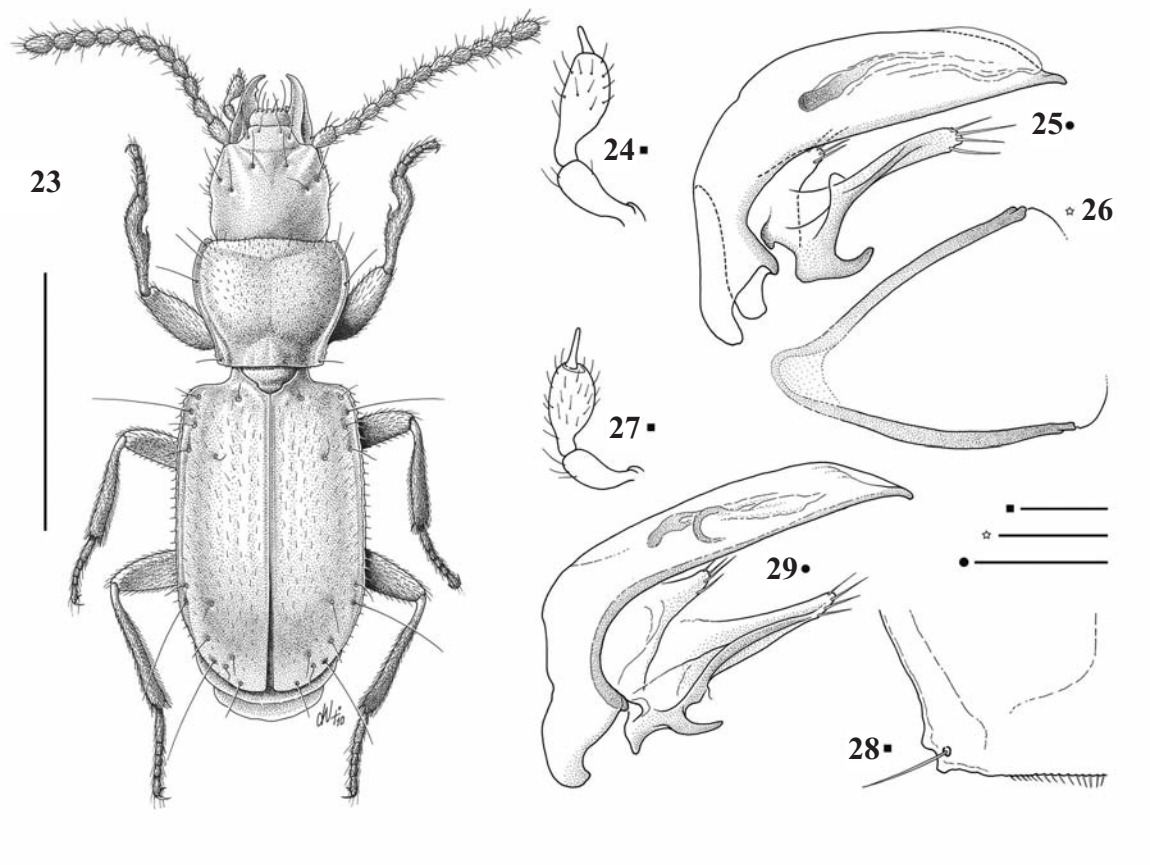


Figure 23. *Prioniomus moczarskii*, habitus of the male (from Pavesi, 2010, scale 1 mm).
Figures 24-29. *Prioniomus* spp. 24: *Prioniomus moczarskii*, maxillary palp; 25: idem, aedeagus in lateral view; 26: idem, invaginated segment; 27: *Prioniomus cassiopaeus*, maxillary palp; 28: idem, basal angle of the pronotum; 29: idem, aedeagus in lateral view (from Pavesi, 2010, scale 0.1 mm).

3rd discal pore towards the base, the median lobe of the aedeagus less squat, and the different shape of the copulatory piece.

Body (Fig. 30) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture having an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform but with slightly elongated articles, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines sharply converging backwards. Mandibles elongated, simple, without dorsal ridges, premolar tooth missing.

Pronotum slightly transverse (PW/PL = 1.15 male, 1.18 female), with the maximum width just before the middle, slightly narrower at the base, with sides feebly arcuate, slightly sinuate and crenellate before the basal angles. Base slightly emarginate laterally, before the basal angles (Fig. 28). Anterior angles slightly prominent, the posterior ones almost right and marked. Disc faintly convex, with a long and sparse pubescence; shallow median groove. Marginal groove wide and flattened, distinctly enlarged near the base; marginal setae inserted inside the marginal groove, in the anterior half, along with other three supernumerary setae on each side, slightly

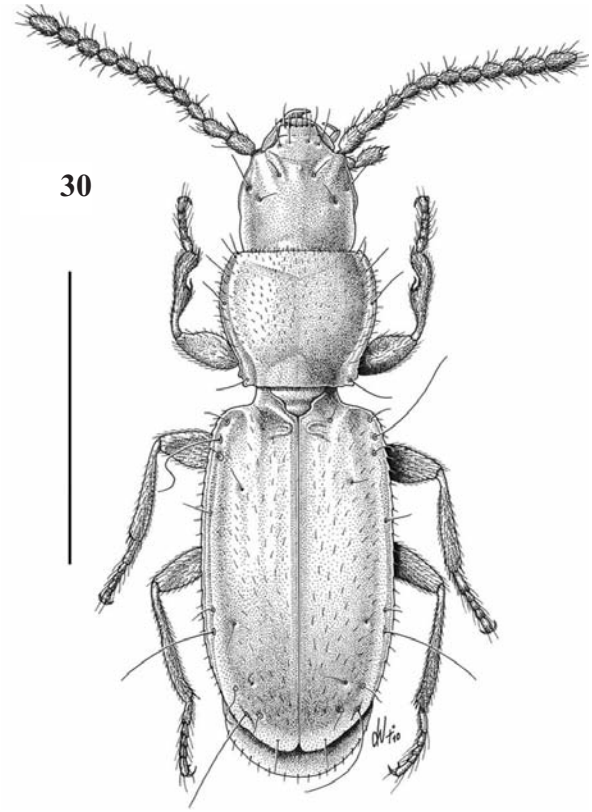


Figure 30. *Prioniomus cassiopaeus*, habitus of the male (from Pavesi, 2010, scale 1 mm).

shorter; basal setae inserted almost at the posterior angles.

Elytra oval, elongated and parallel-sided (EL/EW = 1.80 male, 1.82 female), with the maximum width at the centre, not emarginate yet broadly rounded externally in the preapical area. Disc convex; shiny integuments, with an evident microsculpture having an isodiametric mesh, and a long, sparse and erect pubescence. Humeri well marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation up to the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 1st, 2nd and 3rd pore almost equidistant; the distance between the 3rd and 4th pore three times that between the 2nd and 3rd; 3rd and 4th pore significantly shifted towards the disc; 5th and 6th pore paired and placed before the apical third; 7th, 9th and 8th pore not equidistant from each other, with the 8th and 9th ones forming a "geminate" pair; the 8th pore nearly aligned with the posterior discal seta and placed almost at the height of the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd ones placed respectively between the 3rd and 4th and at the level of the 7th pore of the umbilicate series, while the 2nd one is placed between the 5th and 6th umbilicate pore; the 3rd pore is much more shifted towards the elytral suture than the 1st and 2nd.

Aedeagus (Fig. 29) big; median lobe considerably bottle-necked in the prebulbar part, very elongated, frail, sharply bent in the prebulbar part, not twisted on the right side, with the apical blade elongated into a pronounced beak, slightly and abruptly bent downwards, acute but rounded, not sharp. Endophallus bearing a sclerified copulatory piece, of a bifid, long and sharp shape. Parameres bearing each one 3-4 apical setae.

Distribution and ecology. According to Pavesi (2010) it is found in the deep clayey layer of the soil.

Prioniomus peloponnesiacus n. sp.

Locus typicus. Greece, nom. Arkadía, O. Ménalon m 1550.

Examined material (Figs. 31-36). Holotypus male, " Grecia, nom. Arkadía, O. Ménalon, m 1550, 11.VI.2004, P.M. Giachino & D. Vailati leg." (CGi). Paratypi 3 females, "Grecia, nom. Arkadía, O. Ménalon, m 1550, 4.VI.1996, P.M. Giachino & D. Vailati leg." (MRSN, CGi, CVa).

Diagnosis. *Prioniomus peloponnesiacus* n. sp. is similar, by the shape of the median lobe in of the aedeagus, to *P. moczarskii* Jeannel, 1937, of Corfu, *P. cassiopaeus* of the island of Kérkyra, and *P. etontii* n. sp. of the Maara cave (O. Meníkio). However, it differs from *P. moczarskii* in the smaller size, the rearmost position toward the apex and not shifted onto the disc of the 4th

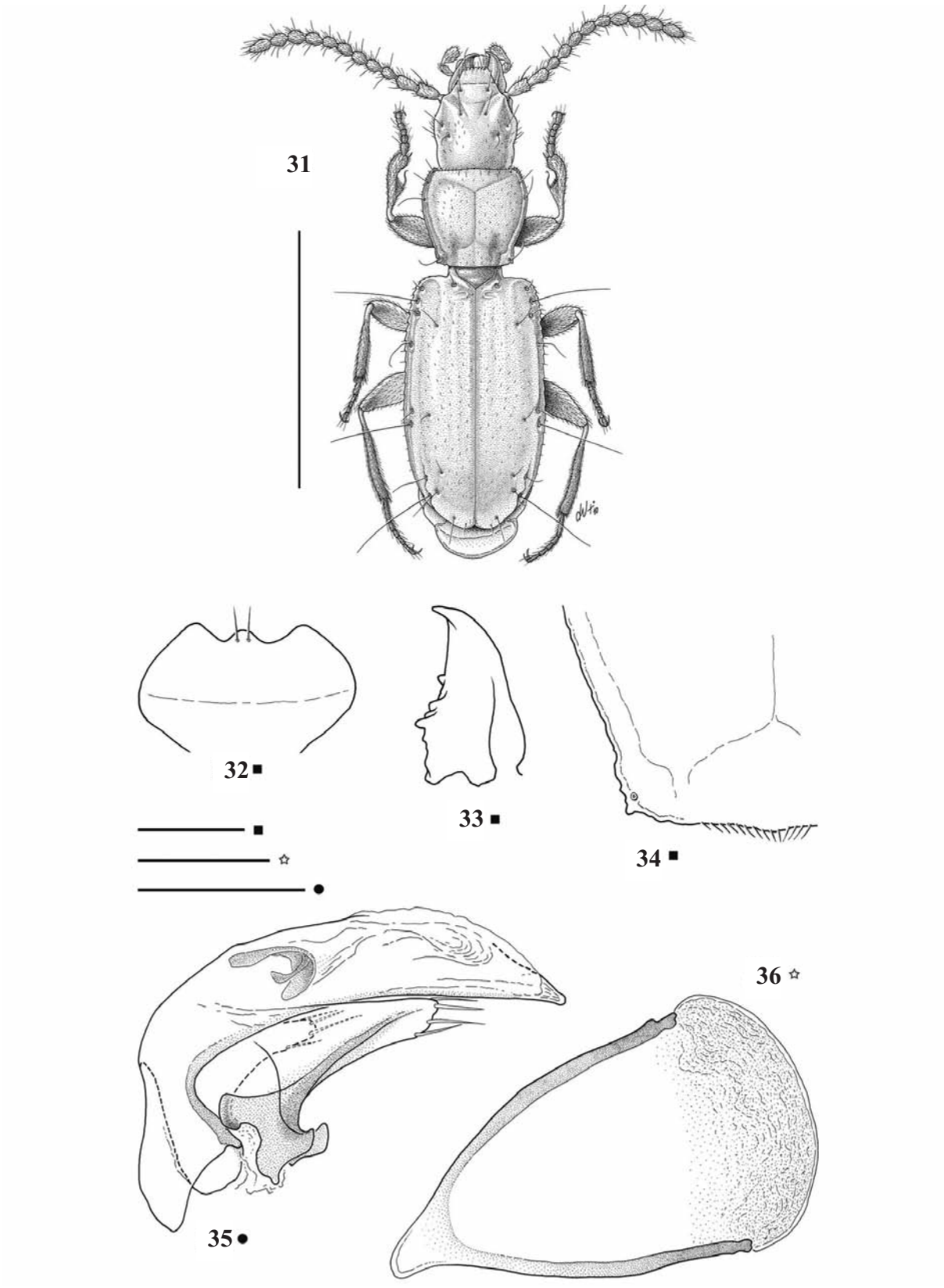


Figure 31. *Prioniomus peloponnesiacus* n. sp., habitus of the male (scale 1 mm).
Figures 32-36. *Prioniomus peloponnesiacus* n. sp. 32: profile of the labium; 33: right mandible; 34: basal angle of the pronotum; 35: aedeagus in lateral view; 36: invaginated segment (scale 0.1 mm).

pore of the umbilicate series, and the different shape of the copulatory piece; it differs instead from *P. etontii* n. sp. in the smaller size, the convex elytral disc, the position of the 8th pore of the umbilicate series, the different curvature of the median lobe of the aedeagus, and the different shape of the copulatory piece. Finally, it differs from *P. cassiopaeus* in the smaller size, the position of the 8th pore of the umbilicate series, the median lobe of the aedeagus more curved, with the apex more rounded, and a different shape of the copulatory piece.

From *P. vailatii*, *P. menozzii* and *P. antonella*e n. sp., all known from a single female specimen, it differs in its smaller size.

Description. L 1.66 mm male, 1.68 female. Body (Fig. 31) elongated and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture having an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform but with slightly elongated antennomeres, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly convergent backwards. Mandibles elongated, simple, without dorsal ridges, left premolar tooth absent, right premolar tooth small and placed at the level of the anterior margin of the labrum, which is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.13 male, 1.16 female), with the maximum width at the base of the anterior fourth, significantly narrower at the base, with curved sides, distinctly sinuate and crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 34). Anterior angles rounded, slightly prominent; posterior ones right and marked. Disc feebly convex, with a long and sparse pubescence; median groove very shallow. Marginal groove wide and flattened, enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other two supernumerary setae on each side, slightly shorter; basal setae inserted almost on the posterior angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.76 male, 1.71 female), with the maximum width at the centre, not emarginate, broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture having an isodiametric mesh, and long, sparse and erect pubescence. Humeri well marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation up to the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 1st, 2nd and 3rd pore almost equidistant; 4th pore far from the 3rd as the distance between the 1st and the 3rd; 1st, 2nd and 4th placed in the elytral groove, the 3rd one shifted towards the disc, almost on the edge of the groove; the 5th and 6th pore are paired and situated before the apical third; the 7th, 9th and 8th are not equidistant from each other, with the 8th and 9th forming a "geminate" pair; the 8th being aligned with the posterior discal seta and shifted further before the 9th; the 7th significantly shifted onto the disc. Discal pores three in number and not well aligned with each other: the 1st and 3rd ones are placed respectively well before the 4th umbilicate pore and approximately at the level of the 7th, while the 2nd is located approximately at the level of the 5th umbilicate pore; 3rd pore much more shifted towards the elytral suture than to the 1st and 2nd.

Aedeagus (Fig. 35) big; median lobe considerably bottle-necked in the prebulbar part, elongated, poorly curved, sharply bent in the prebulbar part, not twisted on the right side, with the apical blade elongated into a pronounced beak, acute but rounded, not sharp and not bent downwards. Endophallus bearing a sclerified copulatory piece vaguely T-shaped, concave, with the lower arm shorter and sharper. Parameres bearing each 3 apical setae.

Etimology. From "Peloponnese", the Greek region where the type locality is situated.

Distribution and ecology. *P. peloponnesiacus* n. sp. is currently known only from the type

locality, a grassy clearing at an altitude of 1,550 m a.s.l., in the O. Ménalon, on the hill crossed by a road running along the massif in an east-west direction, from Levídi to Vitína. The clearing, characterized by the presence of red clay on limestone is placed between formations of *Abies* characterizing the tree cover in the area. *P. peloponnesiacus* n. sp. was collected under rocks (even small ones) in direct contact with the clay and in syntopy with another interesting anilline, *Caecoparvus arcadicus* (J. Müller, 1935) (Fig. 244).

Prioniomus etontii n. sp.

LOCUS TYPICUS. Greece, nom. Dráma, Piges, Cave of Maara, m 250

EXAMINED MATERIAL (Figs. 37-44). Holotypus male, "Grecia, nom. Dráma, Piges, Gr. di Maara, m 250, 23.VI.1992, M. Etonti leg." (CEt). Paratypi: 1 male, "Grecia, nom. Dráma, Piges, Gr. di Maara, m 250, 23.VI.1992, M. Etonti leg."; 1 male, "Grecia, nom. Dráma, Piges, Gr. di Maara, m 250, 26.VI.1994, M. Etonti leg." (CGi, CVa).

DIAGNOSIS. *Prioniomus etontii* n. sp. is closely related by the shape of the median lobe of the aedeagus to *P. moczarskii* Jeannel, 1937, of Corfu, and *P. peloponnesiacus* n. sp. of O. Ménalon. However, it differs from all other known species in the very flattened elytral disc; from *P. moczarskii* in the position of the 4th pore of the umbilicate series not shifted onto the disc and the different shape of the copulatory piece; from *P. peloponnesiacus* n. sp. it differs instead in the bigger size, the position of the 4th pore of the umbilicate series, the lower distance from the 3rd, the different curvature of the median lobe of the aedeagus, and the different shape of the copulatory piece. Finally, it differs from *P. cassiopaeus* in the bigger size, the less advanced position of the 3rd discal pore toward the base, the median lobe of the aedeagus more squat, and the different shape of the copulatory piece.

From *P. vailatii*, *P. menozzii* and *P. antonella*e n. sp., all known from a single female, it differs in its bigger size.

DESCRIPTION. L male 2.56 mm. Body (Fig. 37) long and narrow, depigmented (the specimens used for the description, due to the long stay in alcohol which altered the colours, were turned to uniform brown), shiny integuments, with an evident microsculpture having an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform but with slightly elongated antennomeres, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly convergent backwards. Mandibles (Figs. 38-39) very elongated, simple, without dorsal ridges; left premolar tooth developed, right premolar tooth small and placed at the level of the anterior margin of the labrum which is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.19 male), with the maximum width at the base of the anterior fourth, significantly narrower at the base, with sides arcuate, remarkably sinuate and distinctly crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 42). Anterior angles rounded, very poorly prominent, sub-acute posteriorly and marked. Disc feebly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other 1-2 super-numerary setae per side, slightly shorter; one supernumerary seta is near the anterior margin of the pronotum; the basal setae are inserted almost on the posterior angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.74 male), with the maximum width at about the apical third, not emarginate but broadly rounded externally in the preapical area. Disc flat, almost depressed, integuments shiny, with an evident microsculpture having an isodiametric mesh, and a long, sparse and erect pubescence. Humeri well marked, but rounded, post-humeral margin denticulate, with an evident crenellation almost up to the level of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident up to the height of the 7th pore of the umbilicate series.

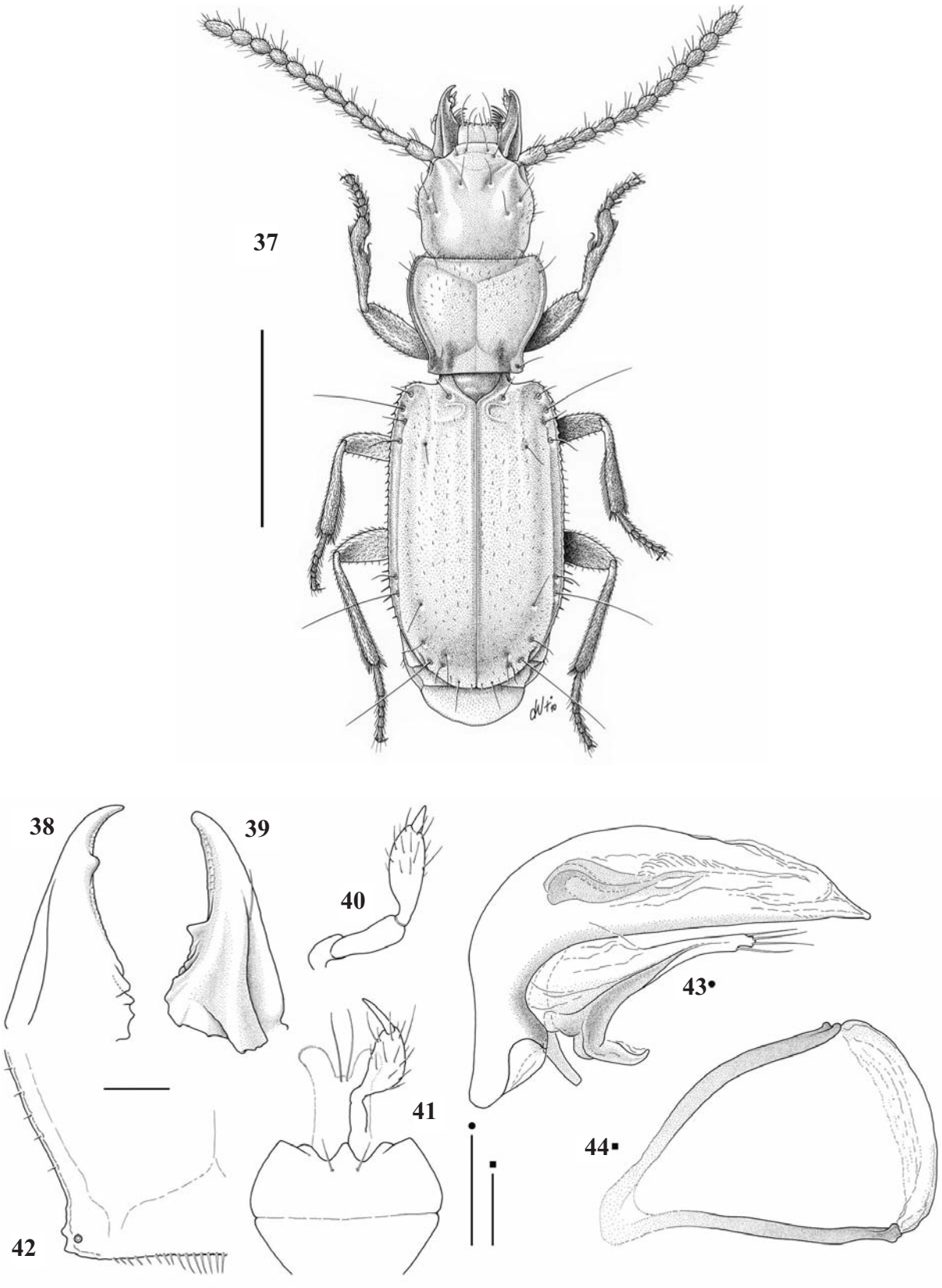


Figure 37. *Prioniomus etontii* n. sp., habitus of the male (scale 1 mm).
Figures 38-42 *Prioniomus etontii* n. sp. 38: left mandible; 39: right mandible; 40: maxillary palp; 41: labium and labial palp; 42: basal angle of the pronotum (scale 0.1 mm).
Figures 43-44. *Prioniomus etontii* n. sp. 43: aedeagus in lateral view; 44: invaginated segment (scale 0.1 mm).

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A: 2nd and 3rd pore of the umbilicate series more closely aligned than the 1st with the 2nd and the 3rd with the 4th; 3rd pore slightly shifted towards the disc, 4th one aligned with the 1st and the 2nd; 5th and 6th pore flattened and situated at the beginning of the apical third; 7th, 9th and 8th not equidistant from each other, with the 9th and 8th forming a "geminate" pair; the 8th aligned with the posterior discal seta and placed at about the height of the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd are placed respectively at the height of the 4th pore of the umbilicate series and just before the 9th; the 2nd discal pore is placed far beyond the 6th umbilicate pore, the 3rd pore is much shifted towards the elytral suture than to the 1st and 2nd.

Aedeagus (Fig. 43) big, median lobe significantly bottle-necked and abruptly arcuate in the prebulbar part, not twisted on the right side, with the apical blade elongated into an apical beak pronounced yet rounded, not sharp and not bent downwards. Endophallus fitted with a sclerified saddle-shaped wavy copulatory piece, with an acuminate anterior part. Parameres bearing four apical setae each.

Female unknown.

ETIMOLOGY. We dedicate this new species to our friend Mirto Etonti, a tireless investigator of the Greek entomological fauna, who first discovered it.

DISTRIBUTION AND ECOLOGY. *P. etontii* n. sp. is currently known only from the type locality, the Maara Cave located about 250 m a.s.l. near Piges in the O. Meníkio (nom. Dráma). In this locality *P. etontii* n. sp. was collected while wandering on the clay beds in the deep part of the cave; which was already known also for the presence of another interesting subterranean trechine *Duvalius* (*Paraduvalius*) *joannidisi* Casale, Giachino & Etonti, 1990 (Casale et al., 1990).

«Group of *P. gabriellae*»

DIAGNOSIS. A group characterized by species with the median lobe of the aedeagus not bottle-necked in the prebulbar part, elongated, abruptly flexed in the basal half, so to take a right or acute internal angle, not twisted on the right side, with an apical blade elongated into a pronounced beak, rounded but not sharp. Endophallus provided with a bifid sclerified copulatory piece, having a "C" shape in lateral view.

Prioniomus gabriellae n. sp.

LOCUS TYPICUS. Greece, nom. Evritanía, O. Kaliakoúda, road Méga Horio-Psianá, N slope m 1380.

EXAMINED MATERIAL (Figs. 45-49). Holotypus male, "Grecia, nom. Evritanía, O. Kaliakoúda, strada Méga Horio-Psianá, vers. N, m 1380, 6.VI.2003, Giachino & Vailati leg." (CGi). Paratypi: 1 male, 2 females, "Grecia, nom. Evritanía, O. Kaliakoúda, strada Méga Horio-Psianá, vers. N, m 1380, 6.VI.2003, Giachino & Vailati leg." (CGi, CVa).

DIAGNOSIS. *P. gabriellae* n. sp. is closely related by the shape of the median lobe of the aedeagus to *P. scaramozzinoi* n. sp. of O. Karáva, from which it differs however in the mediumly bigger size, the less advanced position of the 8th pore of the umbilicate series toward the base, and the apex of the median lobe of the aedeagus less flexed inferiorly, in lateral view.

It differs from the three species known on single female specimens, respectively, in the size smaller than *P. vailatii* and bigger than *P. menozzii* and *P. antonella*e n. sp.

DESCRIPTION. L 2.05 to 2.11 mm male, 2.00 to 2.05 female. Body (Fig. 45) elongated and narrow depigmented, reddish-testaceous with appendages yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, narrower than the pronotum, anophthalmous. Antennae long, frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow poorly distinct; anterior margin of the epistome slightly protruding in the middle. Two supraorbital setae on each side, close together, on lines very convergent backwards. Mandibles elongated, simple, without dorsal ridges, left

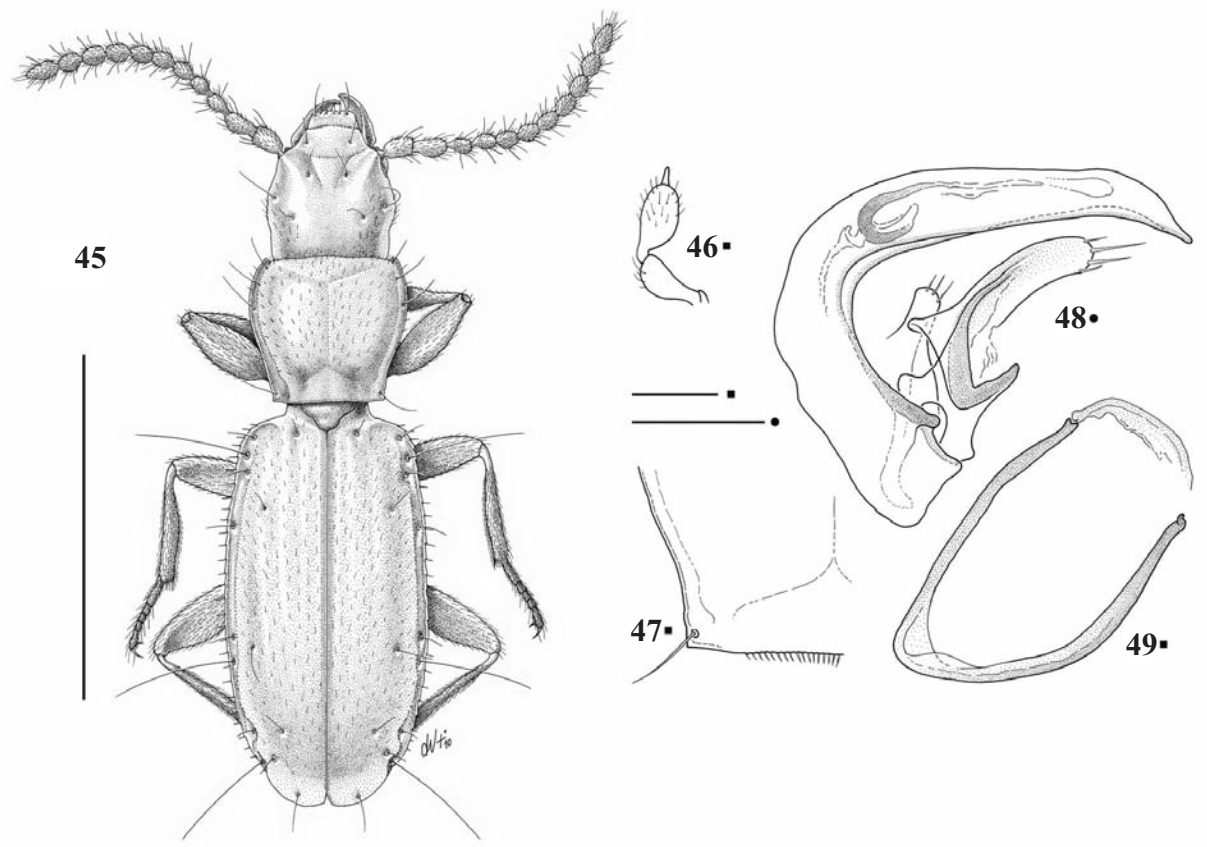


Figure 45. *Prioniomus gabriellae* n. sp., habitus of the male (scale 1 mm).
Figures 46-49. *Prioniomus gabriellae* n. sp. 46: maxillary palp; 47: basal angle of the pronotum; 48: aedeagus in lateral view; 49: invaginated segment (scale 0.1 mm).

premolar tooth absent, right premolar tooth very small and placed at the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.08 male, 1.09 female), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with sides arcuate, sinuate and distinctly crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 47). Anterior angles rounded, slightly prominent, posteriorly subacute and marked. Disc faintly convex, with a long and sparse pubescence; shallow median groove. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other two supernumerary setae on each side, slightly shorter; basal setae inserted almost at the posterior angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.92 male, 1.84 female), with the maximum width at about the apical third, slightly emarginate and broadly rounded externally in the preapical area. Disc flat in the middle; integuments shiny, with a very evident microsculpture of an isodiametric mesh, and a long, sparse and erect pubescence. Humeri marked, but rounded; post-humeral margin denticulate, with an evident crenellation almost up to the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 2nd and 3rd pore of the umbilicate series slightly closer than the 1st with the 2nd; 4th pore very far from the 3rd one, at a distance greater than that between the 1st and the 3rd; 3rd pore slightly shifted towards the disc, the 4th one aligned with the 1st, and the 2nd, 5th and 6th pore paired and placed well before the beginning of the apical third; 7th, 9th and 8th not equidistant from each other, with the 9th and 8th

forming a "geminate" pair; the 8th one not aligned with the posterior discal seta and placed just before the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd ones are placed respectively before the 4th pore of the umbilicate series and at the level of the 7th; the 2nd discal pore is located between the 5th and the 6th umbilicate pore; the 3rd pore is much more shifted towards the elytral suture than the 1st and 2nd.

Aedeagus (Fig. 48) big, median lobe not bottle-necked in the prebulbar part, stretched, sharply bent, so to take an acute internal angle near the middle, not twisted on the right side, with an apical blade elongated into a pronounced beak, rounded, not acuminate and slightly bent downwards. Endophallus fitted with a bifid sclerified copulatory piece, with a double concave shape. Parameres bearing with four apical setae each.

ETIMOLOGY. We are pleased to dedicate this new species to Gabriella Verna, life partner of one of the authors (PMG), as a token of gratitude for her patience during our many "disappearances" in Greece.

DISTRIBUTION AND ECOLOGY. *P. gabriellae* n. sp. is currently known only from the type locality situated in O. Kaliakoúda along the Méga Horio-Psianá road in an *Abies* forest on a NNE-facing slope at an altitude of 1,380 m a.s.l. In this station *P. gabriellae* n. sp. was collected under rocks buried in red clay, in a gully developed in the contact zone between limestone and shale, in syntopy with another interesting anilline, *Iason rossii* n. sp., described in this same contribution.

Prioniomus scaramozzinoi n. sp.

LOCUS TYPICUS. Greece nom. Kardítsa, O. Karáva, Argithea, m 930.

EXAMINED MATERIAL (Figs. 50-55). Holotypus male, "Grecia nom. Kardítsa, O. Karáva, Argithea, m 930, 17.VI.2002, P.M. Giachino & D. Vailati leg." (CGi). PTT: 1 male, 2 females, "Grecia nom. Kardítsa, O. Karáva, Argithea, m 930, 17.VI.2002, P.M. Giachino & D. Vailati leg."; 1 female, "Grecia, nom. Kardítsa, O. Karáva, Argithea, m 930, 19.VI.1992, P.M. Giachino & D. Vailati leg." (MCSNB, CGi, CVa).

DIAGNOSIS. *P. scaramozzinoi* n. sp. is closely related to *P. gabriellae* sp. of O. Kaliakoúda by the shape of median lobe of the aedeagus, from which it differs, however, in the generally smaller size, the most forward position of the 8th pore of the umbilicate series toward the base, and the apex of median lobe of the aedeagus, in lateral view, more sharply flexed inferiorly.

It differs from *P. vailatii*, *P. menozzii*, and *P. antonellae* sp., all known on single female specimens, in its smaller size.

DESCRIPTION. L 1.82-1.87 mm males, 1.78-1.89 females. Body (Fig. 50) elongated and narrow depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with a microsculpture very apparent, of isodiametric meshes, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clipeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly converging backwards. Mandibles elongated, simple, without dorsal ridges, left premolar tooth absent, right premolar tooth small and placed behind the anterior margin of the labrum that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.10 male, 1.15 female), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with curved sides, distinctly sinuate and very slightly crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 53). Anterior angles rounded, slightly prominent; the posterior ones subacute and marked. Disc faintly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the groove marginal, at the level of the anterior third, along with other two supernumerary setae on each side, slightly shorter; basal setae inserted almost on the basal angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.91 male - 1.89 female), with the maximum width at about the half, not emarginate

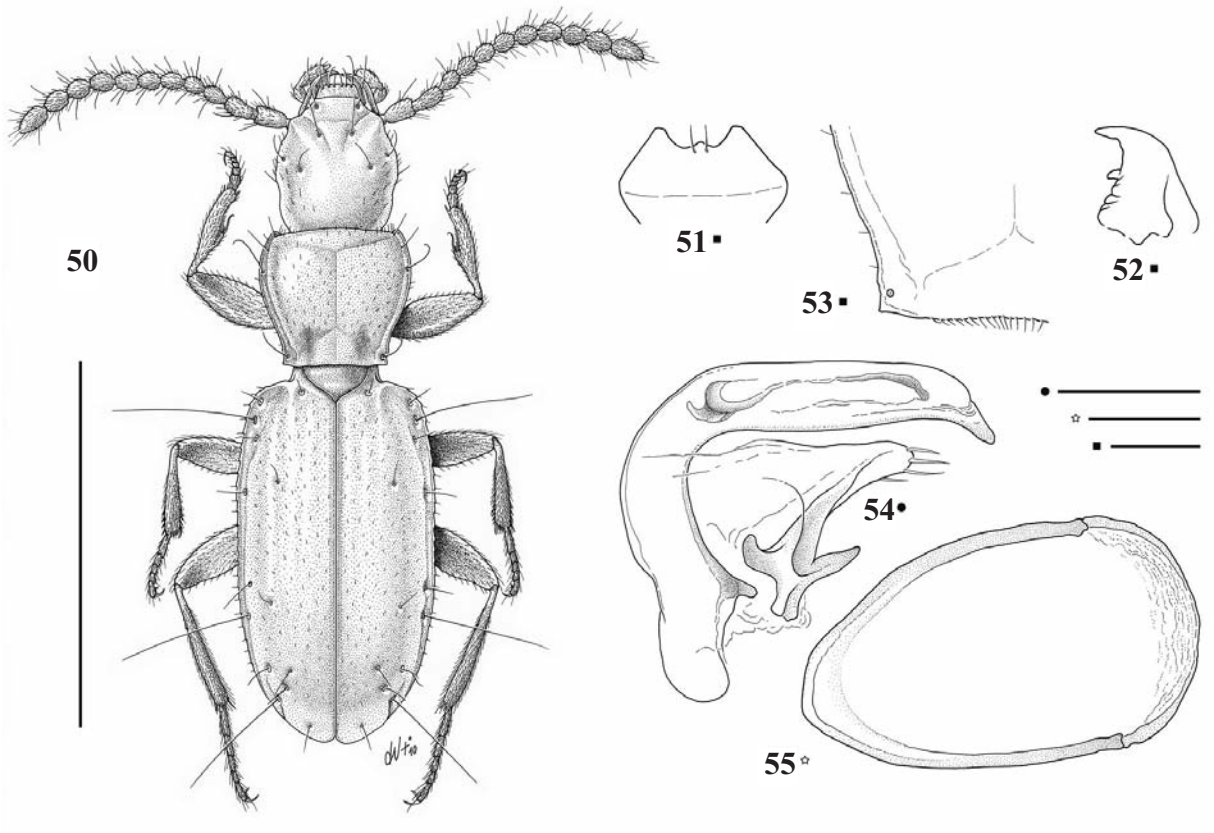


Figure 50. *Prioniomus scaramozzinoi* n. sp., habitus of the male (scale 1 mm).
Figures 51-55. *Prioniomus scaramozzinoi* n. sp. 51: profile of the labium; 52: right mandible; 53: basal angle of the pronotum; 54: aedeagus in lateral view; 55: invaginated segment (scale 0.1 mm).

yet broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and with a long, sparse and erect pubescence. Humeri well marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation at the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove wide and evident at the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A, 1st, 2nd and 3rd pore of the umbilicate series almost equidistant; 4th pore very far from the 3rd, at a distance greater than that between the 1st and the 3rd; 3rd pore slightly shifted toward the disc, 4th aligned with the 1st and 2nd; 5th and 6th pores paired but relatively spaced, 6th pore located on the apical third; 7th, 9th and 8th not equidistant from each other, the 9th and 8th forming a "geminate" pair; the 8th nearly aligned with the posterior discal seta. Discal pores three in number and not well aligned with each other: the 1st and 3rd are placed respectively before the 4th pore and between the 5th and 6th pore of the umbilicate series, while the 2nd is located at the level of the 7th umbilicate pore; 3rd pore shifted much more towards the elytral suture than to the 1st and 2nd.

Aedeagus (Fig. 54) big, median lobe not bottle-necked in the prebulbar part, elongated, sharply bent, so to take an almost right internal angle, at about the half, not twisted on the right side, with apical blade elongated into a pronounced beak, rounded, not acuminate, and sharply bent downwards. Endophallus provided with a bifid sclerified copulatory piece, of a double concave shape. Parameres bearing four apical setae each.

Etimology. We are pleased to dedicate this new species to our friend Pier Luigi Scaramozzino, a research fellow in Greece in the spring of 1992.

DISTRIBUTION AND ECOLOGY. *P. scaramozzinoi* n. sp. is currently known only from the type locality situated at the foot of the O. Karáva, near the town of Argithea, at an altitude of 930 m a.s.l. In this site *P. scaramozzinoi* n. sp. was found in red clay, beneath buried rocks along the banks of a small irrigation ditch derived from the main stream and placed along the dry stone walls, in a small valley with plenty of water and plane trees along the main stream. It should be noted that, always in the O. Karáva, at a higher altitude (1,550 m) and a few km away, there are two other species of anillines described in this paper: *Caecoparvus karavae* n. sp. and *Iason karametasi* n. sp.

«Group of *P. abnormis*»

DIAGNOSIS. A group characterized by species with the median lobe of the aedeagus elongated and regularly arcuate, not - or only slightly - flexed basally, with the apex slightly twisted on the right side and the apical blade short and stocky. Endophallus provided with a sclerified copulatory piece vaguely shaped like a "head of garlic".

Prioniomus abnormis (Sahlberg, 1900)

LOCUS TYPICUS. Corfou, Ropa.

Anillus abnormis Sahlberg 1900: 137.
Anillus abnormis Sahlberg: Ganglbauer 1900: 178.
Anillus abnormis Sahlberg: Apfelbeck 1904: 124
Corcyranillus abnormis Sahlberg: Jeannel 1937: 347.
Corcyranillus abnormis Sahlberg: Jeannel 1963: 58.
Corcyranillus abnormis (Sahlberg): Löbl & Smetana 2003: 238.
Corcyranillus abnormis (Sahlberg): Lorenz 2005: 202.
Prioniomus abnormis (Sahlberg): Pavesi 2010: 432. (**nov**. **comb**.).

EXAMINED MATERIAL (Figs. 56-60). 5 males and 5 females, GR, Kerkyra, Vouniatades, 10.XII.1995, leg. M. Pavesi; 1 male, GR, Kerkyra, Ermones mouth river Ropa, 10.XII.1999, leg. M. Pavesi. (CGi, CPa, CVa).

DIAGNOSIS AND REDESCRIPTION. A *Prioniomus* closely related to *P. giachinoi* Vailati, 2002, for the shape of the median lobe of the aedeagus and the copulatory piece. It differs, however, from *P. giachinoi* in the shape of the median lobe of the aedeagus less regularly curved, more sharply bent and more bottle-necked in the prebulbar part, and in the apex of median lobe gradually tapered in lateral view.

It differs from *P. vailatii*, *P. menozzii*, and *P. antonellae* n. sp., all known on single female specimens, in its smaller size.

L 1.80 mm male, 1.86 female. Body (Fig. 56) elongate, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform, but with slightly elongated antennomeres, exceeding the base of the pronotum when stretched backwards. Fronto-clipeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines strongly converging backwards. Mandibles elongated, simple, without dorsal ridges, left premolar tooth absent, right premolar tooth small and placed before the anterior margin of the labrum that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.21 male, 1.19 female), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with curved sides, distinctly sinuate and slightly crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 58). Anterior angles slightly prominent, the posterior ones sub-acute and marked. Disc faintly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other two supernumerary setae on each side, slightly shorter; basal setae inserted almost on the posterior angles.

