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## Two new species of *Platydomene* GANGLBAUER from Romania and Turkey, with a redescription of *P. stoeckleini* (KOCH) (Coleoptera: Staphylinidae, Paederinae)

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**Abstract:** *Platydomene sodalis* (KRAATZ), *P. gyorgyi* sp. n. (southwestern Romania), *P. stoeckleini* (KOCH) (Iran, Iraq), and *P. lanugo* sp. n. (N-Anatolia) are (re-)described and distinguished from similar congeners. Their male sexual characters are illustrated.

**Key words:** Coleoptera, Staphylinidae, Paederinae, *Platydomene*, Palaearctic region, Romania, Turkey, Iran, Iraq, taxonomy, new species

### Introduction

Some 20 species and subspecies of *Platydomene* GANGLBAUER 1895 have become known from the Palaearctic region (BORDONI 1980, COIFFAIT 1967, 1982, SCHÜLKE 1988, 1990, WATANABE 1991). Five species have been reported from the Eastern Palaearctic, but none of them appears to be congeneric with the Western Palaearctic taxa, so that the genus may actually be confined to the Western Palaearctic region. Three of these Eastern Palaearctic species occur in Japan and are currently attributed to *Lobrathium* MULSANT & REY (NAOMI 1989). Likewise, the Siberian *P. altaica* (COIFFAIT) belongs to *Lobrathium* (SCHÜLKE, pers. comm.). The fifth species, *P. taiwanensis* WATANABE, is not likely to belong to *Platydomene*, either, as is suggested by the morphology of the aedeagus, as well as by ecological and biogeographic arguments, but its correct generic affiliations are unknown.

All the Western Palaearctic species are ripicolous; none of them can be considered common. Some of the taxa are still known only by their respective types. This was true also of *P. stoeckleini* (KOCH), whose description is based on a single female from northern Iraq. On the occasion of a recent visit to the collections of the Naturhistorisches Museum Wien, however, a male of this species was found, so that it is now possible to describe its aedeagus and the male secondary sexual characters. Even more remarkable is the discovery of two undescribed *Platydomene* species, which, too, are described here. One of them was recently collected by Gy. Makranczy in Romania and, after a subsequent comparison with type and non-type material of *P. sodalis* (KRAATZ), proved to be new to science; the other is from Northern Turkey and was found in the F. Schubert collection, which is now deposited and accessible in the Naturhistorisches Museum Wien.

### Material, measurements and abbreviations

The material examined is deposited in the following collections:

DEI .....Deutsches Entomologisches Institut, Eberswalde (L. Zerche)

NHMB .....Naturhistorisches Museum Basel (E. Sprecher)

NHMW .....Naturhistorisches Museum Wien (H. Schillhammer)

cAss .....author's private collection

cSch .....private collection M. Schülke, Berlin

The following abbreviations are used for the measurements, which are given in mm:

HL: head length from anterior margin of clypeus to neck; HW: head width; PW: maximal width of pronotum; PL: length of pronotum along median line; EL: length of elytra from apex of scutellum to hind margin; AL: length of aedeagus from apex of ventral process to base; TL: total length.

#### *Platydomene sodalis* (KRAATZ) (Figs. 1-4)

*Lathrobium sodale* KRAATZ 1857: 687f.

Type examined: Lectotype ♂: Bavar. / Waltl / sodale / Coll. Kraatz / Holotypus / coll. DEI Eberswalde / Lectotypus *Lathrobium sodale* Kraatz rev. V. Assing 2002 (DEI).

Additional material examined: 8 exs., Germany, "Alp. bavar." (DEI); 1 ex., "Teschen", leg. Wanka (DEI); 1 ex., "Besciden", leg. Reitter (DEI); 1 ex., Austria, Kärnten, Pontafel, leg. Manderek (DEI); 6 exs., Niederösterreich, Lunz, leg. Habermelner (DEI); 1 ex., Niederösterreich, locality not specified (DEI); 1 ex., locality illegible (DEI).

Comments: The original description specifies neither a holotype nor the number of types, so that the above specimen was originally a syntype. In using the term "Holotypus" for the specimen, however, GAEDIKE (1981) unintentionally designated a lectotype.

Among its Western Palearctic congeners, *Platydomene sodalis* is readily identified by its small body size, the coloration, and by the male sexual characters. For illustrations of its facies and male sexual characters see Figs. 1-4. The aedeagus figured by COIFFAIT (1982: 303) possibly refers to a different species. The distribution ranges from France and the Netherlands to Poland, Slovakia, and Croatia, and it includes southern Germany, Austria, the Czech Republic, Hungary, Romania, and Slovenia (HORION 1965).

