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DESCRIPTION OF *PYGOPLEURUS SALTINII*, NEW SPECIES FROM SOUTH-EASTERN TURKEY (INSECTA, COLEOPTERA, SCARABAEOIDEA, GLAPHYRIDAE)

Riassunto. *Descrizione di* Pygopleurus saltinii*, nuova specie della Turchia sud-orientale (Insecta, Coleoptera, Scarabaeoidea, Glaphyridae).*
Viene descritta e illustrata una nuova specie di *Pygopleurus* diffusa sul Monte Nemrut (Turchia, provincia di Adiyaman). La nuova specie, a fenologia precoce, appartiene al "gruppo 3" di Baraud ed è simile a *P. anahitae* Mitter, con cui viene comparata.

Summary. A new species of *Pygopleurus* from Mt. Nemrut (Turkey, Adiyaman province) is described and figured. It belongs to Baraud's "group 3" and is compared to the close species, *P. anahitae* Mitter.

Keywords: Glaphyridae, taxonomy, new species, *Pygopleurus saltinii, Pygopleurus anahitae,* Turkey.

Introduction

The genus *Pygopleurus* Motschulsky, 1860, widespread from South East Europe to the Middle East, is composed by a large number of flower-dwelling species characterized by a strongly uniform appearance. The taxonomic knowledge of this genus has been significantly improving in recent years: since the last revision, presented by Baraud (1989), 12 new taxa have been described, taking the checklist of *Pygopleurus* to 60 species currently regarded as valid (Nikodým & Bezdek, 2006; Uliana unpublished data).

Among the miscellaneous Glaphyridae received for study from various colleagues a new species from South Eastern Turkey was identified, which is here described.

The studied specimens are preserved in the following collections: Museo di Storia Naturale di Venezia (MSNVE); Denis Keith, Chartres (DK); Mauro Malmusi, Modena (MM); Milan Nikodým, Roztoky u Prahy (MN); Antonio Rey, Torino (AR); Guido Sabatinelli, Prévessin (GS); Lucio Saltini, Modena (LS); Claudio Sola, Modena (CS); Marco Uliana, Codevigo (MU).

Pygopleurus saltinii n. sp. (figs. 1-5, 7-9, 11-13)

Diagnosis

A small-sized species of *Pygopleurus* belonging to Baraud's "group 3" (Baraud, 1989), therefore characterized by finely granulated pronotum, without vermiculated wrinkles, and rounded elytral apex.

Head, pronotum and scutellum ranging in colour from green to fuchsia, with dense, erected, soft, yellow-whitish hairs mixed to black hairs. Elytra of males uniformly light brown. Elytra of females bicoloured, with the proximal area light brown and the distal area black. In both sexes the suture and the lateral margin are black, no coloured metallic shine is observed.

Adpressed hair variable in colour, mostly whitish; long erected setae variable in colour, mostly black. Abdomen of males covered by soft yellow hairs; the last segment orange, the penultimate orange with a black spot of variable extension on the tergite; abdomen of the female black with soft whitish hairs and few long erected black setae, abundant on the pygidium. Pygidium of the female with sharp apical pit. Legs metallic.

Clypeus of the male without longitudinal carina, posterior angles of the pronotum marked, elytra slightly dehiscent, with etired apex in the female. Metatarses slightly longer than the metatibiae in the male, shorter in the female, claws short, strongly curved.

Distribution: only known from the Nemrut Dagi area (SE Turkey, Adiyaman province).

Type series: 16 ♂ and 16 ♀.

Holotype (♂): Turkey, Nemrut Dagi, Adiyaman, m 1400-1600, 5.V.2000, leg. L. Saltini, coll. MSNVE.