Elytra oval, moderately elongated and subparallel (EL/EW = 1.68 male, 1.72 female), with the maximum width at about the apical third, not emarginate yet broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and a

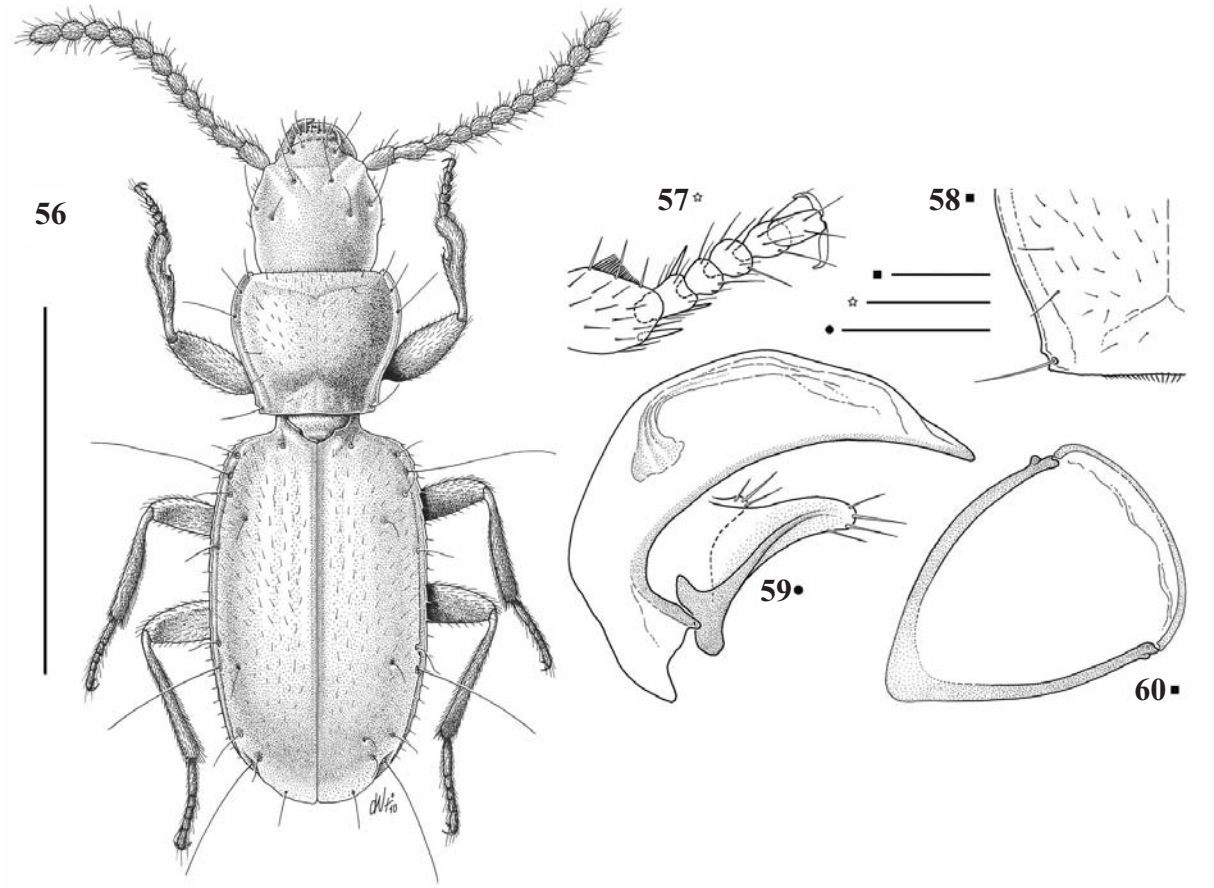


Figure 56. *Prioniomus abnormis*, habitus of the male (from Pavesi, 2010, scale 1 mm).
Figures 57-60. *Prioniomus abnormis*. 57: "pseudotetramerous" protarsum of the male; 58: basal angle of the pronotum; 59: aedeagus in lateral view (from Pavesi, 2010); 60: invaginated segment (scale 0.1 mm).

long, sparse and erect pubescence. Humeri well marked, but rounded; post-humeral margin significantly denticulate, with an evident crenellation at the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove wide and evident at the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A, 1st, 2nd, 3rd of the umbilicate series almost equidistant; 4th pore very far from the 3rd, at a distance greater than that between the 1st and the 3rd; 3rd pore distinctly shifted onto the disc, the 4th aligned with the 1st and 2nd; the 5th and 6th paired, the 6th pore located on the apical third; the 7th, 9th and 8th not equidistant from each other, with the 9th and 8th very close and forming a "geminate" pair; the 8th misaligned with the posterior discal seta and placed almost at the height of the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd ones are placed, respectively, between the 3rd and the 4th and at the level of the 7th umbilicate pore, while the 2nd is located at the level of the 6th; the 3rd pore is much more shifted towards the elytral suture than the 1st and 2nd.

Aedeagus (Fig. 59) relatively big; median lobe elongate and regularly curved, bent and distinctly bottle-necked basally, with the apex slightly twisted onto the right side and the apical blade short, stocky and regularly tapered in lateral view. Endophallus provided with a sclerified copulatory piece vaguely shaped like a "head of garlic". Parameres bearing three apical setae each.

Distribution and ecology. According to Pavesi (2010), it is found in the deep clayey layer of the soil.

Prioniomus giachinoi Vailati, 2002

LOCUS TYPICUS. Greece, nom. Fokída, O. Gióna m 1320, above Panourgiäs N slope.

Prioniomus giachinoi Vailati 2002: 298.
Prioniomus gachinoi (sic !) Vailati: Lorenz 2005: 202.

EXAMINED MATERIAL (Figs. 1, 61-66). Holotypus male, "Grecia, nom. Fokída, O. Gióna, m 1320, sopra Panourgiäs vers. N, 9.VI.1999, P.M. Giachino & D. Vailati leg." (MRSN).

DIAGNOSIS AND REDESCRIPTION. A *Prioniomus* closely related to *P. abnormis* (Sahlberg, 1900) for the shape of the median lobe of the aedeagus and the copulatory piece. It differs, however, from *P. abnormis* in the median lobe of the aedeagus regularly curved, less abruptly bent and less bottle-necked in the prebulbar part, and the apex of the median lobe sharply tapered in lateral view.

From the three species known on single female specimens, it differs, respectively, in the smaller size than *P. vailatii* and the bigger size than *P. menozzii* and *P. antonellae* n. sp.

L 2.17 mm male. Body (Fig. 61) elongated and narrow, depigmented, with pronotum and elytra testaceous-yellow and the head slightly darker. Integument shiny, with an evident microsculpture of an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head (Fig. 1) robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, moniliform, but with slightly elongated antennomeres, exceeding the base of the pronotum when stretched backwards. Fronto-clipeal furrow distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly converging backwards. Mandibles elongated, simple, without dorsal ridges, left premolar tooth absent, right premolar tooth small and placed after the anterior border of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.13 male), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with sides arcuate, slightly sinuate before the base; crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 65). Anterior angles rounded, slightly prominent; posterior ones slightly obtuse and marked. Disc faintly convex, with a long and sparse pubescence, median groove shallow. Marginal groove wide and flattened, only slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other three supernumerary setae on each side, slightly shorter, with the first anterior seta distinctly shifted onto the disc near the anterior margin; basal setae inserted almost on the basal angles.

Elytra oval, elongated and subparallel (EL/EW = 1.78 male), with the maximum width at about the half, not emarginate yet broadly rounded externally in the preapical area, without traces of striae. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and a long, sparse and erect pubescence. Humeri marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation at the height of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove wide and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A, 1st, 2nd, 3rd pore of the umbilicate series almost equidistant; 4th pore very far from the 3rd, placed at a greater distance than that between the 1st and the 3rd; 3rd pore distinctly shifted onto the disc, the 4th one aligned with the 1st and 2nd; the 5th and 6th paired, the 6th pore located on the apical third; the 7th, 9th and 8th not equidistant from each other, with the 9th and the 8th very close and forming a "geminate" pair; the 8th nearly aligned with the posterior discal seta and situated slightly before the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd ones placed, respectively, between the 3rd and 4th pore (closer to the 4th) and at the level of the 7th umbilicate pore, while the 2nd is located slightly below the 6th; the 3rd pore is much more shifted towards the elytral suture than the 1st and 2nd.

Aedeagus (Fig. 66) relatively big; median lobe a little bottle-necked in the prebulbar part, elongated and regularly curved, not bent basally, with the apex slightly twisted on the right side, and the apical blade short and stocky. Endophallus provided with a sclerified copulatory piece vaguely shaped like a "head of garlic". Parameres bearing four apical setae each.

Female unknown

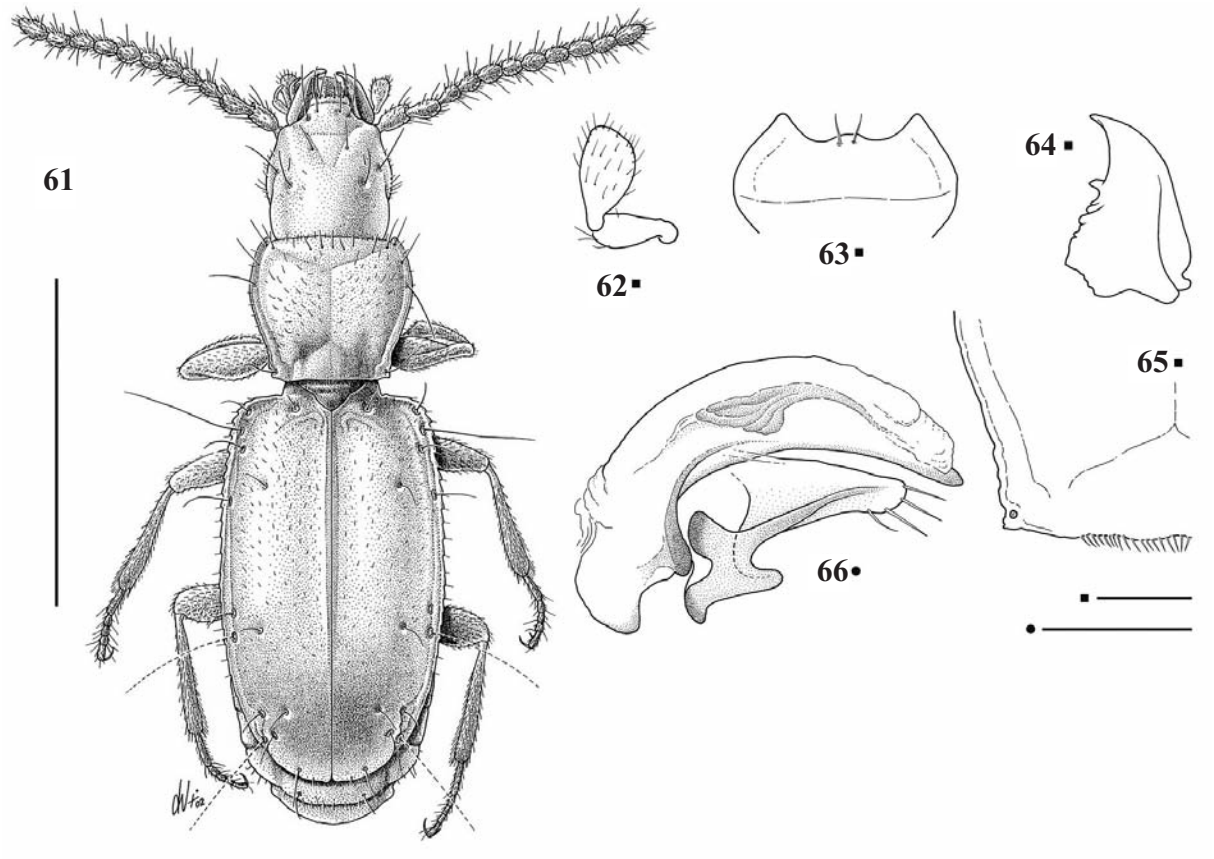


Figure 61. *Prioniomus giachinoi*, habitus of the male (scale 1 mm).
Figures 62-66. *Prioniomus giachinoi*. 62: maxillary palp; 63: profil of the labium; 64: right mandible; 65: basal angle of the pronotum; 66: aedeagus in lateral view (scale 0.1 mm).

DISTRIBUTION AND ECOLOGY. *P. giachinoi* is currently known only from the type locality situated on the North side of O. Gióna, on Panourgias at m 1,320. The only known specimen was collected under a stone buried in yellowish clay soil in a clearing of an *Abies* forest. Repeated research conducted in the years after the first finding gave no longer the chance to collect this species.

«Species of *incertae sedis*»

Prioniomus menozzii (Schatzmayr, 1936) nov. comb.

LOCUS TYPICUS. Monte Attairo (Is. Ródhos)

Scotodipnus menozzii Schatzmayr 1936: 327.
Corcyranillus menozzii Schatzmayr: Jeannel 1963: 59.
Corcyranillus menozzii Schatzmayr: Löbl & Smetana 2003: 238.
Corcyranillus menozzii Schatzmayr: Lorenz 2005: 202.

EXAMINED MATERIAL (Figs. 67, 69). Holotypus female, M. Attairo, Rodi, 15.IV.1934, C. Menozzi (white handwritten and printed); Typus (red printed); Corcyranillus menozzii Schatzm. (white handwritten); Holotypus (red printed) (MCSNM).

DIAGNOSIS AND REDESCRIPTION. *P. menozzii* (Schatzmayr, 1936) is a species known on a single female specimen, and this prevents a sure placement within the groups of species of the genus *Prioniomus*, although the shape of the pronotum and the elytral chaetotaxy seems to place it closer to species of the group *P. abnormis*. It differs, however, from *P. abnormis*

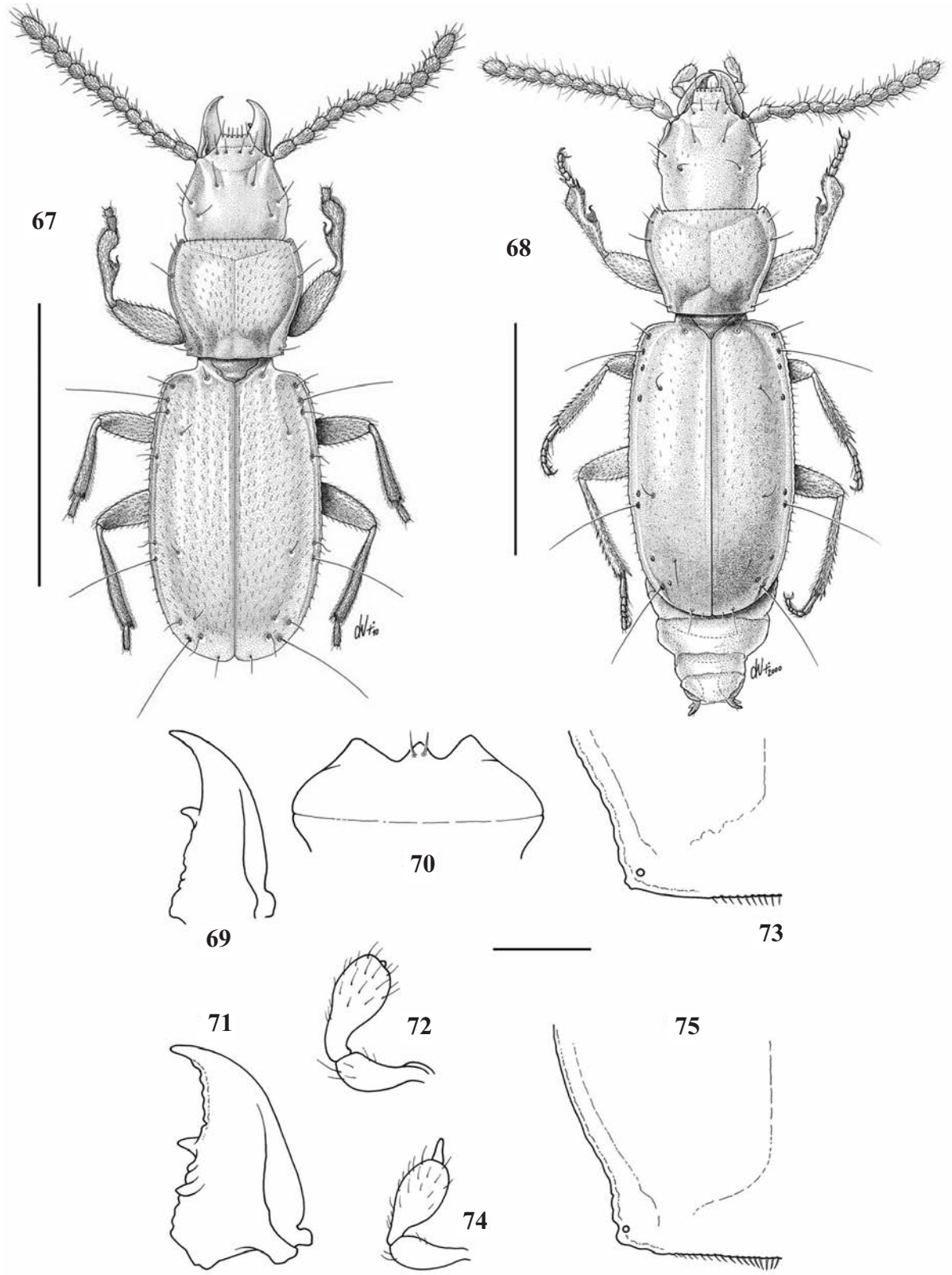


Figure 67. *Prioniomus menozzii*, habitus of the female (scale 1 mm).
Figures 68. *Prioniomus vailatii*, habitus of the female (scale 1 mm).
Figures 69-75. *Prioniomus* spp. 69: *Prioniomus menozzii*, right mandible; 70: *Prioniomus vailatii* Giachino, profile of the labium; 71: idem, right mandible; 72: idem, maxillary palp; 73: idem, basal angle of the pronotum; 74: *Prioniomus antonellae* n. sp., maxillary palp; 75: idem, basal angle of the pronotum (scale 0.1 mm).

in a slightly bigger size, the elytra stockier, and the slightly more advanced position of the 2nd and 3rd discal seta toward the base.

L 1.95 mm female. Body (Fig. 67) elongated and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of isodiametric meshes, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, not moniliform, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow poorly distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly converging backwards. Mandibles elongated, simple, without dorsal crests; left premolar tooth missing, right premolar tooth small and placed far before the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 69).

Pronotum very transverse (PW/PL = 1.09 female), with the maximum width at the base of the anterior third, slightly narrower at the base, with sides curved, sinuate and crenellate before the basal angles. Base subrectilinear, only slightly emarginate laterally before the basal angles. Anterior angles rounded, slightly prominent; the posterior ones slightly acute and marked. Disc faintly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other 2 slightly shorter supernumerary setae on each side.

Elytra oval, elongated, and subparallel (EL/EW = 1.72 female), with the maximum width about in the centre, not emarginate yet broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and with a long, sparse and erect pubescence. Humeri marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation up to the height of the 7th pore of the umbilicate series; elytral apices separately rounded. Marginal groove wide and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 1st, 2nd, 3rd umbilicate series almost equidistant; 4th pore very far from the 3rd, placed at a distance greater than that between the 1st and the 3rd; 3rd pore slightly shifted onto the inner edge of the groove, 4th one aligned with the 1st and 2nd; 5th and 6th pore paired, the 6th one situated slightly before the apical third; 7th, 9th and 8th not equidistant from each other, with the 9th and 8th close to each other forming a "geminate" pair; 8th nearly aligned with the posterior discal seta and placed slightly before the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd placed, respectively, between the 3rd and 4th pore (slightly closer to the 3rd) and at the 7th umbilicate pore, while the 2nd is located between the 5th and 6th pore; the 3rd pore is more shifted towards the elytral suture than to the 1st and 2nd.

Male unknown.

Distribution and ecology. The only known specimen comes from M. Attairo (Rhodes Island), with no other identifying details. In the original description Schatzmayr (1936) gives no indication about its ecology.

Prioniomus vailatii Giachino, 2001

Locus typicus. Greece, nom. Viotía, O. Elikón, road Kiriáki-Elikónas, m 850.

Prioniomus vailatii Giachino 2001: 180.
Prioniomus vailatii Giachino: Lorenz 2005: 202.

Examined material (Figs. 68, 70-73). Holotypus female, "Grecia, nom. Viotía, O. Elikón, 7.VI.1994, strada Kiriáki-Elikónas, m 850, D. Vailati leg." (MCSNB).

Diagnosis and redescription. *P. vailatii* Giachino, 2001, is a species known on a single female specimen, and this prevents a certain position within the groups of species of the genus *Prioniomus*, although the shape of the pronotum and the elytral chaetotaxy seem to approach it to the group of *P. abnormis*. *P. vailatii* differs from the geographically closest species, *P. giachinoi* of O. Gióna, as well as in the neatly bigger size, the base of the pronotum

narrower, the elytra more elongated, and the more advanced position of the second discal seta toward the base.

L 2.34 mm female. Body (Fig. 68) elongated and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of isodiametric meshes, covered with a sparse, long and erect pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae long, frail, not moniliform, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly converging backwards. Mandibles elongated, simple, without dorsal crests; left premolar tooth missing, right premolar tooth small and placed far behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 71).

Pronotum transverse (PW/PL = 1.20 female), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with sides arcuate, sinuate and slightly crenellate before the basal angles. Base subrectilinear, only subtly emarginate laterally before the basal angles (Fig. 73). Anterior angles rounded, slightly prominent; the posterior ones slightly obtuse and marked. Disc faintly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, only slightly widened near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other three slightly shorter supernumerary setae on each side, with the first anterior seta distinctly shifted onto the disc near the anterior edge; basal setae inserted almost on the basal angles.

Elytra oval, very elongated and subparallel (EL/EW = 1.82 female), with the maximum width about in the centre, not emarginate yet broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and with a long, sparse and erect pubescence. Humeri marked, but rounded, post-humeral margin significantly denticulate, with an evident crenellation up to the height of the 9th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove wide and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 1st, 2nd, 3rd pore of the umbilicate series almost equidistant; the 4th pore very far from the 3rd, at the same distance that separates the 1st from the 3rd; all four pores of the humeral group approximately aligned with each other, 5th and 6th pore paired, the 6th pore situated slightly before the apical third; the 7th, 9th and 8th not equidistant from each other, with the 9th and 8th very close so to form a "geminate" pair; the 8th almost aligned with the posterior discal seta and situated slightly before the 9th. Discal pores three in number and not well aligned with each other: the 1st and 3rd one are placed, respectively, between the 3rd and 4th pore (slightly closer to the 4th) and at the level of the 7th umbilicate pore, while the 2nd is located roughly at the level of the 5th; the 3rd pore is more shifted towards the elytral suture than to the 1st and 2nd.

Male unknown.

DISTRIBUTION AND ECOLOGY. *P. vailatii* is currently known only from the type locality, situated in O. Elikón, along the road Kiriáki-Elikónas, at 850 m a.s.l.. In this site *P. vailatii* was collected under a deeply buried rock, on red clay soil, in a gully in the *Abies* forest. Repeated research conducted in the following years after the first finding, gave no longer the chance to collect this species.

Prioniomus antonellae n. sp.

LOCUS TYPICUS. Greece nom. Ahaïa, O. Erímanthos, above Kaléntzi, forest at m 1150.

EXAMINED MATERIAL (Figs. 74-76). Holotypus female, "Grecia nom. Ahaïa, O. Erímanthos, sopra Kaléntzi, foresta a m 1150, 1.VI.2005, Giachino & Vailati leg." (CGi). Paratypi: 2 females, "Grecia nom. Ahaïa, O. Erímanthos, sopra Kaléntzi, foresta a m 1150, 1.VI.2005, Giachino & Vailati leg." (CGi, CVa).

DIAGNOSIS. A *Prioniomus* of medium size (L 1.96 mm), known only on female specimens and therefore difficult to place with certainty in one

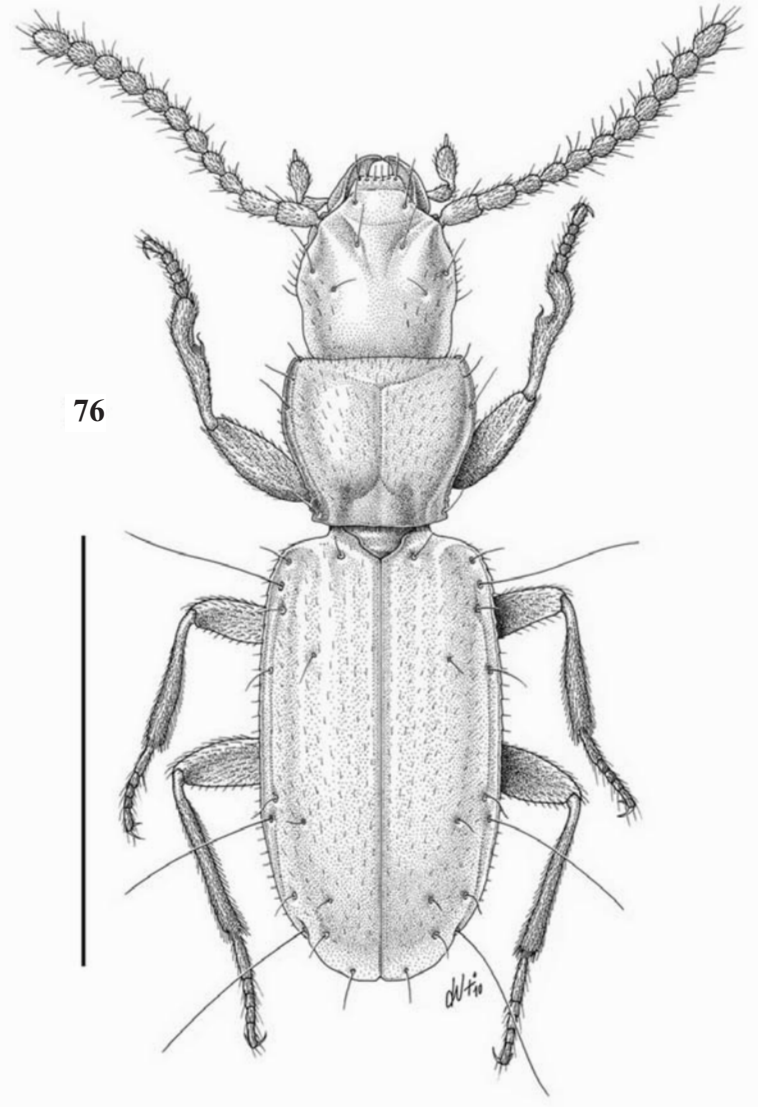


Figure 76. *Prioniomus antonellae* n. sp., habitus of the female (scale 1 mm).

of the species groups of the genus; although the elytral chaetotaxy seems to place it in the group of *P. peloponnesiacus*. *P. antonellae* n. sp differs from the taxonomically closest species, *P. peloponnesiacus* of O. Ménalon, besides in the bigger size, in the more transverse pronotum, the more elongated elytra, and the more rearward position of the second and third discal seta toward the apex.

Description. L 1.96-1.98 mm female. Body (Fig. 76) elongated and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse, long and erect pubescence.

Head robust, slightly hypertrophic, faintly narrower than the pronotum, anophthalmous. Antennae long, frail, moniliform, but with slightly elongated antennomeres, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, close together, on lines neatly converging backwards. Mandibles elongated, simple, without dorsal ridges, left premolar tooth absent, right premolar tooth small and placed behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.13 female), with the maximum width at the base of the anterior third, which is significantly narrower at the base, with curved sides, distinctly sinuate and crenellate before the basal angles. Base visibly emarginate laterally before the basal angles (Fig. 75). Anterior angles rounded, slightly prominent, the posterior ones almost right and marked. Disc faintly convex, with a long and sparse pubescence; median groove shallow. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the marginal groove, at the level of the anterior third, along with other two slightly shorter supernumerary setae on each side; basal setae inserted almost onto the posterior angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.85 female), with the maximum width at the apical third, slightly emarginate and broadly rounded externally in the preapical area. Disc convex, shiny integuments, with an evident microsculpture of an isodiametric mesh, and with a long, sparse and erect pubescence. Humeri well marked, but rounded; post-humeral margin significantly denticulate, with an evident crenellation almost up to the level of the 7th pore of the umbilicate series; elytral apices not separately rounded. Marginal groove very wide and evident almost up to the level of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type A; 1st, 2nd and 3rd pore equidistant; the 4th one far from the 3rd more than the distance between the 1st and the 3rd; the 1st, 2nd and 4th situated in the elytral groove, the 3rd slightly shifted towards the disc, onto the edge of the groove; the 5th and 6th pore paired and placed before the apical third; the 7th, 9th and 8th not equidistant from each other, with the 8th and 9th quite distant from each other, but forming, however, a "geminate" pair; the 8th aligned with the posterior discal seta and slightly shifted behind the 9th; the 7th significantly shifted onto the disc. Discal pores three in number and not well aligned with each other: the 1st and 3rd places respectively are well before the 4th pore cord and approximately at the level of the 7th one while the 2nd is located approximately at the level of the 6th umbilicate pore; 3rd pore much more shifted towards the elytral suture than to the 1st and 2nd.

Male unknown.

ETIMOLOGY. We are pleased to dedicate this new species to Antonella Vinai, life partner of one of the authors (D.V.) as a sign of gratitude for the infinite patience and continued support for our research travels in Greece.

DISTRIBUTION AND ECOLOGY. *P. antonellae* n. sp. is currently known only from the type locality situated in O. Erímanthos in the *Abies* forest above the village of Kaléntzi at 1,150 m a.s.l.. In this site *P. antonellae* n. sp. was collected under rocks buried in red clay in a grassy clearing near a forest road in syntopy with another interesting anilline described in this paper: *Caecoparvus sciakyi* n. sp.

Phyletic series of ***Winklerites*** (sensu Giachino, 1992)

The following genera belong to this phyletic series: *Winklerites* Jeannel, 1937, *Dicropterus* Ehlers, 1883, *Binaghites* Jeannel, 1937, and *Rhegmatobius* Jeannel, 1937; only one of them (*Winklerites*) is present in Greece.

Genus ***Winklerites*** Jeannel, 1937

TYPE SPECIES: *Microtyphlus paganettii* J. Müller, 1911.

Winklerites Jeannel, 1937: 282.
Winklerites Jeannel: Jeannel, 1963: 185.
Winklerites Jeannel: Coiffait, 1956: 77.
Winklerites Jeannel: Jeanne, 1973: 88.
Winklerites Jeannel: Casale et al., 1990: 550.
Winklerites Jeannel: Giachino, 2001: 175.
Winklerites Jeannel: Löbl & Smetana, 2003: 240.
Winklerites Jeannel: Lorenz, 2005: 205.

DIAGNOSIS AND REDESCRIPTION. A genus of Anillina of the phyletic lineage of *Winklerites* (sensu Giachino, 1992), characterized by species of medium size (L 1.60-2.37 mm), with pentamerous male protarsi, with the first two protarsomeres dilated.

Head robust, anophthalmous; antennae moderately long (exceeding the base of the pronotum when stretched backwards), frail, moniliform. Two supraorbital setae on each side,

close together and placed in lines neatly converging. Mandibles elongated, with no dorsal crests, right premolar tooth developed. Labium toothless. Maxillary palps with the penultimate article big, ovoidal, and the last one small, poorly differentiated.

Pronotum with curved sides, abruptly sinuate before the base, not crenellate before the basal angles. Base usually slightly truncated obliquely at the sides before the basal angles. Anterior marginal setae, one on each side, inserted inside the marginal groove; basal setae inserted before the posterior angles.

Elytra more or less oval, elongated, parallel-sided, and with the elytral apex reduced and deeply emarginate at the level of the 7th pore of the umbilicate series; post-humeral margin denticulate, with a thin crenellation. Disc without any traces of striae, umbilicate series of type B (sensu Jeannel, 1963), two discal setae.

Aedeagus with the median lobe of different shapes depending on the group of species, in some species regularly arcuate, in others remarkably bent in the middle area or near the base, and in others almost subrectilinear. Parameres as usually bearing 2 apical setae each.

Key to the Greek species of the genus *Winklerites*

1. Species of smaller size (L < 2.10 mm).....2
–. Species of bigger size (L ≥ 2.20 mm) 8

2. Second discal seta inserted before the 7th pore of the umbilicate series (Fig. 90). Aedeagus as in Figs. 94-95. L = 2.08 mm. Species of O. Vérmio .....***W. casalei*** n. sp.
–. Second setola discal seta inserted at the level of the 7th pore of the umbilicate series 3

3. Elytral disc bearing two evident semicircular furrows in the anterior third (Fig. 116). Aedeagus as in Figs. 119-120. L = 1.89 mm. Species of O. Piéria .....***W. imathiae*** n. sp.
–. Elytral disc without semicircular furrows in the anterior third (sometimes there is a perfectly circular fovea) 4

4. Head narrow; as wide as the base of the pronotum 5
–. Head wide; wider than the base of the pronotum.....6

5. Aedeagus as in Figs. 87-88. L = 1.78 mm. Species of O. Páïko.....***W. luisae*** n. sp.
–. Aedeagus as in Fig. 79. L = 1.66-2.01 mm Species of O. Falakró (= Boz Dag).....
.....***W. weiratheri*** (J. Müller, 1935)

6 (4). 7th, 8th and 9th pore of the umbilicate series equidistant.....7
–. 8th and 9th pore of the umbilicate series closer to each other than the 7th and 8th. Elytral disc bearing in the basal third an evident circular fovea (Fig. 111). Aedeagus as in Fig. 115. L = 1.70 mm. Species of O. Áskio .....***W. andreae*** n. sp.

7. 1st and 2nd pore of the umbilicate series closer to each other than the 2nd and 3rd. Aedeagus as in Fig. 82. L = 1.90-2.03 mm. Species of O. Vrontoús .....***W. lagrecai*** Casale, Giachino & M. Etonti, 1990
–. 2nd and 3rd pore of the umbilicate series closer to each other than the 1st and 2nd. L = 1.91 mm. Species in the neighborhood of Édessa .....***W. vailatii*** Giachino, 2001

8 (1). 4th pore of the umbilicate series less close to the 3rd (about 3 times the distance between the 2nd and the 3rd). Aedeagus as in Fig. 99. L = 2.33 mm. Species of O. Vítsi.....***W. zaballosi*** n. sp.
–. 4th pore of the umbilicate series less close to the 3rd (about 4 times the distance between the 2nd and the 3rd). L = 2.34 mm. Species of the surroundings of Gérakas (nom. Xánthi).....***W. thracicus*** n. sp.

Within the genus *Winklerites* one can distinguish, mainly based on the morphology of the median lobe of the aedeagus, three distinct groups of species:

- a group of *W. weiratheri* including the following species *W. weiratheri* (J. Müller, 1935), *W. lagrecai* Casale, Giachino & M. Etonti, 1990, *W. luisae* n. sp., *W. casalei* n. sp., *W. zaballosi* n. sp. and, probably, also *W. vailatii* Giachino, 2001 and *W. thracicus* n. sp.;
- a group of *W. andreae* including only *W. andreae* n. sp.;
- a group of *W. imathiae* including only *W. imathiae* n. sp..

«Group of *W. weiratheri*» (sensu Casale et al., 1990)

DIAGNOSIS. A group of *Winklerites* of medium-large size (L 1.63-2.37 mm), characterized by species with elytra elongated and subparallel-sided, having the elytral disc with no semicircular furrows and the median lobe of the aedeagus elongated, with its basal and distal parts clearly identifiable thanks to a sharp bending of median lobe, differently located from the centre towards the basal bulb.

Winklerites weiratheri (J. Müller, 1935)

LOCUS TYPICUS. Bos Dagh (= Falakro Oros)

Scotodipnus weiratheri J. Müller 1935: 176.
Winklerites weiratheri J. Müller: Jeannel, 1937: 286.
Winklerites weiratheri J. Müller: Jeannel, 1963: 187.
Winklerites weiratheri (J. Müller): Casale et al.,1990: 555.
Winklerites weiratheri (J. Müller): Löbl & Smetana, 2003: 240.
Winklerites weiratheri (J. Müller): Lorenz, 2005: 205.

EXAMINED MATERIAL (Figs. 77-80). 6 males, females, "Bos D.-Gbg. B. Drama, Nordost-Griechenld. Weirather, Innsbruck" (MHNG, CGi).

DIAGNOSIS AND REDESCRIPTION. *Winklerites weiratheri* n. sp. differs from *W. lagrecai* of O. Meníkio in the more stubby elytra with the sides less parallel, the head narrower, the median lobe of the aedeagus not bisinuate ventrally in the apical half, and the shape of the copulatory piece. It differs from *W. luisae* of O. Páïko in the elytra less stubby, the shape of the median lobe of the aedeagus not curved C-wise and of the copulatory piece. It differs from *W. casalei* n. sp. of O. Vérmio in the elytra stockier, the position of the discal setae (especially of the first one which is in a more posterior position toward the apex), the aedeagus differently arcuate, the basal part of the median lobe more elongated, and the shape of the copulatory piece. It differs from *W. zaballosi* n. sp. of O. Vitsi in the smaller size, the elytra stockier with the sides less parallel, the shape of the median lobe of the aedeagus curved differently, and the shape of the copulatory piece. It differs from *W. vailatii* Giachino, 2001, of the northern foothills of O. Vérmio, known on a single female specimen, in its smaller size and the elytra shorter and more stumpy. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi) in the smaller size and the position, closer, of the 2nd and 3rd pore of the umbilicate series.

L mm 1.66-2.01 (UL mm 2.03-2.54). Body (Fig. 77) long and narrow, depigmented, reddish testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and placed, on the right mandible, in a basal position, before the anterior margin of the labrum. Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.16 male, 1.19 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles. Anterior angles rounded, very poorly prominent; the posterior ones slightly obtuse and slightly sharp at the top. Disc faintly convex, with a short and sparse pubescence; median groove deep and evident. Marginal groove wide

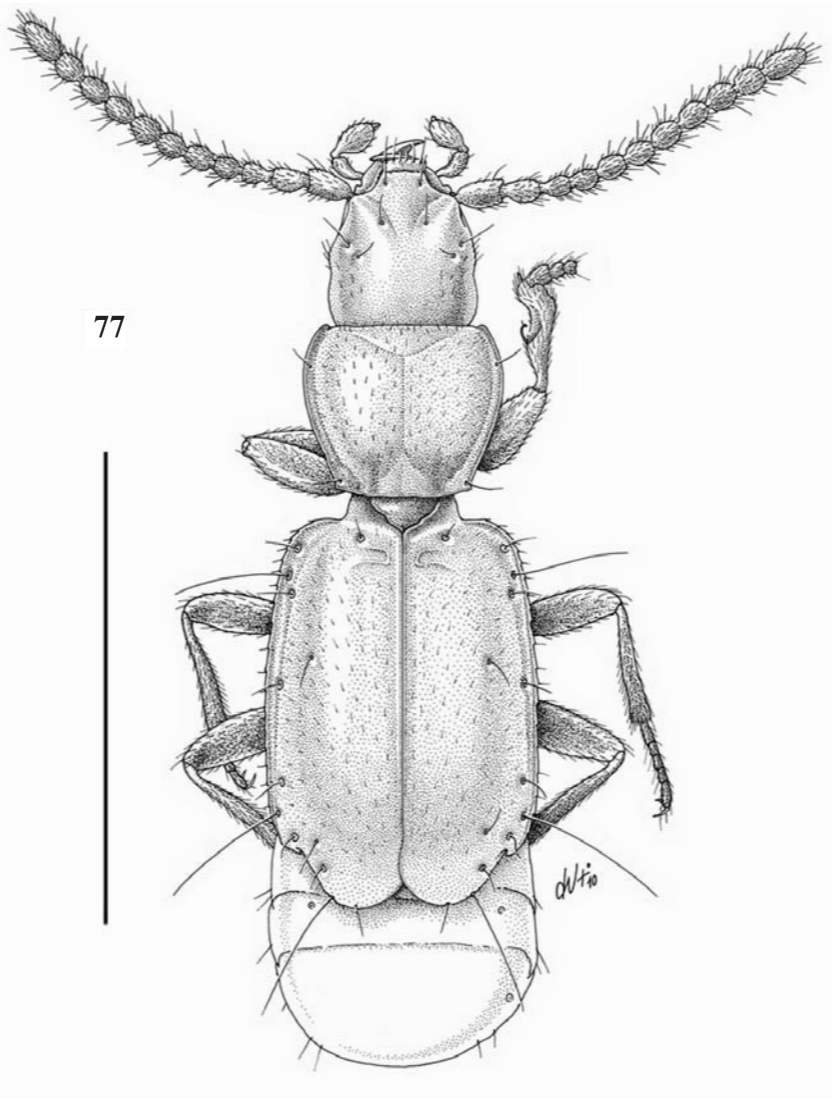


Figure 77. *Winklerites weiratheri*, habitus of the male (scale 1 mm).

and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, roughly at the base of the anterior fourth; basal setae slightly before the posterior angles.

Elytra ovoidal, slightly elongated and subparallel-sided (EL/EW = 1.33 male, 1.30 female), with the maximum width at the distal third, emarginate in the preapical area. Disc slightly convex, subflat; shiny integuments, with a distinct microsculpture of an isodiametric mesh. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine crenellation but distinct up to the height of the 4th umbilicate pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st, 4th pore decidedly farther and placed beyond the basal third of the elytron and beyond the anterior discal seta; 5th pore place slightly before the apical third of the elytron; 5th, 6th and 7th almost equidistant from each other; the 8th one shifted onto the disc and aligned with the posterior discal seta; the 7th, 8th and 9th not equidistant from each other (with a distance of

between the 7th and the 8th greater than the distance between the 8th and 9th). Two discal pores: the 1st one placed slightly before the 4th pore of the umbilicate series, while the 2nd one is located approximately at the level of the 7th.

Aedeagus (Fig. 79) relatively big; median lobe sharply bent in the basal third, twisted on the right side, with the ventral margin not bisinuate, and the apex enlarged, with the apical blade obliquely truncated, not bilobate, prolonged backwards ventrally in a strongly chitinized edge that reaches the middle of the median lobe. Endophallus provided with a big copulatory piece, well chitinized, C-shaped, and a poorly sclerified lamellar fanera, elongated, in a longitudinal position, inserted at the base of the lamella itself. Parameres unequal, long, provided with 2-3 apical setae each.

