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Taxonomic notes on the genus *Pseudoapterogyna* Escalera, 1914 (Coleoptera Scarabaeoidea Melolonthidae) in Sicily

Ignazio Sparacio

Via E. Notarbartolo 54 int. 13, 90145 Palermo, Italy; e-mail: isparacio@inwind.it

ABSTRACT All Sicilian records of the genus *Pseudoapterogyna* Escalera, 1914 (Coleoptera Scarabaeoidea Melolonthidae) are revised. As a result four species are reported to occur in Sicily: *P. euphytus lamantiai* n. ssp. (for the populations of Pantelleria Island, previously attributed to *P. euphytus* s.l.), *P. vorax* (Marseul, 1878) from Lampedusa Island, *P. pellegrinensis* (Brenske in Ragusa, 1893) from Western Sicily (to which all *P. euphytus* records from Sicily need to be attributed), and *P. michaelis* n. sp. from Western Sicily.

KEY WORDS Melolonthidae; *Pseudoapterogyna*; Sicily; taxonomy.

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INTRODUCTION

The Sicilian *Pseudoapterogyna* Escalera, 1914 (Coleoptera Scarabaeoidea Melolonthidae) have been attributed thus far to *P. euphytus* (Buquet, 1840), a species deemed to occur through Algeria, Tunisia and Sicily (Rottenberg, 1871; Ragusa, 1873; 1874; 1893; Bertolini, 1899; Heyden et al., 1883; Luigioni, 1929; Porta, 1932; Baraud, 1977; 1985; 1992; Arnone et al., 1995; Carpaneto & Piattella, 1995; Sparacio, 1995; Smetana & Král, 2006; Arnone, 2010; Ballerio et al., 2010).

Examination of type material of *P. euphytus* plus a large quantity of specimens from Sicily and Northern Africa allowed me to re-evaluate the taxonomic status of the Sicilian populations of *Pseudoapterogyna*. As a result *P. euphytus euphytus* proved not to occur in Sicily, being restricted to Algeria and Tunisia, while the Sicilian populations of *Pseudoapterogyna* proved to represent three distinct taxa: *P. euphytus lamantiai* n. ssp. from Pantelleria Island (Sicily Channel), *P. pellegrinensis* (Ragusa, 1892) and *P. michaelis* n. sp., both endemics of North-Western Sicily.

I consider *Pseudoapterogyna* Escalera, 1914 as a separate genus (according with Baraud, 1985; 1992), and not as a synonym of *Geotrogus* Guérin-Méneville, 1842, as recently proposed by Coca-Abia (2003, see also Smetana & Král, 2006).

ACRONYMS AND ABBREVIATIONS. V. Aliquò collection, Palermo, Italy (CVA); M. Arnone collection, Palermo, Italy (CMA); M. Bellavista collection (CMB); Armando Monastra collection, Palermo, Italy (CAM); M. Romano collection, Capaci, Palermo, Italy (CMR); I. Sparacio collection, Palermo, Italy (CIS); A. Tetamo collection, Palermo, Italy (CAT); Collection of Dipartimento di Biologia Animale University of Catania, Italy (CMC); Collection of Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy (MCSNG); Collection of Museum National d'Histoire Naturelle, Paris, France (MNHN); m = male/s; f = female/s. Unless otherwise stated, the collector of the beetles in the field is the owner of the collection.

Pseudoapterogyna euphytus euphytus Buquet, 1840

EXAMINED MATERIAL. 1 ex labelled: Ex Musaeo Mniszech / a Euphytus Bqt alg. type / Museum Paris - ex coll. R. Oberthur / SYNTYPE - *Rhizotrogus euphytus* Buquet, 1840 / SYNTYPE / SYNTYPE - *Pseudoapterogyna euphyta* (Buquet, 1840) / MHNHN EC4183. 1 ex labelled: Ex Musaeo Mniszech / Museum Paris - ex coll. R. Oberthur / SYNTYPE - *Rhizotrogus euphytus* Buquet, 1840 / SYNTYPE / SYNTYPE - *Pseudoapterogyna euphyta* (Buquet, 1840) / MHNHN EC4184. Algeria, Costantine, Bonvouloir, 1 m (MCSNG); Algeria, Costantine, Henon, 3 m and 1 f (MCSNG); Algeria, Batna, 27 marzo 1952, ex coll. G. Fiori, 1 m (MCSNG); Algeria, Bône, 1874, Puton, 2 m and 2 f (MCSNG); Tunisia, Tunisi, Aut.-Inv. 1981-2, G. e L. Doria, 3 m (MCSNG); Tunisia, Tunisi dint., 1881, G. e L. Doria, 1 m

BIOLOGY AND DISTRIBUTION. Aduls often found under stones. Algeria and Tunisia.