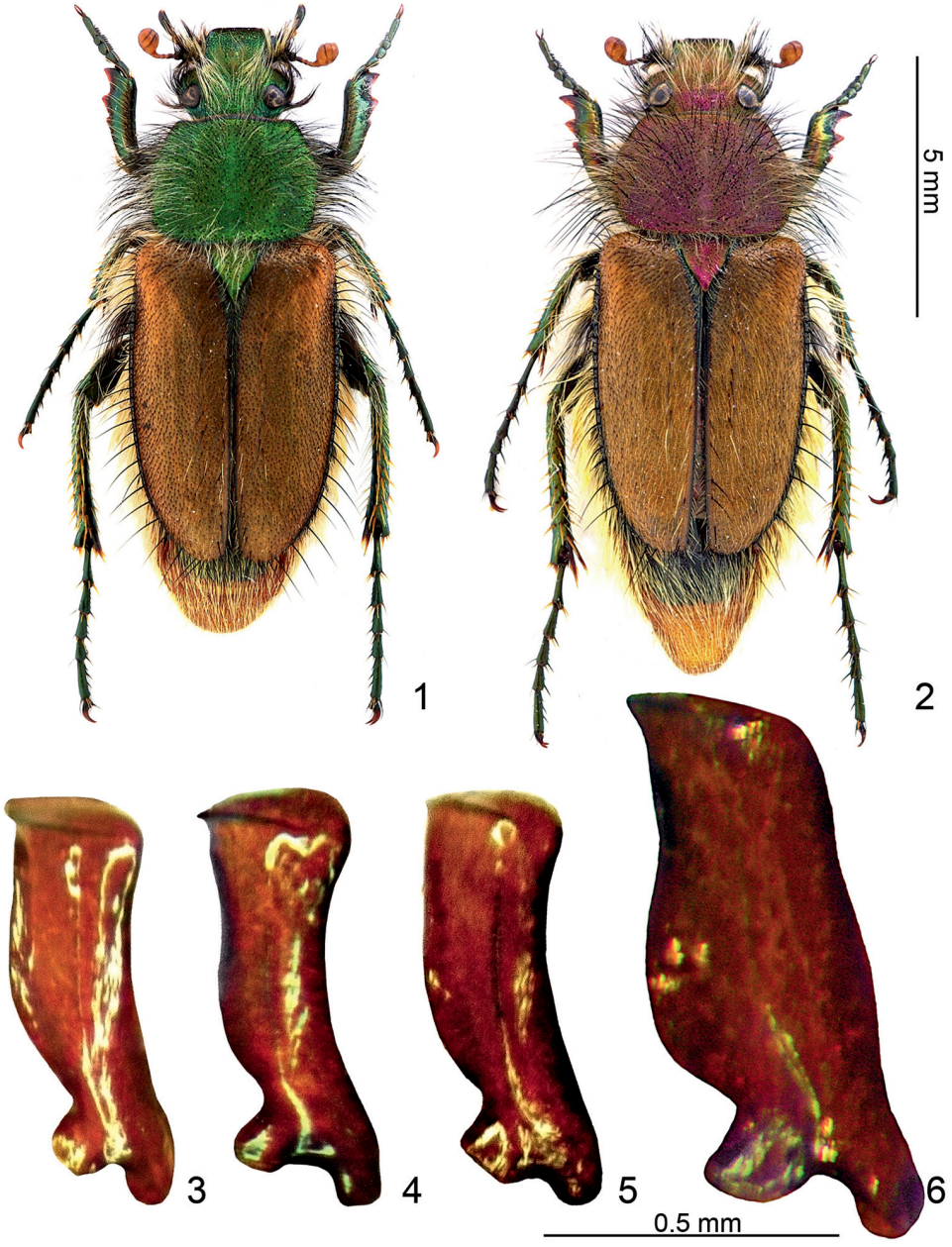
Paratypes: Turkey, Nemrut Dagi, Adiyaman, m 1400-1600, leg. L. Saltini: 1.V.2000 (4 ♂, 7 ♀), coll. DK, GS, LS, MU; 5.V.2000: (5 ♂, 4 ♀), coll. AR, LS, MU. Same locality, 1.V.2000, leg. M. Malmusi (3 ♂, 1 ♀), coll. AR, MM, MU. Same locality, leg. C. Sola: 1.V.2000 (1 ♂, 2 ♀), coll. CS, MU; 5.V.2000 (1 ♂), coll. CS. Turkey, Nemrut Dag, Karadut, 14.5.1997, leg. Z. Martinová (1 ♂, 1 ♀), coll. MN. Turkey, Nemrut Dagi, m 800, Katha, 1.V.2000, leg. Cartini (1 ♀), coll GS.

Description of males [holotype data in square brackets] (figs. 1-5)

Body size: 9.0-10.2 mm [10.2 mm] from the margin of the clypeus to the apex of the elytra; 10.4-12.2 mm [12.2 mm] including the apex of the abdomen. Width across the humeri: 3.5-4.0 mm [4.0 mm].

Colour of integuments: head, pronotum and scutellum metallic, green, golden green with orange undertones or fuchsia [golden green with orange undertones]. Elytra pale brown, with suture and lateral margin black. Propygidium black in the proximal part, orange in the distal one; pygidium orange. Antennal articles 1 and 2 black, with copper metallic reflection, article 3 and 4 orange with dark base, the rest of the antenna orange. Legs metallic, from golden green to light purple [copper to light purple].