DISTRIBUTION AND ECOLOGY. *W. weiratheri* is currently known only on material collected by Leo Weirather himself in Bos Dagh (= O. Falakro) and mentioned as collected under deeply buried stones (Jeannel, 1937, 1963) without further and more detailed information. The examination of the L. Weirather's collection diaries, recently published (Giachino & Lana, 2005), it was possible to ascertain that the material collected on 6.VI.1931, comes from "Debelina, a locality situated SE of Volak at an altitude of 1,270 m a.s.l., on the left of the path that crosses the ravine SE of the spring".

Winklerites lagrecai Casale, Giachino & M. Etonti, 1990

LOCUS TYPICUS. N-E Greece, nóm. Drama, Micropolis, Oros Menikion m 1050.

Winklerites lagrecai Casale et al., 1990: 550.
Winklerites lagrecai Casale, Giachino & M. Etonti: Löbl & Smetana, 2003: 240.
Winklerites lagrecai Casale, Giachino & M. Etonti: Lorenz, 2005: 205.

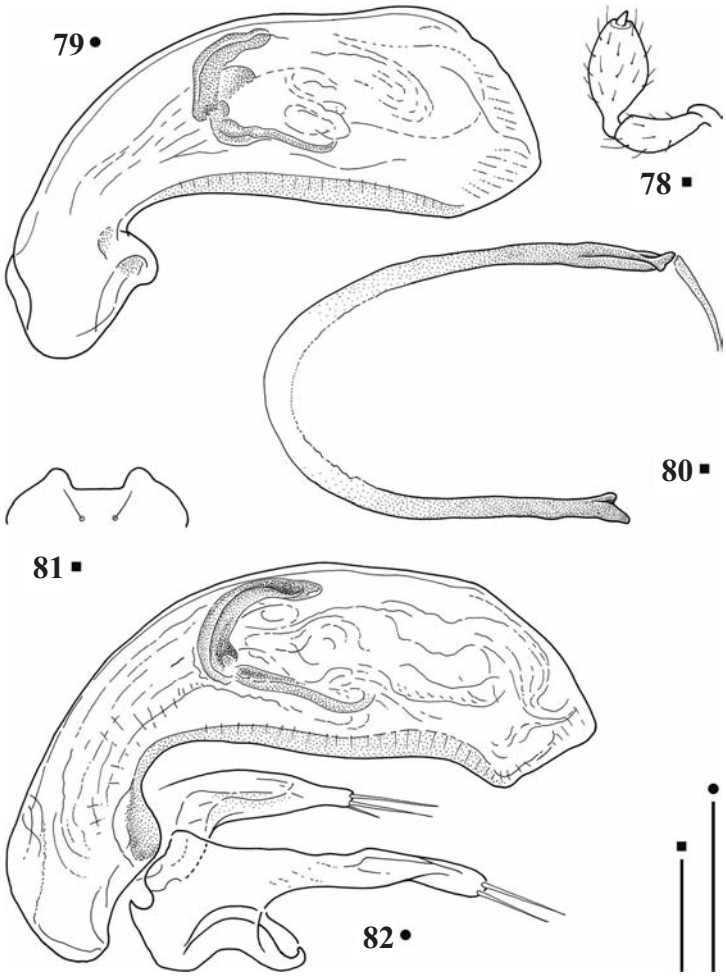
EXAMINED MATERIAL (Figs. 81-83). Paratypi: 1 male, 2 females, "N-E Grecia, nóm Drama, Micropolis, Oros Menikion, m 1050, 30.V.1989, M. Etonti leg." (CGi).

DIAGNOSIS AND REDESCRIPTION. *Winklerites lagrecai* n. sp. differs from *W. weiratheri* of O. Falakró in the more slender elytra with the parallel sides, the head broader, the median lobe of the aedeagus bisinuate ventrally in the apical half, and the shape of the copulatory piece. It differs from *W. luisae* of O. Páïko in the elytra more slender with parallel sides, the shape of the median lobe of the aedeagus not curved C-wise, and the copulatory piece. It differs from *W. casalei* n. sp. of O. Vérmio in the more slender elytra with parallel sides, the more rearward position of the first discal seta toward the apex, the aedeagus differently arcuate, the basal part of the median lobe more elongated, and the shape of the copulatory piece. It differs from *W. zaballosi* n. sp. of O. Vitsi in its smaller size, the shape of the median lobe of the aedeagus curved differently, and the shape of the copulatory piece. It differs from *W. vailatii* Giachino, 2001, of the northern foothills of the O. Vérmio, known on a single female specimen, in the less stocky and more elongated elytra. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi) in the smaller size and the position, closer together, of the 2nd and 3rd pore of the umbilicate series.

L 1.90-2.03 mm (UL 2.27-2.45 mm). Body long and narrow, depigmented, reddish-testaceous with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with a microsculpture almost totally gone, covered with a sparse and short pubescence (Fig. 83).

Head robust, broad, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and situated, on the right mandible, in a basal position, about at the height of the anterior margin of the labrum. Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.20 male, 1.30 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles.



Figures 78-82. *Winklerites* spp. 78: *Winklerites weiratheri*, maxillary palp; 79: idem, aedeagus in lateral view (from Casale et al., 1990, redrawn); 80: idem, invaginated segment; 81: *Winklerites lagrecai*, profile of the labium (from Casale et al. 1990, redrawn); 82: idem, aedeagus in lateral view (from Casale et al., 1990, redrawn., scale 0.1 mm).

Anterior angles rounded, very poorly prominent, the posterior ones slightly obtuse and poorly acuminate at the top. Disc faintly convex, with a short and sparse pubescence; median groove deep and evident. Marginal groove wide and flattened, only slightly enlarged at the base, anterior marginal setae inserted in front of the marginal groove, roughly at the base of the anterior fourth; basal setae slightly before the posterior angles.

Elytra ovoidal, very elongated and parallel-sided (EL/EW = 1.60 male, 1.55 female), with the maximum width at the centre, emarginate in the preapical area. Disc slightly convex, subflat; shiny integuments, with a poorly distinct microsculpture of an isodiametric mesh. Humeri marked, but rounded; post-humeral margin denticulate, with a very fine crenellation but distinct up to the height of the 4th umbilicate pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly shifted towards the disc and less close to the 2nd than the latter to the 1st, 4th pore decidedly farther and placed beyond the basal third of the elytron and beyond the anterior discal seta; the 5th pore placed slightly before the apical third of the elytron; the 5th, 6th and 7th almost equidistant from each other; the 8th shifted onto the disc and aligned with the posterior discal seta; the 7th, 8th and 9th almost equidistant from each other (with a distance between the 7th and the 8th slightly smaller than between the 8th and the

9th). Two discal pores: the 1st one placed slightly before the 4th pore of the umbilicate series, while the 2nd is located slightly before the 7th.

Aedeagus (Fig. 82) relatively big; median lobe abruptly bent in the basal third, slightly twisted on the right side, with the ventral margin bisinuate, and the apex enlarged, with the apical blade obliquely truncated, slightly bilobate, ventrally prolonged backwards in a strongly chitinized edge that reaches the middle of the median lobe. Endophallus provided with a big copulatory piece, well chitinized, C-shaped, and a poorly sclerified lamellar fanera, elongated, in a longitudinal position, inserted at the base of the lamella itself. Parameres unequal, long, provided with 2-3 apical setae each.

DISTRIBUTION AND ECOLOGY. *W. lagrecai* is currently known only from the type locality, located in the Oros Menikion, near Micropolis at 1,050-1,250 m a.s.l., where it was collected under deeply buried rocks in a beech forest surrounded by pastures (Casale et al., 1990).

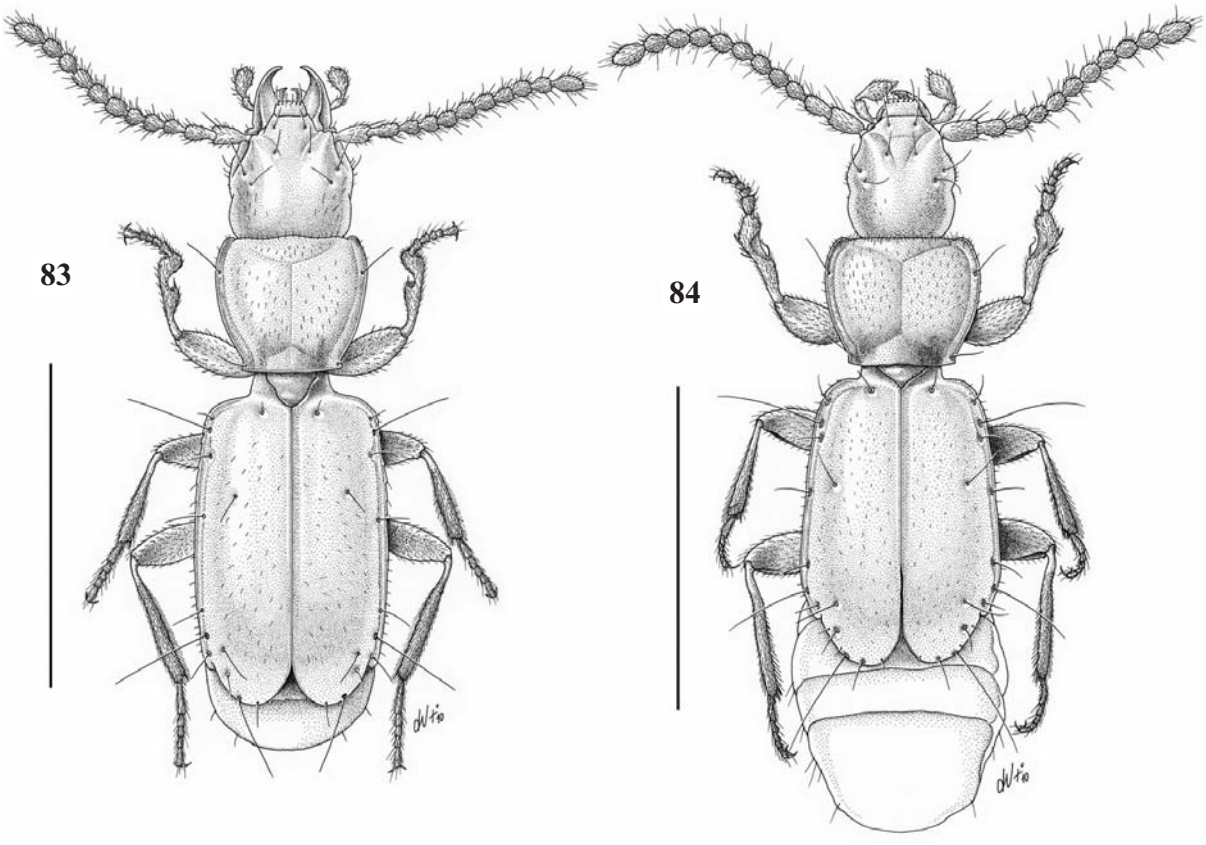
Winklerites luisae n. sp.

LOCUS TYPICUS. Greece nom. Kilkís, O. Páïko road to Livádia m 1100.

EXAMINED MATERIAL (Figs. 84-91). Holotypus male, "Grecia nom. Kilkís, O. Páïko str. per Livádia m 1100, 19.VI.2008, P.M. Giachino & D. Vailati leg." (CGi). Paratypi: 13 males, 6 females, "Grecia nom. Kilkís, O. Páïko str. per Livádia m 1100, 19.VI.2008, P.M. Giachino & D. Vailati leg."; 2 females, "Grecia nom. Kilkís, O. Páïko str. per Livádia m 1150, 16.VI.1993, P.M. Giachino & D. Vailati leg." (MRSN, MCSNB, CCa, CGi, CPa, CVa, CVi).

DIAGNOSIS. A *Winklerites* of 1.63-1.71 mm, belonging to the group of *W. weiratheri* (J. Müller, 1934) by the shape of the median lobe of the aedeagus.

Winklerites luisae n. sp. differs from *W. lagrecai* of O. Meníkio in the more stubby elytra



Figures 83. *Winklerites lagrecai*, habitus of the male (from Casale et al., 1990, redrawn, scale 1 mm).
Figures 84. *Winklerites luisae* n. sp., habitus of the male (scale 1 mm).

with the sides less parallel, the head narrower, the median lobe of the aedeagus curved C-wise, the apical blade prolonged posteriorly into a carina, and the copulatory piece ovoidal. It differs from *W. weiratheri* of O. Falakró in the more squat elytra, the shape of the median lobe of the aedeagus curved C-wise, and of the copulatory piece. It differs from *W. casalei* n. sp. of O. Vérmio in the stockier elytra, the position of the discal setae (especially the first one which is in a rearmost position toward the apex), the aedeagus differently arcuate, the basal part of the median lobe less elongated, and the shape of the copulatory piece. It differs from *W. zaballosi* n. sp. of O. Vitsi in the smaller size, the elytra stockier with the sides less parallel, the shape of the median lobe of the aedeagus curved differently, and the shape of the copulatory piece. It differs from *W. vailatii* Giachino, 2001, of the northern foothills of the O. Vérmio, known on a single female specimen, in the elytra shorter and stockier, and the more rearward position of the first discal seta toward the apex. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi) in the smaller size and the position, closer together, of the 2nd and 3rd pore of the umbilicate series.

Description. L 1.63-1.71 mm (UL 2.20-2.29 mm). Body (Fig. 84) long and narrow, depigmented, reddish-testaceous with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

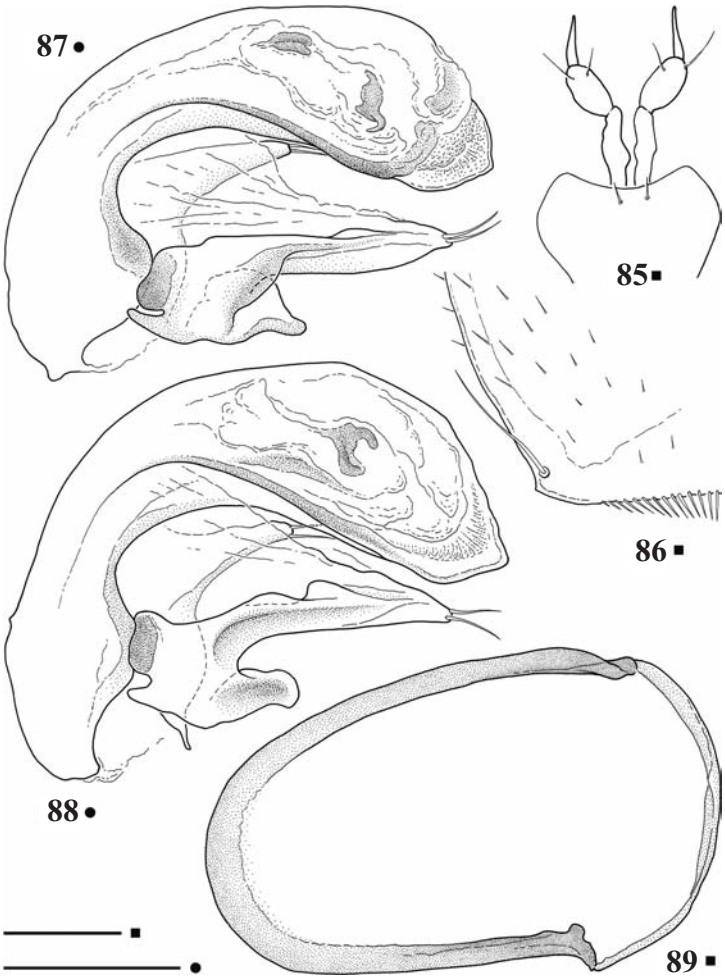
Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae robust, neatly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and situated, on the right mandible, in a basal position, before the anterior margin of the labrum. Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.22 male, 1.29 female), with the maximum width at the base of the anterior fourth, narrowed at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles (Fig. 86). Anterior angles rounded, poorly prominent; the posterior ones slightly obtuse but very sharp, almost denticulate, at the tip. Disc faintly convex, with a short and sparse pubescence; median groove deep and evident. Marginal groove wide and flattened, not restricted near the base, anterior marginal setae inserted inside the marginal groove, roughly at the base of the anterior fourth; basal setae well before the posterior angles.

Elytra ovoidal, poorly elongated and poorly parallel-sided (EL/EW = 1.42 male, 1.46 female), with the maximum width at the distal third, emarginate in the preapical area. Disc poorly convex, subflat; shiny integuments, with a distinct microsculpture of an isodiametric mesh. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine but distinct crenellation up to the height of the 1st discal pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st, 4th pore decidedly farther and placed beyond the basal third of the elytron and beyond the anterior discal seta; 5th pore placed slightly before the apical third of the elytron; 5th, 6th and 7th pore almost equidistant from each other, with the 6th and 7th slightly closer; the 8th one shifted onto the disc and aligned with the posterior discal seta; the 7th, 8th and 9th almost equidistant from each other (with a distance between the 7th and the 8th slightly greater than the distance between the 8th and the 9th). Two discal pores: the 1st one placed just before the 4th pore of the umbilicate series, while the 2nd one is located approximately at the level of the 7th.

Aedeagus (Figs. 87-88) relatively big; median lobe longly arcuate, twisted on the right side and ventral margin subrectilinear up to the apex, that is enlarged, with the apical blade obliquely truncated, slightly bilobate, prolonged backwards ventrally into a strongly chitinized edge that reaches the middle of the median lobe. Endophallus provided with a very small copulatory piece, well chitinized, ovoidal, and a



Figures 85-89. *Winklerites luisae* n. sp. 85: labium and labial palps; 86: basal angle of the pronotum; 87: aedeagus in lateral view; 88: idem of another specimen; 89: invaginated segment (scale 0.1 mm).

poorly sclerified lamellar fanera, elongated, in a longitudinal position, inserted at the base of the lamella itself. Parameres unequal, elongated, provided with two apical setae each.

ETIMOLOGY. We dedicate this new species with pleasure to our friend and former colleague at the Museum of Brescia, Luisa Olivetti, who has always been a supporter of our research campaigns in Greece.

DISTRIBUTION AND ECOLOGY. *Winklerites luisae* n. sp. is currently known from two sites in O. Páïko (nom. Kilkís), along the road to Livádia at altitudes between 1,100 and 1,500 m a.s.l. In these localities this species was collected under rocks buried in red clay on the bottom of dry gullies in beech wood.

Winklerites casalei n. sp.

LOCUS TYPICUS. Greece nom. Imathía, O.Vérmio road Séli-Véria m 1300.

EXAMINED MATERIAL (Figs. 90, 92-95). Holotypus male, "Grecia nom. Imathía, O.Vérmio str. Séli-Véria m 1300, 19.VI.2008, Giachino & Vailati leg." (CGi). PTT: 1 female, "Grecia nom. Imathía, O.Vérmio str. Séli-Véria m 1300, 4.VI.1993, Giachino & Vailati leg."; 3 males, 1 female, "Grecia nom. Imathía, O.Vérmio str. Séli-Véria m 1300, 19.VI.2008, Giachino & Vailati leg."; 1 male, "Grecia nom. Imathía, O.Vérmio str. Séli-Náoussa m 1100, 19.VI.2008, Giachino & Vailati leg." (MRSN, CCa, CGi, CVa).

Diagnosis. A *Winklerites* belonging to the group of *W. weiratheri* by the shape of the median lobe of the aedeagus.

W. casalei n. sp. differs from *W. lagrecai* of O. Meníkio in the stockier elytra, the longer antennae, the head slightly narrower, the more forward position of the anterior discal seta toward the base and more shifted towards the elytral edge, the ventral margin of the median lobe not bisinuate, the apical blade not prolonged posteriorly into a carina, the basal part of the median lobe more developed in length and provided with a big copulatory piece, elongated, with two well chitinized concave areas. It differs from *W. weiratheri* of O. Falakró in the shape of the median lobe and of the copulatory piece. It differs from *W. luisae* n. sp. of O. Páïko in the less stocky elytra, the position of the anterior discal seta (located at the base of the anterior fourth), the aedeagus bigger and differently arcuated, the basal part of the median lobe more elongated, and the shape of the copulatory piece big, elongated, with two well chitinized concave areas. It differs from *W. vailatii*, of the northern foothills of the O. Vérmio, known on a single female specimen, in the elytra shorter and stockier, and the position of the discal setae, both more rearwards. It differs from *W. zaballosi* n.sp. of O. Vitsi in the smaller size, the elytra stockier with the sides less parallel, the shape of the median lobe of the aedeagus curved differently, and the shape of the copulatory piece. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi) in the smaller size and the position, closer together, of the 2nd and 3rd pore of the umbilicate series.

Description. L 1.72-1.77 mm (UL 2.62-2.66 mm). Body (Fig. 90) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with a distinct microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and situated, on the right mandible, in a basal position before the anterior margin of the labrum (Fig. 92). Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.18 male, 1.20 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles (Fig. 93). Base truncate obliquely at the sides. Anterior angles very rounded, not prominent, the posterior ones obtuse and blunt, not denticulate at the top. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, not restricted near the base, anterior marginal setae inserted inside the marginal groove, slightly before the base of the anterior fourth; basal setae neatly before the posterior angles.

Elytra oval, moderately elongated and relatively parallel-sided (EL/EW = 1.50 male, 1.48 female), with the maximum width at the distal third, deeply emarginate in the preapical area. Disc poorly convex, subflat; shiny integuments, with a distinct microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine but distinct crenellation up to the height of the 1st discal pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the 7th discal pore.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly shifted towards the disc and slightly closer to the 2nd one than the latter to the 1st, 4th pore decidedly farther and placed well beyond the basal third of the elytron and far beyond the anterior discal seta; 5th pore placed at the apical third of the elytron; 5th, 6th and 7th almost equidistant from each other, the 7th shifted onto the disc, the 8th shifted onto the disc and almost aligned with the posterior discal seta; the 7th, 8th and 9th about equidistant from each other (with a distance between the 7th and the 8th slightly greater than the distance between the 8th and the 9th). Two discal pores: the first one is located on the basal fourth while the 2nd is located beyond the apical fourth and before the 7th umbilicate pore.

Aedeagus (Figs. 94-95) relatively big; median lobe very and sharply curved almost in the middle, twisted on the right side, in lateral view with the apical part enlarged drop-shaped; the apical blade obliquely truncate, apically beak-shaped. Endophallus provided with a big copulatory piece, elongated, with two well chitinized concave areas, and a poorly sclerified lamellar fanera, elongated, in a longitudinal position, inserted at the base of the lamella itself. Parameres unequal, elongated, provided with two apical setae each.

ETIMOLOGY. We dedicate this new species to our friend Achille Casale, the first "modern" explorer of the Oros Vérmio, to whom we owe the finding in 1983 (Casale, 1983) of some other interesting Coleoptera Carabidae and Cholevidae of the subterranean fauna of this mountainous massif.

DISTRIBUTION AND ECOLOGY. *W. casalei* n. sp. is currently known only from two sites located, in the O. Vérmio, at altitudes between 1,100 and 1,300 m a.s.l. along the road that rises from Náoussa to Séli and then descends to Véria. In these sites, the new species was collected under rocks deeply buried in red clay on limestone, in the dry bed of gullies in a beech forest.

Winklerites zaballosi n. sp.

LOCUS TYPICUS. Greece, nom. Kastoriá, O. Vitsi, above A. Andónios m 1320, N 40°39'04".3 E 21°20'17".4.

EXAMINED MATERIAL (Figs. 96-100). Holotypus male, "Grecia, nom. Kastoriá, O. Vitsi, sopra A. Andónios m 1320, N40°39'04".3 E21°20'17".4, 18.VI.2007/17.VI.2008, Giachino & Vailati leg." (CGi). PTT: 1 female, "Grecia, nom. Kastoriá, O. Vitsi, sopra A. Andónios m 1320, N40°39'04". 3, E21°20'17".4, 18.VI.2007/ 17.VI.2008, Giachino & Vailati leg."; 1 female, "Grecia, nom. Flórina, O. Vitsi, sopra Drosopigi m 1340, N40°38'50".1 E21°24'26".7, 19.VI. 2007/17.VI.2008, Giachino & Vailati leg." (CGi, CVa).

DIAGNOSIS. A *Winklerites* belonging to the group of *W. weiratheri* by the shape of the median lobe of the aedeagus.

W. zaballosi n.sp. differs from *W. lagrecai* of O. Meníkio in the bigger size, the head narrower, the ventral margin of the median lobe not bisinuate, the apical blade not prolonged posteriorly into a carina, the basal part of the median lobe more developed in length, and the shape of the copulatory piece. It differs from *W. weiratheri* of O. Falakró in the bigger size, the elytra less stocky, the shape of the median lobe of the and copulatory piece. It differs from *W. luisae* n. sp. of O. Paiko in the bigger size, the elytra less stocky, the aedeagus differently arcuated, the basal part of the median lobe less elongated, and the shape of the copulatory piece. It differs from *W. casalei* n. sp. of O. Vérmio in the bigger size, the elytra less stocky with parallel sides, the shape of the median lobe of the aedeagus curved differently, and the shape of the copulatory piece. It differs from *W. vailatii*, of the northern foothills of the O. Vérmio, known on a single female specimen, in the bigger size, the elytra more elongated and less stocky. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi) in the pronotum less transverse, the elytra with more parallel sides, and the position slightly more rearward toward the apex of the discal pores.

DESCRIPTION. L 2.31-2.36 mm (UL 2.77-2.82 mm). Body (Fig. 96) elongated and narrow, depigmented, reddish-testaceous with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with a distinct microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and situated, on the right mandible, in a basal position before the anterior margin of the labrum. Labrum provided with 6 anterior marginal setae.

Pronotum very transverse (PW/PL = 1.10 male, 1.14 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides slightly and regularly arcuate, abruptly

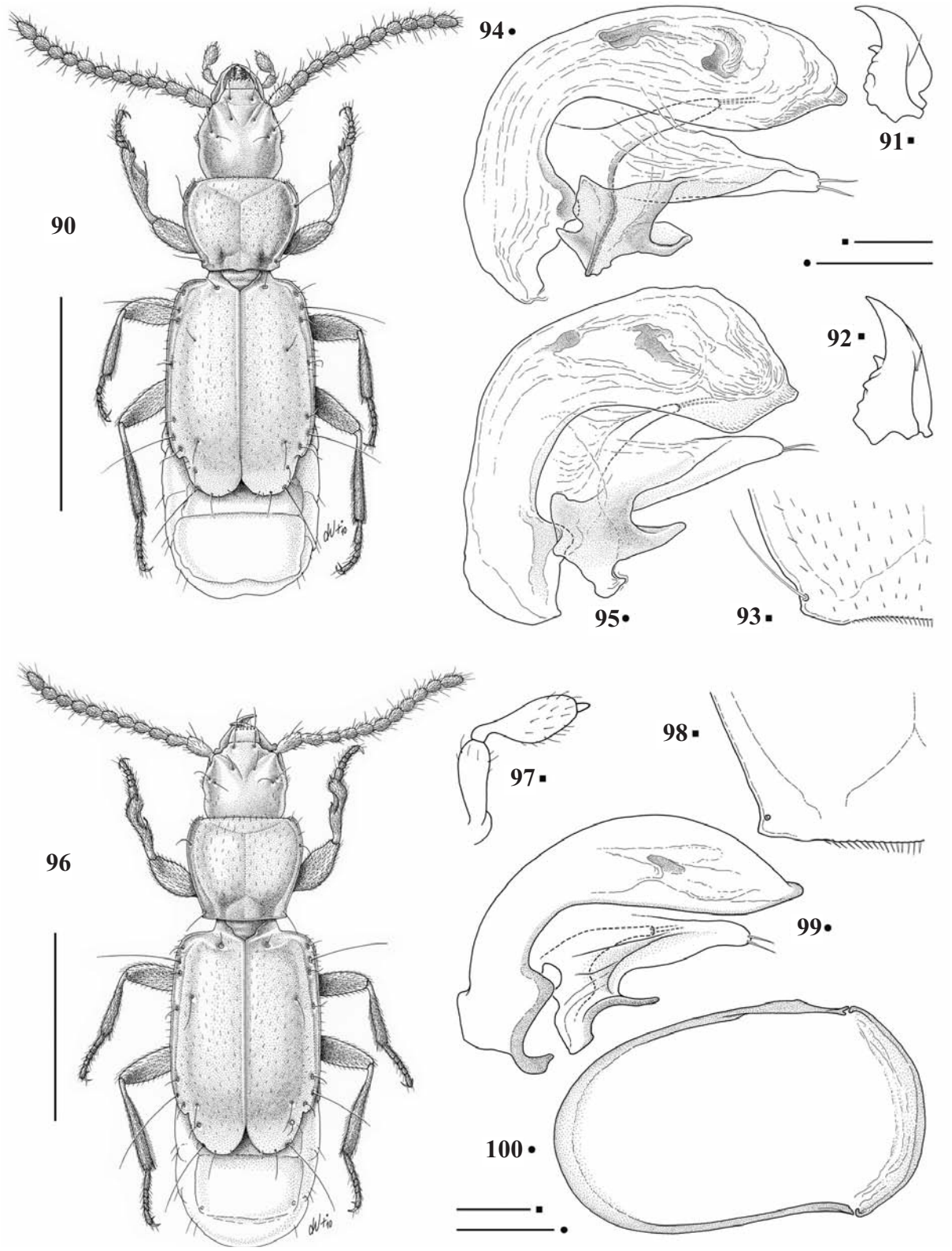


Figure 90. *Winklerites casalei* n. sp., habitus of the male (scale 1 mm).
Figures 91-95. *Winklerites* spp. 91: *W. luisae* n. sp., right mandible; 92: *W. casalei* n. sp., right mandible; 93: idem, basal angle of the pronotum; 94: idem, aedeagus in lateral view; 95: idem of another specimen (scale 0.1 mm).
Figure 96. *Winklerites zaballosi* n. sp., habitus of the male (scale 1 mm).
Figures 97-100. *Winklerites zaballosi* n. sp. 97: maxillary palp; 98: basal angle of the pronotum; 99: aedeagus in lateral view; 100: invaginated segment (scale 0.1 mm).

and briefly sinuate before the base, not denticulate neither emarginate before the basal angles (Fig. 98). Base slightly truncate obliquely at the sides. Anterior angles very rounded, poorly prominent, the posterior ones obtuse and blunt, not denticulate at the top. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the marginal groove, almost at the base of the anterior fourth; basal setae neatly before the posterior angles.

Elytra oval, elongated and decidedly parallel-sided (EL/EW = 1.53 male, 1.55 female), with the maximum width at a half, deeply emarginate in the preapical zone. Disc poorly convex, subflat; shiny integuments, with a distinct microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marcked but rounded, post-humeral margin denticulate, with a very thin but distinct crenellation up to about the level of 1st discal pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the level of the 7th discal pore.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, 4th pore decidedly farther and inserted at the edge of the basal third of the elytron and well beyond the anterior discal seta; 3rd pore slightly shifted towards the disc; 5th pore placed at the beginning of the apical third of the elytron; 5th, 6th and 7th almost equidistant from each other, the 7th shifted onto the disc, the 8th shifted onto the disc and almost aligned with the posterior discal seta; the 7th, 8th and 9th almost equidistant from each other (with a distance between the 7th and the 8th slightly greater than the distance between the 8th and the 9th). Two discal pores: the first one is placed at the posterior limit of the basal fourth while the 2nd is located at the level of the 7th umbilicate pore.

Aedeagus (Fig. 99) relatively big; median lobe sharply curved in the basal third, twisted on the right side, in lateral view with the apex slightly enlarged drop-shaped; apical blade not truncate obliquely, apically rounded beak-shaped. Endophallus provided with a small copulatory piece, ovoidal elongated. Parameres unequal, elongated, provided with two apical setae each.

ETIMOLOGY. We dedicate this new species with pleasure to our colleague Juan Perez Zaballos of Madrid, a specialist of Carabidae Anillina, as a token of esteem and friendship.

DISTRIBUTION AND ECOLOGY. *W. zaballosi* n. sp. is currently known only from two sites, both located in O. Vitsi (nom. Kastoriá) above A. Andónios at 1,320 m s.l.m. and above Drosopigi at 1,340 m s.l.m. The two sites, located, respectively, on the S and NNE slope of the mountain, are both characterized by the presence of *Fagus* tree cover on a schist substratum. The first site is located on the slope of a forest road that runs along the left side of the valley oriented in an E-W direction and is characterized by the presence of red clay and gravel of a hazel colour, and the second is located in a groove in the beech forest, where, under a thick layer of black humus there is again red clay and hazel gravel as in the previous site. In both sites, which is extremely rare and certainly accidental for the Anillina, *W. zaballosi* n.sp. was collected in traps baited with cheese and placed in the Superficial Subterranean Environment.

Winklerites vailatii Giachino, 2001

LOCUS TYPICUS. Greece, nom. Péla, Édessa, road Kato Granganico-Ag. Foteini m 1050.

Winklerites vailatii Giachino, 2001: 175.
Winklerites vailatii: Lorenz, 2005: 205.

EXAMINED MATERIAL (Figs. 101-104). Holotypus female, "Grecia, nom. Péla, Édessa, str. Kato Granganico-Ag. Foteini m 1050, 15.VI.1993 D.Vailati leg." (MCSNB).

DIAGNOSIS AND REDESCRIPTION. *Winklerites vailatii* differs from *W. weiratheri* of O. Falakró in the bigger size, the elytra more slender with humeri less marked. It differs from *W. lagrecai* of O. Menikion in the elytra less slender and with the sides less parallel, and the head narrower. It differs from *W. luisae* n. of O. Páïko in the bigger size and the elytra more slender with parallel sides. It differs from *W. casalei* n. sp. of O. Vérmio in its smaller size, the elytra more slender, and the more rearward position of the discal setae toward the apex. It differs from *W.*

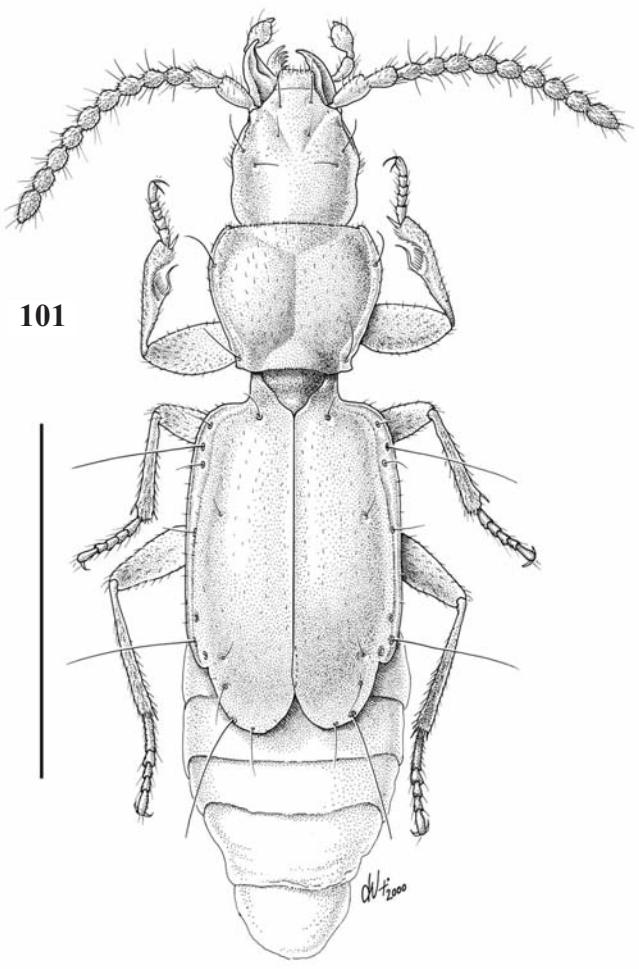


Figure 101. *Winklerites vailatii*, habitus of the female (scale 1 mm).

zaballosi n.sp. of O. Vitsi in the smaller size, and the elytra less slender and parallel-sided. It differs from *W. thracicus* n. sp. of Gerakas (Xanthi), known only on a single female specimen, in the smaller size, and the position, closer together, of the 2nd and 3rd pore of the umbilicate series.

L 1.91 mm (UL mm 2.55). Body (Fig. 101) long and narrow, depigmented, reddish-testaceous with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture, covered with a sparse and short pubescence.

Head robust, wide, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges, premolar tooth developed and situated, on the right mandible, in a basal position before the anterior margin of the labrum (Fig. 103). Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.17 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base; not denticulate neither emarginate before the basal angles (Fig. 104). Anterior angles rounded, poorly prominent; the posterior ones slightly obtuse but sharp and slightly projecting outwards. Disc faintly convex, with a short and sparse pubescence; median groove deep and evident. Marginal groove wide and flattened, only slightly enlarged at the base, anterior marginal setae inserted inside the marginal groove, roughly at the level of the base of the anterior fourth; basal setae well before the posterior angles.

Elytra oval, very elongated and parallel-sided (EL/EW = 1.52 female), with the maximum width at the centre, emarginate in the preapical area. Disc poorly convex, subflat; shiny integuments, with the microsculpture poorly distinct of an isodiametric mesh. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine crenellation but distinct up to the height of the 3rd umbilicate pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly shifted onto the disc and closer to the 2nd one than the latter to the 1st, 4th pore decidedly farther and inserted beyond the basal third of the elytron and beyond the anterior discal seta; 5th pore placed slightly before the apical third of the elytron; 5th, 6th and 7th, almost equidistant from each other; the 8th shifted onto the disc and aligned with the posterior discal seta; 7th, 8th and 9th almost equidistant from each other. Two discal pores: the 1st one placed before the 4th pore of the umbilicate series (at a distance equal to 1/3 of the distance between the 3rd and 4th umbilicate pore), while the 2nd is situated approximately at the level of the 7th.

Male unknown.

DISTRIBUTION AND ECOLOGY. *W. vailatii* is currently known only from the type locality, a beech forest at 1,050 m a.s.l. along the road that leads from Kato Granganico to Agios Foteini, on the northern foothills of the O. Vérmio (nom. Péla). In this site *W. vailatii* was collected under rocks deeply buried in red clay on the bottom of a dry gully.

Winklerites thracicus n. sp.

LOCUS TYPICUS. Greece, nom. Xanthi, Gerakas, m 400-550.

EXAMINED MATERIAL (Figs. 2, 105-110). Holotypus female, "Grecia, nom. Xanthi, Gerakas, m 400-550, 5.VI.1993, M. Etonti leg." (CEt).

DIAGNOSIS. A *Winklerites* belonging to the group of *W. weiratheri* for the general body shape and the absence of semi-circular furrows on the elytral disc.

W. thracicus n. sp. differs from all known species of the group of *W. weiratheri*, excluding only *W. zaballosi* n.sp., for the much bigger size. It differs from *W. zaballosi* n.sp. of O. Vitsi in the more transverse pronotum with sides more curved anteriorly and the less parallel-sided elytra.

DESCRIPTION OF THE HOLOTYPUS FEMALE. L 2.37 mm (UL 2.93 mm). Body (Fig. 110) long and narrow, depigmented, reddish testaceous with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with a distinct microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head (Fig. 2) robust but narrower than the pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal ridges; premolar tooth developed and situated, on the right mandible, in a basal position, at the level of the anterior margin of the labrum (Fig. 107). Labrum provided with 6 anterior marginal setae.

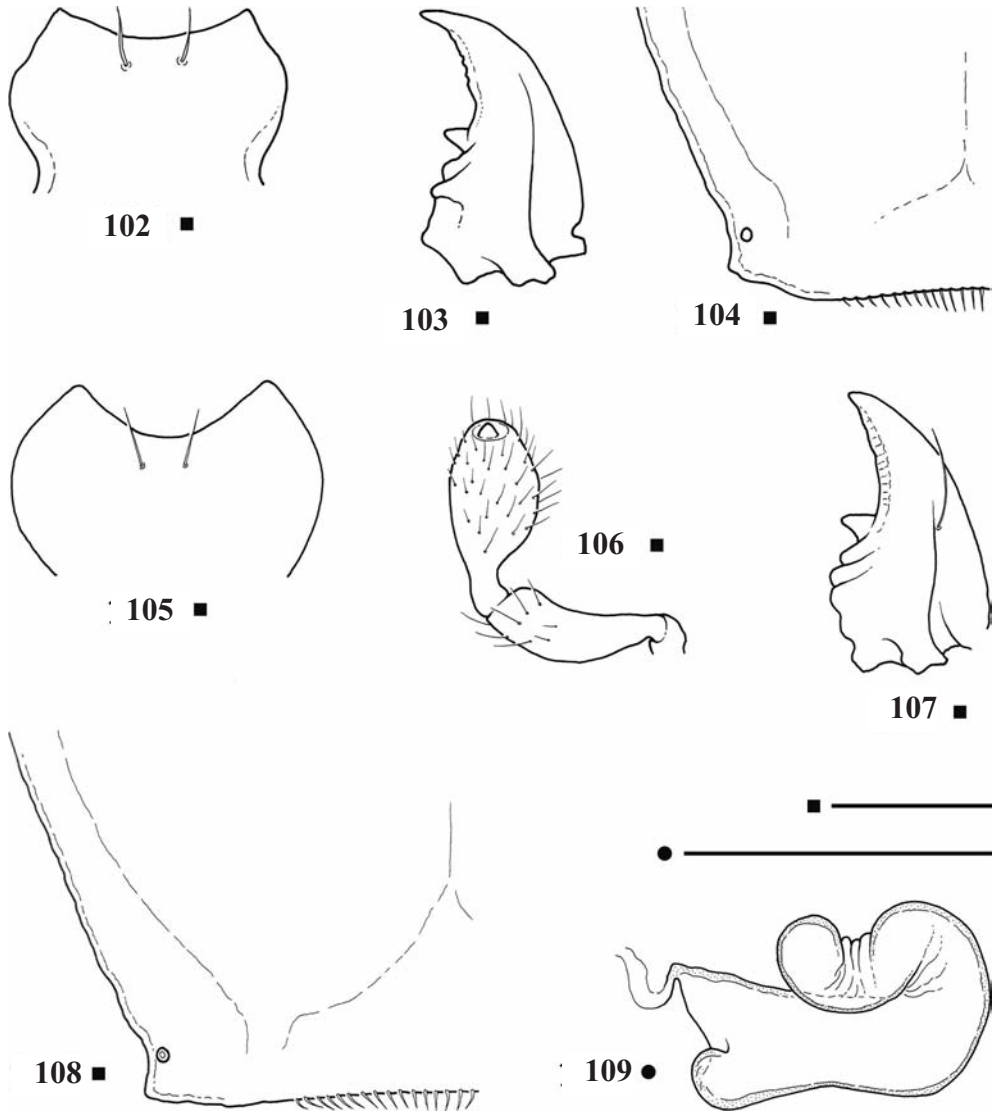
Pronotum transverse (PW/PL = 1.22 female), with the maximum width at the base of the anterior third, narrow at the base, with sides remarkably and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles (Fig . 108). Base slightly truncate obliquely at the sides. Anterior angles very rounded, poorly prominent; the posterior ones obtuse and rounded, not denticulate at the top. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, widened near the base; anterior marginal setae inserted inside the marginal groove, almost at the base of the anterior fourth; basal setae well before the posterior angles.