REMARKS. *P. euphytus* was described from Constantine in Algeria (Buquet, 1840). The synonyms of this species are the following (Baraud, 1985; 1992; Smetana & Král, 2006): *maculicollis* Fairmaire nec Villa, 1860; *biskrensis* Marseul, 1878 locus typicus: Biskra, Algeria; *tuniseus* Fairmaire, 1884 locus typicus: Tunis, Tunisia; *dilutus* Fairmaire, 1860 locus typicus: Tunis, Tunisia.

The study of *P. euphytus* type material (Figs. 1, 2), and of several specimens from the type locality and other places in Algeria and Tunisia allows to summarize the diagnosis of this species (see also Baraud, 1985) as follows:

Males with fully developed metathoracic wings, females are flightless. Length 12–16 mm.; yellowish-brown, disc of pronotum sometimes darker; dorsal surface sub-opaque; antennae 10-segmented, scape elongate and dilated distally, club developed, shorter than funicle (club/funicle = 0.64); pronotum glabrous, only a few sparse short erect setae on anterior margin, surface micro-reticulated, punctation with large and dense punctures (the distance between the punctures being subequal or inferior to their diameter); posterior angles well marked, in most cases distinctly projecting backwards, preceded by a slight sinuosity at lateral sides; base of pronotum marked by a trasversal row of coarse punctures; elytral surface densely microreticulated, with shallow and poorly defined puncturation. Anterior tibiae tridentate on external margin, basal tooth very short, sometimes absent. Posterior tibiae without carina on dorsal side or, at least, proximally. 1° metatarsomere short in both sexes. Claws toothed at base and with a spine well developed. Pygidium finely wrinkled and micro-reticulated with puncturation made of shallow scattered large punctures mixed to other much smaller and denser punctures. Posterior coxae of males far from median coxae. Aedeagus with parameres, in lateral view, narrowed distally with very elongate and pointed apex.

Females have a more convex dorsum, a smaller antennal club, shorter tarsi, posterior angles of pronotum often pointed, and larger and coarser elytral punctation.

Pseudoapterogyna euphytus lamantiai n. ssp.

EXAMINED MATERIAL. Holotypus male (CIS): Pantelleria (Sicily, Italy), Sesi, 10.V.1991, 1 m; Paratypes: ibidem, 30.IV.1995, 2 m and 4 f (CIS). Pantelleria, II.1906, S. Sommier, *Rhizotrogus euphytus* Buq., det. Sabatinelli, 4 m (MCSNG). 1 male labelled: "Pantelleria" and 1 male without label, likely from the same locality as above (see below) E. Ragusa collection (CMC).

DESCRIPTION OF HOLOTYPUS. Length 12 mm. Yellowish-brown, disc of pronotum sometimes dark brown; antennae, palpi, legs, pubescence, and ventral surface yellowish; dorsal surface subopaque. Head with deep and dense punctation and a thin, slightly raised transverse carina; clypeus slightly emarginate at middle of anterior margin. Antennae 10-segmented, club 3-segmented, about half the length of funicle (club/funicle = 0.52); scape dilated distally, almost as long as the 2°, 3° and 4° segments together. Pronotum with maximum width just before middle, sides crenulated, subrectilinear with a little sinuation before posterior protruding angles; anterior margin subrectilinear; basal bead complete, flattened and punctate; pronotal sculpturing made of middle-sized deep sparse punctures (the distance between the punctures being more than double their diameter) clearly visible on the micro-reticulated surface; the anterior margin and sides of pronotum bear short and sparse fine setae. Scutellum triangular, bearing some short

setae near base, with big shallow punctures. Elytra subparallel, slightly dilated at apical third, with micro-reticulated surface bearing some deep small punctures; humeral callus visible. Anterior tibiae tridentate, with a very weak hardly visible basal tooth. Posterior tibiae without carina on dorsal side. Tarsi about twice longer than tibiae. First posterior tarsomere shorter than the 3° tarsomere. Claws toothed at the base and with a spine well developed. Pygidium finely wrinkled, micro-reticulated, with punctures small. Metathoracic wings fully developed. Aedeagus with parameres strong, narrowed distally, with slightly elongate apex.