Hair: head with dense, erected, soft, yellow-whitish hair; few black hairs are regularly present on the canthus and occasionally between the eyes [so in the holotype]. Antennal article 1 with dense black hair mixed with abundant yellow-whitish hair in the basal half, article 2 with few black hairs. Pronotum and scutellum similar to the head, with black setae, longer and stouter than the light hairs, present at least along the sides of the pronotum and on its discal area, but sometimes abundant and regularly distributed all over its surface [so in the holotype]. Elytra with adpressed hairs variable in colour, usually completely black in the basal area and completely whitish in the apical one [so in the holotype, with mixed hairs at mid-lenght]. The proportion of the two parts can range from hair almost totally black, but a few ones near the apex, to almost totally whitish, but a few ones in the humeral area. Long erected setae are present along the lateral margin, on the humeral region, along the suture and in one irregular row close to the suture. These setae are mostly black, some whitish setae may be present in the row near the suture [so in the holotype].



Figs. 1-6. Figs. 1-2: *Pygopleurus saltinii*, n. sp., habitus of males (paratypes). Figs. 3-5: *Pygopleurus saltinii*, n. sp., variability of right paramere, lateral view (paratypes). Fig. 6: *Pygopleurus anahitae* Mitter, right paramere, lateral view (topotypical specimen, courtesy of Denis Keith).

Abdominal segments uniformly covered with yellowish hairs. Foretibiae with a row of whitish hairs on the dorsal surface. Mid and hind legs with long, whitish hairs; spines light brown with lighter apex; apical spurs dark brown with lighter apex. Ventral side mostly covered with light hairs, but for black hairs on the mouthparts, the coxae and the femora.

Morphology: clypeus subtrapezoidal, slightly enlarged distally, anterior angles rounded, without medial carina, but with a bump in the middle. Integument of the clypeus and of the rest of the head covered by fine and dense piliferous punctuation; microreticulation clearly visible through the punctuation on the whole head. Pronotum sub-ovoid, larger [3.6 mm] than long [2.5 mm]; with anterior angles visible, rounded and obtuse; posterior angles rounded but well visible; pronotal base slightly concave in the middle; surface finely and evenly covered with piliferous punctuation, punctures of different size are mixed together, with the larger points having about twice the size of the smaller points; punctures, on average, finer and less dense than on the head, with spaces among punctures as large as the punctures themselves. Scutellum triangular; about as long as wide, with a sculpturing similar to that of the pronotum; punctures absent along the edges. Elytra slightly dehiscent, more rounded at the external side than along the suture, apex regularly rounded; surface without evident longitudinal depressions, piliferous punctuation fine, well visible near the humeral callus, fading toward the apex. Foreclaws short and strongly curved, fore tarsi short [combs of articles 1 to 5 respectively 11, 10, 8, 6, 5 toothed], comb of the first article with teeth regularly growing in length from base to the apex. Claws of meso- and meta-legs similar to that of forelegs, but a bit larger and slightly slender. Metatarsi slightly longer [3.8 mm] than the metatibia [3.5 mm].

Parameres: ca. 0.70 mm long; slightly variable in shape (see figs. 3-5).

Description of females (figs. 7-9, 11-13)

Body size: 10.5-11.4 mm from the margin of the clypeus to the apex of the elytra; 10.9-13.0 mm including the apex of the abdomen. Width across the humeri: 4.0-4.3 mm.