Elytra oval, elongated and slightly parallel-sided (EL/EW = 1.46 female), with the maximum width at a half, deeply emarginate in the preapical zone. Disc poorly convex, subflat; shiny integuments, with a distinct microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked but rounded; post-humeral margin denticulate, with a very fine but distinct crenellation roughly up to the level of the 5th umbilicate pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the level of the 7th discal pore.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, the 4th pore decidedly farther and inserted beyond the basal third of the elytron and well beyond the anterior discal seta; 3rd pore slightly shifted toward the disc; the 5th pore placed at the beginning of the apical third of the elytron; 5th, 6th and 7th almost equidistant from each other; the 7th shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta; 7th, 8th and 9th almost equidistant from each other (with the distance between the 7th and the 8th slightly greater than the distance between the 8th and 9th). Two discal pores: the first one is placed beyond the posterior limit of the basal fourth, while the 2nd one is located approximately at the level of the 7th umbilicate pore.

Male unknown.

Spermatheca (Fig. 109) saccular, poorly sclerified, with a proximal part of a bigger diameter and a distal part with an annuliform preapical area.



Figures 102-109. *Winklerites* spp. 102: *W. vailatii*, profile of the labium; 103: idem, right mandible; 104: idem, basal angle of the pronotum; 105: *W. thracicus* n. sp., profil of the labium; 106: idem, maxillary palp; 107: idem, right mandible; 108: idem, basal angle of the pronotum; 109: idem, spermatheca (scale 0.1 mm).

ETIMOLOGY. From Thrace, a region of Greece where the type locality is situated.

DISTRIBUTION AND ECOLOGY. *W. thracicus* n. sp. is currently known only from the type locality, situated near the town of Gerakas (nom. Xanthi) at an altitude between 400 and 550 m a.s.l., where it was collected under a rock deeply buried in a forest of oaks.

«Group of *W. andreae*»

DIAGNOSIS. A group of medium-sized *Winklerites* (L 1.65-1.70 mm), characterized by species with stocky elytra; the elytral disc with no semicircular furrows but with two evident circular foveae in the basal third and the median lobe of the aedeagus short and subrectilinear with the basal and distal part not well identified due to the lack of a neat flexion of the median lobe.

Winklerites andreae n. sp.

LOCUS TYPICUS. Greece, nom. Kozáni, O.Áskio N slope m 1125.

EXAMINED MATERIAL (Figs. 111-115). Holotypus male, "Grecia, nom. Kozáni, O. Áskio vers. N m 1125, 16.VI.2006, Giachino & Vailati leg." (CGi). Paratypi: 2 females, "Grecia, nom. Kozáni, O.Áskio vers. N m 1250, 16.VI.2006, Giachino & Vailati leg." (CGi, CVa).

DIAGNOSIS. A *Winklerites* belonging to the group of *W. andreae* for the shape of the median lobe of the aedeagus. It differs from all the other known species of the genus in the shape of the median lobe of the aedeagus and the presence of two evident circular foveae in the basal third of the elytral disc, while it differs in the much smaller size from *W. vailatii*, of the northern foothills of the O. Vérmio, and from *W. thracicus* n. sp. of Gerakas (Xanthi), both known on single female specimens.

DESCRIPTION. L 1.65-1.70 mm (UL 2.17-2.25 mm). Body (Fig. 111) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but not hypertrophic, narrower than pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, neatly exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles short, simple, without dorsal crests, premolar tooth developed and situated, on the right mandible, in a basal position before the anterior margin of the labrum (Fig. 113). Labrum provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.18 male, 1.22 female), with the maximum width at the base of the anterior third, narrow at the base, with sides longly and regularly arcuate, abruptly and briefly sinuate before the base, not denticulate neither emarginate before the basal angles (Fig. 114). Anterior angles rounded, not prominent; the posterior ones acute and acuminate, almost denticulate, and protruding laterally at the top. Disc faintly convex, with a short and sparse pubescence; median groove deep and evident. Marginal groove wide and flattened, not restricted near the base; anterior marginal setae inserted inside the marginal groove, roughly at the level of the base of the anterior fourth; basal setae before the posterior angles.

Elytra ovoidal, elongated, subparallel (EL/EW = 1.44 male, 1.47 female), with the maximum width at the basal third, deeply emarginate in the preapical area. Disc poorly convex, subflat; bearing in the basal third two evident circular foveae probably with a sensorial function; integument shiny, with a distinct microsculpture of an isodiametric mesh. Humeri poorly marked, rounded; post-humeral margin denticulate, with very fine but distinct crenellation approximately up to the height of the 1st discal pore; elytral apices separately and broadly rounded. Marginal groove wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant from each other, 4th pore decidedly farther and placed beyond the limit of the basal third of the elytron and beyond the anterior discal seta; 5th pore placed slightly before the apical third of the elytron; 5th and 6th pore slightly farther from each other than the 6th from the 7th; the 8th shifted onto the disc and almost aligned with the posterior discal seta; 7th, 8th and 9th not equidistant from each other, with the 8th and the 9th decidedly closer. Two discal pores: the first one is located just before the 4th umbilicate pore, while the 2nd one is located approximately at the level of the 7th.

Aedeagus (Fig. 115) relatively big; median lobe very poorly arcuate, almost subrectilinear, without an evident basal bending; with the ventral margin curved up to the apex that is stocky, with the apical blade not obliquely truncate but, in lateral view, subrounded. Endophallus provided with a big copulatory piece, saddle-shaped, well chitinized, and a poorly sclerified lamellar fanera, elongated, in a

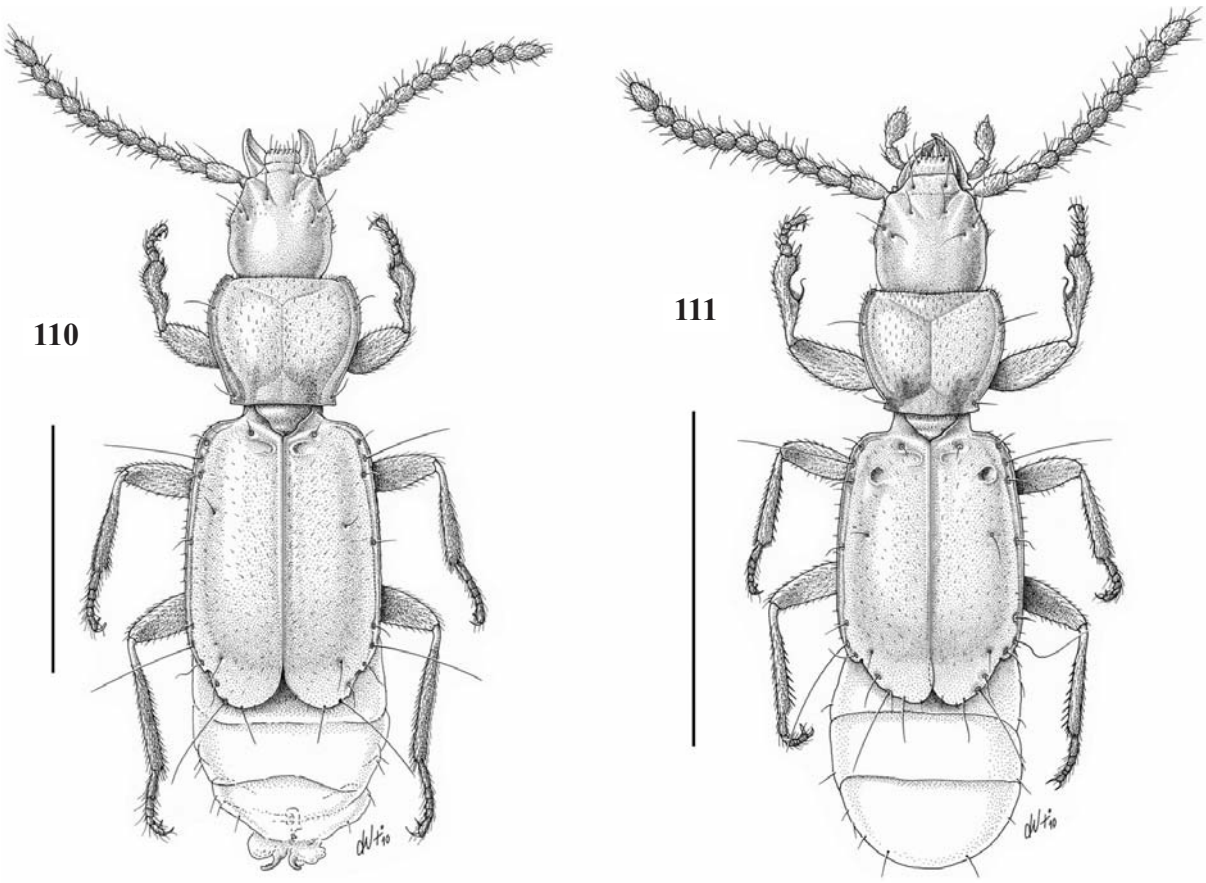


Figure 110. *Winklerites thracicus* n. sp., habitus of the female (scale 1 mm).
Figure 111. *Winklerites andreae* n. sp., habitus of the male (scale 1 mm).

longitudinal position, inserted at the base of the lamella itself. Parameres unequal, elongated, provided with two apical setae each.

ETIMOLOGY. We are pleased to dedicate this new species to Andrea, one of the authors' son (DV).

DISTRIBUTION AND ECOLOGY. *W. andreae* n. sp. is currently known only from two sites, both on the northern side of the O. Áskio (nom. Kozáni), respectively at 1,125 and 1,250 m a.s.l. In these sites, *W. andreae* n. sp. was collected under rocks buried in red clay on a calcareous substrate, in dry gullies in a beech wood (Fig. 242).

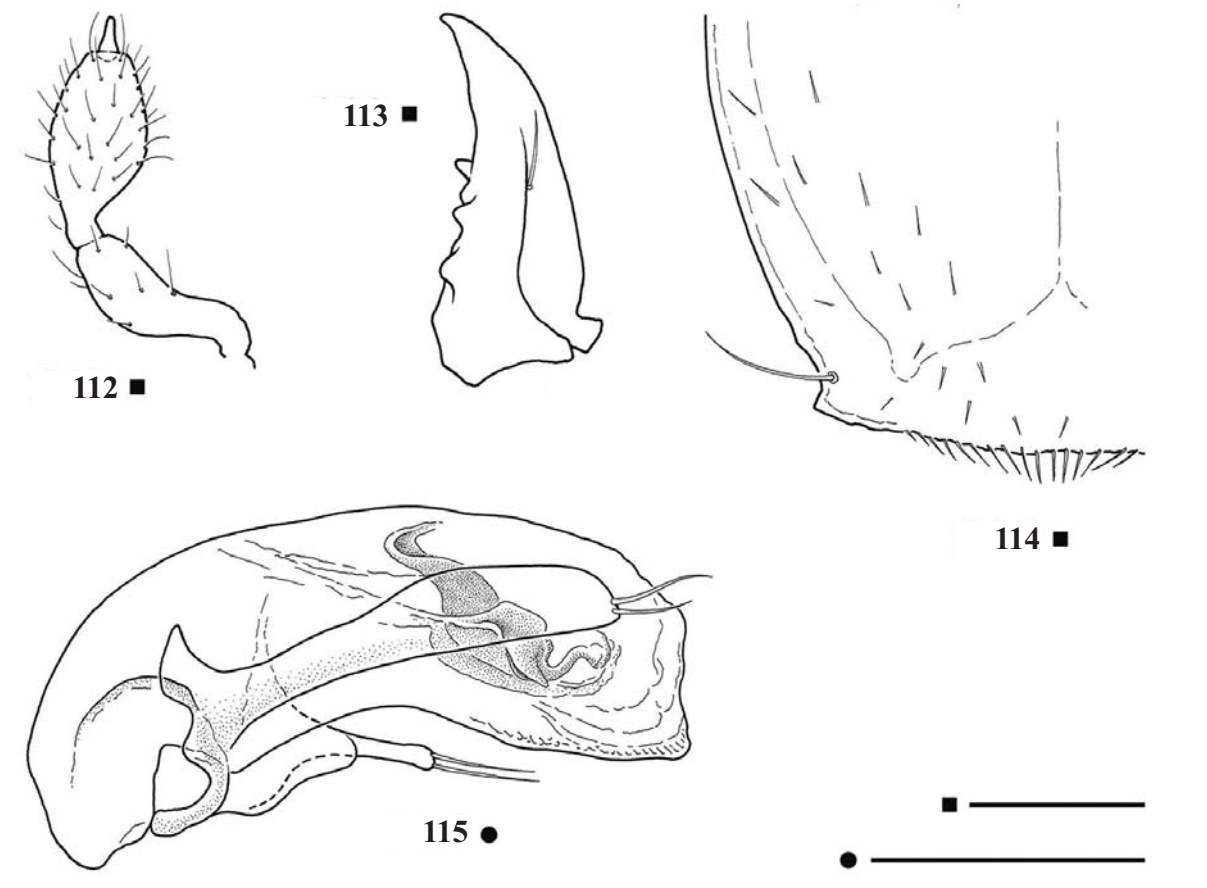
«Group of *W. imathiae*»

DIAGNOSIS. A group of medium-sized *Winklerites* (L 1.60-1.65 mm), characterized by species with elytra relatively elongated but not particularly parallel-sided, the elytral disc provided with two evident semi-circular furrows in the basal fifth, and the median lobe of the aedeagus regularly curved, with a small basal bulb and the apex curved ventrally.

Winklerites imathiae n. sp.

LOCUS TYPICUS. Greece nom. Imathia, O. Piéria, N slope, m 1160, mountain pass between Elatohori and Rizomata towards Seloma.

EXAMINED MATERIAL (Figs. 7**,** 116-121). Holotypus male, "Grecia nom. Imathia, O. Piéria vers. N m 1160, colle fra Elatohori e Rizomata verso Seloma, 12.VI.2006, Giachino & Vailati leg." (CGi). PTT: 2 males, "Grecia nom. Imathia, O. Piéria vers. N m 1160, colle fra Elatohori e Rizomata verso Seloma, 12.VI.2006, Giachino & Vailati leg."; 2 males and 7 females, "Grecia nom.



Figures 112-115. *Winklerites andreae* n. sp. 112: maxillary palp; 113: right mandible; 114: basal angle of the pronotum; 115: aedeagus in lateral view (scale 0.1 mm).

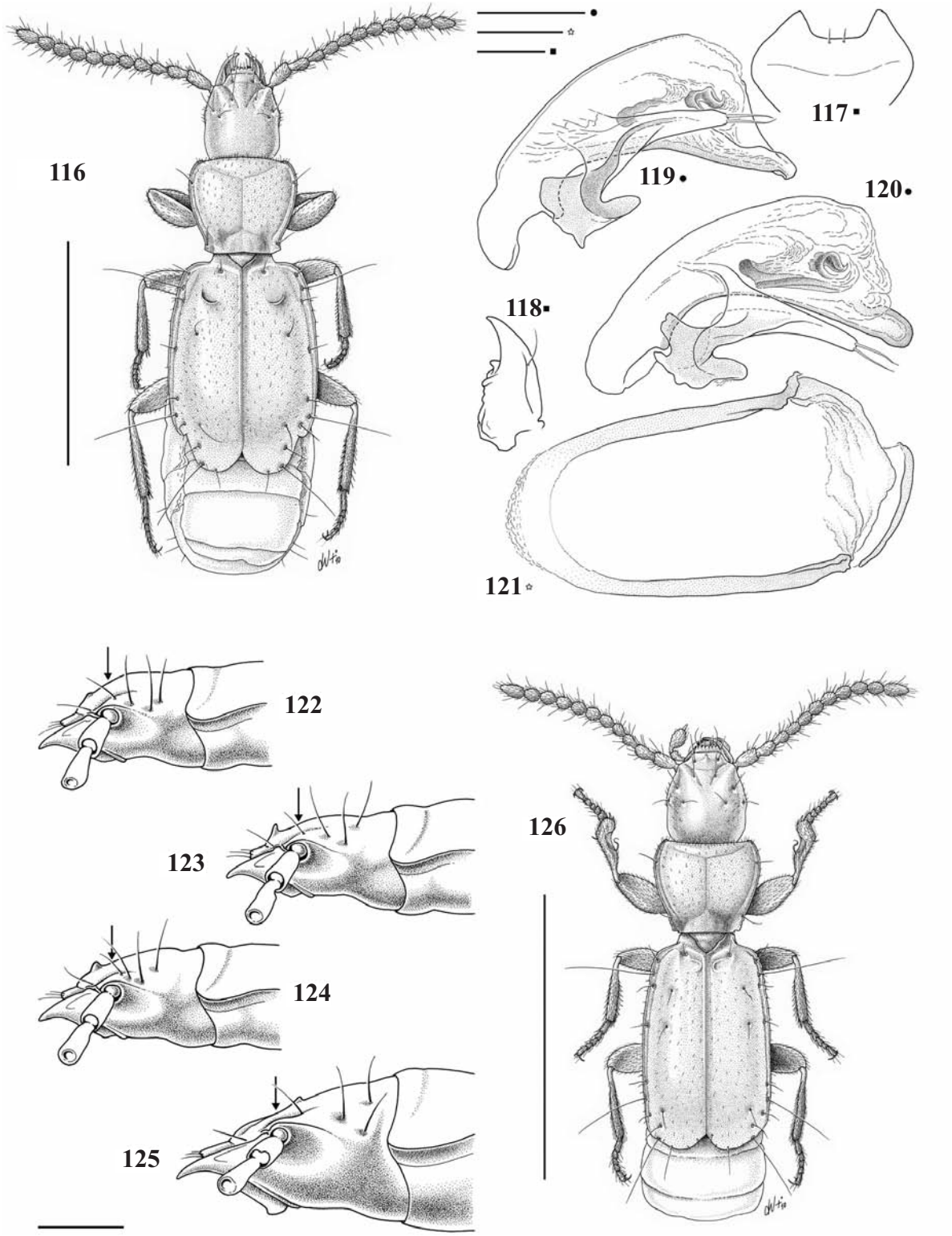
Imathia, Oros Piéria vers. N m 890, colle fra Elatohori e Rizomata a 1 km da Seloma, 10.VI.1992, Giachino & Vailati leg."; 2 males and 1 female, "Grecia nom. Imathia, Oros Piéria ver. N m 890, colle fra Elatohori e Rizomata a 1 km da Seloma, 12.VI.2006, Giachino & Vailati leg."; 1 male and 1 female, "Grecia nom. Imathia, Oros Piéria ver. N m 890, colle fra Elatohori e Rizomata a 1 km da Seloma, 15.VI.1991, Giachino & Vailati leg." (MRSN, MCSNB, CGi, CPa, CVa).

DIAGNOSIS. A *Winklerites* belonging to the group of *W. imathiae* for the shape of the median lobe of the aedeagus. It differs from all the other known species of the genus in the shape of the median lobe of the aedeagus and the presence of two evident semi-circular furrows on the elytral disc.

DESCRIPTION. L 1.60-1.65 mm (UL 2.00-2.07 mm). Body (Fig. 116) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous. Antennae robust, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed, tricuspidate (Fig. 118) and placed at the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.15 male, 1.19 female), with the maximum width at the base of the anterior third, narrow at the base,



Figures 116. *Winklerites imathiae* n. sp., habitus of the male (scale 1 mm).
Figures 117-121. *Winklerites imathiae* n. sp. 117: profile of the labium; 118: right mandible; 119: aedeagus in lateral view; 120: idem of another specimen; 121: invaginated segment (scale 0.1 mm).
Figures 122-125. *Caecoparvus* et *Iason* spp. 122: *Caecoparvus achaiae* n. sp. with just hinted horn on the epistome; 123: *C. daccordii* n. sp. with a well-developed and sharp horn on the epistome; 124: *C. karavae* n. sp. with a horn developed but stocky on the epistome; 125: *Iason argonauta* n. sp. with a hint of a horn on its frons. The arrows indicate the suture points between the epistome and frons, not always clearly visible (scale 0.1 mm).
Figures 126. *Caecoparvus muelleri,* habitus of the male (scale 1 mm).

with sides regularly arcuate, abruptly and briefly sinuate before the base; not denticulate neither emarginate before the basal angles (Fig. 7). Base slightly truncate obliquely at the sides. Anterior angles very rounded, very poorly prominent; the posterior ones acute and marked, not denticulate at the top. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted before the posterior angles.

Elytra oval, relatively elongated and subparallel (EL/EW = 1.38 male, 1.35 female), with the maximum width almost at the beginning of the distal third, deeply emarginate in the preapical area. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. In the basal area, before the discal seta, there is, on each elytron, an evident semi-circular furrow with a probable sensorial function. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine but distinct crenellation almost up to the level of the 5th umbilicate pore; elytral apices separately and broadly rounded. Marginal groove very wide and evident up to the height of the apical emargination.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the first, 4th pore decidedly farther and placed well beyond the limit of the basal third of the elytron and much beyond the anterior discal seta; 5th pore placed just before the beginning of the apical third of the elytron and slightly shifted onto the disc; 5th and 6th farther from each other than the 6th from the 7th; 7th significantly shifted onto the disc; 8th shifted onto the disc and almost aligned with the posterior discal seta; 7th, 8th and 9th almost equidistant from each other (with a distance between the 7th and the 8th slightly greater than the distance between the 8th and the 9th). Two discal pores aligned: the first one is on the limit of the basal third, while the 2nd is located at the level of the 7th umbilicate pore.

Aedeagus (Figs. 119-120) relatively big; median lobe poorly curved, not twisted on the right side, with the ventral margin slightly curved up to the apex which appears thickened, with the apical blade rounded, bisinuate and extended ventrally and backwards into a strongly chitinized edge that reaches almost the half of the median lobe. Basal bulb narrowed and poorly developed. Endophallus provided with a big copulatory piece, complex and well chitinized, spoon-shaped topped anteriorly by a saddle-shaped structure. Parameres unequal, elongated, provided with two apical setae each.

ETIMOLOGY. From Imathia, the name of the Greek "nomos" where the type locality is situated.

DISTRIBUTION AND ECOLOGY. *W. imathiae* n. sp. is currently known from two sites located a few kilometres far from each other, along the road between Elatohori and Seloma, on the O. Piéria (nom. Imathia). The two sites, located both on the northern slope, in a beech forest and on a calcareous substrate, are located, respectively, at 890 and 1,160 m a.s.l.. In both sites *W. imathiae* n. sp. was collected under rocks buried in red clay, on the bottom of a dry gully. At the site at the altitude of 890 m, *W. imathiae* n. sp. was collected in syntopy with two other interesting subterranean Carabidae: *Duvalius antonellae* Casale, Giachino, Vailati & Vigna Taglianti, 1996, and *Reicheadella imathiae* Casale, Giachino, Jalžić & Vailati, 1998.

Phyletic series of ***Caecoparvus*** (sensu novo)

This phyletic series includes, as we consider it, the genera: *Caecoparvus* Jeannel, 1937, *Iason* nov. gen. and *Parvocaecus* Coiffait, 1956, all present in Greece.

Genus ***Caecoparvus*** Jeannel, 1937

TYPE SPECIES. *Scotodipnus muelleri* Ganglbauer, 1900.

Caecoparvus Jeannel, 1937: 285.
Caecoparvus Jeannel: Coiffait, 1956: 77.
Caecoparvus Jeannel: Jeannel, 1963: 97.
Caecoparvus Jeannel: Jeanne, 1973: 88.
Caecoparvus Jeannel: Löbl & Smetana, 2003: 239.
Caecoparvus Jeannel: Lorenz, 2005: 203.

DIAGNOSIS AND REDESCRIPTION. A genus of Anillina of the phyletic lineage of *Caecoparvus*

(sensu novo), characterized by species of small to medium size (L 1.10-1.92 mm), with head bearing in some species a distinct frontal prominence, with pentamerous male protarsi and the first two protarsomeres dilated.

Head robust, anophthalmous; antennae moderately long (exceeding the base of the pronotum when stretched backwards), frail, moniliform. Epistome bearing, in some species, an evident median protuberance, sometimes well-developed and horn-shaped, other times only hinted, appreciated in lateral view. Cephalic chaetotaxy composed of two supraorbital setae on each side, close together and placed in lines neatly converging and of an ocular seta. Mandibles elongated, with no dorsal crests, right premolar tooth developed. Labium provided with a tooth. Maxillary palps with the penultimate article big, ovoidal, and the last one small, poorly differentiated.

Pronotum with curved sides, not or slightly sinuate before the base and crenellate before the basal angles. Base emarginate on the sides before the basal angles. Anterior marginal setae, one on each side, inserted inside the marginal groove; basal setae inserted much forward, at the beginning of the crenellation.

Elytra more or less oval, elongated, poorly parallel-sided, with the elytral apex reduced but not emarginate at the level of the 7th pore of the umbilicate series; post-humeral margin denticulate, with a thin crenellation, of a limited extension. Disc without any traces of striae, umbilicate series of type B (sensu Jeannel, 1963), three discal setae.

Aedeagus with the median lobe of different shapes depending on the species group, but always elongated, poorly curved and flexed near the base. Endophallus usually without a real sclerified copulatory piece (present only in *C. arcadicus*). Parameres usually provided with two apical setae each.

Key to the species of the genus *Caecoparvus*

1. Species of central Greece 2
–. Species of the Peloponnese 9

2. Species of bigger size (L = 1.42-1.92 mm) 3
–. Species of smaller size (L = 1.12-1.53 mm) 5

3. Epistome without the median horn-shaped protuberance. Aedeagus as in Fig. 196. L = 1.42-1.63 mm. Species of O. Óthris.....***C. marchesii*** n. sp.
–. Epistome bearing a well-developed horn-shaped protuberance (Figs. 123-124). Species of bigger size 4

4. Head narrow, as wide as base of the pronotum. Epistome bearing a well developed horn, slender and pointed (Fig. 123). Aedeagus as in Fig. 180-181. Smaller species (L = 1.65-1.74 mm) of the O. Oxià. .....***C. daccordii*** n. sp.
–. Head wide, wider than the base of the pronotum. Epistome with a well developed horn, but stocky, wide at the base and not pointed (Fig. 124). Aedeagus as in Fig. 203. Larger species (L = 1.71-1.92 mm) of the O. Karáva .....***C. karavae*** n. sp.

5 (2). Species of smaller size: L = 1.12-1.24 mm 6
–. Species of bigger size: L = 1.24-1.53 mm.....7

6. Pronotum more transverse (PW/PL = 1.30-1.32). Epistome bearing a median protuberance, appreciable in lateral view. Aedeagus as in Figs. 166-167. L = 1.12-1.24 mm. Species of the O. Kallídromo .....***C. leonidae*** n. sp.
–. Pronotum less transverse (PW/PL = 1.23). Epistome bearing a hint of a median protuberance, poorly appreciated in lateral view. Aedeagus as in Fig. 163. L = 1.15-1.23 mm. Specie dell'O. Parnassós ....***C. parnassicus*** (Breit, 1923)

7 (5). Epistome without the median protuberance. Third discal seta inserted at the level of the 7th pore of the umbilicate series (Fig. 183). Aedeagus as in Fig. 187. L = 1.24-1.40 mm. Species of the O. Vardoússia.....***C. berrutii*** n. sp.

–. Epistome with or without the median protuberance. Third discal seta inserted before the 7th pore of the umbilicate series 8
8. Epistome with the protuberance just hinted, but noticeable in lateral view. Aedeagus as in Figs. 189-190. L = 1.30-1.38 mm. Species of the O. Oxià.....***C. lompei*** n. sp.
–. Epistome without the median protuberance. Aedeagus as in Fig. 174. L = 1.50-1.53 mm. Species of the O. Iti .....***C. hercules*** n. sp.

9 (1). Second discal seta inserted before the 4th pore of the umbilicate series (Fig. 153). Aedeagus as in Figs. 156-157. L = 1.43-1.45 mm. Species of the O. Killíni .....***C. pavesii*** n. sp.
–. Second discal seta inserted at the level of the 4th pore of the umbilicate series.....10

10. Third discal seta inserted before the 7th pore of the umbilicate series (Fig. 136 and 146).....11
–. Third discal seta inserted at the level of the 7th pore of the umbilicate series.....12

11. Aedeagus as in Fig. 139. L = 1.26-1.33 mm. Species of the O. Aroania (= Chelmos) ....***C. meschniggi*** (Winkler, 1936)
–. Aedeagus as in Figs. 143-144. L = 1.10-1.30 mm. Species of the O. Erímanthos...***C. sciakyi*** n. sp.

12 (10). Epistome with median protuberance just hinted, but noticeable in lateral view. Elytra shorter (of EL/PL <2.20). Aedeagus as in Figs. 150-151. L = 1.19-1.25 mm. Species of the O. Panahaïkó .....***C. achaiae*** n. sp.
–. Epistome with or without the median horn-shaped protuberance. Elytra more elongated (EL/PL > 2.20) 13

13. Epistome bearing a well developed horn, slender and pointed. Aedeagus as in Fig. 131. L = 1.31-1.43 mm. Species of the O. Taigetos.....***C. muelleri*** (Ganglbauer, 1900)
–. Epistome without any protuberance. Aedeagus as in Fig. 134. L = 1.30-1.37 mm. Species of the O. Ménalon .....***C. arcadicus*** (J. Müller, 1935)

Within the genus *Caecoparvus* it is possible to distinguish two distinct groups of species, mainly based on the morphology of the median lobe of the aedeagus:

- a group of *Caecoparvus muelleri* including: *C. muelleri* (Ganglbauer, 1900), *C. arcadicus* (J. Müller, 1935), *C. meschniggi* (Winkler, 1936), *C. sciakyi* n. sp., *C. achaiae* n. sp., *C. pavesii* n. sp., *C. parnassicus* (Breit, 1923) and *C. leonidae* n. sp.
- a group of *Caecoparvus hercules* including: *C. hercules* n. sp., *C. daccordii* n. sp., *C. berrutii* n. sp., *C. lompei* n. sp., *C. marchesii* n. sp. and *C. karavae* n. sp.

«Group of *C. muelleri*»

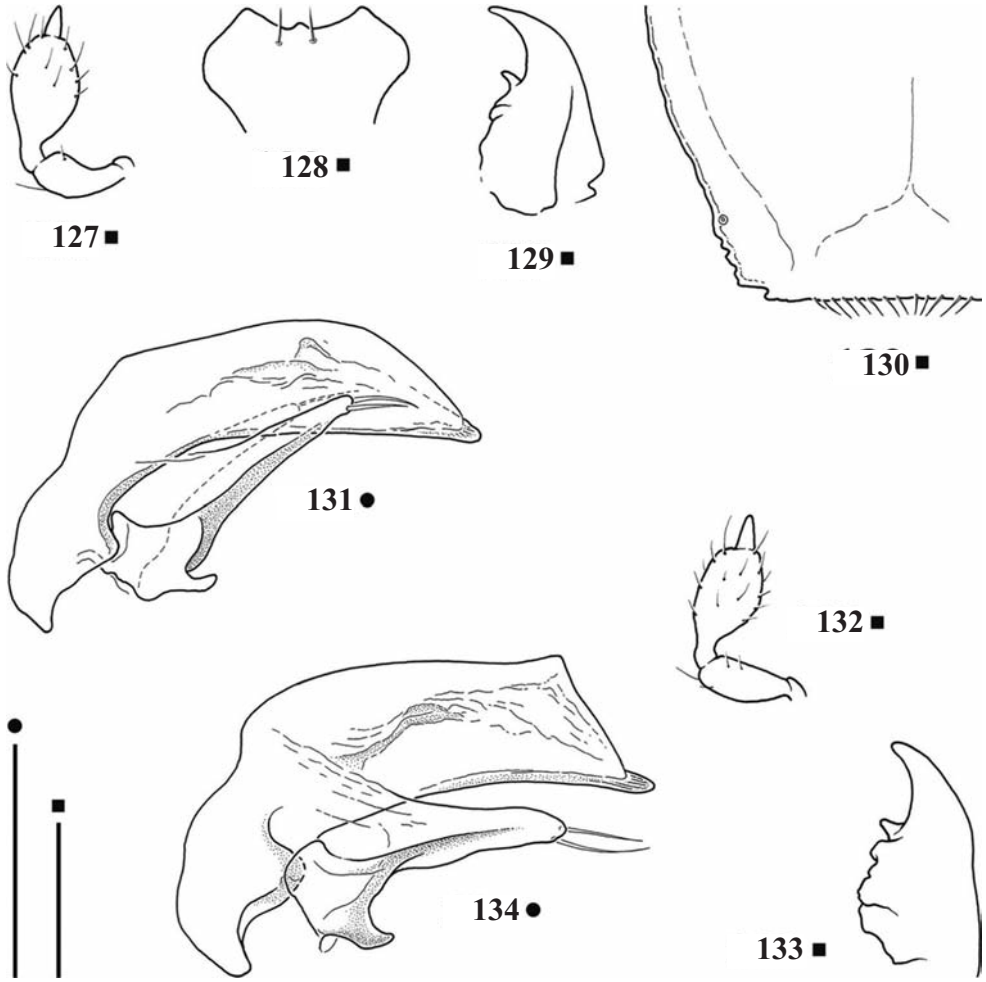
Diagnosis. A group of small to medium sized *Caecoparvus* (L 1.10-1.45 mm), characterized by species with a small aedeagus, with the median lobe short, stocky, having the ventral edge longly and regularly arcuate and the apical blade, in lateral view, usually short and stocky.

Caecoparvus muelleri (Ganglbauer, 1900)

Locus typicus. Taigetos.

Scotodipnus muelleri Ganglbauer, 1900: 168.
Winklerites (*Caecoparvus*) *muelleri* Ganglbauer: Jeannel, 1937: 286.
Caecoparvus muelleri Ganglbauer: Jeannel, 1963: 99.
Caecoparvus muelleri (Ganglbauer): Löbl & Smetana, 2003: 239.
Caecoparvus muelleri (Ganglbauer): Lorenz, 2005: 203.

Examined material (Figs. 126-131). 5 males, 3 females, “Grecia, Peloponneso, M. Taygetos, vers. E, 1800 m, 18.V.1989, R. Sciaky leg. » (CGi, CSc, CVa); 7 males, 3 females, “Grecia, nom. Lakonía, O. Taigetos, Prof. Elías m 1940, 2.VI.2005, Giachino & Vailati leg. » (CGi, CVa); 1 male, 2 females, “Grecia, Peloponneso, M. Taygetos m 2000 14.VI.1979 A. Casale leg.” (CCa).



Figures 127-134. *Caecoparvus* spp. 127: *C. muelleri*, maxillary palp; 128: idem, profil of the labium; 129: idem, right mandible; 130: idem, basal angle of the pronotum; 131: idem, aedeagus in lateral view; 132: *C. arcadicus*, maxillary palp; 133: idem, right mandible; 134: idem, aedeagus in lateral view (scale 0.1 mm).

Diagnosis and redescription. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. parnassicus* of O. Parnassós, from *C. pavesii* n. sp. of O. Ziria, from *C. sciakyi* n. sp. of O. Erímanthos, and *C. arcadicus* of O. Ménalon in the median lobe of the aedeagus bottle-necked in the prebulbar part. It differs from *C. leonidae* n. sp. of O. Kallidromo in the aedeagus bigger and less curved. It differs from *C. meschniggi* of O. Aroánia in the apical blade of the median lobe, stockier in lateral view, and the more rearward position of the 1st discal seta toward the apex. It differs from *C. achaiae* n. sp. of O. Panahaïkó in the apex of the median lobe of the aedeagus less slender, with the apical blade less evident.

L 1.31-1.43 mm (UL 1.57-1.68 mm). Body (Fig. 126) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, decidedly narrower than the pronotum, anophthalmous, having on the epistome a evident horn, well developed, slender,

pointed, similar to that of *C. daccordii* n. sp. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, very close to each other, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed almost at the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 129).

Pronotum slightly transverse (PW/PL = 1.21 male, 1.23 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly arcuate, imperceptibly sinuate before the base, distinctly crenellate before the basal angles. Base deeply emarginate laterally before the basal angles (Fig. 130). Anterior angles very rounded, not prominent; the posterior ones almost right and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, elongated and parallel-sided (EL/EW = 1.60 male, 1.58 female), with the maximum width almost at the beginning of the distal fourth, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very fine but distinct crenellation up to over the 3rd pore of the umbilicate series. Marginal groove very wide anteriorly, gradually narrowing posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the first, 4th pore decidedly farther and placed decidedly beyond the limit of the basal third of the elytron and at about the level of 2nd discal seta; the 5th pore placed almost at the beginning of the apical third of the elytron and not shifted onto the disc; 5th, 6th and 7th equidistant from each other; the 7th significantly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other (with the 8th and 9th slightly closer). Discal pores three in number and aligned: the 1st and 3rd are placed, respectively, just beyond the 3rd umbilicate pore and at the height of the 7th, while the 2nd is located roughly at the level of the 4th umbilicate pore.

Aedeagus (Fig. 131) relatively small, with median lobe clearly bottle-necked in the prebulbar part, elongated and slightly curved; median lobe not twisted on the right side, with the ventral margin slightly curved at the base, then subrectilinear up to the apex, that is regularly tapered, with the apical blade small, subtriangular and rounded. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

DISTRIBUTION AND ECOLOGY. *C. muelleri* is currently known only from the massif of O. Taigetos, and in particular from the highest peak, the Profitis Elías, where it occurs at altitudes between 1,800 and 2,000 m a.s.l.. We collected personally *C. muelleri* in an alpine meadow, located between the landslide blocks at the base of the North walls of Profitis Elías. In this site, located at 1,940 m of altitude, *C. muelleri* was found under rocks deeply buried in black humus. In similar conditions, A. Casale sampled some individuals under big stones near the snow at 2,000 m a.s.l.

Caecoparvus arcadicus (J. Müller, 1935)

Locus Typicus. Ménalon.

Scotodipnus arcadicus J. Müller, 1935: 176.
Winklerites (*Caecoparvus*) *parnassicus arcadicus* J. Müller: Jeannel, 1937: 286.
Caecoparvus arcadicus J. Müller: Jeannel, 1963: 99.
Caecoparvus arcadicus (J. Müller): Löbl & Smetana, 2003: 239.
Caecoparvus arcadicus (J. Müller): Lorenz, 2005: 203.

Examined material (Figs. 11, 132-135). 2 males and 2 females, "Grecia, nom. Arkadía, O. Ménalon m 1550, 4.VI.1996, Giachino & Vailati leg." (MRSN, CVa); 3 males, 1 female, "Grecia, nom. Arkadía, O. Ménalon m 1550, 26.V.1998, Giachino & Vailati leg. (MRSN, CGi); 30 males, 25 females, "Grecia, nom. Arkadía, O. Ménalon m 1550, 11.VI.2004, Giachino & Vailati leg."; 1 female, "Grecia, nom. Arkadía, O. Ménalon m 1640, 11.VI.2004, Giachino & Vailati leg." (CCa, CGi, CLo, CPa, CVa, CVi, CZa).

Diagnosis and redescription. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. muelleri* of O. Taigetos, from *C. achaiae* n. sp. of O. Panahaïkó, from *C. meschniggi* of O. Aroánia and *C. leonidae* n. sp. of O. Kallidromo in the median lobe of the aedeagus not bottle-necked in the prebulbar part. It differs from *C. sciakyi* n. sp. of O. Erímanthos, *C. pavesii* n. sp. of O. Ziria and *C. parnassicus* of O. Parnassos in the median lobe of the aedeagus less stocky.

L 130-1.37 mm (UL 1.58-1.68 mm). Body (Fig. 135) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous, no protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at about the level of the anterior border of the labrum, that is provided with 6 anterior marginal setae (Fig. 133).

Pronotum slightly transverse (PW/PL = 1.23 male, 1.24 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly arcuate, slightly sinuate before the base, distinctly crenellate before the basal angles. Base deeply emarginate laterally before the basal angles (Fig. 11). Anterior angles very rounded, poorly prominent; the posterior ones almost right and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, moderately elongated and poorly parallel-sided (EL/EW = 1.54 male, 1.52 female), with the maximum width almost at the beginning of the distal fourth, not emarginate but broadly rounded externally the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a thin crenellation up to the 3rd pore of the umbilicate series. Marginal groove narrow anteriorly, progressively restricted posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant, 4th pore decidedly farther and placed decidedly beyond the basal third of the elytron and about at the height of the 2nd discal seta; 5th pore placed almost at the beginning of the apical third of the elytron and not shifted onto the disc; 5th, 6th and 7th equidistant from each other; the 7th slightly shifted onto the disc; the 8th shifted onto the disc

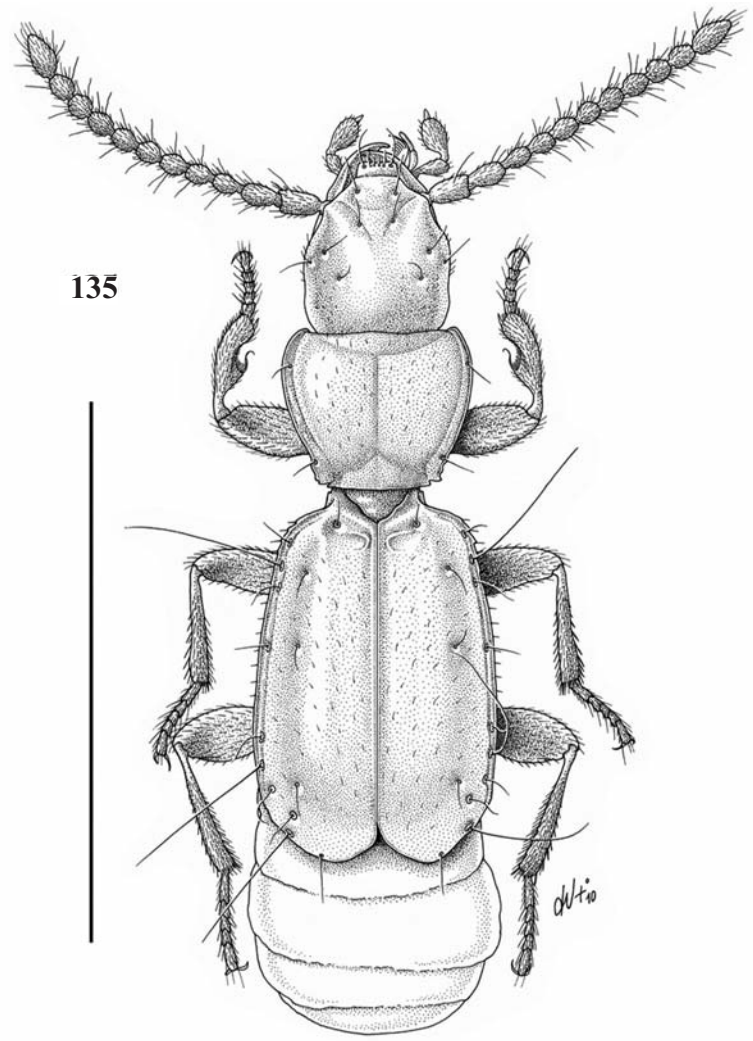


Figure 135 *Caecoparvus arcadicus*, habitus of the male (scale 1 mm).

and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other (with the 8th and 9th slightly closer). Discal pores three in number and aligned: the 1st and 3rd are placed, respectively, between the 2nd and the 3rd umbilicate pore and at the height of the 7th, while the 2nd is located at about the level of 4th umbilicate pore.