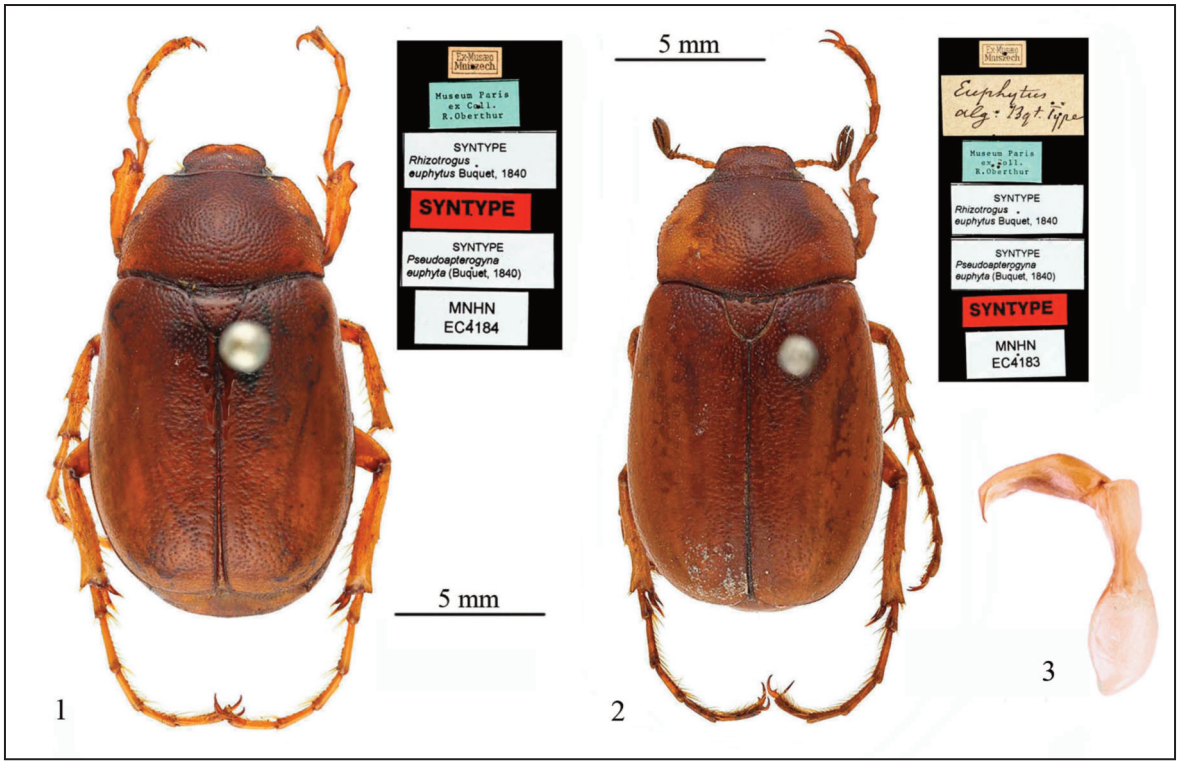
Variability. Length 11.5–13 mm; the disc of pronotum may be yellowish in colour, like the rest of the body. The little carina of dorsal side of posterior tibiae may be absent or very reduced. Females are flightless, have a more convex dorsum and elytra more dilated backward, with dorsal punctation sparse and shorter tarsi; posterior tarsi little longer than posterior tibiae.

Etimology. Latin noun in the genitive case. After Tommaso La Mantia, University of Palermo, Italy, in acknowledgement of his oustanding expertise on the Sicily channel islands.

Biology and Distribution. Adults found under stones, active during Spring. Records from other seasons (see Arnone et al., 1995) are likely due to findings of dead specimens under stones, often found in good condition due to the dry environment. Endemic to Pantelleria Island.

Comparative notes. *P. euphytus lamantiai* n. ssp. differs from *P. euphytus euphytus* from Algeria and Tunisia by the following characters: smaller size, males with dorsum less convex, more parallel body (especially the elytra), punctation (in particular that of pronotum) sparser and less deep, antennal club longer, sculpturing of pygidium without big punctures, and shape of parameres with stouter and shorter apex.