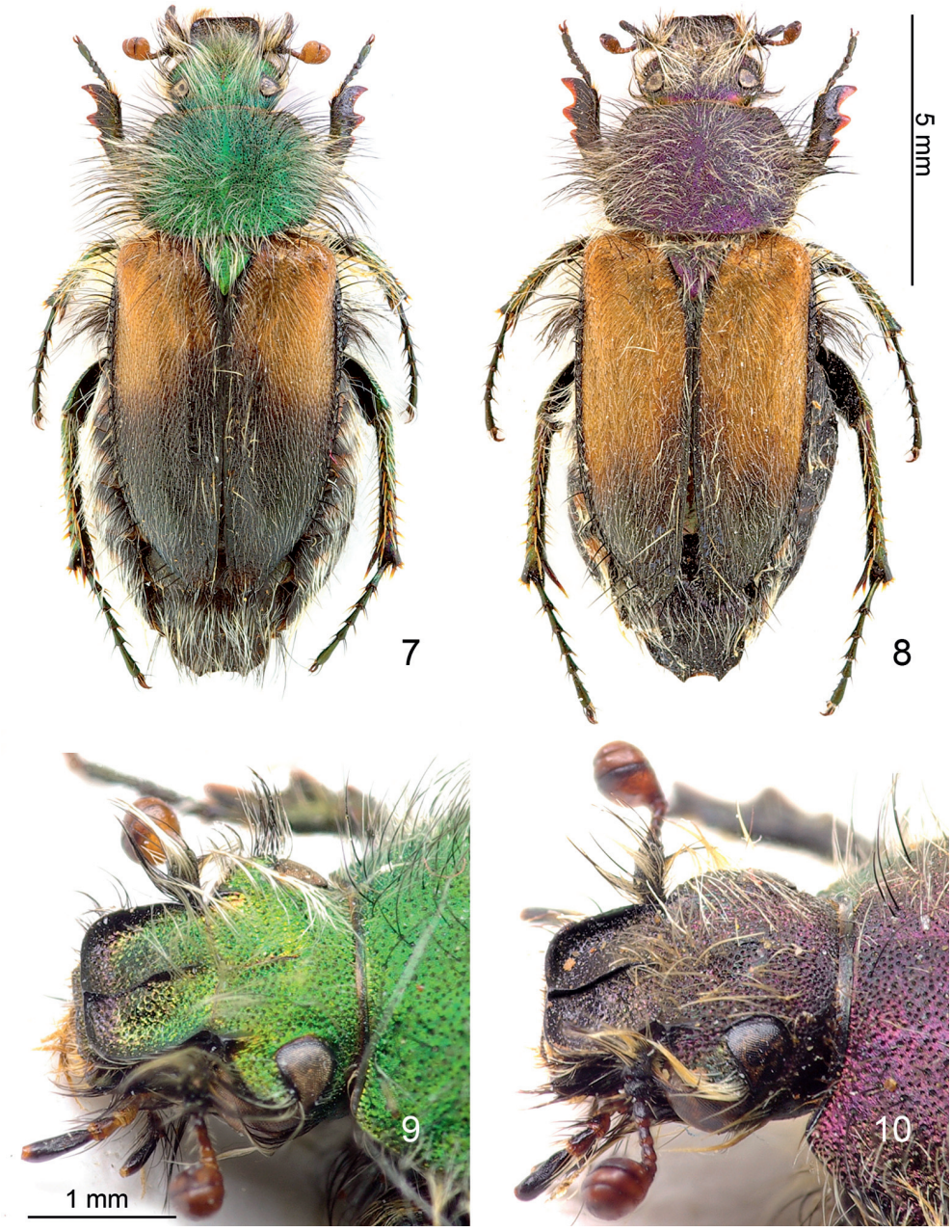
Colour: forebody going from green to dark purple with cyan undertones. Elytra bicoloured, with the base light brown and the apex black. The boundary between the two areas is variable, most of the females having the dark area occupying about 2/3 of the elytra and expanding along the suture, so that only the humeral region remains brown. Abdomen completely black, covered with whitish hair, but for the pygidium, whose pilosity is mostly black, and the last sternite which may bear sparse black hairs.

Morphology: similar to the male but for the following characters: posterior half of the clypeus with a short longitudinal carina. Elytra elongated and flattened after the apical callus, the apex slightly raised upwards; pygidium with a deep and sharp apical pit bearing two tooth-like projections at the sides. Metatarsi slightly shorter than the metatibiae.

Genital sclerites: slightly variable in shape, as in figs. 11-13.

Etymology

Dedicated with friendship to the colleague Lucio Saltini (Modena), who collected most of the type series and kindly allowed the study of his whole Glaphyridae collection.



Figs. 7-10. Figs. 7-8: *Pygopleurus saltinii*, n. sp., habitus of females (paratypes). Fig. 9: *Pygopleurus saltinii*, n. sp., head of female, lateral view. Fig. 10: *Pygopleurus anahitae* Mitter, head of female, lateral view.

Comparative notes

Due to the sculpturing of the pronotum and to the shape of the elytral apex, *Pygopleurus saltinii* belongs to Baraud's "group 3", together with other 10 species.

Of these, the only one posing identification problems is *P. anahitae* Mitter, 2001, described from northwestern Iran (Mitter, 2001) and subsequently recorded for the Zagros mountains by Keith & Uliana (2008), who provided some additional data on morphology based on the examination of one paratype and other topotypical specimens.