Aedeagus (Fig. 134) relatively small, with median lobe not bottle-necked, only slightly narrower in the prebulbar part, elongated, poorly and regularly curved; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and evenly curved along the whole extension up to the apex, which is sharply tapered dorsally, with the apical blade small, squat and rounded. The apical blade of the median lobe of the aedeagus, in dorsal view, is big, subtriangular, with the apex broadly rounded. Endophallus provided with a sclerified copulatory piece, vaguely shaped like a saddle. Parameres unequal, the right one shorter than the left one, right, provided with two apical setae each.

Distribution and ecology. *C. arcadicus* n. sp. is currently known only from O. Ménalon. We collected it personally in O. Ménalon in a grassy clearing at an altitude of 1,550 m a.s.l. on the hill run by the road that crosses the massif in an East-West sense, from Levídi to Vitína. The clearing, characterized by the presence of red

clay on limestone, lies between *Abies* woods. *C. arcadicus* was collected under rocks (even small ones) in direct contact with the clay and in syntopy with another interesting anilline, *Prioniomus peloponnesiacus* n. sp., described in this paper (Fig. 244).

Caecoparvus meschniggi (Winkler, 1936)

Locus typicus. Chelmos.

Scotodipnus meschniggi Winkler: 1936: 232.
Caecoparvus meschniggi Winkler: Jeannel, 1963: 99.
Caecoparvus meschniggi (Winkler): Löbl & Smetana, 2003: 239.
Caecoparvus meschniggi (Winkler): Lorenz, 2005: 203.

Examined material (Figs. 136-139). 4 males and 1 female, "Grecia, nom. Ahaïa, Oros Aroánia, m 1900, 4.VI.2005, Giachino & Vailati leg." (CGi, CVa).

Diagnosis and redescription. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. parnassicus* of O. Parnassos, *C. pavesii* n. sp. of O. Ziria, *C. sciakyi* n. sp. of O. Erímanthos and *C. arcadicus* of O. Ménalon in the median lobe of the aedeagus bottle-necked in the prebulbar part. It differs from *C. leonidae* n. sp. of O. Kallidromo in the aedeagus bigger and less curved. It differs from *C. muelleri* of O. Taigetos in the aedeagus bigger and stockier. It differs from *C. achaiae* n. sp. of O. Panahaïkó in the apex of the median lobe of the aedeagus less slender, with the apical blade less evident.

L 1.26-1.33 mm (UL 1.43-1.59 mm). Body (Fig. 136) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, more evident on head and pronotum and less on the elytral disc, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous, provided with a hint of frontal horn on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at about the level of the anterior border of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.22 male, 1.24 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly arcuate, subrectilinear before the base, distinctly crenellate before the basal angles. Base deeply emarginate laterally before the basal angles (Fig. 138). Anterior angles very rounded, very poorly prominent; the posterior ones almost right and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, moderately elongated and poorly parallel-sided (EL/EW = 1.49 male, 1.47 female), with the maximum width almost at the beginning of the distal third, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a thin crenellation evident until about the 3rd pore of the umbilicate series. Marginal groove wide anteriorly, progressively restricted posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st. 2nd and 3rd pore of the umbilicate series equidistant, 4th pore decidedly farther and inserted far beyond the basal third of the elytron and about at the height of the 2nd discal seta; 5th pore placed

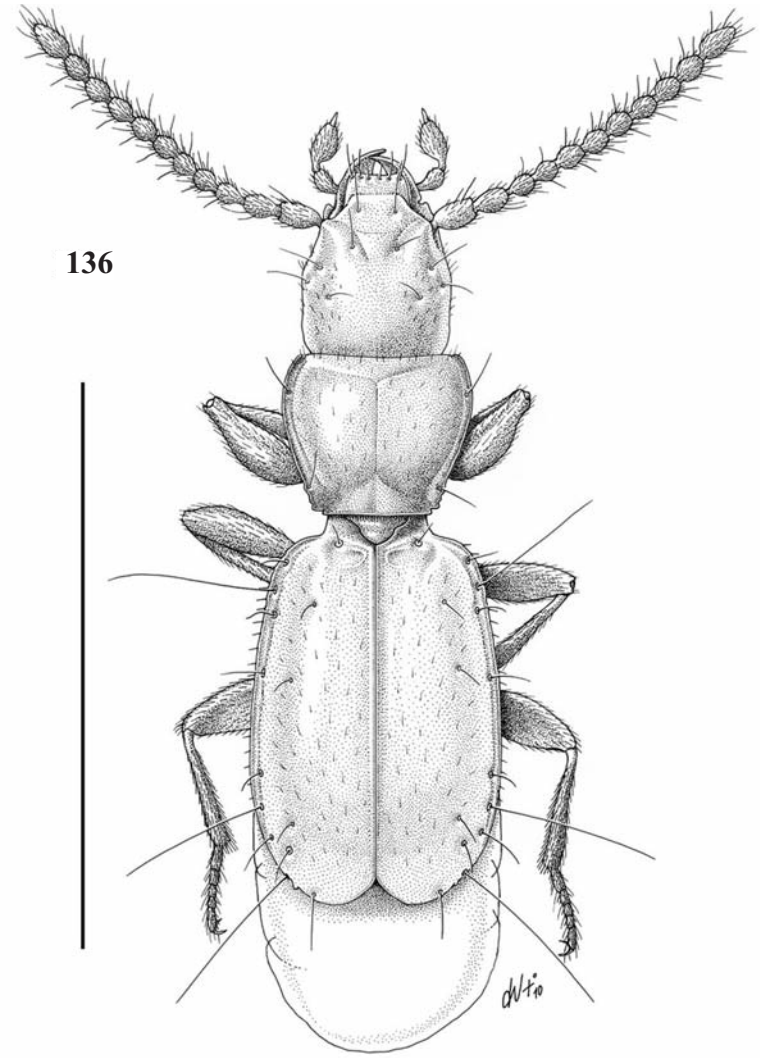
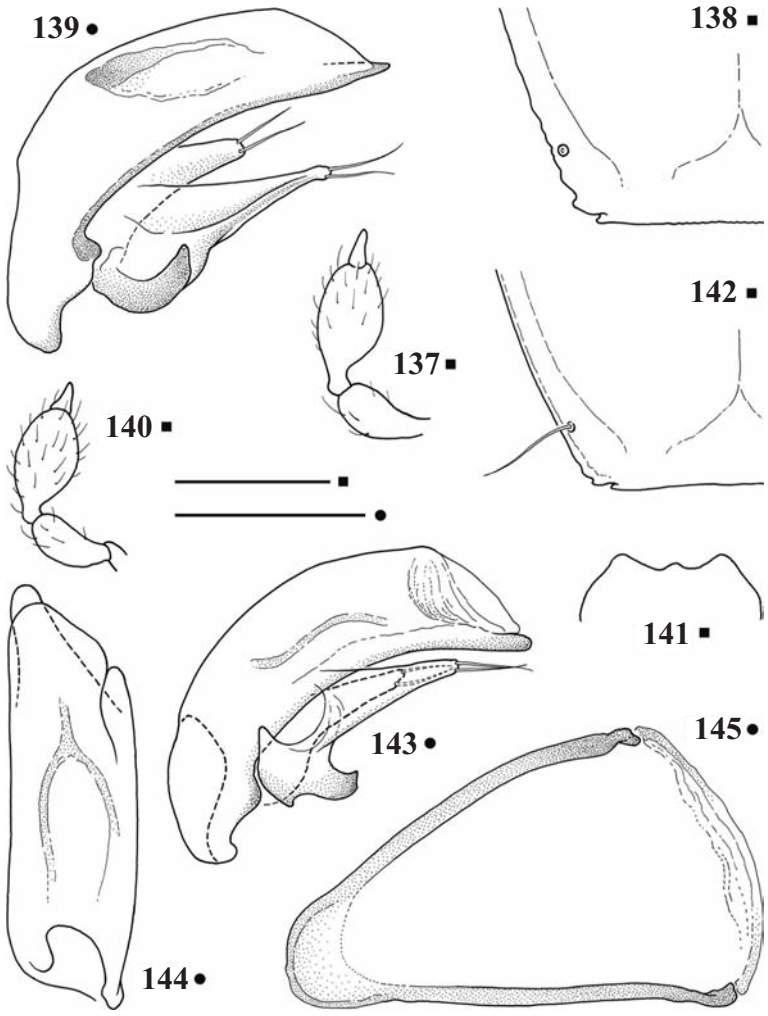


Figure 136. *Caecoparvus meschniggi*, habitus of the male (scale 1 mm).

almost at the beginning of the apical third of the elytron and not shifted onto the disc; 5th, 6th and 7th equidistant from each other; the 7th slightly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other (with the 8th and 9th slightly farther). Discal pores three in number and approximately aligned (the 2nd is slightly shifted toward the edge): the 1st and 3rd are placed, respectively, between the 2nd and 3rd umbilicate pore and just before the 7th, while the 2nd is located roughly at the level of the 4th umbilicate pore.

Aedeagus (Fig. 139) relatively small, with median lobe clearly bottle-necked in the prebulbar part, elongated, poorly and non-regularly curved; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and irregularly curved up to the apex, which is sharply tapered dorsally, with the apical blade small, subtriangular, acute but not sharp. Endophallus without a real sclerified copulatory piece, but bearing in the dorso-central part some thickened muscle bundles, not sclerified. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

DISTRIBUTION AND ECOLOGY. *C. meschniggi* is currently known only from the massif of Aroánia (= Chelmos). We collected it personally in O. Aroánia, at an altitude of 1,940 m a.s.l. on the



Figures 137-145. *Caecoparvus* spp. 137: *C. meschniggi*, maxillary palp; 138: idem, basal angle of the pronotum; 139: idem, aedeagus in lateral view; 140: *C. sciakyi* n. sp., maxillary palp; 141: idem, profile of the labium; 142: idem, basal angle of the pronotum; 143: idem, aedeagus in lateral view; 144: idem, aedeagus in dorsal view; 145: idem, invaginated segment (scale 0.1 mm).

grassy banks of a gully located on the North slope, above the Ski Centre. In this site *C. meschniggi* was found under rocks deeply buried in black humus on a limestone substrate.

Caecoparvus sciakyi n. sp.

Locus typicus. Peloponnese, Mount Erimanthos, m 1800.

Examined material (Figs. 140-146). Holotypus male, "Peloponneso, Monte Erimanthos, m 1800, 16.V.89, R. Sciaky leg." (CSc). Paratypi: 9 males, 3 females, "Peloponneso, Monte Erimanthos, m 1800, 16.V.89, R. Sciaky leg."; 2 males, 3 females, "Grecia, nom. Ahaïa, O. Erímanthos, sopra Kaléntzi, foresta a m 1150, 1.VI.2005, Giachino & Vailati leg." (CGi, CSc, CVa, CZa).

Diagnosis. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. muelleri* of O. Taigetos, *C. achaiae* n. sp. of O. Panahaïkó, *C. meschniggi* of O. Aroánia and *C. leonidae* n. sp. of O. Kallidromo in the median lobe of the aedeagus not bottle-necked in the prebulbar part. It differs from *C. arcadicus* of O. Ménalon in the median lobe of the aedeagus stockier, from *C. parnassicus* of O. Parnassós in the median lobe, in lateral view, more curved, with the basal blade stockier, while from *C. pavesii* n. sp. of O. Ziria

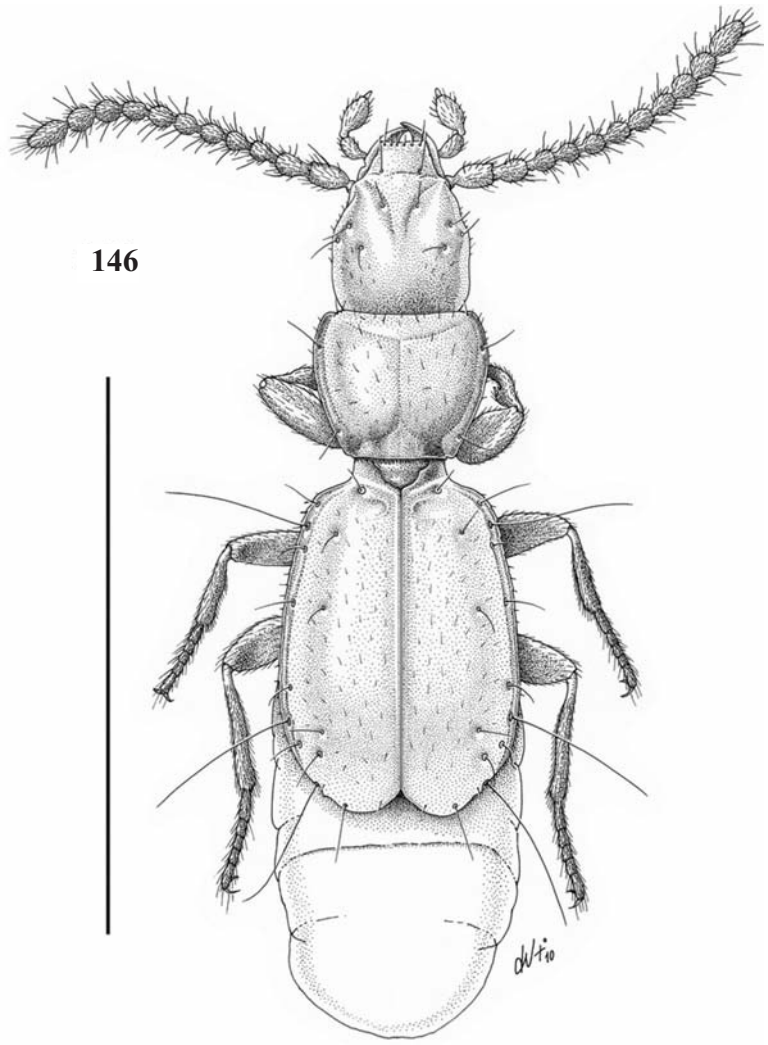


Figure 146. *Caecoparvus sciakyi* n. sp., habitus of the male (scale 1 mm).

it differs especially in the smaller size and the apical blade of the median lobe, in dorsal view, stockier and less bent to the right.

Description. L 1.10-1.30 mm (UL 1.27-1.71 mm). Body (Fig. 146) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, more evident on head and pronotum and less on the elytral disc, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous, without an evident median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed just before the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.21 male, 1.22 female), with the maximum width at the base of the anterior third, narrow at the base, with sides regularly arcuate, subrectilinear before the base; slightly crenellate before the basal angles. Base deeply emarginate laterally

before the basal angles (Fig. 142). Anterior angles very rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, poorly elongated (EL/EW = 1.38 male, 1.36 female), with the maximum width almost at the beginning of the distal third, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, very rounded; post-humeral margin denticulate, with a thin crenellation evident up to about the 3rd pore of the umbilicate series. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the level of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant, 4th pore decidedly farther and inserted at the limit of the basal third of the elytron and at about the level of the 2nd discal seta; 5th pore placed almost at the beginning of the apical third of the elytron; 5th, 6th and 7th equidistant from each other and slightly shifted onto the disc; 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and approximately aligned (the 2nd is slightly shifted toward the edge): the 1st and 3rd are placed, respectively, just after the 2nd umbilicate pore and before the 7th, while the 2nd is located roughly at the level of the 4th umbilicate pore.

Aedeagus (Figs. 143-144) relatively small, with median lobe not bottle-necked, only slightly narrower, in the prebulbar part, elongated, regularly arcuate; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and evenly curved, up to the apex, which is abruptly tapered dorsally, with the apical blade small, squat and rounded. The apical blade of the median lobe of the aedeagus, in dorsal view, big, subtriangular, with the apex broadly rounded and shifted rightwards. Endophallus without a real sclerified copulatory piece, but bearing in the dorso-central part a thickened muscle bundle, not sclerified and bifid. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

Etimology. We dedicate this new species with pleasure to our friend Riccardo Sciaky of Milan who was the first to collect it.

Distribution and ecology. *C. sciakyi* n. sp. is currently known only from the O. Erímanthos, where it was collected at two sites: the first one, located at 1,800 m altitude, where the species has been found under rocks deeply buried in an alpine meadow; the second one, located in the *Abies* forest above the village of Kaléntzi, at 1,150 m, where *C. sciakyi* n. sp. was collected under rocks buried in red clay in a grassy clearing near a forest road in syntopy with another interesting anilline described in this paper: *Prioniomus antonellae* n. sp.

Caecoparvus achaiae n. sp.

Locus typicus. Greece, nom. Ahaïa, Oros Panahaïkó, above Paraskeví, m 1150, N38°09’23.0” E21°59’38.7”.

Examined material (Figs. 122, 147-152). Holotypus male, “Grecia, nom. Ahaïa, Oros Panahaïkó, sopra Paraskeví, m 1150, N38°09’23.0” E21°59’38.7”, 6.VI.2005, Giachino & Vailati leg.” (CGi). Paratypi: 7 males, 6 females, “Grecia, nom. Ahaïa, Oros Panahaïkó, sopra Paraskeví, m 1150, N38°09’23.0” E21°59’38.7”, 6.VI.2005, Giachino & Vailati leg.”; 7 males, 2 females, “Grecia, nom. Ahaïa, Oros Panahaïkó, sopra Paraskeví, m 1150, N38°09’23.0” E21°59’38.7”, 3.VI.1994, Giachino & Vailati leg.” (MRSN, MCSNB, CGi, CVa, CZa).

Diagnosis. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. parnassicus* of O. Parnassós, *C. pavesii* n. sp. of O. Ziria, *C. sciakyi* n. sp. of O. Erímanthos and *C. arcadicus* of O. Ménalon in

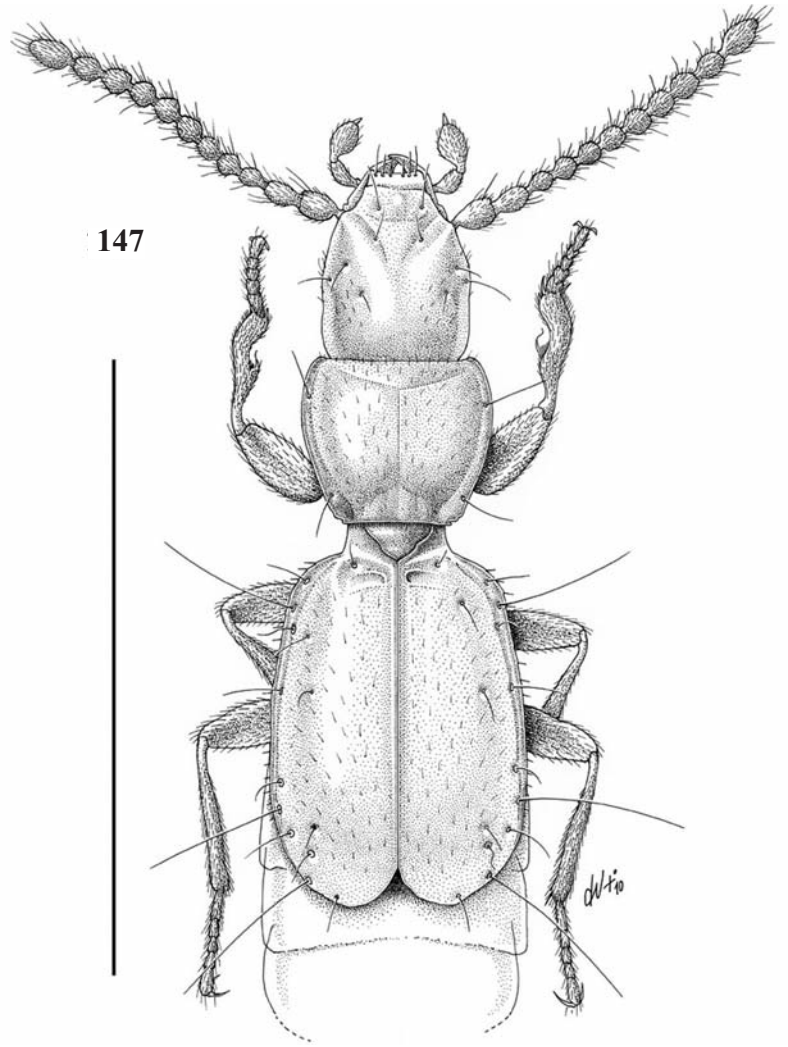


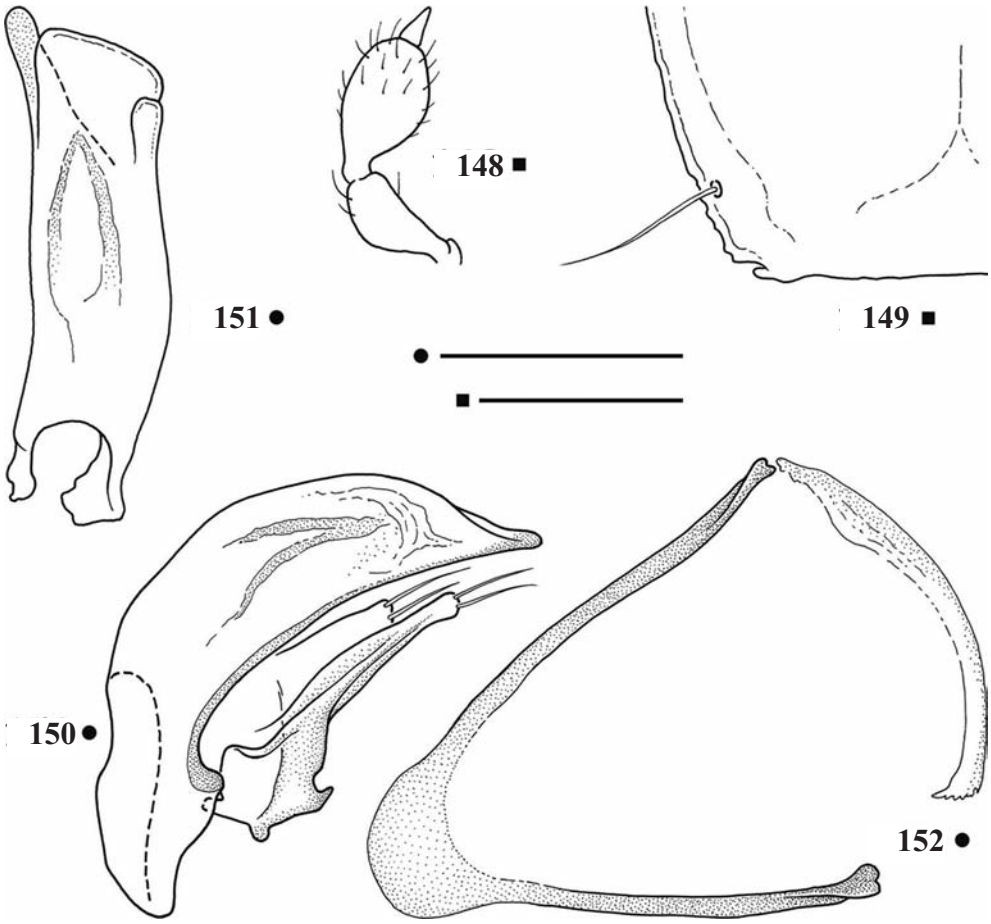
Figure 147. *Caecoparvus achaiae* n. sp., habitus of the male (scale 1 mm).

the median lobe of the aedeagus bottle-necked in the prebulbar part. It differs from *C. leonidae* n. sp. of O. Kallidromo in the aedeagus bigger and less curved. It differs from *C. muelleri* of O. Taigetos and *C. meschniggi* of O. Aroánia in the apex of the aedeagus with the apical blade of the median lobe longer and tapered.

DESCRIPTION. L 1.19-1.25 mm (UL mm 1.46-1.50). Body (Fig. 147) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, more evident on head and pronotum and less on the elytral disc, covered with a sparse and short pubescence.

Head robust, decidedly narrower than the pronotum, anophthalmous, provided with an evident median protuberance on the epistome (Fig. 122). Antennae slender, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed just before the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.19 male, 1.20 female), with the maximum width at the base of the anterior third, narrow at the base, with sides regularly arcuate,



Figures 148-152. *Caecoparvus achaiae* n. sp. 148: maxillary palp; 149: basal angle of the pronotum; 150: idem, aedeagus in lateral view; 151: aedeagus in dorsal view; 152: invaginated segment (scale 0.1 mm).

subrectilinear before the base; slightly crenellate before the basal angles. Base deeply emarginate laterally before the basal angles (Fig. 149). Anterior angles very rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, slightly elongated (EL/EW = 1.38 male, 1.36 female), with the maximum width almost at the beginning of the distal fourth, not emarginate yet broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, very rounded; post-humeral margin denticulate, with a thin crenellation evident up to about the 2nd pore of the umbilicate series. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the level of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of

type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, the 4th pore decidedly farther and inserted at the limit of the basal third of the elytron and almost at the height of the 2nd discal seta; 5th pore placed much before the beginning of the apical third of the elytron and not shifted onto the disc; 5th, 6th and 7th equidistant from each other, with the 6th and the 7th slightly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and aligned: the 1st and 3rd are placed, respectively, at the level of the 3rd and 7th umbilicate pore, while the 2nd is located roughly at the level of the 4th umbilicate pore.

Aedeagus (Figs. 150-151) relatively small, with median lobe bottle-necked in the prebulbar part, elongated, poorly and regularly curved; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and evenly curved up to the apex, which is gently tapered dorsally, with the apical blade long, relatively squat and rounded. Apical blade of the median lobe of the aedeagus, in dorsal view, long, digitiform, with the apex rounded and shifted to the right. Endophallus without a real sclerified copulatory piece, but bearing in the dorso-central part a thickened muscle bundle, not sclerified and bifid. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

ETIMOLOGY. From Achaia, the region in the Peloponnese where the type locality is situated.

DISTRIBUTION AND ECOLOGY. *C. achaiae* n. sp. is currently known only from the type locality situated in O. Panahaïkó, above the village of Paraskeví, at 1,150 m a.s.l. In this site, located at the base of a limestone wall facing North, *C. achaiae* n. sp was collected under rocks buried deep in black humus, in syntopy with another interesting anilline described in this paper: *Iason fulvii* n. sp. (Fig. 245).

Caecoparvus pavesii n. sp.

LOCUS TYPICUS. Greece, nom. Korinthía, Killini, O. Ziria m 1500, N37°56'58.1" E22°25'12.3".

EXAMINED MATERIAL (Figs. 153-158). Holotypus male, "Grecia, nom. Korinthía, Killini, O. Ziria, m 1500, N37°56'58.1" E22°25'12.3", 5.VI.2005, Giachino & Vailati" (CGi). Paratypi: 2 males, "Grecia, nom. Korinthía, Killini, O. Ziria, m 1500, N37°56'58.1" E22°25'12.3", 5.VI.2005, Giachino & Vailati"; 3 females, "Grecia, nom. Korinthía, Killini, O. Ziria, m 1500, N37°56'58.1" E22°25'12.3", 5.VI.2005, Pavesi" (CGi, CPa,. CVa).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. muelleri* of O. Taigetos, *C. achaiae* n. sp. of O. Panahaïkó, *C. meschniggi* of O. Aroánia and *C. leonidae* n. sp. of O. Kallidromo in the median lobe of the aedeagus not bottle-necked in the prebulbar part. It differs from *C. arcadicus* of O. Ménalon in the median lobe of the aedeagus stockier and the apical blade of the median lobe, in dorsal view, distinctly bent rightwards, it differs from *C. parnassicus* of O. Parnassós in the median lobe, in lateral view, more curved, with the apical blade stockier, while from *C. sciakyi* n. sp. of O. Erímanthos it differs especially in the bigger size and the apical blade of the median lobe, in dorsal view, less stocky and more bent to the right.

DESCRIPTION. L 1.43-1.45 mm (UL 1.69-1.71 mm). Body (Fig. 153) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, more evident on head and pronotum and less on the elytral disc, covered with a sparse and short pubescence.

Head robust, decidedly narrower than the pronotum, anophthalmous, without the median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. There are two supraorbital setae on

each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed almost on the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.20 male, 1.22 female), with the maximum width at the base of the anterior third, narrow at the base, sides regularly arcuate, subrectilinear before the base; slightly crenellate before the basal angles. Base deeply but narrowly emarginate laterally before the basal angles (Fig. 155). Anterior angles very rounded, not prominent; the posterior ones obtuse and poorly marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, only slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fifth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, elongated (EL/EW = 1.52 male, 1.50 female), with the maximum width almost at the beginning of the distal third, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, very rounded; post-humeral margin denticulate, with a thin crenellation evident almost up to the 3rd pore of the umbilicate series. Marginal groove wide anteriorly, progressively tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore small, foveate. Umbilicate series of type B; 1st. 2nd and 3rd pore of the umbilicate series equidistant, with the 2nd and 3rd slightly closer, 4th pore decidedly farther and placed beyond the limit of the basal third of the elytron and beyond the 2nd discal seta; 5th pore placed almost at the beginning of the apical third of the elytron; 5th, 6th and 7th equidistant from each other and not shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and approximately aligned (the 1st is slightly shifted toward the disc): the 1st and 3rd are placed, respectively, just after the 2nd umbilicate pore and before the 7th, while the 2nd is placed before the 4th umbilicate pore.

Aedeagus (Figs. 156-157) relatively small, with median lobe not bottle-necked, only slightly narrower, in the prebulbar part, elongated, poorly and regularly curved; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and evenly curved, up to the apex, which is abruptly tapered dorsally, with the apical blade small, short, stocky and rounded. The apical blade of the median lobe of the aedeagus, in dorsal view, narrow, subtriangular, with the apex broadly rounded and distinctly bent to the right. Endophallus without a real sclerified copulatory piece, but bearing in the central part a thickened muscle bundle, not sclerified. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

ETIMOLOGY. We dedicate this new species with pleasure to our friend Maurizio Pavesi of Milan, an excursion companion on the day of the finding, and a passionate investigator of the Greek insect fauna.

DISTRIBUTION AND ECOLOGY. *C. pavesii* n. sp. is currently known only from the type locality, a limestone plateau, situated at 1,500 m a.s.l., on the North slope of the O. Ziria, the main peak of the mountain massif of Killini (nom. Korinthia). This plateau, the same on which the Hellenic Alpine Club hut stands, is characterized by a grass cover on a small layer of black humus. In this site *C. pavesii* n. sp. was collected deeply buried under rocks and in contact with red clay (Fig. 248).

Caecoparvus parnassicus (Breit, 1923)

LOCUS TYPICUS. Parnassós.

Scotodipnus parnassicus Breit 1923: 143.
Winklerites (*Caecoparvus*) *parnassicus* Breit: Jeannel 1937: 287.
Caecoparvus parnassicus Breit: Jeannel 1963: 99.
Caecoparvus parnassicus (Breit): Löbl & Smetana 2003: 239.

Caecoparvus parnassicus (Breit): Lorenz 2005: 203.

EXAMINED MATERIAL (Figs. 159-163). 1 Sintypus male, Graecia, Parnassos, 1914, Winkler (handwritten, white with a red border), Type (red printed), Coll. Piesbergen (white printed) (CGi); 1 male, Parnass, Paganetti, Coll. Piesbergen (CGi).

DIAGNOSIS AND REDESCRIPTION. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. muelleri* of O. Taigetos, *C. achaiae* n. sp. of O. Panahaïkó, *C. meschniggi* of O. Aroánia and *C. leonidae* n. sp. of O. Kallidromo in the median lobe of the aedeagus not bottle-necked in the prebulbar part. It differs from *C. arcadicus* of O. Ménalon in its smaller size, the median lobe of the aedeagus stockier and the apical blade of the median lobe, in lateral view, more slender, it differs from *C. pavesii* n. sp. of O. Ziria in its smaller size, the median lobe, in lateral view, less curved, with the apical blade less squat, and from *C. sciakyi* n. sp. of O. Erímanthosin the median lobe less curved and the apical blade of the median lobe, in lateral view, more slender.

L 1.15-1.23 mm (UL 1.37-1.50 mm). Body (Fig. 159) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous, provided with a median protuberance, poorly appreciable, on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed almost on the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.25 male), with the maximum width at the base of the anterior fourth, narrow at the base, with sides remarkably and regularly arcuate, subrectilinear before the base, distinctly crenellate before the basal angles. Base slightly emarginate laterally before the basal angles (Fig. 162). Anterior angles very rounded, not prominent; the posterior ones obtuse and poorly marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove relatively narrow and flattened, only slightly enlarged near the base, anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, poorly elongated (EL/EW = 1.34 male), with the maximum width almost at the beginning of the distal third, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, very rounded; post-humeral margin denticulate, with a thin crenellation evident up to about the 2nd pore of the umbilicate series. Marginal groove wide anteriorly, progressively tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st. 2nd and 3rd pore of the umbilicate series almost equidistant, with the 3rd slightly shifted onto the disc, the 4th pore decidedly farther and inserted beyond the limit of the basal third of the elytron and beyond the 2nd discal seta; the 5th pore placed before the beginning of the apical third of the elytron; 5th, 6th and 7th equidistant from each other and slightly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th not equidistant from each other, with the 8th and 9th closer. Discal pores three in number and non-aligned (the 1st one is more shifted toward the disc): the 1st and 3rd are placed, respectively, at the level of the 2/ umbilicate pore and before the 7th, while the 2nd is placed before the 4th umbilicate pore.

Aedeagus (Fig. 163) relatively small, with median lobe not bottle-necked, only slightly narrower in the prebulbar part, stocky, poorly and

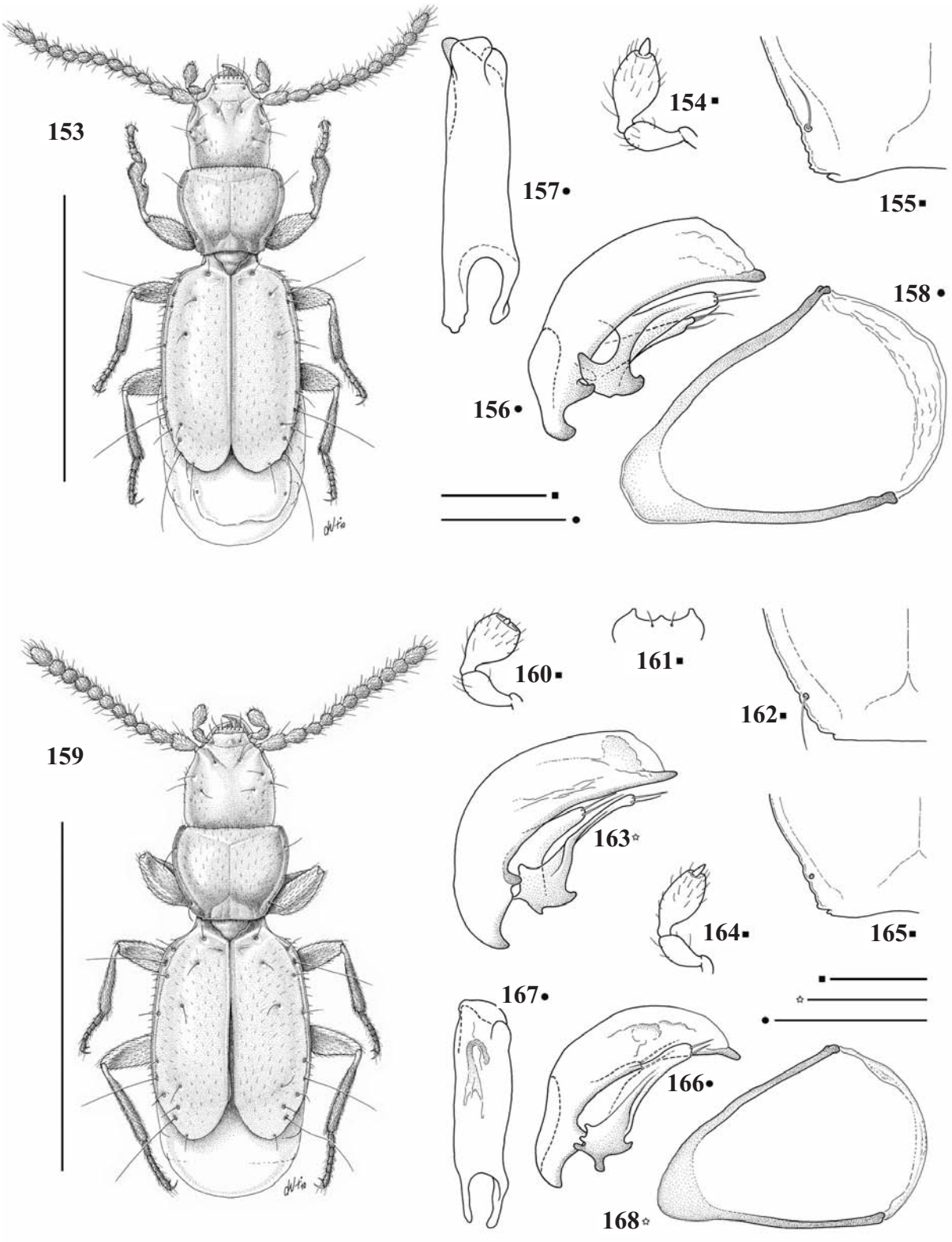


Figure 153. *Caecoparvus pavesii* n. sp., habitus of the male (scale 1 mm).
Figures 154-158. *Caecoparvus pavesii* n. sp. 154: maxillary palp; 155: basal angle of the pronotum; 156: aedeagus in lateral view; 157: aedeagus in dorsal view; 158: invaginated segment (scale 0.1 mm).
Figure 159. *Caecoparvus parnassicus*, habitus of the male (scale 1 mm).
Figures 160-168. *Caecoparvus* spp. 160: *C. parnassicus*, maxillary palp; 161: idem, profil of the labium; 162: idem, basal angle of the pronotum; 163: idem, aedeagus in lateral view; 164: *Caecoparvus leonidae* n. sp., maxillary palp; 165: idem, basal angle of the pronotum; 166: idem, aedeagus in lateral view; 167: idem, aedeagus in dorsal view; 168: idem, invaginated segment (scale 0.1 mm).

not regularly arcuate; median lobe, in lateral view, not twisted on the right side, with the ventral margin slightly and not regularly curved, subrectilinear before the apex, which is abruptly tapered dorsally, with the apical blade small, short, slender and rounded. Endophallus without a real sclerified copulatory piece, but bearing in the central part a thickened muscle bundle, not sclerified. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

DISTRIBUTION AND ECOLOGY. *C. parnassicus* is currently known only from the massif of the O. Parnassós, where it was collected under buried rocks at the upper limit of the forest (Jeannel, 1937, 1963).

Caecoparvus leonidae n. sp.

LOCUS TYPICUS. Central Greece, Oros Kallidromo 990 m, N38°45'10" E22°29'34".

EXAMINED MATERIAL (Figs. 164-169). Holotypus male, "Griechenland Zentr., Oros Kallidromo 990 m, N38°45'10" E22°29'34", Kleine Hochebene mit überfluterter Weide (GR 01/27) 12.4.2001 leg. Lompe" (CLo). PTT: 3 males, 4 females, "Griechenland Zentr., Oros Kallidromo 990 m, N38°45'10" E22°29'34", Kleine Hochebene mit überfluteter Weide (GR 01/27) 12.4.2001 leg. Lompe" (CGi, CLo, CVa).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. muelleri* for the shape of the median lobe of the aedeagus and the small body size. It differs from *C. parnassicus* of O. Parnassós, *C. pavesii* n. sp. of O. Ziria, *C. sciakyi* n. sp. of O. Erímanthos and *C. arcadicus* of O. Ménalon in the median lobe of the aedeagus bottle-necked in the prebulbar part. It differs from *C. achaiae* n. sp. of O. Panahaïkó, *C. muelleri* of O. Taigetos and *C. meschniggi* of O. Aroánia in the aedeagus much smaller and much more curved.

DESCRIPTION. L. 1.12-1.24 mm (UL 1.38-1.57 mm). Body (Fig. 169) long and narrow, depigmented, testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, more evident on head and pronotum, less on the elytral disc, covered with a sparse and short pubescence.