Remarks. All previous records from Pantelleria Island, such as Ragusa (1875: sub *Rhizotrogus Gerardi* Buq.), Bertolini (1899: sub *Rhizotrogus Gerardi* Buq.), Luigioni, 1929 (sub *Rhizotrogus euphytus* Buquet), Liebmann (1962: sub *Rhizotrogus*



Figures 1, 2. Syntypes of *Pseudoapterogyna euphytus* (MHNHN).
Figure 3. Aedeagus of the *P. euphytus* from Costantine, Algeria, length 6.3 mm (MCSNG).

euphytus), Ratti, 1987 (sub *P. euphytus*) and finally Arnone et al. , 1995 (sub *P. euphytus*), actually refer to *P. euphytus lamantiai* n. ssp.

Pseudoapterogyna pellegrinensis (Brenske in Ragusa, 1893)

EXAMINED MATERIAL. Lectotypus male: Falde 3. [Monte Pellegrino leg. E. Ragusa], E. Ragusa collection (CMC); paralectotypes, idem 8 males and 3 females, without label, likely from the same locality as above (see below) E. Ragusa collection (CMC); Palermo, Addaura, 17.I.1970-10.II.1970 (CVA); Monte Cuccio (Palermo), 4.IV.1970-27.III.1971 (CVA); Cinisi (Palermo), 7.I.1973-11.II.1973-7 and 19.III.1973 (CVA); Capaci (Palermo), 11.II.1973 (CVA); Mazara del Vallo (Trapani), 16.IV.1976, 9.I.1983, 15.II.1983, 2.IV.1983, 13.V.1983, 6.XII.1986, 11.IV.1987 (CVA); Foce Fiume Belice (Trapani) 13.IV.1984 (CVA). Cinisi (Palermo), 11.II.1975 (CAM); Mazara del Vallo (Trapani), 6.II.1984 (CAM); Torretta (Palermo), 23.II.1977 (CAM). Capaci (Palermo) 9.I.1973, 8.II.1973, 6.III.1973, 27.I.1980 (CMR); Carini (Palermo), 7.III.1973 (CMR); Cinisi (Palermo) 19.III.1973 (CMR); Castelluzzo litorale (Trapani), 10.IV.2011 (CMR); Capaci (Palermo), 27.I.1980, 3.II.1980, 17.II.1980 (CMA); Cinisi (Palermo), 21.III.1986 (CMA); Palermo, Addaura, 23.XII.1972, leg. A. Carapezza (CMA); Campobello di Mazara: Cave di Cusa (Trapani), 7.IV.1985 (CMA); Castelluzzo litorale (Trapani), 14.III.1999, 17.II.2002, 10.IV.2011 (CMA); Isole Egadi, Favignana (Trapani), 30.IV.1969 leg. B. Massa (CMA); Mazara del Vallo (Trapani), 9.I.1983, 30.IV.1983 CMA). Palermo, Tommaso Natale, 23.III.1978, 1 m (CIS); Capaci (Palermo), 17.II.1980, 4 m and 3 f; idem, 16.I.1983, 1 m 10.V.1991, 1 m (CIS); Sferracavallo, La Conza, 18.I.1981, 2 f; idem 10.V.1991, 1 m (CIS); Mazara del Vallo (Trapani), 1.II.1981, 1 m (CIS); Isola delle Femmine (Palermo), 25.II.1983, 1 m 10.V.1991, 1 m (CIS); Cinisi (Palermo), 25.II.1983, 1 m 10.V.1991, 1 m (CIS); Terrasini (Palermo), 12. IV.1983, 1 m; idem, 24.IV.1993, 1 f; idem, 2.IV.2002, 1 f 10.V.1991, 1 m (CIS); Monte Cofano (Trapani), 14.IV.1991, 1 m (CIS).

BIOLOGY AND DISTRIBUTION. A Mediterranean maquis dweller, usually found in open disturbed maquis, with stony grounds. Adults of *P. pellegrinensis* are found under stones, or walking, or (males only) flying during Spring months. Larvae are rizophagous and found underground. Endemic to North-Western Sicily, in strong rarefaction near Palermo where it has disappeared from many localities in the last thirty years; very localized in the area of Trapani.