Males of the two species can be reliably identified through the paramera (cfr. figs. 3-6). In *P. saltinii* they are much shorter (ca. 0.7 mm) than in *P. anahitae* (ca. 1.0 mm), and the shape, although variable, is constantly different. In *P. saltinii* the dorsal side is evidently concave (slightly convex in *P. anahitae*), sometimes producing a "swollen" apex (cfr. fig. 4) (differently shaped in *P. anahitae*); the sinuosity of the ventral side is either absent (cfr. fig. 5) or scarce, with the basal enlargement poorly developed (both characters are more marked in *P. anahitae*). Variabilty of *P. anahitae* paramera is almost null.

In addition, males of *P. saltinii* always miss a clypeal carina, although it may be indicated by a black line, not in relief, on its basal half. Conversely, a well evident carina, in relief and usually reaching the clypeal margin, is commonly observed in *P. anahitae*, although it may be seldom absent in small specimens (Keith & Uliana, 2008).

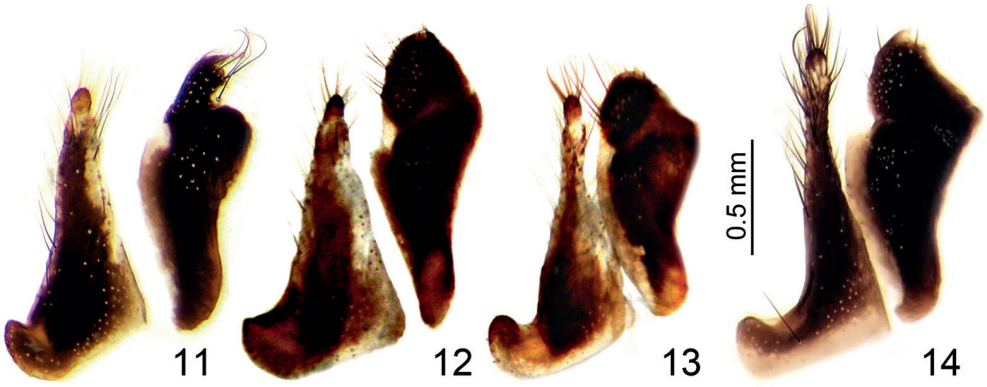
The distinction of the females of the two species is far less easy: the genital sclerites of *P. saltinii* are rather variable (cfr. figs. 11-13) with scarce differentiation from those of *P. anahitae* (fig. 14). A small difference can be observed in the structure of the clypeal carina: in *P. saltinii* the carina is short, well developed along the basal half of the clypeus but flattened to a black line, not in relief, in the distal half (fig. 9). Conversely, a complete carina, reaching anterior margin, is regularly present in *P. anahitae* (fig. 10).

The forebody colour may also be helpful: known males of *P. saltinii* are commonly (15/16) green, rarely (1/16) fuchsia (fig. 2). Conversely, all known males of *P. anahitae* have a basically violet forebody (Mitter, 2001; Keith & Uliana, 2008; D. Keith pers. comm.). The colour of females seems not helpful, since both species show green and purple/violet phenotypes (although green seems to be uncommon in *P. anahitae*). However, the use of colour as a diagnostic character requires caution and evaluation on a larger sample, since it shows a wide intraspecific variation in several *Pygopleurus* species.

Ecological notes

Pygopleurus saltinii was collected above the limit of the arboreal vegetation (L. Saltini, pers. comm.). According to the material studied by the author, it was syntopic and active together with *Pygopleurus koniae* (Petrovitz, 1958), and with a further species of unidentified *Pygopleurus*, of which a single female was collected.

In spite of the montane environment where it lives, *P. saltinii* exhibit an apparently precocious phenology: all known specimens were collected between May 1 and May 14; a collecting expedition carried out by the author during the days 21-22 May 2010 on Mt. Nemrut and its surroundings failed to find any specimen.



Figs. 11-14. Figs. 11-13: *Pygopleurus saltinii*, n. sp., variability of right genital sclerites of females (paratypes). Fig. 14: *Pygopleurus anahitae* Mitter, right genital sclerites (topotypical specimen, from Keith & Uliana, 2008).

Acknowledgments

The type series was gathered through the help of Mauro Malmusi, Milan Nikodým, Antonio Rey, Guido Sabatinelli, Lucio Saltini, Claudio Sola. A special thanks to Denis Keith for giving information and taking pictures of the specimens of *P. anahitae* of his collection.

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