Head robust, much narrower than the pronotum, anophthalmous, provided with an evident median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome subrectilinear. There are two supraorbital setae on each side, close together, on lines converging backwards and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed almost on the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.30 male, 1.32 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly arcuate, subrectilinear before the base; slightly crenellate before the basal angles. Base emarginate laterally before the basal angles (Fig. 165). Anterior angles very rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, elongated (EL/EW = 1.53 male, 1.54 female), with the maximum width before the beginning of the distal fourth, not emarginate but broadly rounded externally in the preapical area; elytral apices separately and broadly rounded. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, very rounded; post-humeral margin denticulate, with a poorly evident crenellation. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the level of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, 4th pore decidedly farther and

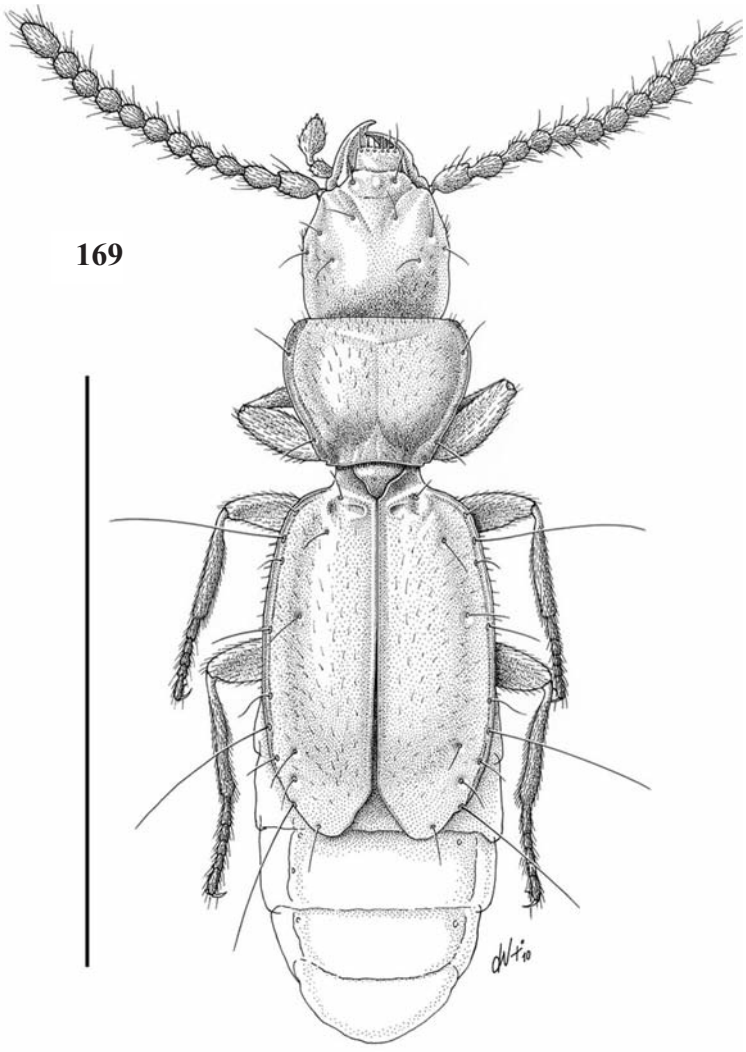


Figure 169. *Caecoparvus leonidae* n. sp., habitus of the male (scale 1 mm).

inserted beyond the limit of the basal third of the elytron and after the 2nd discal seta; the 5th pore placed much before the beginning of the apical third of elytron and not shifted onto the disc; 5th, 6th and 7th equidistant from each other, with the 7th slightly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and non-aligned (the 1st one is located more inside the disc), the 1st and 3rd are placed, respectively, at the level of the 2nd and just before the 7th umbilicate pore, while the 2nd is situated before the 4th umbilicate pore.

Aedeagus (Figs. 166-167) small, with median lobe bottle-necked in the prebulbar part, elongated, remarkably and regularly arcuate; median lobe, in lateral view, not twisted on the right side, with the ventral margin remarkably and regularly curved up to the apex, which appears gently tapered dorsally, with the apical blade long, relatively squat and rounded. The apical blade of the median lobe of the aedeagus, in dorsal view, short, subtriangular, with the apex rounded and shifted to the right. Endophallus without a real sclerified copulatory piece, but bearing in the dorso-central part a thickened muscle bundle, not sclerified and curved. Parameres unequal, the right one shorter than the left one, provided with two apical setae each.

ETIMOLOGY. This new species is dedicated to the Greek hero Leonidas, who in 480 BC sacrificed himself with a handful of warriors at the Thermopiles, along the Gulf of Maliakós and at the base of the O. Kallidromo in an attempt to halt the advance of the Persian army led by Xerxes.

DISTRIBUTION AND ECOLOGY. *C. leonidae* n. sp. is currently known only from the type locality situated in O. Kallidromo, at 990 m a.s.l. and at the coordinates N38°45'10" E22°29'34". This new species was collected under rocks buried in a small plateau with a flooded meadow.

«Group of *C. hercules*»

DIAGNOSIS. A group of medium to large sized *Caecoparvus* (L 1.24-1.92 mm), characterized by species with a big aedeagus, with median lobe elongated, rarely stout, with the ventral edge not regularly arcuate, often subrectilinear or sinuate in the apical half, and with the apical blade, in lateral view, usually elongated.

Caecoparvus hercules n. sp.

LOCUS TYPICUS. Greece, nom. Fthiótida, O. Iti, Katavótra m 1480.

EXAMINED MATERIAL (Figs. 10, 170-175). Holotypus male, "Grecia nom. Fthiótida, O. Iti Katavótra m 1480, 12.VI.2002, Giachino & Vailati leg." (CGi). PTT: 17 males and 11 females, "Grecia nom. Fthiótida, O. Iti Katavótra m 1480, 12.VI.2002, Giachino & Vailati leg."; 1 male, "Grecia nom. Fthiótida, O. Iti Katavótra m 1480, 1.VI.1998, Giachino & Vailati leg."; 11 males and 6 females, "Griechenland Zentr., Oros Iti, N-Hang, subalpine Matten 1400 m, N38°49'29" E022°14'12", (GR 01/22), 10.4.2000, leg. Lompe"; 12 males and 8 females, "Griechenland Zentr., Oros Iti, N-Hang, feuchte Weide in Hochtal 1400 m, N38°49'26" E022°14'03", (GR 01/23), 10.4.2001, leg. Lompe" (MRSN, CCa, CGi, CLo, CPa, CVa, CVi).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median lobe of the aedeagus and the medium-large body size. In particular it is close to *C. daccordii* n. sp. of O. Oxiá and to *C. karavae* n. sp. of O. Karáva, it differs from them, along with *C. marchesii* n. sp of O. Óthris in the smaller body size and the smaller aedeagus with median lobe shorter. It differs from *C. berrutii* n. sp. of O. Vardoússia and *C. lompei* n. sp. of O. Oxiá in the aedeagus shorter and more curved. It also differs from *C. daccordii* n. sp. in the absence of the frontal horn.

DESCRIPTION. L 1.50-1.53 mm (UL 1.95-1.98 mm). Body (Fig. 170) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, slightly less evident on the elytral disc, covered with a sparse and short pubescence.

Head robust, decidedly narrower than the pronotum, anophthalmous, without the median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome slightly convex. Two supraorbital setae on each side, very close to each other, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at about the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 173).

Pronotum slightly transverse (PW/PL = 1.21 male, 1.25 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly arcuate, imperceptibly sinuate before the base, distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 10). Anterior angles very rounded, not prominent; the posterior ones almost right and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, short, stocky and not parallel-sided (EL/EW = 1.41 male, 1.40 female), with the

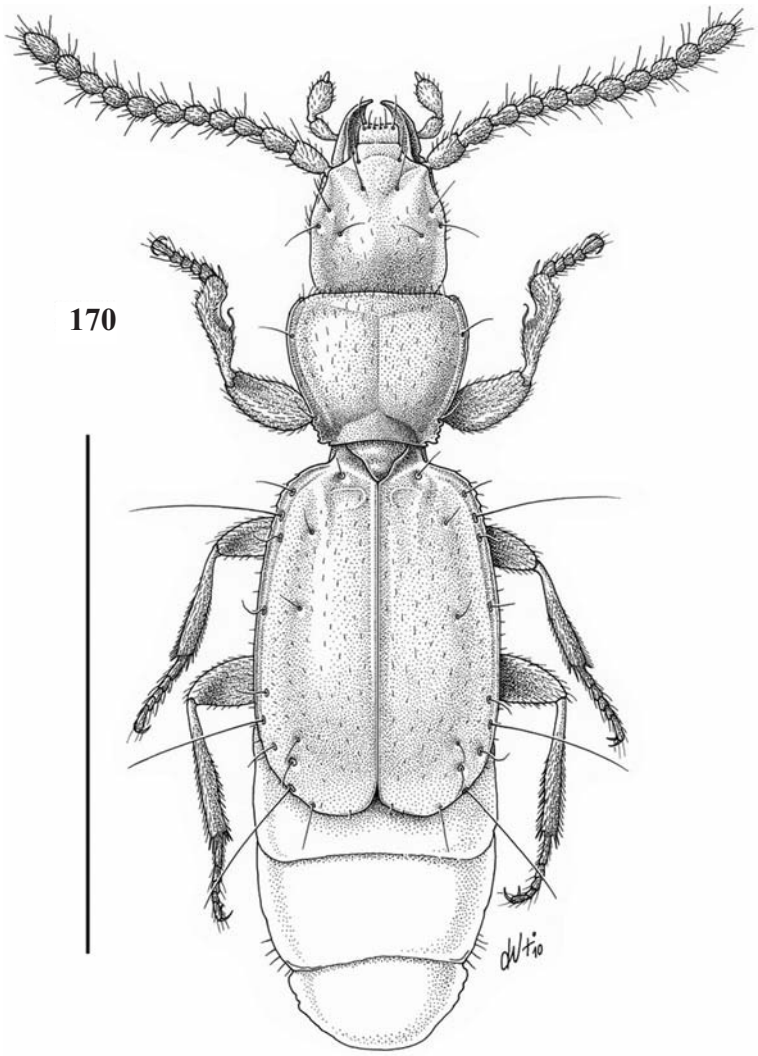


Figure 170. *Caecoparvus hercules* n. sp., habitus of the male (scale 1 mm).

maximum width almost at the beginning of the distal fourth, not emarginate yet broadly rounded externally in the preapical area. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very thin yet distinct crenellation almost up to the 3rd pore of the umbilicate series; elytral apices separately and broadly rounded. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, with the 3rd slightly shifted towards the disc, 4th pore decidedly farther and inserted far beyond the basal third of the elytron and almost at the height of the 2nd discal seta; the 5th pore placed a little before the the beginning of the apical third of the elytron and slightly shifted onto the disc; 5th, 6th and 7th equidistant from each other; the 7th significantly shifted onto the disc; the 8th shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and aligned: the 1st and 3rd are placed, respectively, between the 2nd and 3rd pore of the umbilicate series and almost at the level of the

7th pore, while the 2nd is at the height of the 4th umbilicate pore.

Aedeagus (Fig. 174) big, curved; median lobe not twisted on the right side and ventral margin remarkably and regularly curved up to the apex, that is, in lateral view, subtriangular, with the apical blade shaped as an elongated beak rounded at the apex. Median lobe slightly narrower in the prebulbar part. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified. Parameres unequal, provided with two apical setae each; left paramere longer than the right one, but decidedly much wider.

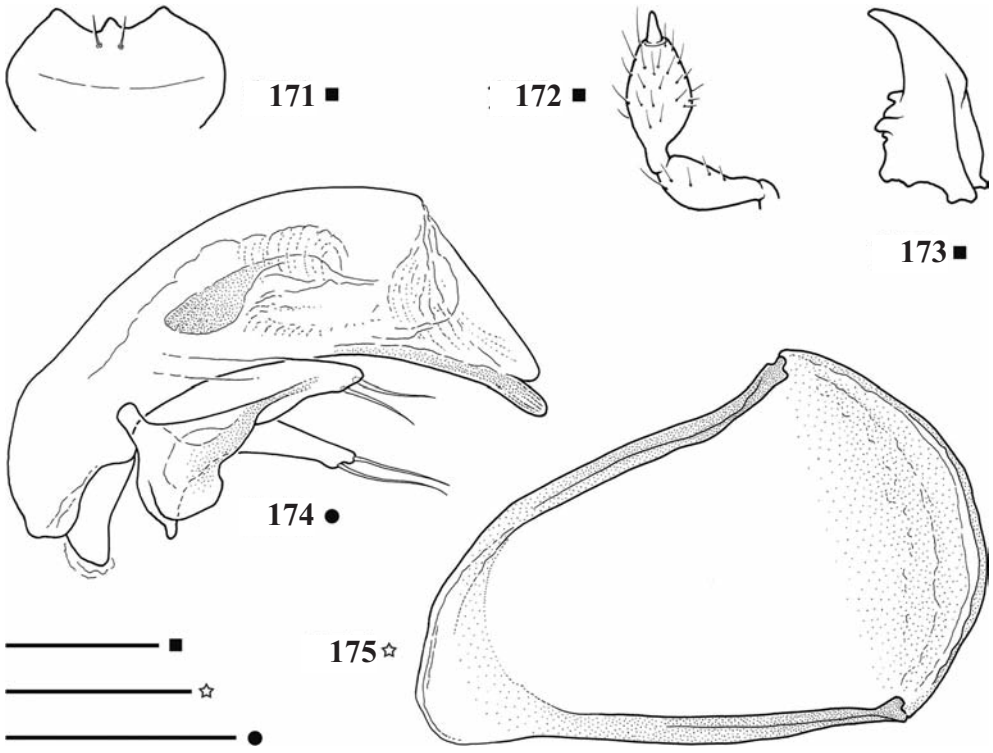
ETIMOLOGY. This new species is dedicated to Hercules, the mythological Greek hero who died burned on a pyre made of fir trees of the Oros Iti, where the type locality of Katavotra is situated.

DISTRIBUTION AND ECOLOGY. *C. hercules* n. sp. is currently known only from three sites, at altitudes between 1,400 and 1,480 m a.s.l., on the O. Iti (nom. Fthiótioda). The typical site, located in the grassland on the sides of the stream which flows into the karst sinkhole of Katavótra, is characterized by a grass cover on a small layer of black humus. In this site *C. hercules* n. sp. was collected under deeply buried rocks and in contact with red clay. In the other two known sites *C. hercules* n. sp. was collected under deeply buried rocks in grassland on slopes facing North.

Caecoparvus daccordii n. sp.

LOCUS TYPICUS. Greece n. Fthiótida, O. Oxiá, road Gardíki-Gramméni Oxiá, fagetum at m 1600, N slope.

EXAMINED MATERIAL (Figs. 9, 123, 176-182). Holotypus male, "Grecia n. Fthiótida, O. Oxiá, str. Gardíki-Gramméni Oxiá fagetum a m 1600, versante Nord, 22.VI.2004, Giachino & Vailati" (CGi). PTT: 1 female, "Grecia n. Fthiótida, O. Oxiá, str. Gardíki-Gramméni Oxiá fagetum a m 1600, versante Nord, 10.VI.1995, P.M. Giachino, D. Vailati, M. Daccordi



Figures 171-175. *Caecoparvus hercules* n. sp. 171: profile of the labium; 172: maxillary palp; 173: right mandible; 174: aedeagus in lateral view; 175: invaginated segment (scale 0.1 mm).

leg."; 3 males and 1 female, "Grecia n. Fthiótida, O. Oxiá, str. Gardíki-Gramméni Oxiá fagetum a m 1600, versante Nord, 22.VI.2004, Giachino & Vailati" (MRSN, CGi, CVa).

Diagnosis. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median lobe of the aedeagus and the medium-large body size. In particular it is close to *C. hercules* n. sp. of O. Iti and to *C. karavae* n. sp. of O. Karáva, it differs from *C. hercules* n. sp., *C. berrutii* n. sp. of O. Vardoússia and *C. lompei* n. sp. of O. Oxia in the smaller body size. It differs from *C. marchesii* n. sp of O. Óthris in the base of the pronotum less wide and the different curvature of the median lobe of the aedeagus, and from *C. karavae* n. sp. in the median lobe of the aedeagus less squat and the head less robust.

Description. L 1.65-1.74 mm (UL 2.00-2.11 mm). Body (Fig. 176) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but decidedly narrower than the pronotum, anophthalmous, bearing on the epistome an evident and well developed horn, pointed and curved backwards (Fig. 123). Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome slightly convex. Two supraorbital setae on each side, close together, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more posteriorly than the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 178).

Pronotum slightly transverse (PW/PL = 1.24 male, 1.25 female), with the maximum width at the base of the anterior third, narrow at the base, with sides regularly arcuate, only imperceptibly sinuate before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 9). Anterior angles rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, relatively elongated and not parallel-sided (EL/EW = 1.48 male, 1.45 female), with the maximum width almost at the beginning of the distal third, not emarginate yet broadly rounded externally in the preapical area. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation almost up to the level of the 3rd pore of the umbilicate series; elytral apices separately and broadly rounded. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st and clearly shifted onto the disc, 4th pore decidedly farther and inserted beyond the limit of the basal third of the elytron and almost at the level of the 2nd discal seta; the 5th pore placed a little before the beginning of the apical third of the elytron and slightly shifted onto the disc; 5th and 6th closer to each other than the 6th and 7th; the 7th a little and the 8th decidedly shifted onto the disc and approximately aligned with the posterior discal seta and with the 9th umbilicate pore; 7th and 8th slightly farther from each other than the 8th and 9th. Discal pores three in number and non-aligned (the 1st one is shifted towards the inside of the disc): the 1st and 3rd are placed, respectively, between the 2nd and 3rd pore and at the level of the 7th umbilicate pore, while the 2nd is placed at the level of the 4th umbilicate pore.

Aedeagus (Figs. 180-181) big, with median lobe slightly bottle-necked in the prebulbar part, poorly and regularly curved; median lobe not twisted on the right side, with the apical blade shaped as a rounded beak. Endophallus without a real sclerified copulatory piece, but bearing in

the central part some thickened muscle bundles, not sclerified. Parameres unequal, provided with two apical setae each; left paramere longer than the right one and decidedly wider.

ETIMOLOGY. We are pleased to dedicate this new and interesting species to our friend and colleague Mauro Daccordi who collected the first specimen.

DISTRIBUTION AND ECOLOGY. *C. daccordii* n. sp. is currently known only from the type locality situated on the O. Oxiá (nom. Fthiótioda), on the North slope of the hill above Gramméni Oxiá, along the road that leads from Gardíki to Gramméni Oxiá. The site, located at 1,600 m a.s.l., is characterized by a beech forest on shale rock that turns out to be, among other things, the southern limit of *Fagus* along the Pindus mountain chain. In this site *C. daccordii* n. sp. was collected under rocks buried deep in red clay on the bottom of a flared gully. It must be pointed out that, on the same mountain range and a few kilometres away as the crow flies, there is another interesting species of *Caecoparvus* of the same group: *C. lompei* n. sp. described in this same contribution.

Caecoparvus berrutii n. sp.

LOCUS TYPICUS. Greece, nom. Fokída, Ori Vardoússia, O. Kokkiniás, meadow on the W slope, m 1800.

EXAMINED MATERIAL (Figs. 183-187). Holotypus male, "Grecia, nom. Fokída, Ori Vardoússia, O. Kokkiniás, prato sul vers W, m 1800, 13.VI.2002, Giachino & Vailati leg." (CGi). Paratypi: 1 male and 1 female, "Grecia, nom. Fokída, Ori Vardoússia, O. Kokkiniás, prato sul vers W, m 1800, 13.VI.2002, Giachino & Vailati leg."; 1 female, "Grecia, nom. Fokída, Ori Vardoússia, O. Kokkiniás, prato sul vers W, m 1800, 22.VI.2000, Giachino & Vailati leg."; 16 males and 11 females, "GR. Fokis, 45 km SW Lamía, Oros Vardoussia, m 1600, No 17, N38°42'06" E22°08'56", 18.IV.2000, V. Assing"; 9 males and 1 female, "GR. Fokis, 45 km SW Lamía, Oros Vardoussia, m 1600, No 17, N38°42'06" E22°08'56", 18.IV.2000, P. Wunderle" (MRSN, CGi, CLo, CPa, CVa).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median lobe of the aedeagus and the medium-large body size. In particular it is close to *C. lompei* n. sp. of O. Oxiá for smaller body size and the elongated shape of the median lobe of the aedeagus, it differs from *C. daccordii* n. sp. of O. Oxiá, *C. karavae* n. sp. of O. Karáva and *C. marchesii* n. sp of O. Óthris in the smaller body size and the shape of the median lobe of the aedeagus. It differs from *C. daccordii* n. sp. and *C. karavae* n. sp. also in the absence of the frontal horn, while it differs from *C. hercules* n. sp. of O. Iti in the different curvature of the median lobe of the aedeagus, more elongated and less stocky.

DESCRIPTION. L 1.24-1.40 mm (UL 1.57-1.82 mm). Body (Fig. 183) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but decidedly narrower than the pronotum, anophthalmous, without the median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, relatively close to each other, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at about the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.17 male, 1.18 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides regularly curved almost before the base; slightly yet distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 186). Anterior angles rounded, not prominent; the posterior ones obtuse, marked yet blunt. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of

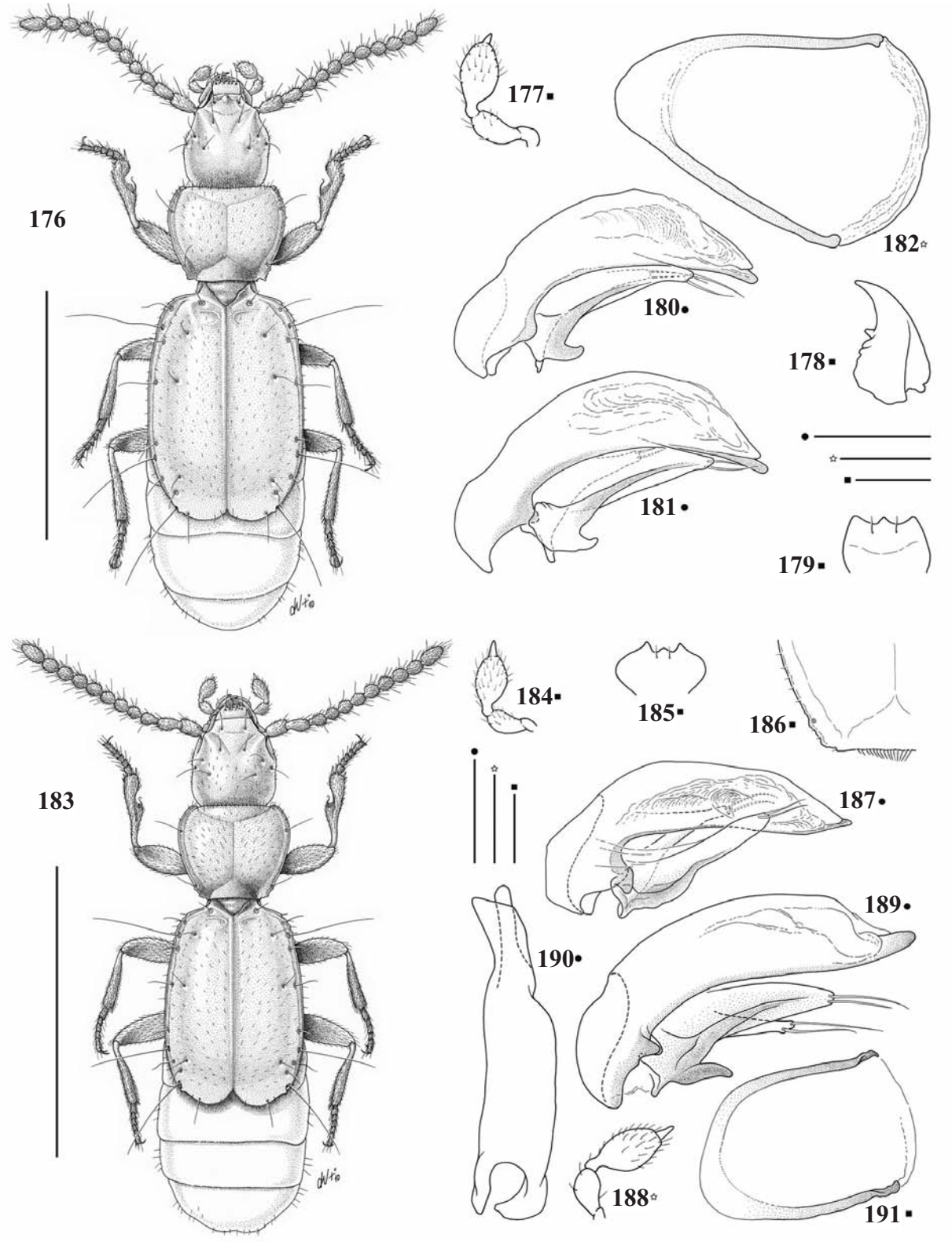


Figure 176. *Caecoparvus daccordii* n. sp., habitus of the male (scale 1 mm).
Figures 177-182. *Caecoparvus daccordii* n. sp. 177: maxillary palp; 178: right mandible; 179: profile of the labium; 180: aedeagus in lateral view; 181: idem of another specimen; 182: invaginated segment (scale 0.1 mm).
Figure 183.– *Caecoparvus berrutii* n. sp., habitus of the male (scale 1 mm).
Figures 184-191. *Caecoparvus* spp. 184: *C. berrutii* n. sp., maxillary palp; 185: idem, profile of the labium; 186: idem, basal angle of the pronotum; 187: idem, aedeagus in lateral view; 188: *C. lompei* n. sp., maxillary palp; 189: idem, aedeagus in lateral view; 190: idem, aedeagus in dorsal view; 191: idem, invaginated segment (scale 0.1 mm).

the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, relatively elongated and not parallel-sided (EL/EW = 1.43 male, 1.42 female), with the maximum width almost at the beginning of the distal third, not emarginate but broadly rounded externally in the preapical area, where there is, just beyond the 9th umbilicate pore, a small tooth bearing a small seta at its apex. Disc slightly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation almost up to the level of the 3rd pore of the umbilicate series; elytral apices separately and broadly rounded. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant, the 3rd one not shifted onto the disc, the 4th pore decidedly farther and inserted beyond the limit of the basal third of the elytron and at about the level of the 2nd discal seta; the 5th pore placed at the beginning of the apical third of the elytron; 5th, 6th, 7th, 8th and 9th almost equidistant; the 7th a little shifted onto the disc; the 8th decidedly shifted onto the disc and approximately aligned with the 9th umbilicate pore. Discal pores three in number and non-aligned (the 1st one is shifted towards the inside of the disc): the 1st and 3rd are placed, respectively, between the 2nd and 3rd and at the level of the 7th umbilicate pore, while the 2nd is placed at the level of the 4th umbilicate pore.

Aedeagus (Fig. 187) big, with median lobe slightly bottle-necked in the prebulbar part, long, poorly and not regularly curved; median lobe not twisted lobe on the right side, with the lower margin bisinuate distally, and the apical blade shaped as a rounded beak. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified and of a vaguely bifid shape. Parameres unequal, provided with two apical setae each; left paramere longer than the right one and decidedly wider.

DERIVATIO NOMINIS. We dedicate this new and interesting species with great pleasure, as a sign of esteem and friendship, to Dr. Giuseppe Berruti of Brescia, a passionate geologist who has always actively supported with enthusiasm our research in Greece in the years when official missions were carried out jointly by the Museums of Brescia and Turin.

DISTRIBUTION AND ECOLOGY. *C. berrutii* n. sp. is currently known only from two sites in the Ori Vardoússia (nom. Fokída) at altitudes between 1,600 and 1,800 m a.s.l.. In one of the sites, located on the West slope of the O. Kokkiniás at 1,800 m of altitude, *C. berrutii* n. sp. was found under deeply buried rocks, in contact with red clay, in an alpine meadow, crossed by a stream, characterized by a grass cover on a modest black humus layer (Fig. 247).

Caecoparvus lompei n. sp.

LOCUS TYPICUS. Central Greece, Oros Oxiá, 1550 m, N38°49'43" E21°55'42".

EXAMINED MATERIAL (Figs. 188-192). Holotypus male, "Griechenland Zentr., Oros Oxiá, 1550 m, N38°49'43" E21°55'42", N-Hang, Bachschlucht (GR 01/26), 11.4.2001, leg. Lompe" (CLo). PTT: 19 males and 20 females, "Griechenland Zentr., Oros Oxiá, 1550 m, N38°49'43" E21°55'42", N-Hang, Bachschlucht (GR 01/26), 11.4.2001, leg. Lompe"; 4 males and 1 female, "Griechenland Zentr., Oros Oxiá, SW Paleochori, 1450 m, N38°49'53" E21°55'44", N-Hang, Wiese über Tannenwald (GR 01/25) 11.4.2001 leg. Lompe"; 2 males, 1 female, "GR. Fthiotis, Oros Oxiá, W Lamia, 1500 m, N38°49'43" E21°55'42", meadow, under stones, 11.IV.2001 V. Assing" (CCa, CGi, CLo, CPa, CVa, CVi).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median lobe of the aedeagus and the medium-large body size. In particular it is close to *C. berrutii* n. sp. of O. Vardoússia for the smaller body size and the elongated shape of the median lobe of the aedeagus, it differs from *C. daccordii* n. sp. of O. Oxiá, *C. karavae* n. sp. of

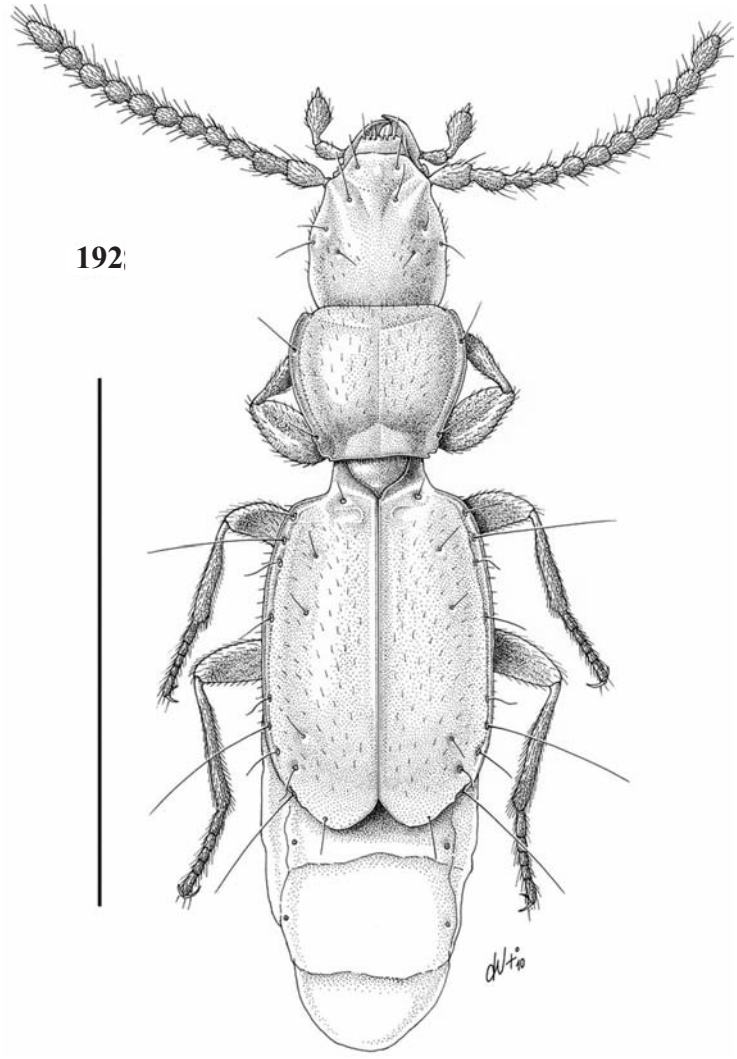


Figure 192. *Caecoparvus lompei* n. sp., habitus of the male (scale 1 mm).

O. Karáva and *C. marchesii* n. sp of O. Óthris in the smaller body size and the shape of the median lobe of the aedeagus. It differs from *C. hercules* n. sp. of O. Iti in the different curvature of the median lobe of the aedeagus, more elongated and less stocky.

Description. L 1.30 to 1.38 mm (UL 1.65-1.81 mm). Body (Fig. 192) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the elytral disc, covered with sparse and short pubescence.

Head robust, but decidedly narrower than the pronotum, anophthalmous, bearing on the epistome a faintly marked protuberance, almost vanished. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, relatively close to each other, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at about the level of the

anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.19 male, 1.20 female), with the maximum width at the base of the anterior third, narrow at the base, with the sides regularly arcuate, subrectilinear before the base; slightly but distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles. Anterior angles rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, relatively elongated and not parallel-sided (EL/EW = 1.46 male, 1.45 female), with the maximum width almost at the beginning of the distal third, not emarginate yet broadly rounded externally in the preapical area, where there is, just beyond the 9th umbilicate pore, a small tooth bearing a small seta at its apex. Disc slightly convex, subflat; shiny integuments, with a moderately evident microsculpture of isodiametric meshes, with a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a thin but distinct crenellation almost up to the level of the 3rd pore of the umbilicate series; elytral apices separately and broadly rounded. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant, the 3rd one slightly shifted onto the disc, the 4th pore decidedly farther and inserted beyond the limit of the basal third of the elytron and just beyond the 2nd discal seta; the 5th pore placed before the beginning of the apical third of the elytron; 5th, 6th, 7th, 8th and 9th almost equidistant; the 7th not shifted onto the disc; the 8th decidedly shifted onto the disc and approximately aligned with the 3rd discal seta and with the 9th umbilicate pore. Discal pores three in number and non-aligned (the 1st one is more shifted towards the inside of the disc): the 1st and 3rd are placed between the 2nd and 3rd pore and before the 7th umbilicate pore, while the 2nd one is placed just before the 4th umbilicate pore.

Aedeagus (Figs. 189-190) big, with median lobe slightly bottle-necked in the prebulbar part, long, poorly curved and not regularly arcuate, median lobe not twisted on the right side, with the inferior margin sinuate distally and the apical blade shaped as a stocky and rounded beak. Apical blade of the median lobe, in dorsal view, long, digitiform, with the apex rounded and directed rightwards. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified. Parameres unequal, provided with two apical setae each; left paramere longer than the right one and decidedly wider.

ETIMOLOGY. We are pleased to dedicate this new and interesting species to its collector, Arved Lompe of Nienburg (Germany), who has very kindly decided to send it to us in study.

DISTRIBUTION AND ECOLOGY. *C. lompei* n. sp. is known from two sites in the O. Oxiá (nom. Fthiótida), near the town of Paleochori, at altitudes between 1,450 and 1,550 m a.s.l., where it was collected under deeply buried rocks in the glades with streams in a fir-wood on a North-facing slope. It must be pointed out that, on the same mountain massif and a few kilometres away as the crow flies, there is another interesting species of *Caecoparvus* of the same group: *C. daccordii* n. sp. described in this paper.

Caecoparvus marchesii n. sp.

LOCUS TYPICUS. Greece, nom. Fthiótida, O. Óthris, above Ag. Ioánnis m 640.

EXAMINED MATERIAL (Figs. 193-197). Holotypus male, "Grecia, nom. Fthiótida, O. Óthris, sopra Ag. Ioánnis m 640, 7.VI.1992, Giachino & Vailati leg." (CGi). paratypi: 3 females, "Grecia, nom. Fthiótida, O. Óthris, sopra Ag. Ioánnis m 640, 7.VI.1992, Giachino & Vailati leg." (MCSNB, CVa, CZa).

DIAGNOSIS. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median

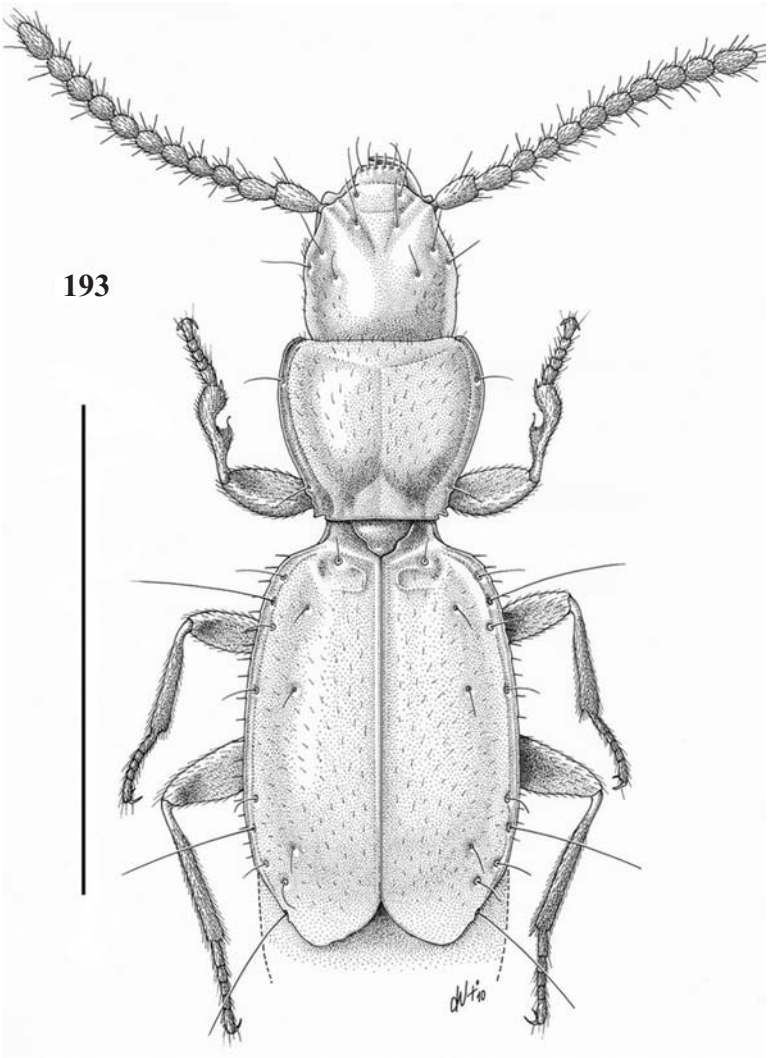


Figure 193. *Caecoparvus marchesii* n. sp., habitus of the male (scale 1 mm).

lobe of the aedeagus and the medium-large body size. Relatively isolated within the group, it seems to be closer to *C. daccordii* n. sp. of O. Oxiá for the shape of the median lobe of the aedeagus, but it differs from it in the smaller body size and the pronotum with a narrower base. It differs from *C. lompei* n. sp. of O. Oxiá, *C. hercules* n. sp. of O. Iti and *C. berrutii* n. sp. of O. Vardoússia in the bigger body size and the shape of the median lobe of the aedeagus, and it differs from *C. karavae* n. sp. of O. Karáva in the smaller body size and the median lobe of the aedeagus less squat.

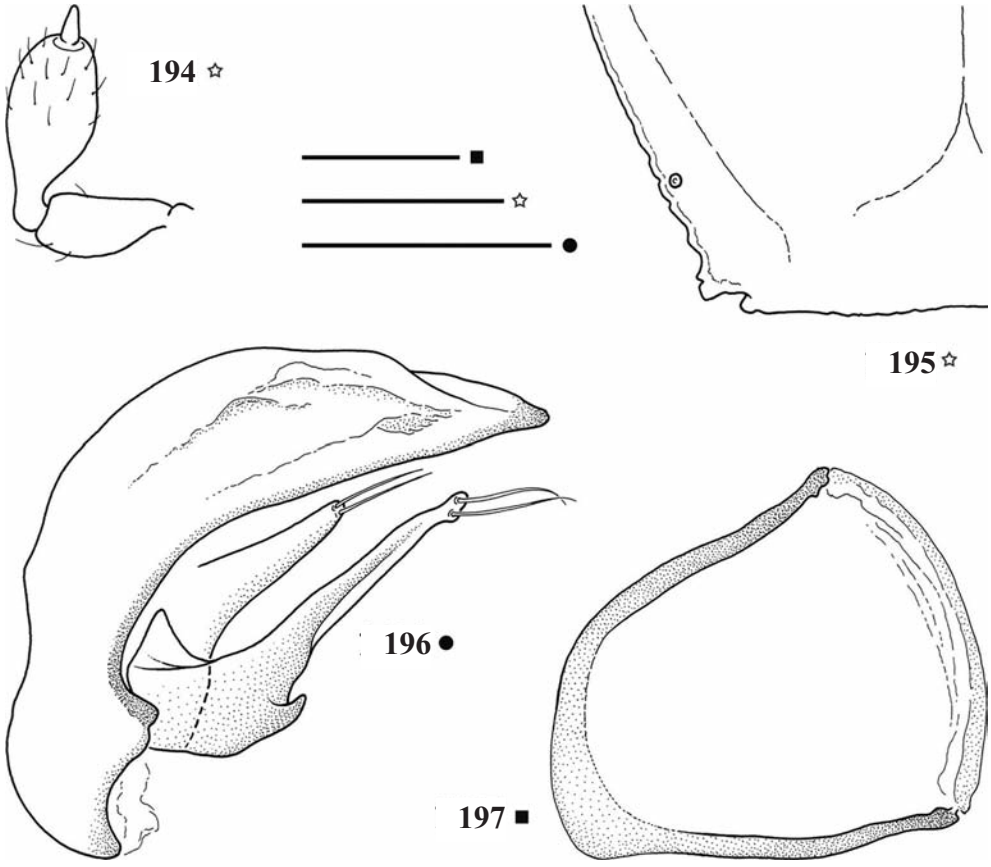
Description. L 1.42-1.63 mm (UL 1.68-2.03 mm). Body (Fig. 193) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the elytral disc, covered with a sparse and short pubescence.

Head robust, but decidedly narrower than the pronotum, anophthalmous, without the median protuberance on the epistome. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the epistome slightly convex. Two supraorbital setae on each side, relatively close to each other, on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth

developed and placed at about the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum only slightly transverse (PW/PL = 1.15 male, 1.16 female), with the maximum width at the base of the anterior third, very narrow at the base, with sides regularly arcuate, subrectilinear before the base; slightly but distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 195). Anterior angles rounded, not prominent; the posterior ones obtuse and marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the beginning of the crenellation.

Elytra ovoidal, relatively elongated and not parallel-sided (EL/EW = 1.44 male, 1.42 female), with the maximum width almost in the middle, not emarginate but broadly rounded externally in the preapical area, where there is, just beyond the 9th umbilicate pore, a small tooth bearing a small seta at its apex. Disc slightly convex, subflat; shiny integuments, with a moderately evident microsculpture of isodiametric meshes, with a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a thin but distinct crenellation almost up to the level of the 3rd pore of the umbilicate series; elytral apices separately and broadly rounded. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.



Figures 194-197. *Caecoparvus marchesii* n. sp. 194: maxillary palp; 195: basal angle of the pronotum; 196: aedeagus in lateral view; 197: invaginated segment (scale 0.1 mm).

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series equidistant, the 3rd one slightly shifted towards the disc, the 4th pore decidedly farther and inserted beyond the limit of the basal third of the elytron and at the level the 2nd discal seta; the 5th pore placed before the beginning of the apical third of the elytron; 5th, 6th and 7th not equidistant from each other, with the 5th and 6th a little closer; 5th and 7th slightly shifted onto the disc; 7th, 8th and 9th equidistant, with the 7th and 8th slightly closer; the 8th decidedly shifted onto the disc and aligned approximately with the 9th umbilicate pore, but not with the 3rd discal seta. Discal pores three in number and approximately aligned: the 1st and 3rd are placed, respectively, almost at the level of the 2nd and before the 7th umbilicate pore, while the 2nd is placed at the level of the 4th umbilicate pore.

Aedeagus (Fig. 196) relatively big, with median lobe decidedly bottle-necked in the prebulbar part, long, poorly and unevenly curved; median lobe not twisted on the right side, with the inferior margin distally subrectilinear and the apical blade, in lateral view, subtriangular, stocky and rounded. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified. Parameres unequal, provided with two apical setae each; right paramere shorter than the left one.

Etimology. We dedicate this new species to our friend Giampietro Marchesi, a speleologist and current Chairman of the Italian Speleological Society, for his friendship and support to our missions in Greece.