COMPARATIVE NOTES. Compared to *P. euphytus*, *P. pellegrinensis* is bigger and wider (length 15–18 mm), shiny and has a less convex dorsum. Diagnosis: reddish-brown. Male: club/funicle = 0.52, pronotum wider just before anterior half, with punctures smaller, spaced and shallow, irregularly distributed, thinner at the sides; sides less curved, slightly sinuated just before posterior angles, posterior angles well-marked but not protruding. Elytra wrinkled, with irregular longitudinal striae, with hardly visible micro-retic-ulation and punctures big and deep. Posterior tibiae distinctly keeled on the dorsal surface. Ventrites shiny, the first three with a longitudinal depression. Pygidium much wider at base, coarsely wrinkled, micro-reticulated and with punctures small and very dense; apical margin slightly emarginate. Aedeagus with parameres stouter, slightly elongate distally.

Female: females are wingless, with a more convex dorsum and elytra more dilated backward; posterior tibiae distinctly keeled on the dorsal surface; posterior tarsi little longer than posterior tibiae.

REMARKS. In Sicily, *P. euphytus* was reported for the first time by Rottemberg (1871: "Am Fuss des M. Pellegrino") and mentioned several times by Ragusa (1873; 1874; 1893).

Ragusa (1874), however, was not convinced of the identity of this beetle "*... il Barone di Rottemberg ... lo crede il* R. Euphytus *Buq…Quest'insetto merita d'essere attentamente studiato ...*". ["Rottemberg ... he believes it is *R. euphytus* Buq. ... this insect deserves to be carefully studied"].

In his " Catalogo ragionato dei Coleotteri di Sicilia", Ragusa (1893) provided a long comment on *P. euphytus* in a footnote in which he translates a letter that he received from Brenske (to whom he had "*comunicato tutte le specie di* Rhizotrogus *di Sicilia*" ["sent all the species of *Rhizotrogus* of Sicily"]). Brenske, after examining the bibliography on *P. euphytus* available at that time, indicates that the Sicilian populations of the species should be distinguished from those of North Africa: "*(1) Var.* pel-

legrinensis *Brenske var. nov. ... esse si devono separare, se non come due specie distinte, una come varietà dell'altra.... La differenza più evidente sta nella punteggiatura del pygidio, che nell' insetto di Sicilia non è lucido, ed è leggermente aggrinzita, mentre l'algerino è oltre di ciò ricoperto di grossi e forti punti. Per la specie di Sicilia io scelgo il nome di* pellegrinensis*, per indicare la località dove questa specie è stata fin'ora trovata.*"

["(1) Var. *pellegrinensis* Brenske var. nov. … they must represent two distinct species or at least two distinct varieties. The most obvious difference is in the punctation of pygidium, which in the insect from Sicily is not shining, and slightly wrinkled, while in the Algerian specimens, in addition to this character, is covered by big and strong punctures. For the species of Sicily I choose the name *pellegrinensis* to indicate the location where this species has been found so far."]

It is quite clear from the footnote of Ragusa's 1893 paper that the name "*pellegrinensis*" and the description come from Brenske. I think therefore that Brenske is alone responsible both for the name and for satisfying the criteria of availability other than publication, hence, according to art. 50.1.1 of the Code, Brenske is the author of the name "*pellegrinensis*", which needs to be quoted as Bresnke in Ragusa. Ragusa provided only the translation of Brenske's letter, but this circumstance, in my opinion, is not sufficient to change the sole responsibility of Brenske.

The populations of Sicily, so far reported as *P. euphytus*, show clear differences from *P. euphytus* and therefore must be attributed to *P. pellegrinensis*. Reports of *P. euphytus* from the Lampedusa Island (Failla Tedaldi, 1887; Heyden et al., 1891; Goggi, 2004) are likely records of *P. vorax* (see below).

In Ragusa's collection there are 14 specimens of *Pseudoapterogyna* from Sicily (see also Arnone, 2010); only two of them bear a locality label. One of them comes from Pantelleria (together with other two specimens of the series of 14 specimens) and therefore belongs to *P. euphytus lamantiai* (see above), while the other bears the following label:: "Falde, 3, E. Ragusa. [Monte

Figure 4. *Pseudoapterogyna euphytus lamantiai* n. ssp. Fig. 5. Idem, aedeagus, length 5.6 mm. Fig. 6. *P. pellegrinensis*. Fig. 7. Idem, aedeagus, length 6 mm. Fig. 8. *P. michaelis* n. sp. Fig. 9. Idem, aedeagus, length 6 mm. (photos M. Romano).

Pellegrino leg. E. Ragusa]" (foothills, March, E. Ragusa. [Monte Pellegrino leg. E. Ragusa]". I hereby designate this latter specimen as the lectotypus of *P. pellegrinensis*. The following red handwritten label has been added to it: Lectotypus - *Pseudoapterogyna pellegrinensis* Brenske in Ragusa, 1893, I. Sparacio des. 2014. Ragusa used to add the locality label only to the first specimen of a series (Arnone, 2010), therefore the remaining ten specimens of the series, all belonging to *P. pellegrinensis*, have to be consdiered as paralectotypi.

Pseudoapterogyna vorax (Marseul, 1878)

EXAMINED MATERIAL. Sicily (Agrigento), Lampedusa, 4.VI.1975, 1 m (*Pseudoapterogyna vorax* Mars. J. Baraud det.), legit B. Massa (CMA); idem, 1 f, 5.VI.1975 (CMA); Sicilia (Agrigento), Isola di Lampedusa, 15.V.1983, 1 f (CIS).

BIOLOGY AND DISTRIBUTION. Adults active in May and June. Records from other months (Arnone et al., 1995; Ballerio et al., 2010) are likely findings of dead specimens, often found under stones.

P. vorax is widespread from Morocco to Libia (Baraud, 1985). Baraud (1977) was the first to report the occurrence of this species in Lampedusa (Sicily Channel), later Smetana & Král (2006) added a record from Lampione (an islet next to Lampedusa).

REMARKS. A comparison between the holotype of *P. vorax* (MNHN, locus typicus: Algeria, Batna) and a few specimens from Lampedusa Island did not reveal any relevant difference between the two populations.

Pseudoapterogyna michaelis n. sp.

EXAMINED MATERIAL. Holotypus male: Monte Cofano (Trapani, Sicily, Italy), 20.XI.2011 (CIS). Paratypes: idem, 2 m (CIS); idem, 17.XI.2013, 31 m (CIS); idem, 20 m, legit A. Tetamo (CMB); idem, 8 m (CAT); idem, 1 m, legit I. Sparacio (MNHN); idem, 1 m, legit I. Sparacio (MCSNG).

DESCRIPTION OF HOLOTYPUS. Length 14.5 mm. Shiny. Reddish-brown, with darker pronotum; palpi, antennae, tarsi, lateral margins of pronotum, and underside yellowish-brown; long yellowish-brown erect setae are present around the body, denser in the central part of both the anterior and posterior margins of pronotum, the latter having also a very dense tuft of long fine recumbent setae. Sternum with dense yellowish setation. Antennae 10-segmented; scape elongate and distally dilatate, almost as long as 2°–3° and 4° segments together; 2° segment very short; club shorter than the 7 previous segments together (club/funicle = 0.60). Clypeus with anterior margin emarginate at middle.

Head covered with big deep dense punctures; a small transverse carina slightly raised and not reaching the sides is present on clypeus. Pronotum transverse, 2.3 times wider than long, sides slightly curved at basal, norrowed distally, maximum width at basal half; posterior angles obtuse; anterior margin slightly curved forward, posterior margin projecting backward in the middle with basal bead thin and with sparse little punctures; a smooth longitudinal line is present in the middle of pronotum; pronotal surface smooth (not microreticulated), sculpture formed by medium sized deep dense punctures, regularly distributed over the entire surface (the distance between the punctures subequal to twice their diameter). Scutellum wide, subtriangular, with curved sides, micro-reticulated, with deep dense punctation, concentrated mainly at sides, covered by the dense recumbent long fine setation.

Humeral callus present. Elytra broad, dorsally flattened, wider at distal third, coarsely striated, with punctures large, dense and deep at the base then densely wrinkled at apical third; elytral apex slightly divergent. Pygidium with poorly defined shallow sparse punctures on densely micro-reticulated surface. Tarsal claws toothed at base. Anterior tarsi elongate, 1.75 longer than the corresponding tibiae. Anterior tibiae tridentate on external margin. Posterior tarsi elongate, 1.75 longer than the corresponding tibiae, 1° tarsomere distinctly shorter than the 3°. Posterior tibiae without carina on dorsal side. Metathoracic wings fully developed.