Distribution and ecology. *C. marchesii* n. sp. is currently known only from the type locality, situated in O. Óthris (nom. Fthiótida), above the village of Agios Ioánnis, at 640 m a.s.l. This site, located on a slope facing South, is characterized by a *Quercus* tree cover on a calcareous substrate. *C. marchesii* n. sp. was collected under rocks buried deep in red clay on the bottom of a flared gully and, at that time, very humid (Fig. 243).

Caecoparvus karavae n. sp.

Locus typicus. Greece nom. Kardítsa, O. Karáva fagetum at m 1550.

Examined material (Figs. 4, 198-203). Holotypus male, "Grecia nom. Kardítsa, O. Karáva fagetum a m 1550, 17.VI.2002, Giachino & Vailati legit" (CGi). PTT: 4 male and 4 females, "Grecia nom. Kardítsa, O. Karáva fagetum a m 1550, 17.VI.2002, Giachino & Vailati leg." (CGi, CVa).

Diagnosis. A *Caecoparvus* belonging to the group of *C. hercules* for the shape of the median lobe of the aedeagus and the medium-large body size. Relatively isolated within this group, it seems to be closer to *C. daccordii* n. sp. of O. Oxiá for the shape of the median lobe of the aedeagus, but it differs from it in the larger body size and the less developed frontal horn. It differs from *C. lompei* n. sp. of O. Oxiá, *C. hercules* n. sp. of O. Iti and *C. berrutii* n. sp. of O. Vardoússia in the bigger body size and the shape of the median lobe of the aedeagus, while it differs from *C. marchesii* n. sp. of O. Óthris in the larger body size and the median lobe of the aedeagus stockier.

Description. L 1.71-1.92 mm (UL 1.98-2.50 mm). Body (Fig. 198) long and narrow, depigmented, reddish-testaceous, with elytra and abdomen lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the disc of the pronotum, covered with a sparse and short pubescence.

Head (Fig. 4) robust, but decidedly narrower than the pronotum, anophthalmous, bearing on the epistome a median horn well developed, but stocky, broad at the base and not pointed. Antennae frail, distinctly moniliform starting from the fourth antennomere, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the epistome subrectilinear. Two supraorbital setae on each side, not very close to each other, on lines converging posteriorly, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 201).

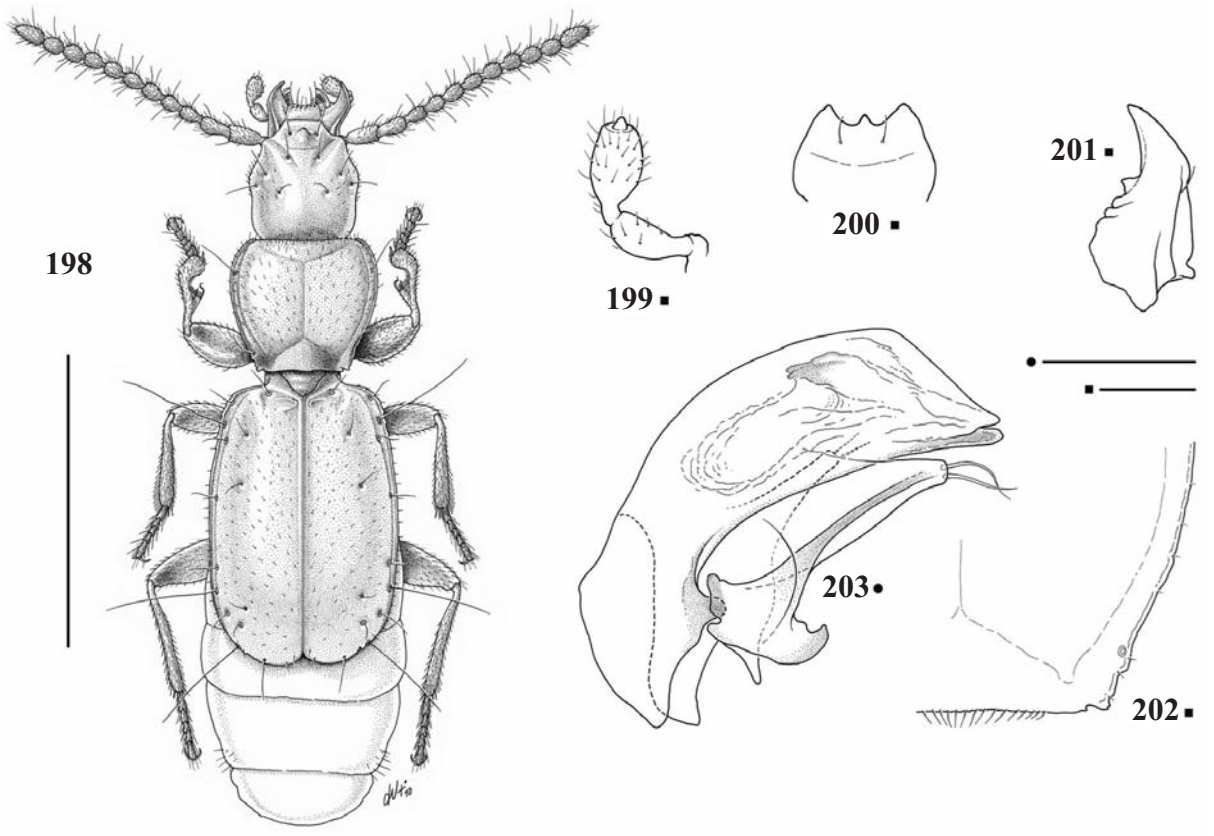


Figure 198. *Caecoparvus karavae* n. sp., habitus of the male (scale 1 mm).
Figures 199-203. *Caecoparvus karavae* n. sp. 199: maxillary palp; 200: profile of the labium; 201: right mandible; 202: basal angle of the pronotum; 203: aedeagus in lateral view (scale 0.1 mm).

Pronotum only slightly transverse (PW/PL = 1.13 male, 1.15 female), with the maximum width at the base of the anterior third, narrow at the base, with sides regularly arcuate, only imperceptibly sinuate before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 202). Anterior angles rounded, not prominent; the posterior ones obtuse but marked. Disc faintly convex, with a short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, relatively elongated and poorly parallel-sided (EL/EW = 1.45 male, 1.44 female), with the maximum width almost at the half, not emarginate yet broadly rounded externally in the preapical area, where there is, just beyond the 9th umbilicate pore, a small tooth bearing a small seta on its apex. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation up to the level of the 3rd discal seta; elytral apices separately and broadly rounded. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the first, and slightly shifted towards the disc, 4th pore decidedly farther and placed well beyond the limit of the basal third of the elytron and beyond the 2nd discal seta; the 5th pore placed at the beginning of the apical third of the elytron and slightly shifted towards the disc; the 5th and 6th slightly closer to each other than the 6th and 7th; the 7th slightly shifted onto the

disc; the 8th decidedly shifted onto the disc and approximately aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant. Discal pores three in number and approximately aligned: the 1st and 3rd are placed, respectively, between the 2nd and 3rd pore and before the 7th umbilicate pore, while the 2nd is located slightly before the 4th pore.

Aedeagus (Fig. 203) big, with median lobe slightly bottle-necked in the prebulbar part, poorly curved; median lobe not twisted on the right side, with the apical blade, in lateral view, shaped like a rounded bifid beak. Endophallus without a real sclerified copulatory piece, but bearing in the central part some thickened muscle bundles, not sclerified, and two distinct areas with structures of aggregate scales. Parameres unequal, provided with two apical setae each; left paramere shorter than the right one and decidedly wider.

Etimology. From the Oros Karáva, the type locality of this new species.

Distribution and ecology. *C. karavae* n. sp. is currently known only from the type locality, situated in O. Karáva (nom. Kardítsa), in a beech forest at 1,550 m a.s.l. on the NE slope of the mountain, on a calcareous substrate. In this site, *C. karavae* n. sp. was found under rocks buried deep in red clay, in syntopy with another interesting anilline: *Iason karametasi* n. sp., described in this paper.

Genere ***Iason*** nov. gen.

Type species: *Iason argonauta* n. sp.

Diagnosis. A genus of large-sized Anillina (2.20-3.38 mm), belonging to the Phyletic series of *Caecoparvus* (*sensu novo*) for the pronotum with sides crenellate before the basal angles, and the base deeply emarginate on the sides, the elytra not emarginate apically, the presence of three setae on the elytral disc. It differs from *Caecoparvus* in the lack of the labial tooth.

Description. Body elongated, depigmented, elytra not emarginate preapically on the external side, separately rounded and not covering the last abdominal segments.

Head big but not hypertrophic, with antennae frail, elongated, having moniliform articles. Cephalic chaetotaxy composed of two supraorbital setae on each side, close together and placed on lines neatly converging, and an ocular seta. Front bearing, in some species, two distinct longitudinal impressions, and sometimes a slight median protuberance. Labium without the median tooth.

Pronotum from subquadrate to slightly transverse, with a narrow base, provided with an anterior seta and a posterior one inserted much before the posterior angles, at the beginning of the crenellation. Sides provided with a evident crenellation before the basal angles; base deeply emarginate on the sides before the basal angles.

Elytra bearing an umbilicate series of type B, with the 5th and 6th umbilicate pores very close together, almost paired, and three discal setae.

Legs relatively robust, with two protarsomeres dilated in the male; tibiae flattened, metatibiae bearing on the internal side, in some species (*argonauta* n. sp., *paglianoi* n. sp., *karametasi* n. sp.), a long crenellation with a probable cleaning function.

Aedeagus small, characterized by a median lobe twisted lobe on the right side, with a variable curvature and the apical blade well developed, bearing a well sclerified copulatory piece of a complex shape. Parameres bearing two apical setae, asymmetrical, with the left one longer than the right one.

Etimology. *Iason*, the name reminds Jason, the legendary leader of the Argonauts from the city of Vólos, located at the foot of the Oros Pílio, searching for the Golden Fleece. The name of the taxon is masculine.

Remarks. As pointed out in the diagnosis, *Iason* nov. gen., which belongs to the Phyletic series of *Caecoparvus* (*sensu novo*) for the general shape of the body, the elytra not emarginate apically, the elytral chaetotaxy of type B with three discal setae, is closer really to *Caecoparvus* for the crenellation of the sides of the pronotum, while it differs from it in the absence of the labial tooth.

The distribution area of the currently known species of *Iason* nov. gen., includes the eastern coastal chain of central and northern Greece (from Oros Karaboutáki to Oros Olimbos), it overlaps partly with that of *Caecoparvus* and offers interesting zoogeographic considerations which will be discussed later in the proper section.

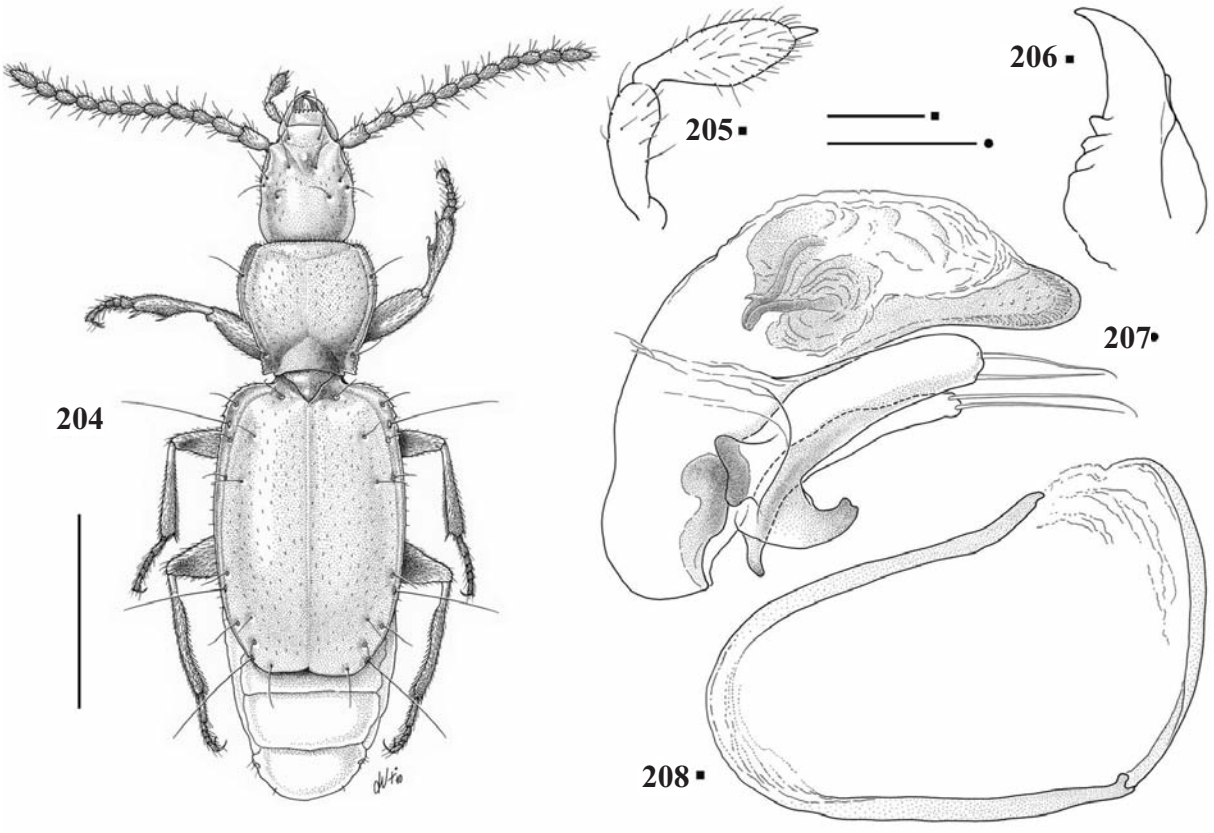


Figure 204. *Iason argonauta* n. sp., habitus of the male (scale 1 mm).
Figures 205-208. *Iason argonauta* n. sp. 205: maxillary palp; 206: right mandible; 207: aedeagus in lateral view; 208: invaginated segment (scale 0.1 mm).

Key to the species of the genus *Iason*

1. Species of bigger size (L ≥ 3.0 mm) 2
–. Species of smaller size (L < 3.0 mm).....3

2. L > 3.20 mm. Species of O. Kaliakoúda.....***I. rossii*** n. sp.
–. L < 3.20 mm. Aedeagus as in Fig. 207. Species of O. Pílio .....***I. argonauta*** n. sp.

3. (2). Species of small sizes (L < 2.40 mm). Species of O. Olimbos.....***I. olympicus*** (Casale, 1977)
–. Species of medium sizes (L between 2.40 and 2.80 mm).....4

4. 2nd and 3rd pore of the umbilicate series not aligned with each other (the 3rd one shifted towards the inner margin of the elytral groove (Figs. 221, 228).....5
–. 2nd and 3rd pore of the umbilicate series aligned with each other (the 3rd and 2nd aligned). (Figs. 209, 223).....6

5. Species of central Greece (O. Karaboutáki near Filáki, nom. Magnissía). L = 2.60 mm .....***I. beroni*** n. sp.
–. Species of the Peloponnese (O. Panahaïkó). Aedeagus as in Fig. 231. L = 2.66 mm...***I. fulvii*** n. sp.

6. (4). Bigger sizes (2.44-2.78 mm). Aedeagus as in Fig. 226. Species of O. Karáva .....***I. karametasi*** n. sp.
–. Smaller sized (2.33-2.35 mm). Aedeagus as in Fig. 214. Species of O. Mavrovoúni..... .....***I. paglianoi*** n. sp.

Iason argonauta n. sp.

Locus typicus. Greece, nom. Magnissía, O. Pílio, m 950, road Hánia-Makriráhi.

Examined material (Figs. 13, 125, 204-208). Holotypus male, "Grecia nom. Magnissía, O. Pílio, m 950, str. Hánia-Makriráhi, 7.VI.2006, P.M. Giachino & D. Vailati leg." (CGi). Paratypi: 13 males and 4 females, "Grecia nom. Magnissía, O. Pílio, m 950, str. Hánia-Makriráhi, 7.VI.2006, P.M. Giachino & D. Vailati leg."; 1 female, "Grecia, nom. Magnissía, O. Pílio, m 980, str. Hánia-Makriráhi, 7.VI.1992, P.M. Giachino & D. Vailati leg." (MCSNB, CCa, CGi, CPa, CVa).

Diagnosis. *Iason argonauta* n. sp. differs from *I. paglianoi* n. sp. of O. Mavrovoúni and *I. karametasi* n. sp. of O. Karáva in the different shape of the aedeagus, with the apical blade of the median lobe, in lateral view, stockier and rounded. It differs from *I. fulvii* n. sp. of O. Panahaïkó in the median lobe of the aedeagus less arcuate. It differs from *I. rossii* n. sp. of O. Kaliakoúda in its smaller size, and it differs from *I. olympicus* of O. Olimbos in the larger size. Finally, it differs from *I. beroni* n. sp. of O. Karaboutáki in the pronotum less narrowed at the base.

Description. L 3.00 to 3.11 mm (UL 3.66-3.75 mm). Body (Fig. 204) long and narrow, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but decidedly narrower than the pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; frons with two short longitudinal impressions and provided with a slight median protuberance (Fig. 125); the anterior margin of the clypeus slightly subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind than the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 206).

Pronotum subquadrate (PW/PL = 1.09 male, 1.10 female), with the maximum width at the base of the anterior third, narrow at the base, with sides poorly curved, subrectilinear before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 13). Anterior angles rounded, very poorly prominent; the posterior ones almost right and marked. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fifth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, slightly elongated and not parallel-sided (EL/EW = 1.44 male, 1.41 female), with the maximum width about in the centre, not emarginate yet broadly rounded externally in the preapical area. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation almost up to the height of the 4th pore of the umbilicate series; elytral apices separately rounded and slightly truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter with the 1st, 3rd pore slightly shifted towards the disc; the 4th pore decidedly farther and inserted almost at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed at the beginning of the apical third of the elytron; 5th and 6th close together, almost paired; the 7th slightly, the 8th decidedly shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th not equidistant from each other, with the 8th closer to the 9th. Discal pores three in number and not well aligned with each other (the 1st is more shifted toward the inside of the disc): the 1st and 3rd are

placed between the 2nd and 3rd umbilicate pore and just before the 7th, while the 2nd is located at the level of the 4th pore of the umbilicate series.

Aedeagus (Fig. 207) relatively small, with median lobe slightly bottle-necked in the prebulbar part, little arcuate, twisted lobe on the right side, with blade broadly rounded apex and squat. Endophallus provided with a sclerified copulatory piece complex, often folded posterior on itself. Parameres unequal, provided with two apical setae each; Parameres longer than the left and right remarkably larger.

ETIMOLOGY. Dedicated to the Argonauts, the legendary sailors who, under the leadership of Jason, left the city of Vólos (located at the foot of the Oros Pílio) in search of the Golden Fleece.

DISTRIBUTION AND ECOLOGY. *I. argonauta* n. sp. is currently known only from two sites close to each other, located in O. Pílio (nom. Magnissía), along the road from Hánia to Makriráhi. The two sites situated on the NE slope at an altitude between 950 and 980 m a.s.l. are characterized by a cover of *Fagus* on a schist substrate. The first specimen of this new species was found, which is rather odd for an anilline, in a trap baited with cheese and placed in the Superficial Subterranean Environment at the site at the height of 980 m. Subsequent research conducted in a flared gully, at an altitude of 950 m allowed the finding in series of *I. argonauta* n. sp. under rocks buried deep in red clay. On the occasion of this finding, on 7.VI.2006, the gully still had few snow patches with an air temperature of 11.3 °C, and a soil temperature of 5.5 °C.

Iason paglianoi n. sp.

LOCUS TYPICUS. Greece, nom. Magnissía, O. Mavrovoúni, above Kalamáki, m 640.

EXAMINED MATERIAL (Figs. 5, 209-214). Holotypus male, "Grecia, nom. Magnissía, O. Mavrovoúni, sopra Kalamáki, m 640, 7.VI.2006, Giachino & Vailati leg." (CGi). Paratypi: 2 males, "Grecia, nom. Magnissía, O. Mavrovoúni, sopra Kalamáki, m 640, 7.VI.2006, Giachino & Vailati leg." (CGi, CVa).

DIAGNOSIS. *Iason paglianoi* n. sp. differs from all other known species of the genus, with the exception of only *I. olympicus* of O. Olimbos in the smaller size. It differs from *I. argonauta* n. sp. of O. Pílio and *I. fulvii* n. sp. of O. Panahaïkó in the apical blade of the median lobe of the aedeagus less squat, while it differs from *I. karametasi* n. sp. of O. Karáva in the different curvature of the median lobe of the aedeagus. It differs from *I. olympicus*, besides in the bigger size, in the position of the second discal seta more shifted toward the base.

DESCRIPTION. L 2.33-2.35 mm (UL 2.75-2.78 mm). Body (Fig. 209) long and narrow, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head (Fig. 5) robust, but decidedly narrower than the pronotum, anophthalmous. Antennae frail, moniliform but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; frons with two short and slight longitudinal impressions; anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 212).

Pronotum subquadrate (PW/PL = 1.05 male), with the maximum width at the base of the anterior third, narrow at the base, with sides slightly arcuate, slightly sinuate before the base, distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 213). Anterior angles rounded, very poorly prominent; the posterior ones almost right and marked. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior sixth; basal setae inserted much before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, elongated and not parallel-sided (EL/EW = 1.51 male), with the maximum width almost in the centre, not emarginate yet broadly rounded externally in the preapical area. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri very marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation almost up to the height of the 4th pore of the umbilicate series; elytral apices separately rounded, not truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st, 3rd pore not shifted toward the disc; 4th pore decidedly farther and inserted almost at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed at the beginning of the apical third of the elytron; 5th and 6th close together, almost paired; the 7th slightly, the 8th decidedly shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th equidistant. Discal pores three in number and not well aligned with each other (the 1st is shifted toward the inside of the disc): the 1st and 3rd are placed, respectively, between the 2nd and 3rd umbilicate pore and just before the 7th, while the 2nd is located at the level of the 4th pore of the umbilicate series.

Aedeagus (Fig. 214) relatively small, with median lobe slightly bottle-necked in the prebulbar part, poorly arcuate, twisted on the right side, with the apical blade stocky and, in lateral view, subtriangular. Endophallus provided with a complex sclerified copulatory piece, folded several times on itself. Parameres unequal, provided with two apical setae each; right paramere shorter than the left one.

Female unknown.

ETIMOLOGY. We are pleased to dedicate this new species to our friend Guido Pagliano, a specialist of Hymenoptera, and a research fellow in Greece in the spring of 1992.

DISTRIBUTION AND ECOLOGY. *I. paglianoi* n. sp. is currently known only from the type locality, located in the *Quercus* forest above the village of Kalamáki, at 640 m a.s.l., on the O. Mavrovoúni (nom. Magnissía). In this site *I. paglianoi* n. sp. was collected under rocks buried deeply, in red clay, in the bed of a semi-dry gully.

Iason olympicus (Casale, 1977) nov. comb.

Winklerites olympicus Casale, 1977: 77.
Winklerites olympicus Casale: Casale et al.,1990: 556.
Winklerites olympicus Casale: Löbl & Smetana, 2003: 240.
Winklerites olympicus Casale: Lorenz, 2005: 205.

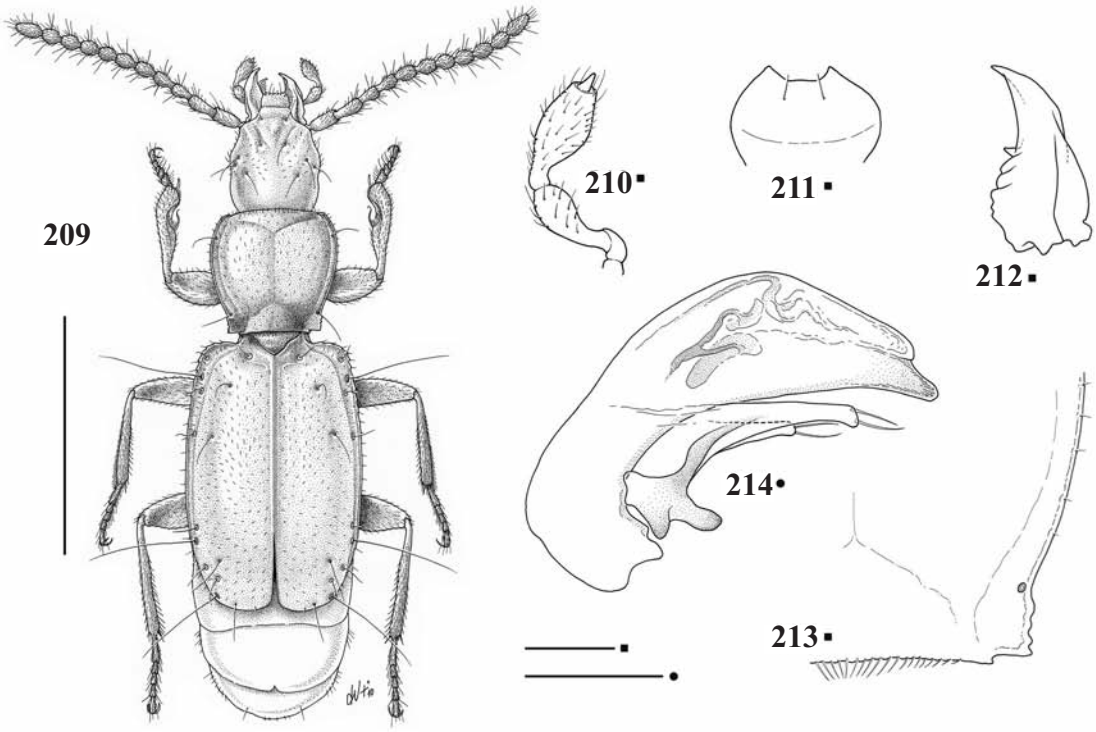
LOCUS TYPICUS. NE Greece, Olympo Mt. (E slope), m 900.

EXAMINED MATERIAL (Figs. 215-216). Holotypus female, "Grecia Nord Orientale, M Olympo di Tessaglia (vers. E), m 900 c.a, 18.VII.76, A. Casale leg." (CCa).

NOTE: Casale (1977), having at his disposal at the time of the description a single female specimen, attributed *olympicus* doubtfully to the genus *Winklerites* Jeannel, 1937. The revision of the Anillina of Greece which is given in this contribution permits us now, on the basis of diacritical characters detectable also on the female specimens, such as the shape of the basal angles and of the base of the pronotum, the absence of the labial tooth, the presence of an ocular seta besides the two supraorbital ones, and the presence of three discal setae on the elytra, to assign *olympicus* Casale, 1977, to the genus *Iason* nov.gen.

DIAGNOSIS AND REDESCRIPTION. *Iason olympicus*, currently known on a single female specimen, differs from all other known species of the genus in its smaller size. It differs from *I. paglianoi* n. sp. of O. Mavrovoúni, a species geographically closer, also in the more rearward position of the second discal seta toward the apex.

L mm 2.2 (UL 2.4 mm). Body (Fig. 215) long and very narrow, depigmented, pale rufo-testaceous with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the elytral disc, covered with a sparse and short pubescence.



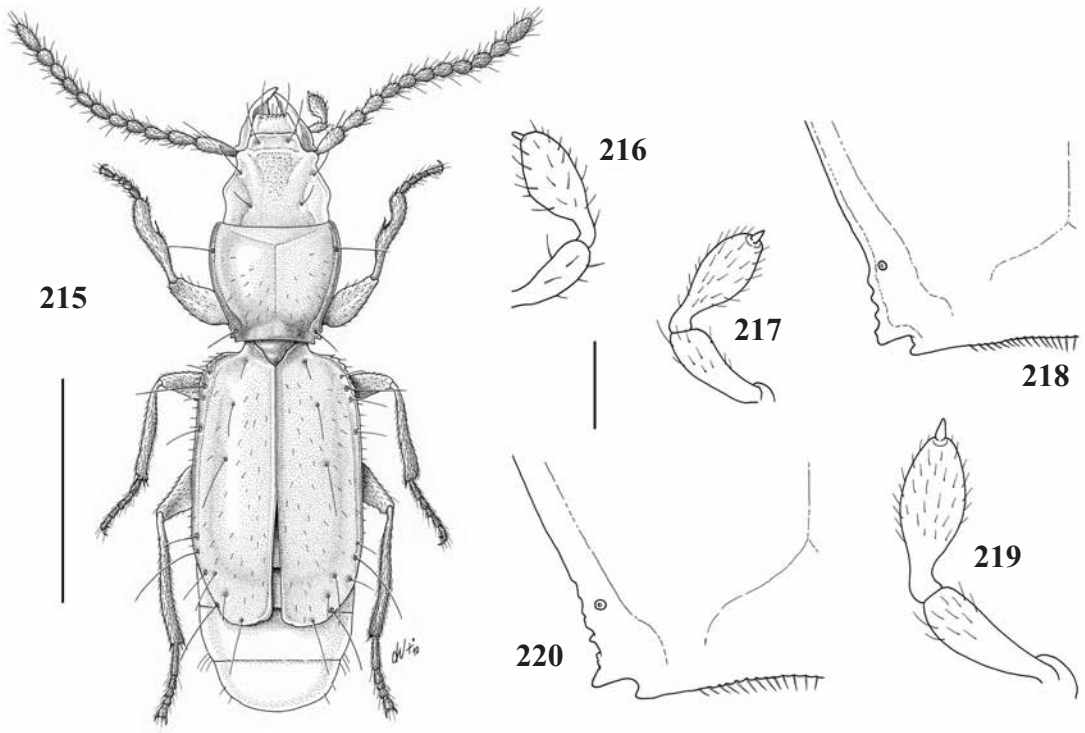


Figure 209. *Iason paglianoi* n. sp., habitus of the male (scale 1 mm).
Figures 210-214. *Iason paglianoi* n. sp. 210: maxillary palp; 211: profile of the labium; 212: right mandible; 213: basal angle of the pronotum; 214: aedeagus in lateral view (scale 0.1 mm).
Figure 215. *Iason olympicus*, habitus of the female (from Casale, 1977, redrawn, scale 1 mm).
Figures 216-220. *Iason* spp. 216: *I. olympicus* Casale, maxillary palp (from Casale 1977, redrawn); 217: *I. beroni* n. sp., maxillary palp; 218: idem, basal angle of the pronotum; 219: *I. rossii* n. sp., maxillary palp; 220: idem, basal angle of the pronotum (scale 0.1 mm).

Head robust, but decidedly narrower than the pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.13 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides poorly arcuate, slightly sinuate before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles. Anterior angles rounded, very poorly prominent; the posterior ones acute and prominent. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove narrow and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, elongated and sub-parallel-sided (EL/EW = 1.52 female), with the maximum width almost in the centre, slightly emarginate and broadly rounded externally in the preapical area. Disc poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked, rounded; post-humeral margin denticulate, with a fine but distinct crenellation almost up to the height of the 3rd pore of the umbilicate series; elytral apices separately rounded, not truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore small, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series almost equidistant, 3rd pore slightly shifted towards the disc, the 4th pore farther and inserted well before the limit of the basal third of the elytron and much before the 2nd discal seta; 5th pore placed at the level of the beginning of the apical third of the elytron; 5th and 6th close together, almost paired; the 7th slightly, the 8th decidedly shifted onto the disc and approximately aligned with the 9th umbilicate pore; 7th, 8th and 9th not equidistant, with the 7th and 8th decidedly farther. Discal pores three in number and not well aligned with each other (the 1st one is shifted toward the inside of the disc): the 1st and 3rd are placed, respectively, just beyond the 3rd umbilicate pore and almost at the level of the 7th, while the 2nd is situated well beyond the 4th pore of the umbilicate series.

Male unknown.

Distribution and ecology. *I. olympicus* is currently known only from the type locality situated on the East slope of the O. Olimbos, at about 900 m a.s.l., along the road that leads from Litókhoro to the refuge. The site is characterized by a short stretch of almost pure *Fagetum* among coniferous formations characteristic of the slope, where *I. olympicus* was collected by sieving litter and soil at the base and beneath buried rocks (Casale, 1977).

Iason beroni n. sp.

Locus typicus. Greece, nom. Magnissía, O. Karaboutáki, v. Filáki, Cave of Filáki.

Examined Material (Figs. 217-218, 221). Holotypus female, "Greece, nom. Magnissía, O. Karaboutáki, v. Filáki, Cave of Filáki, 12.07.2003, P. Beron leg." (NMNHS).

Diagnosis. *I. beroni* n. sp. differs from *I. rossii* n. sp. of O. Kaliakoúda and *I. argonauta* n. sp. of O. Pílio in the smaller size. It differs from *I. olympicus* of O. Olimbos and *I. paglianoi* n. sp. of O. Mavrovoúni in the larger size; while it differs from *I. karametasi* n. sp. of O. Karáva in the elytra with more parallel sides and the 3rd umbilicate pore closer to the 2nd, with the 2nd discal seta placed at its level.

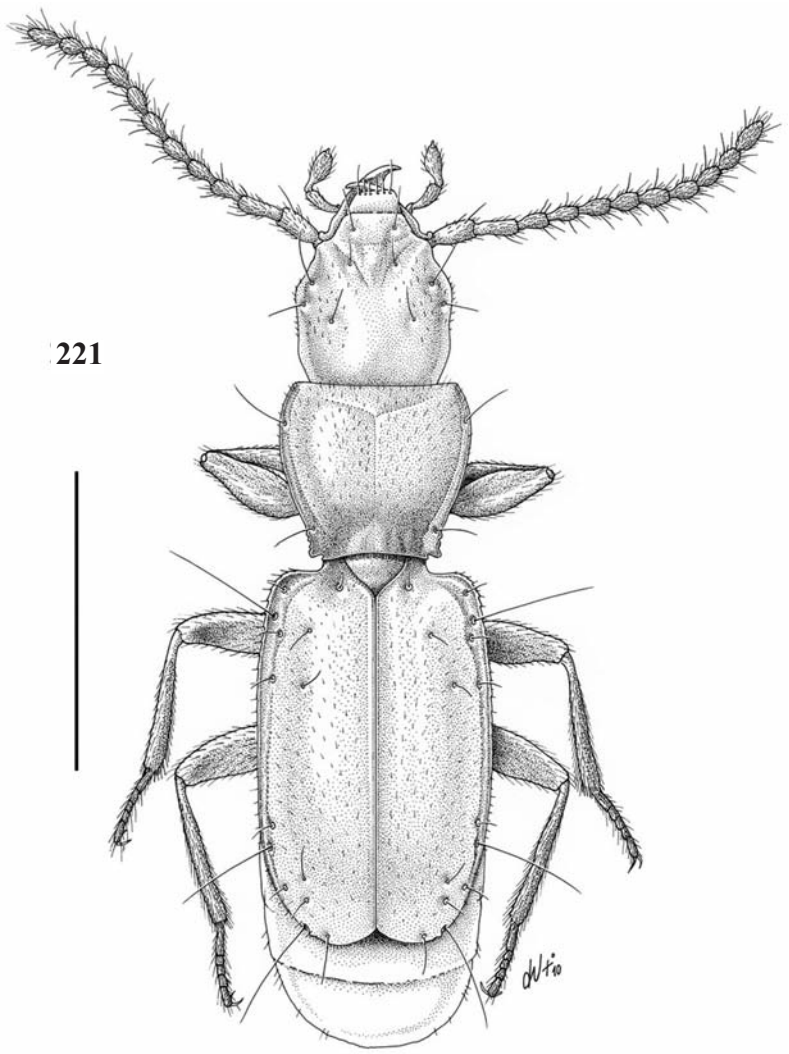


Figure 221. *Iason beroni* n. sp., habitus of the female (scale 1 mm).

DESCRIPTION OF THE FEMALE HOLOTYPUS. L 2.60 mm (UL 3.03 mm). Body (Fig. 221) long and narrow, depigmented, reddish-testaceous with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the elytral disc, covered with a sparse and short pubescence.

Head robust, slightly narrower than pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.14 female), with the maximum width at the level of the base of the anterior third, narrow at the base, with sides slightly arcuate, slightly sinuate before the base, distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 218). Anterior angles rounded, not prominent; the posterior

ones acute and prominent. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove relatively large and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fifth; basal setae inserted before the posterior angles, at the level of the beginning of the crenellation.

Elytra oval, very elongated and sub-parallel-sided (EL/EW = 1.59 female), with the maximum width almost in the centre, not emarginate and broadly rounded externally in the preapical area, bearing an evident small tooth placed after the 9th umbilicate pore. Disc slightly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked, rounded; post-humeral margin denticulate, with a fine but distinct crenellation almost up to the height of the 4th pore of the umbilicate series; elytral apices separately rounded, not truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series not equidistant, with the 2nd and 3rd closer; the 3rd pore remarkably shifted toward the disc; the 4th pore farther and inserted approximately at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed beyond the beginning of the apical third of the elytron; 5th and 6th close together, almost paired, 6th and 7th slightly shifted, the 8th decidedly shifted onto the disc and approximately aligned with the third discal seta and with the 9th umbilicate pore; 7th, 8th and 9th equidistant. Discal pores three in number and aligned with each other: the 1st and 3rd are placed, respectively, at the level of the 3rd umbilicate pore and just before the 7th, while the 2nd is located at the level of the 4th pore of the umbilicate series.

Male unknown.

Etimology. We are pleased to dedicate this new species to its collector, Dr. Petar Beron, former Director of the National Museum of Natural History of Sofia (Bulgaria) and former Vice-President of the Parliament of the Republic of Bulgaria, as a sign of friendship and esteem for the important work of biospeleological research he carried out in the Balkan Peninsula.

Distribution and ecology. *I. beroni* n. sp. is currently known only from the type locality, a cave near Filáki, in the O. Karaboutáki (nom. Magnissía). It is a well about 80 m deep at the base of which, among the debris of the alluvial cone, the only known specimen of the species was found wandering. The external environmental conditions, a hill characterized by a bushy Mediterranean maquis interspersed with cultivated areas, is not particularly favorable to a direct research of the endogean fauna; repeated attempts, conducted by the authors in June for several years, did not permit to find this species neither outside nor in the cave, the coordinates of which were not recorded.

Iason rossii n. sp.

Locus typicus. Greece nom. Evritanía, O. Kaliakoúda, road Méga Horio-Psianá, N slope m 1380.

Examined material (Figs. 219-220, 222). Holotypus female, "Grecia nom. Evritanía, O. Kaliakoúda, strada Méga Horio-Psianá, vers N m 1380, 4.VI.2003, Giachino & Vailati" (CGi).

Diagnosis. *I. rossii* n. sp., known on a single female specimen, differs from all other known species of the genus in large body size.

Description of the female holotypus. L mm 3.38 (UL 4.14 mm). Body (Fig. 222) long and narrow, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, less evident on the elytral disc, covered with a sparse and short pubescence.

Head robust, narrower than pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct; anterior margin of the clypeus subrectilinear.

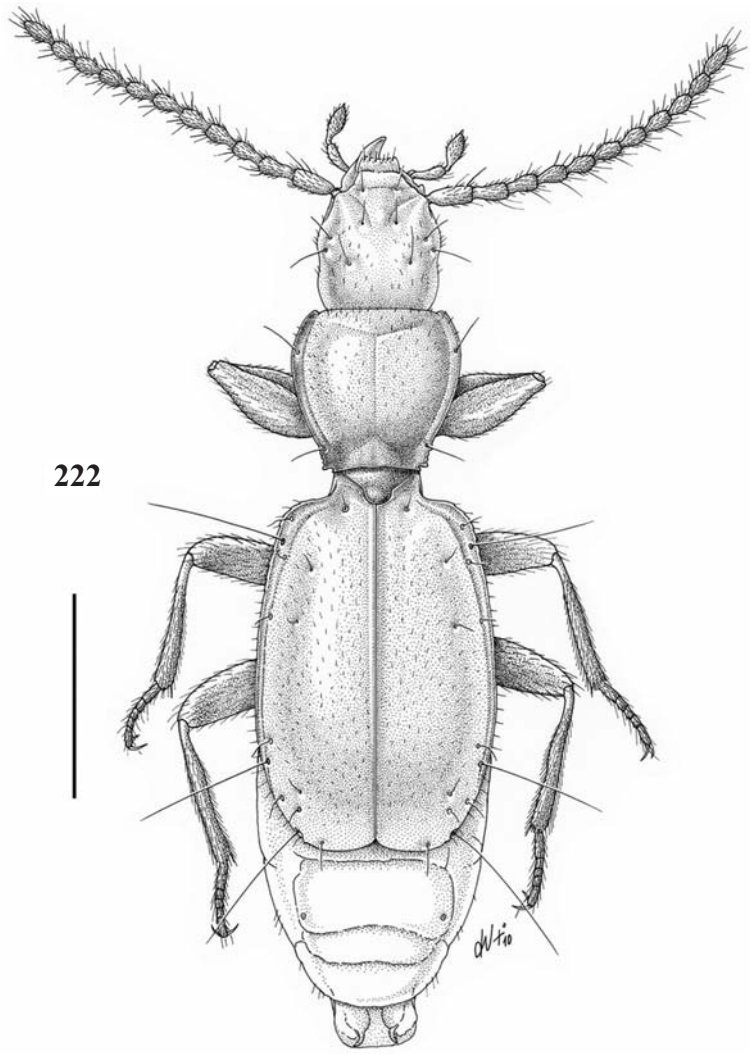


Figure 222. *Iason rossii* n. sp., habitus of the female (scale 1 mm).

Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum subquadrate (PW/PL = 1.07 female), with the maximum width at the base of the anterior fourth, narrow at the base, with sides poorly curved, subrectilinear before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 220). Anterior angles rounded, very poorly prominent; the posterior ones acute and prominent. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted before the posterior angles, at the level of the beginning of the crenellation.

Elytra ovoidal, elongated and not parallel-sided (EL/EW = 1.46 female), with the maximum width almost in the centre, not emarginate and broadly rounded externally in the preapical area, bearing an evident small tooth placed after the 9th umbilicate pore. Disc

poorly convex, subflat; shiny integuments, with a poorly evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked, rounded; post-humeral margin denticulate, with a fine but distinct crenellation almost up to the height of the 3rd pore of the umbilicate series; elytral apices separately rounded, subtroncate. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 8th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 1st, 2nd and 3rd pore of the umbilicate series not equidistant, with the 2nd and 3rd closer; the 3rd pore remarkably shifted toward the disc; the 4th pore farther and inserted approximately at the limit of the basal third of the elytron and at the level of the 2nd discal seta; the 5th pore placed beyond the beginning of the apical third of the elytron; the 5th and 6th close together, almost paired; the 6th and 7th slightly shifted, the 8th decidedly shifted onto the disc and approximately aligned with the third discal seta and with the 9th umbilicate pore; 7th, 8th and 9th equidistant. Discal pores three in number and not aligned with each other (the 1st one is placed more inside the disc): the 1st and 3rd are placed, respectively, almost at the level of the 3rd umbilicate pore and just before the 7th, while the 2nd is located at the level of the 4th pore of the umbilicate series.

Male unknown.

Etimology. We dedicate this interesting species with pleasure, as a token of esteem and friendship, to our friend Walter Rossi of the University of L'Aquila, a specialist of Laboulbeniales (Fungi Ascomycota).

Distribution and ecology. *I. rossii* n. sp. is currently known only from the type locality situated in O. Kaliakoúda along the road Méga Horio-Psianá, in an *Abies* forest on a NNE-facing slope, at an altitude of 1,380 m a.s.l. In this site *I. rossii* n. sp., an abnormal fact for an anilline, was found in a trap, baited with cheese, placed in the superficial subterranean environment in a small gully that developed in the contact zone between limestone and shale, in syntopy with another interesting anilline, collected at sight, *Prioniomus gabriellae* n. sp., described in this paper.

Iason karametasi n. sp.

Locus typicus. Greece nom. Kardítsa, O. Karáva fagetum at m 1550.

Examined material (Figs. 14, 223-227). Holotypus male, "Grecia, nom. Kardítsa, O. Karáva fagetum a m 1550, 17.VI.2002, Giachino & Vailati leg." (CGi). Paratypi: 1 male and 4 females, "Grecia, nom. Kardítsa, O. Karáva fagetum a m 1550, 17.VI.2002, Giachino & Vailati leg." (CGi, CVa).

Diagnosis. *I. karametasi* n. sp. differs from *I. argonauta* n. sp. of O. Pílio and *I. fulvii* n. sp. of O. Panahaïkó in the apical blade of the median lobe of the aedeagus less squat; while it differs from *I. paglianoi* n. sp. of O. Mavrovoúni in the different curvature of the median lobe of the aedeagus. It differs from *I. rossii* n. sp. of O. Kaliakoúda in its smaller size, and it differs from *I. olympicus* of O. Olimbos in the larger body size. Finally it differs from *I. beroni* n. sp. of O. Karaboutáki in the narrower head and the elytra less parallel-sided.

Description. L 2.44-2.78 mm (UL 2.95-3.12 mm). Body (Fig. 223) long and narrow, depigmented, reddish-testaceous, with the appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, but much narrower than the pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct; frons with two short and shallow longitudinal impressions, interspersed with a very faint protuberance; anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed at the level of the anterior margin of the labrum, that is provided with 6 anterior marginal setae (Fig. 225).

Pronotum subquadrate (PW/PL = 1.08 male, 1.09 female), with the maximum width at the base of the anterior third, narrow at the base, with sides poorly arcuate, slightly sinuate before the base, distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 14). Anterior angles rounded, very poorly prominent; the posterior ones acute and marked. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the beginning of the crenellation.

Elytra oval, elongated and not parallel-sided (EL/EW = 1.51 male, 1.50 female), with the maximum width almost in the centre, not emarginate but broadly rounded externally in the preapical area; bearing an evident small tooth placed behind the 9th umbilicate pore. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri very marked, rounded; post-humeral margin denticulate, with a fine but distinct crenellation almost up to the height of the 3rd pore of the umbilicate series; elytral apices separately rounded, not truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to 2nd than the latter to the 1st, 3rd pore not shifted toward the disc; 4th pore decidedly farther and inserted almost at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed at the level of the beginning of the apical third of the elytron; 5th and 6th close together, almost paired; the 5th and 7th slightly, the 8th decidedly shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th equidistant. Discal pores three in number and not well aligned with each other (the 1st one is shifted toward the inside of the disc): the 1st and 3rd are placed, respectively, between the 2nd and 3rd umbilicate pore and just before the 7th, while the 2nd is located at the level of the 4th pore of the umbilicate series.

Aedeagus (Fig. 226) relatively small, with median lobe slightly bottle-necked in the prebulbar part, poorly and irregularly curved; median lobe twisted on the right side, with the apical blade stocky and, in lateral view, subtriangular, rounded at the apex. Endophallus provided with a complex sclerified copulatory piece, consisting of stacked folds. Parameres unequal, provided with two apical setae each; right paramere shorter than the left one.

ETIMOLOGY. We dedicate this new species to our friend Christos Karametas of Pili (Tríkala) as a due acknowledgement for his hospitality and the selfless help he gave us.

DISTRIBUTION AND ECOLOGY. *I. karametasi* n. sp. is currently known only from the type locality, situated on O. Karáva (nom. Kardítsa), in a beech forest at 1,550 m a.s.l. on the NE slope of the mountain, on a calcareous substrate. In this site, *C. karavae* n. sp. was found under rocks buried deep in red clay in syntopy with another interesting anilline: *Caecoparvus karavae* n. sp., described in this paper.

Iason fulvii n. sp.

LOCUS TYPICUS. Greece, nom. Ahaïa, Oros Panahaïkó, above Paraskeví, m 1150, N38°09’23”. E21°59’38”.7.

EXAMINED MATERIAL (Figs. 228-232). Holotypus male, “Grecia, nom. Ahaïa, Oros Panahaïkó, sopra Paraskeví, m 1150, N38°09’23”. E21°59’38”.7, 1.VI.2006, Giachino & Vailati leg.” (CGi).

DIAGNOSIS. *I. fulvii* n. sp. differs from *I. paglianoi* n. sp. of O. Mavrovoúni and *I. karametasi* n. sp. of O. Karáva in the apical blade of the median lobe of the aedeagus stockier, while it differs from *I. argonauta* n. sp. of O. Pílio in the different curvature of the median lobe of the aedeagus. It differs from *I. rossii* n. sp. of O. Kaliakoúda in its smaller size, and it differs from *I. olympicus* of O. Olimbos in the larger body size. Finally, it differs from *I. beroni* n. sp. of O. Karaboutáki in the elytra wider, less parallel-sided.

Description of the male holotypus. L 2.66 mm (UL 3.19 mm). Body (Fig. 228) long and narrow, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head robust, narrower than pronotum, anophthalmous. Antennae frail, moniliform, but with antennomeres slightly elongated, exceeding neatly the base of the pronotum when stretched backwards. Fronto-clypeal furrow distinct, anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines neatly converging backwards, and an ocular seta. Mandibles of normal length, simple, without dorsal ridges, right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum subquadrate (PW/PL = 1.07 male), with the maximum width at the base of the anterior third, narrow at the base, with sides poorly curved, subrectilinear before the base; distinctly crenellate before the basal angles. Base distinctly emarginate laterally before the basal angles (Fig. 230). Anterior angles rounded, not prominent; the posterior ones acute and marked. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove wide and flattened, slightly enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fourth; basal setae inserted much before the posterior angles, at the beginning of the crenellation.

Elytra oval, slightly elongated and not parallel-sided (EL/EW = 1.48 male), with the maximum width almost in the centre, not emarginate but broadly rounded externally in the preapical area; bearing a evident small tooth placed behind the 9th umbilicate pore. Disc slightly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri marked, rounded; post-humeral margin denticulate, with a very thin but distinct crenellation almost up to the height of the 3rd pore of the umbilicate series; elytral apices separately rounded and slightly truncated. Marginal groove very wide anteriorly, gradually tapering posteriorly and evident up to the height of the 9th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore of medium size, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st, 3rd pore slightly shifted towards the disc, the 4th pore decidedly farther and placed almost at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed at the beginning of the apical third of the elytron; the 5th and 6th close together, almost paired; the 8th decidedly shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore; 7th, 8th and 9th almost equidistant from each other. Discal pores three in number and not well aligned with each other (the 1st one is more shifted toward the inside of the disc): the 1st and 3rd are placed, respectively, at the level of the 2nd umbilicate pore and just before the 7th, while the 2nd is located roughly at the level of the 4th pore of the umbilicate series.

Aedeagus (Fig. 231) relatively small, with median lobe not bottle-necked in the prebulbar part, regularly and very curved; median lobe twisted on the right side, with the apical blade stocky and broadly rounded. Endophallus provided with a complex sclerified copulatory piece, made of an elongated fanera, bent, spoon-shaped apically. Parameres unequal, provided with two apical setae each; left paramere longer than the right one and remarkably wider.

Etimology. We dedicate this new species with pleasure to Fulvio, one of the authors' son (P.M.G.).

Distribution and ecology. *I. fulvii* n. sp. is currently known only from the type locality situated in O. Panahaïkó, above the village of Paraskeví, at 1,150 m a.s.l. In this site, located at the base of a limestone wall facing North, *I. fulvii* n. sp was collected under a rock buried deep in black humus and red clay, in syntopy with another interesting anilline described in this paper: *Caecoparvus achaiae* n. sp. (Fig. 245).

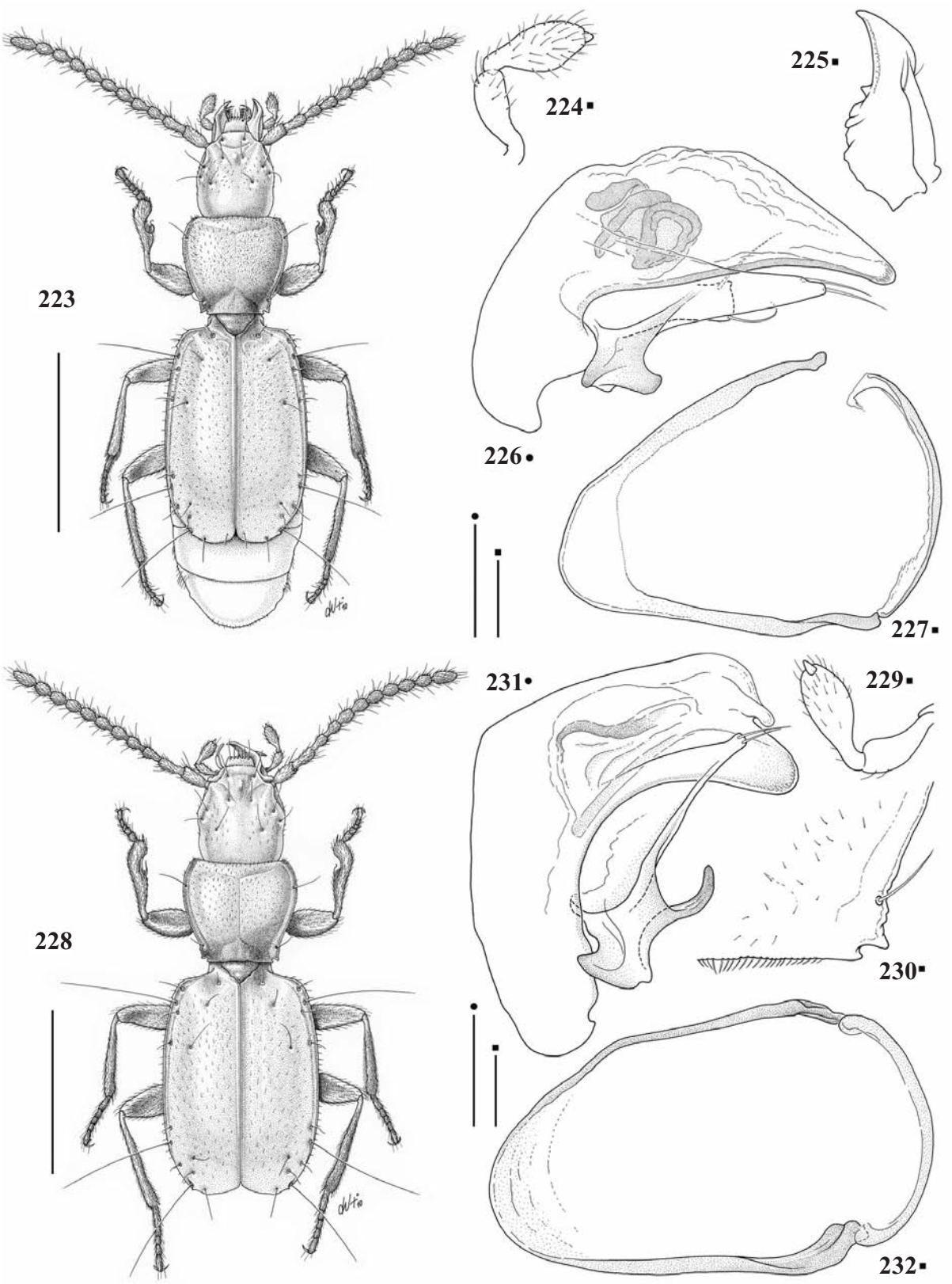


Figure 223. *Iason karametasi* n. sp., habitus of the male (scale 1 mm).
Figures 224-227. *Iason karametasi* n. sp. 224: maxillary palp; 225: right mandible; 226: aedeagus in lateral view; 227: invaginated segment (scale 0.1 mm).
Figure 228. *Iason fulvii* n. sp., habitus of the male (scale 1 mm).
Figures 229-232. *Iason fulvii* n. sp. 229: maxillary palp; 230: basal angle of the pronotum; 231: aedeagus in lateral view; 232: invaginated segment (scale 0.1 mm).

Genus ***Parvocaecus*** Coiffait, 1956

Type species: *Winklerites turcicus* Coiffait, 1956.

Parvocaecus Coiffait 1956: 77.
Winklerites Jeannel (pars): Jeannel, 1937: 282.
Parvocaecus Coiffait: Jeannel, 1963: 185.
Parvocaecus Coiffait: Jeanne, 1973: 88.
Parvocaecus Coiffait: Vigna Taglianti, 1976: 375.
Parvocaecus Coiffait: Löbl & Smetana, 2003: 240.
Parvocaecus Coiffait: Lorenz, 2005: 205.

Diagnosis and redescription. A genus of Anillina of the phyletic lineage of *Caecoparvus* (sensu novo), characterized by small species (L 0.80-2.10 mm), with pentamerous male protarsi and the first two protarsomeres dilated.

Head particularly robust, anophthalmous; antennae mediumly long (exceeding the base of the pronotum when stretched backwards), frail, moniliform. Frons without the frontal horn. Cephalic chaetotaxy composed of two supraorbital setae on each side, close together and placed on slightly converging lines, and an ocular seta. Mandibles elongated, with no dorsal crests, right premolar tooth developed. Labium without any tooth. Maxillary palps with the penultimate article big, ovoidal, and the last one small, poorly differentiated.

Pronotum particularly narrowed at the base, with curved sides, not or poorly sinuate and not crenellate before the basal angles, but bearing a single tooth. Base subrectilinear, not emarginate on the sides. Anterior marginal setae, one on each side, inserted inside the marginal groove; basal setae inserted much before the basal angles.

Elytra more or less ovoidal, elongated, not parallel-sided, with the elytral apex reduced and not or only slightly emarginate at the level of the 7th pore of the umbilicate series; post-humeral margin denticulate, with a thin crenellation, of limited extension. Disc without any trace of striae, umbilicate series of type B (sensu Jeannel, 1963), three discal setae.

Aedeagus with the median lobe of different shapes depending on the group of species, but always small, elongated, not or abruptly curved preapically. Endophallus normally provided with a sclerified copulatory piece, elongated. Parameres as usually provided with two apical setae each.

As far as we currently know, the Greek fauna includes only *P. perpusillus* (Rottenberg 1874) until now considered as belonging to the genus *Winklerites* (Jeannel 1937, 1963; Löbl & Smetana 2003; Lorenz 2005).

Parvocaecus perpusillus (Rottenberg, 1874) nov. comb.

Locus typicus. Saloniki.

Microtyphlus perpusillus Rottenberg ,1874: 329.
Winklerites perpusillus Rottenberg: Jeannel, 1937: 286.
Winklerites perpusillus Rottenberg: Jeannel, 1963: 187.
Winklerites perpusillus (Rottenberg): Vigna Taglianti, 1976: 378.
Winklerites perpusillus (Rottenberg): Löbl & Smetana, 2003: 240.
Winklerites perpusillus (Rottenberg): Lorenz, 2005: 205.

Examined material (Figs. 3, 12, 233-237). Syntypus female, Saloniki, Raymond (white printed); Microtyphlus perpusillus Rott. (handwritten, on thin paper folded more times); TYPUS (red printed); Coll. Letzner / Rottemberg (white printed); Syntypus (red printed); coll. DEI / Müncheberg (white printed); Microtyphlus perpusillus Rott. (white handwritten) (DEI).

Note. Jeannel, in his two monographs of 1937 and 1963, probably based on a misinterpretation of the chaetotaxy of the elytral disc in *Winklerites*, supported by the absence in *perpusillus* of a labial tooth (a characteristic common to all *Winklerites*), assigns this species to this genus. The examination of a co-type of *perpusillus* deposited at DEI, and the revision of the diacritical morphological characters of the Anillina of Greece as a whole, has allowed us to ascertain that *perpusillus* Rottenberg, 1874, belongs to the genus *Parvocaecus* Coiffait, 1956.

Diagnosis and redescription. A small *Parvocaecus*, relatively isolated within this genus for the shape of the median lobe of the aedeagus, in lateral view, not abruptly bent ventrally in the preapical area.

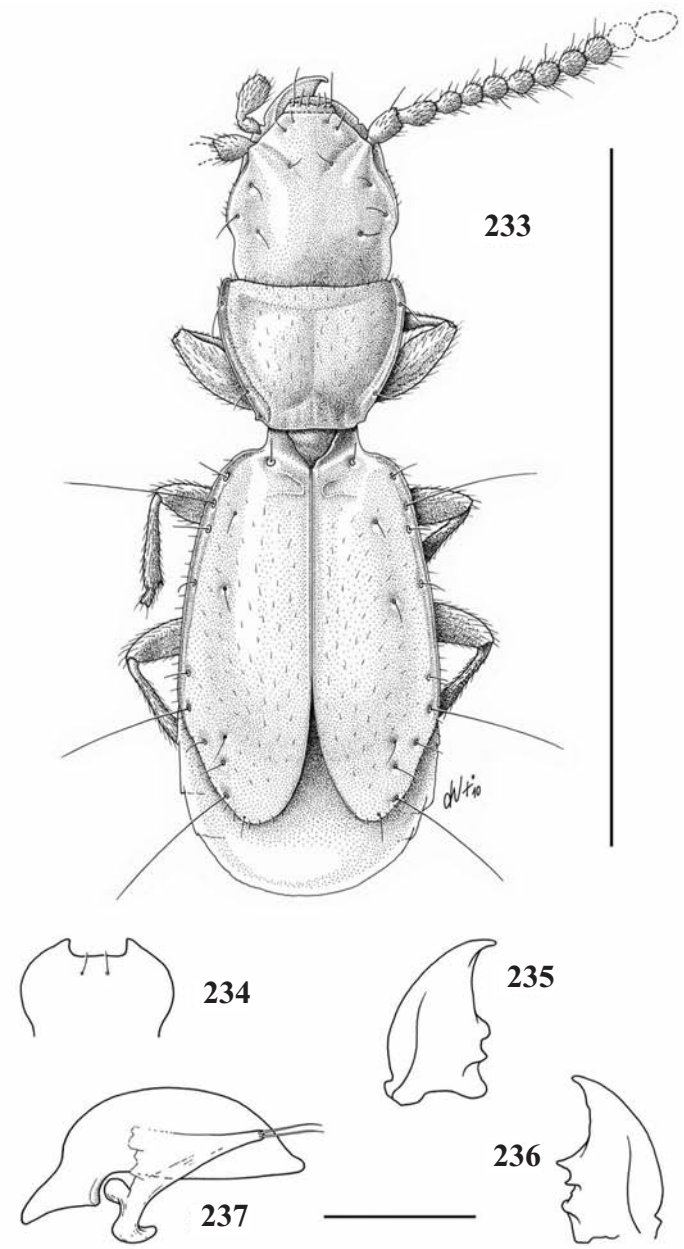


Figure 233. *Parvocaecus perpusillus*, habitus of the female (scale 1 mm).
Figures 234-237. *Parvocaecus perpusillus*. 234: profile of the labium; 235: left mandible; 236: right mandible; 237: aedeagus in lateral view (from Jeannel 1963, redrawn, scale 0.1 mm).

L 0.80-1.11 mm (UL 0.90-1.19 mm) (according to Jeannel, 1963 pars). Body (Fig. 233) long and narrow, depigmented, reddish-testaceous, with appendages lighter, yellow-testaceous; shiny integuments, with an evident microsculpture of an isodiametric mesh, covered with a sparse and short pubescence.

Head (Fig. 3) particularly robust, slightly narrower than the pronotum, anophthalmous. Antennae frail, moniliform, exceeding the base of the pronotum when stretched backwards. Fronto-clypeal furrow indistinct, anterior margin of the clypeus subrectilinear. Chaetotaxy of the ocular area made of two supraorbital setae on each side, placed relatively close to each other and on lines slightly converging backwards, and an ocular seta. Mandibles (Figs. 235-236) of normal length, simple, without dorsal ridges,

right premolar tooth developed and placed more behind the anterior margin of the labrum, that is provided with 6 anterior marginal setae.

Pronotum slightly transverse (PW/PL = 1.28 female), with the maximum width at the base of the anterior fifth, very narrow at the base, with sides slightly and longly curved, subrectilinear before the base; not crenellate before the angles, but bearing a single prebasal tooth. Base subrectilinear and not emarginate laterally (Fig. 12). Anterior angles rounded, poorly prominent; the posterior ones obtuse and blunt. Disc faintly convex, with a very short and sparse pubescence; median groove shallow. Marginal groove moderately wide and flattened, enlarged near the base; anterior marginal setae inserted inside the marginal groove, at the level of the base of the anterior fifth; basal setae inserted much before the posterior angles, at the limit of the basal third.

Elytra ovoidal, elongated and not parallel-sided (EL/EW = 1.41 female), with the maximum width almost at the beginning of the distal third, slightly emarginate distally at the level of the 7th umbilicate pore, and then broadly and separately rounded at the apex. Disc poorly convex, subflat; shiny integuments, with an evident microsculpture of an isodiametric mesh, and a short, sparse and erect pubescence. Humeri poorly marked, rounded; post-humeral margin denticulate, with a very thin crenellation up to the height of the 2nd pore of the umbilicate series. Marginal groove wide anteriorly, gradually tapering posteriorly and evident up to the height of the 7th pore of the umbilicate series.

Chaetotaxy: basal umbilicate pore big, foveate. Umbilicate series of type B; 3rd pore of the umbilicate series slightly closer to the 2nd than the latter to the 1st, 3rd pore not shifted toward the disc; 4th pore decidedly farther and placed almost at the limit of the basal third of the elytron and at the level of the 2nd discal seta; 5th pore placed before the beginning of the apical third of the elytron; 5th, 6th, 7th, 8th and 9th pore almost equidistant; the 7th slightly, the 8th decidedly shifted onto the disc and almost aligned with the posterior discal seta and with the 9th umbilicate pore. Discal pores three in number and not well aligned with each other (the 1st one is slightly shifted toward the inside of the disc): the 1st and 3rd are placed, respectively, between the 2nd and 3rd umbilicate pore and almost at the height of the 7th, while the 2nd is located roughly at the level of the 4th pore of the umbilicate series.

Aedeagus, according to Jeannel (1963) (Fig. 237) relatively small, with median lobe slightly bottle-necked in the prebulbar part, poorly arcuate; median lobe subrectilinear in the apical part, with the apical blade stocky and, in lateral view, subtriangular. Parameres bearing two apical setae each.

Distribution and ecology. *P. perpusillus* is known only on the type material, coming from the surroundings of Thessaloniki, without more details; according to Jeannel (1963) it may be from Mount Kortatch (= O. Hortiátis) East of Thessaloniki. The ecology of this species is not known.

CONCLUSIONS

The analysis of the ecological data available shows that the Anillina species present in Greece should be considered, as a whole, as elements typically deeply endogean and not belonging to the fauna of the forest litter and of the humus layer of the soil. The vast majority of the captures we made in Greece was carried out, in fact, beneath deeply buried rocks, in contact with the layer of clay present under the humus; only in a few cases, always at altitudes above 1,100 m a.s.l., some species of *Caecoparvus* (*muelleri* in O. Taigetos, *meschniggi* in O. Aroánia, and *C. achaiae* n. sp. in O. Panahaïkó) were found in the humus layer. Another interesting fact is that only in rare cases it was possible to capture some Anillina by means of deep traps baited with cheese and placed in the Superficial Subterranean Environment. Overall, in 19 years of research, corresponding to 16 research campaigns and the placement of nearly 4,000 traps, only very few specimens of Anillina were captured with this technique: 3 *Winklerites zaballosi* n. sp., 1 *Iason argonauta* n. sp., and 1 *Iason rossii* n. sp. In only two cases, concerning *P. etontii* n. sp. and *Iason beroni* n. sp. (the latter surely incidental), catches are known in caves.

In no case, however, the different species although found in different habitats, humus, deep endogean and subterranean (meaning in caves), show such morphological differences as to

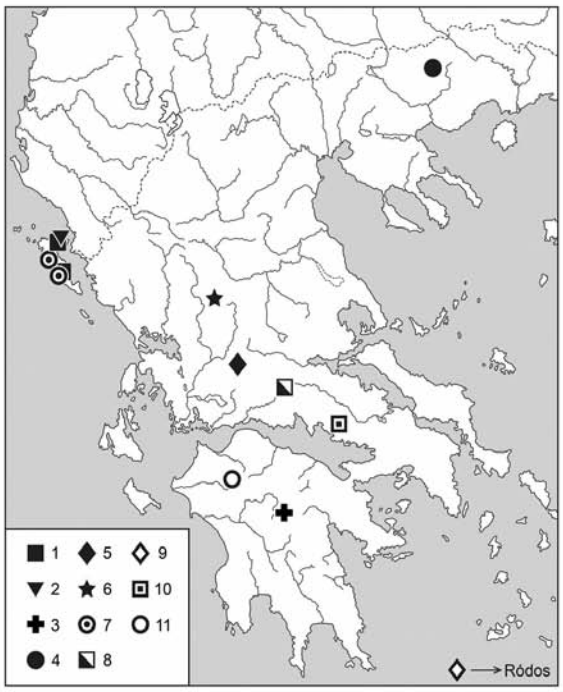


Fig. 238

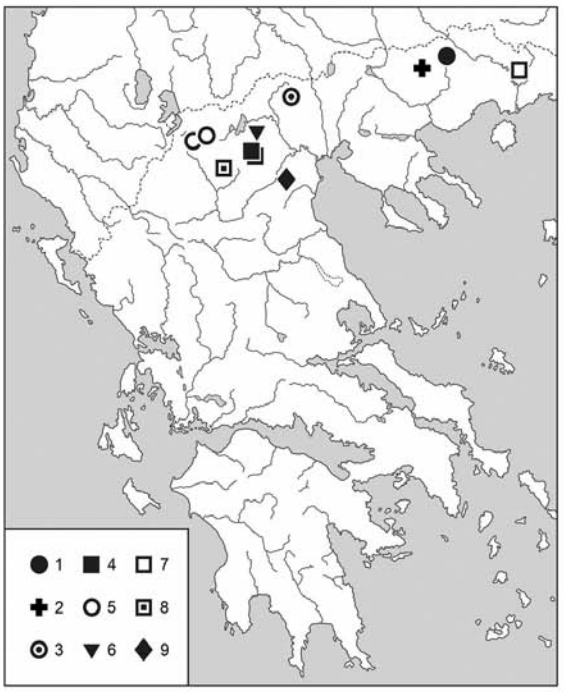


Fig. 239

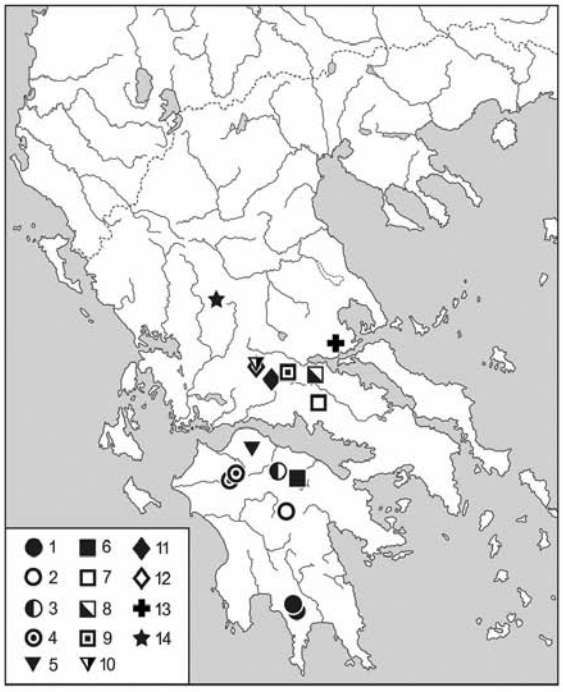


Fig. 240

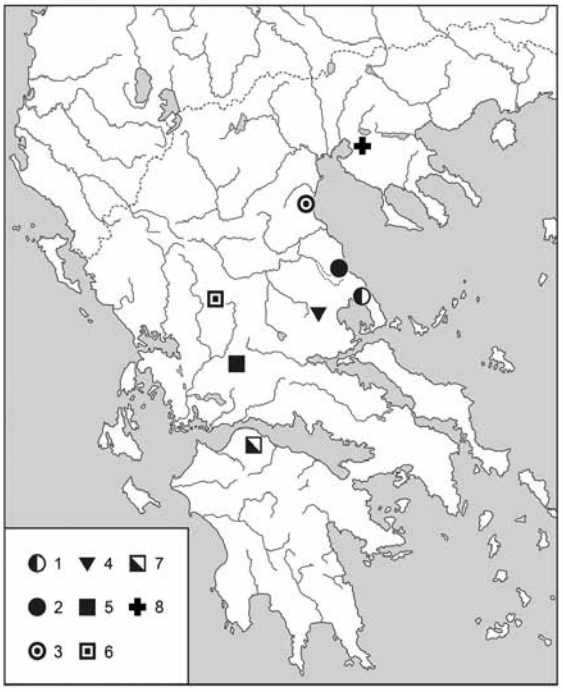


Fig. 241

Figure 238. Distribution of the known Greek species of the genus *Prioniomus*. 1: *P. moczarskii*; 2: *P. cassiopaeus*; 3: *P. peloponnesiacus* n. sp.; 4: *P. etontii* n. sp.; 5: *P. gabriellae* n. sp.; 6: *P. scaramozzinoi* n. sp.; 7: *P. abnormis*; 8: *P. giachinoi*; 9: *P. menozzii*; 10: *P. vailatii*; 11: *P. antonellae* n. sp. (*P. menozzii*, of the Island of Ródos, is outside the map).
Figure 239. Distribution of the known Greek species of the genus *Winklerites* Jeannel. 1: *W. weiratheri*; 2: *W. lagrecai*; 3: *W. luisae* n. sp.; 4: *W. casalei* n. sp.; 5: *W. zaballosi* n. sp.; 6: *W. vailatii*; 7: *W. thracicus* n. sp.; 8: *W. andreae* n. sp.; 9: *W. imathiae* n. sp.
Figure 240. Distribution of the known Greek species of the genus *Caecoparvus* Jeannel. 1: *C. muelleri*; 2: *C. arcadicus*; 3: *C. meschniggi*; 4: *C. sciakyi* n. sp.; 5: *C. achaiae* n. sp.; 6: *C. pavesii* n. sp.; 7: *C. parnassicus*; 8: *C. leonidae* n. sp.; 9: *C. hercules* n. sp.; 10: *C. daccordii* n. sp.; 11: *C. berrutii* n. sp.; 12: *C. lompei* n. sp.; 13: *C. marchesii* n. sp.; 14: *C. karavae* n. sp.
Figure 241. Distribution of the known Greek species of the genus *Iason* n. gen. and *Parvocaecus*. 1: *Iason argonauta* n. sp.; 2: *I. paglianoi* n. sp.; 3: *I. olympicus*; 4: *I. beroni* n. sp.; 5: *I. rossii* n. sp.; 6: *I. karametasi* n. sp.; 7: *I. fulvii* n. sp.; 8: *Parvocaecus perpusillus*.

Fig. 242

Fig. 243

Fig. 244

Fig. 245

Figures 242-244. 242: small gully in a beech forest on the North slope of the O. Áskio (nom. Kozáni) at 1,250 m a.s.l., collection site of *Winklerites andreae* n. sp.; 243: small gully in an oak wood above the village of Agios Ioánnis, at 640 m a.s.l., in the O. Óthris (nom. Fthiótida), collection site of *Caecoparvus marchesii* n. sp.; 244: glade among *Abies* woods at 1,550 m a.s.l., in the O. Ménalon (nom. Arkadía), collection site of *P. peloponnesiacus* n. sp. and *Caecoparvus arcadicus*.
Figure 245. Base of the limestone cliff at 1,150 m a.s.l., above Paraskeví, in the O. Panahaïkó (nom. Ahaïa) collection site of *Iason fulvii* n. sp. and *Caecoparvus achaiae* n. sp.

Fig. 246

Fig. 247

Fig. 248

Figure 246. Clearing among the *Abies* woods at 1,150 m a.s.l., above Kaléntzi, in the O. Erímanthos (nom. Ahaïa) collection site of *C. sciakyi* n. sp. and *Prioniomus antonellae* n. sp.
Figures 247-248. 247: alpine meadow at 1,800 m s.l.m. on the West side of the O. Kokkiniás (Ori Vardoússia, nom. Fokída) collection site of *Caecoparvus berrutii* n. sp., 248: lowland at 1,500 m a.s.l., on the North side of the O. Ziria (Ori Killini, nom. Korinthia) collection site of *C. pavesii* n. sp.

assume some phenomena of adaptive radiation, like those shown, for example, by Casale (2009) for other interesting endogean Carabidae, such as Reicheiina of Sardinia. All the species show morphologies perfectly compatible with those of the typical endogean elements (sensu Coiffait, 1958).

The analysis of the known distribution of the Anillina of Greece highlights two facts in direct antithesis between each other: on the one hand, the remarkable taxonomic increase in their knowledge provided by this paper, where, compared with 15 species previously known, 27 new ones are described, and on the other hand, the fragmentation of our current knowledge. The analysis of the maps of Figs. 238-241, shows clearly, in fact, that the distribution of the species of this subtribe of endogean Carabidae is totally unknown, or nearly so, in areas of great zoogeographic importance such as, purely by way of example, the Pindus mountain chain, most of the mountainous area of central Greece (characterized by relatively low heights but sufficient to host the Anillina), part of the Peloponnese (Central and Western) and several big islands, first of which Crete and Évia, but also Lefkáda, Kefaloniá and Zákinthos. On the other hand, we must also admit and consider that the results achieved so far are due to research not finalized, but occasional, if not random, that occurred during our missions to Greece during the research planned for the finding of other taxa (Carabidae Trechinae and Pterostichinae and Cholevidae Leptodirinae) carried out in different habitats. Another disturbing element in the distribution framework outlined in the distribution maps, is the shortage of material available for the study of the single taxa, almost always known on a few specimens from a single site. The defined pattern in this case is that of substantially stenoendemic elements, each of which seems relevant to a single mountain massif, which, in the absence of more abundant material, is likely but not certain. As we shall see later, really the fragmentation of knowledge prevents us from drawing detailed conclusions about the zoogeographic history of the Anillina of Greece.

The analysis of the maps of Figs. 238-241 shows a partial overlap in the distribution of the different phylogenetic lineages and a strong overlap in that of the single genera. Not always, in fact, it is possible to identify univocally a group of elements as "North-Aegean" and another one as "South-Aegean" in the classic sense of the term (Jeannel, 1929). On the other hand the need to reinterpret Jeannel's concept of "Transaegean trough", we had already discussed this point in the past (Giachino & Vailati, 1993) relative to Anemadinae (Coleoptera, Cholevidae); while the recent contribution by Popov et al. (2004) further clarifies the position and development of the channel which divided the Aegeid into two blocks at the beginning of the Miocene (20.5-19 MY ago). In this case then, as indicated by Giachino (2005), we are in the presence of a group of endogean beetles of very ancient origin in which certainly premiocenic phenomena of differentiation at a genus level are now known worldwide.

Based on the available data we can see how the genus *Prioniomus* (Fig. 238) is uniformly spread, in the North and South of the Transaegean trough (Popov et al., 2004), even with representatives of the same group of species both in northern Greece and in the Peloponnese: *moczarskii* and *cassiopaeus* of the island of Kérkira, *etontii* n. sp. of northern Greece and *peloponnesiacus* n. sp. of O. Ménalon. Other groups of species (group of *P. gabriellae* and group of *P. abnormis*) seem rather relevant to central Greece even if data on the rest of the Pindus mountain range are totally lacking. It therefore appears that the genus *Prioniomus*, belonging to a complex phylogenetic lineage of ancient origin, widespread in the Mediterranean area of the Palaearctic Region, and also in North and South America (Jeannel, 1937, 1963; Jeanne, 1973; Sokolov et al., 2004), has not been influenced in any way, in its distribution, by the Transaegean trough.

The genus *Winklerites*, whose northernmost species (*W. hercegovinensis* (Winkler, 1925) and *W. paganettii* (J. Müller, 1911)) reach the area of Trebinje and the massif of Krivosije in Dalmatia (other species such as *W. durmitorensis* Nonveiller & Pavicevic, 1987 and *W. kuciensis* Nonveiller & Pavicevic, 1987, are known from the Durmitor and Komovi planina) seems to have reached its southern limit in Greece, occupying the mountain ranges along the border, from the O. Vítsi (*W. zaballosi* n. sp.) to the West, up to the neighborhoods of Gérakas (nom. Xánthi) (*W. thracicus* n. sp.) to the East. To the West, in the Italian peninsula, *Winklerites* is replaced by its

transadriatic vicarious: *Rhegmatobius* Jeannel, 1937 (Jeanne, 1973; Giachino, 1992). Nearly all the species known to Greece (Fig. 239) belong to the group of *W. weiratheri*, while only two species belong to different groups, localized currently on mountain ranges placed at the southern limit of the distribution area: *W. andreae* n. sp. in the O. Áskio and *W. imathiae* n. sp. in the O. Piéria. All the *Winklerites* species of the group of *weiratheri* appear well differentiated but very homogeneous in the morphology of the aedeagus, indicating sure allopatric speciation events on different mountain massifs; almost certainly not very recent events.

With regard to the phyletic series of *Caecoparvus* (*sensu novo*), of particular interest is the presence in northern Greece, near Thessaloníki, of a species of the genus *Parvocaecus* (*P. perpusillus*) known so far only in Anatolia (*P. turcicus* (Coiffait, 1956) in the surroundings of Silé, *P. anatolicus* (Coiffait, 1956) in the surroundings of Antalya, and *P. tokatensis* Vigna Taglianti, 1976, in the surroundings of Tokat), where it is distributed both to the North, along the Pontic Chain both to the South in the Taurus. The interest of a species of the genus *Parvocaecus* near Thessaloníki is that so far this genus was considered a typical south-aegean element (sensu Jeannel, 1929), while now its presence also "North of the groove" weakens further the importance of this supposed "barrier" in the distribution of the Anillina of Greece.

Always in the phyletic series of *Caecoparvus* (*sensu novo*) the two genera *Caecoparvus* and *Iason* appear largely overlapping geographically. *Iason* (Fig. 241) occupies in fact with four species (*I. beroni* n. sp. of O. Karaboutáki, *I. argonauta* n. sp. of O. Pílio, *I. paglianoi* n. sp. of O. Mavrovoúni, and *I. olympicus* of O. Olimbos) the eastern coastal range, and then to the West, with *I. rossii* n. sp. of O. Kaliakoúda and *I. karametasi* n. sp. of O. Karáva, as far as Nótia Píndos and to the South in the Peloponnese with *I. fulvii* n. sp. in the O. Panahaïkó. In the Nótia Píndos and in the Peloponnese, *Iason* largely overlaps the distribution area of the *Caecoparvus* species, both of the *hercules* group and of the *muelleri* group to testify, for the two genera, a possible allopatric differentiation followed by alternating phases of contraction and expansion of the areas after the alternation of climatic anathermal and catathermal phases prior to the Quaternary glaciations (Woodward et al., 2004); phases that have likely favoured further allopatric speciation phenomena in both genera. *Caecoparvus* (Fig. 240) appears spread, with two well-characterized groups of species in central Greece and the Peloponnese. The group of *C. hercules* occupies central Greece from O. Karáva NW (*C. karavae* n. sp.), to O. Oxià SW (*C. daccordii* n. sp. and *C. lompei* n. sp.), to O. Iti and O. Vardoússia to the S (*C. hercules* n. sp. and *C. berrutii* n. sp.) as far as O. Óthris to the E (*C. marchesii* n. sp.). The group of *C. muelleri* instead occupies with different species the Peloponnese (*C. muelleri* in O. Taigetos, *C. arcadicus* in O. Ménalon, *C. meschniggi* in O. Aroania (= Chelmos), *C. sciakyi* n. sp. in O. Erímanthos, *C. achaiae* n. sp. in O. Panahaïkó and *C. pavesii* n. sp. in O. Killíni), reaching central Greece with two species (*C. parnassicus* of O. Parnassós and *C. leonidae* n. sp. of O. Kallídromo).

In the species distribution of the two genera *Caecoparvus* and *Iason*, but also in the previously treated *Prioniomus* (Fig. 238), it is evident that the Gulf of Corinth has not represented, for the Anillina, any sort of barrier. The geological data concerning the formation of the Gulf of Corinth indicate a date for its opening, between 1 and 1.8 MY ago (Flotté & Sorel, 2002; Popov et al., 2004) with later Quaternary marine regressions and transgressions which allowed, in alternate phases, extended land links between the Peloponnese and central Greece (Chronis et al., 1991, Perissoratis & Conispoliatis, 2003, Flotté et al., 2005, Huber & Marggi, 2008). In view of the supposed antiquity of this group (Jeannel 1937, 1963; Giachino, 2005) it seems likely that the spreading of the Peloponnese Anillina could have occurred much earlier, perhaps during the middle Miocene (16-15 MY ago), at which time the current Peloponnese should have been seamlessly linked to central Greece (Popov et al., 2004). In favour of this hypothesis there is not only the presence in two massifs of central Greece of two species of *Caecoparvus* of the *muelleri* group: *C. parnassicus* in O. Parnassós and *C. leonidae* n. sp. in O. Kallídromo, but also unpublished data (Giachino & Vailati, in prep.; Casale, Giachino & Vailati, in prep.) regarding the distribution of other subterranean beetles, such as Cholevidae Leptodirinae and Carabidae Trechini of the genus *Duvalius*.

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