Aedeagus, in lateral view, with sub-parallel parameres, distally slightly wider, with apex short, sharp and slightly curved.

Female unknown.

VARIABILITY. Body length 13–18 mm; colour of the dorsal surface is sometimes much darker, with pronotum almost completely dark. In some specimens there is a short and weak carina on the top of the dorsal face of posterior tibiae.

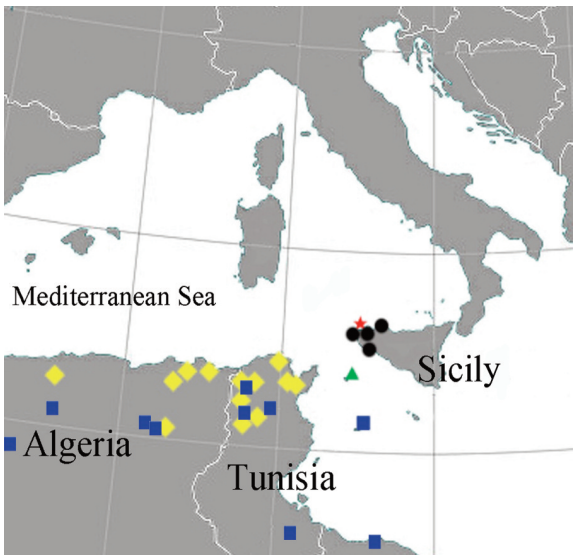


Figure 10. Distribution of the Sicilian members of the genus *Pseudoapterogyna* and of *P. euphytus euphytus* in North Africa (rhombus). *P. euphytus lamantiai*: triangle; *P. pellegrinensis*: circles; *P. michaelis*: star; *P. vorax* (also in Morocco): squares.

ETIMOLOGY. Latin noun in the genitive case. This new species is dedicated to my friend Michele Bellavista (Palermo, Italy).

BIOLOGY AND DISTRIBUTION. All specimens collected were found still alive in potholes with water, during an Autumn sunny day without wind. *P. michaelis* n. sp. seems to be an Autumn species and is known only from the type locality in North-Western Sicily, where it occurs in sintopy with *P. pellegrinensis*, the latter being however a Spring species. The collecting locality is characterized by a stony landscape, with sparse small trees in a disturbed Mediterranean maquis.

COMPARATIVE NOTES. *P. michaelis* n. sp. differs from North African *Pseudoapterogyna* for the following characters (see also Baraud, 1985, pp. 413–415, in particular points 9 and 16): antennal club slightly shorter than funicle, shape and setation of pronotum (long fine setae along basal and fore margins), thin basal bead of pronotum finely and sparsely punctate, obtuse posterior angles of pronotum without sinuation, posterior tibiae without carina on dorsal side, shape of parameres.

REMARKS. Distribution of the Sicilian *Pseudoapterogyna* is showed in figure 10.

They can be easily identified using the following key:

1. Tarsal claws with a short basal tooth only.....*P. michaelis*
- Tarsal claws with a distinct sharp tooth just above basal tooth.....2

2. Sides of pronotum without sinuation just before basal angle, which is obtuse and rounded. Pronotum without distinctly crenulate lateral margins. Aedeagus with parameres not narrowed distally and apex very short (lateral view).....*P. vorax*
- Sides of pronotum with a sinuation just before basal angle, which is acute or at a right angle. Pronotum with distinctly crenulate lateral margins. Aedaegus with parameres distally narrowed (lateral view).....3

3. Dorsal surface shiny. Posterior tibiae with upper face longitudinally carinate. Pygidium coarsely wrinkled, micro-reticulated and with punctures small and very dense; apical margin slightly emarginate.....*P. pellegrinensis*
- Dorsal surface sub-opaque. Posterior tibiae without carina on upper face, or with a slight carina limited to the proximal part. Pygidium with different surface sculpturing.....4

4. Pigidial punctation made of mixed dense small punctures and sparser larger ones on a micro-reticulate background. Parameres with very long and sharp apex (lateral view).....*P. euphytus euphytus*
- Pigidial punctation made of small deep punctures on a coarsely wrinkled background. Aedeagus with parameres with apex short (lateral view).....*P. euphytus lamantiai*

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