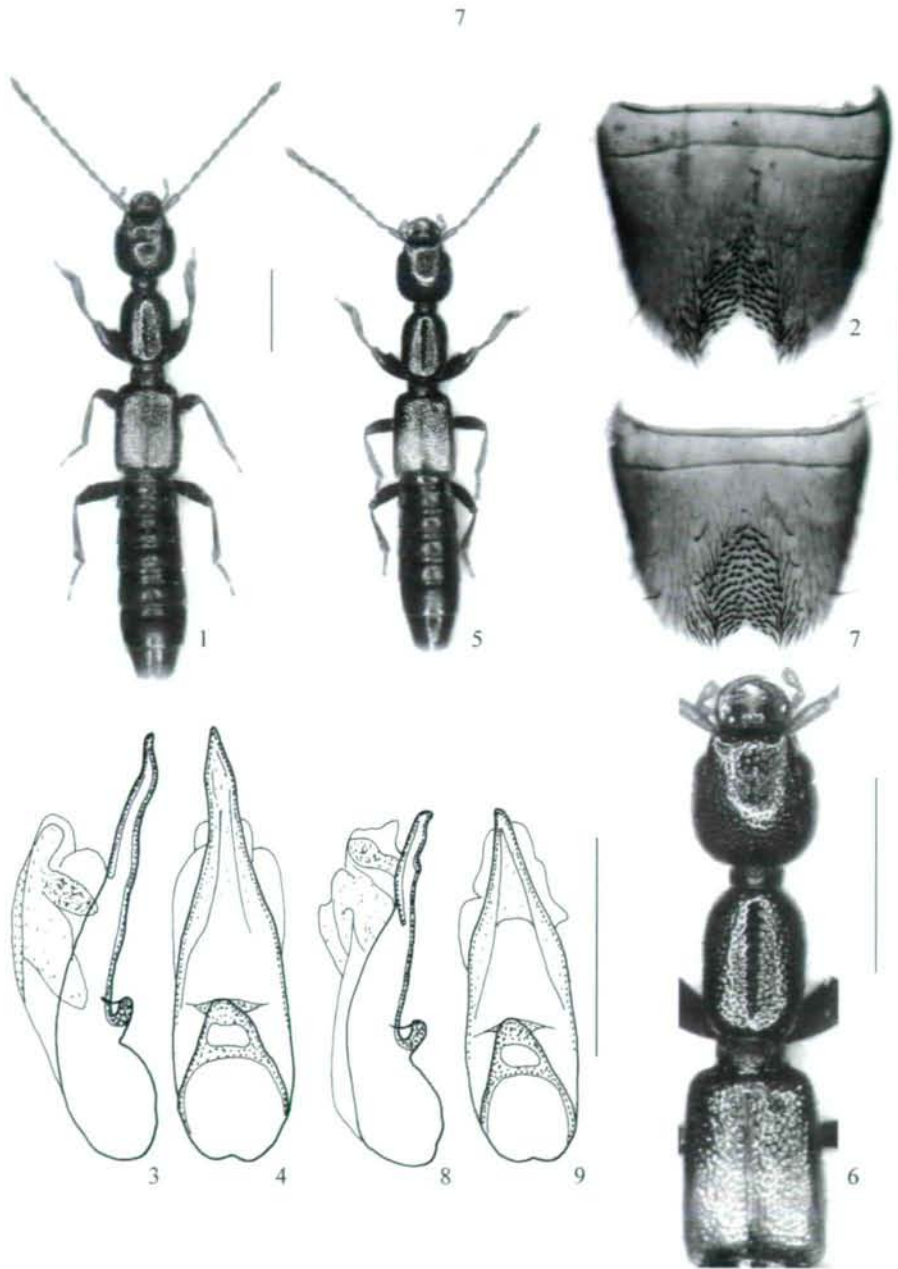
#### *Platydomene gyorgyi* sp. n. (Figs. 5-9)

Holotype ♂: ROMANIA, jud. Caraş-Severin/Mehedinţi, 5km NE Taţu, valley of Cerna, 900m, confluence of streams, sandy patches on gravelly bank, flotation method / 45°00'N, 22°32'E, 25-27.IV.2002, leg. Gy. Makranczy / Holotypus ♂ *Platydomene gyorgyi* sp. n. det. V. Assing 2002 (cAss). Paratype ♂: same data as holotype (cAss).

Description: Measurements (in mm) and ratios (holotype, paratype): HL: 0.79, 0.77; HW: 0.72, 0.71; PW: 0.59, 0.57; PL: 0.83, 0.83; EL: 0.88, 0.83; AL: 0.86, 0.85; TL: 5.7, 5.5; HL/HW: 1.08, 1.09; HW/PW: 1.23, 1.24; PL/PW: 1.41, 1.45; EL/PL: 1.05, 1.00.

In facies similar to *P. sodalis* (Figs. 5, 6).

Head, pronotum, and abdomen blackish, with the abdominal apex slightly lighter; elytra distinctly bicoloured, with the anterior 2/5 black and the posterior 3/5 rufous; antennae brown; legs brown, with the femora more or less infuscate.



**Figs. 1-9:** *Platydomenes sodalis* (KRAATZ) (1-4; 3-4: lectotype) and *P. gyorgyi* sp. n. (5-9): 1, 5 – facies; 2, 7 – ♂ sternite VIII; 3-4, 8-9 – aedeagus in lateral and in ventral view; 6 – forebody. Scales: 1, 5, 6: 1.0 mm; 2-4, 7-9: 0.5 mm.

Head weakly oblong (see ratio HL/HW); eyes of similar size as in *P. sodalis*, in dorsal view less than half the length of postgenae (Fig. 6); puncturation as in *P. sodalis*; antennae slightly shorter than in *P. sodalis* (Fig. 5).

Pronotum very slender (see ratios PL/PW and HW/PW), narrower and more oblong than in *P. sodalis* (Fig. 6); puncturation coarse and dense, similar to that of head, not distinctive (Fig. 6). Elytra at suture approximately as long as pronotum; puncturation coarse and relatively ill-defined, partly more or less confluent.

Anterior abdominal segments with more distinct and well-defined puncturation, otherwise as in *P. sodalis*.

♂: sternite VI unmodified; sternite VII in the middle narrowly and shallowly impressed and with modified setae, its posterior margin only indistinctly concave; sternite VIII posteriorly with extensive median impression, this impression with cluster of black modified setae; posterior margin of sternite VIII relatively weakly emarginate in the middle (Fig. 7); aedeagus of distinctive shape, smaller and apically much less slender than in *P. sodalis* (Figs. 8-9)

**E t y m o l o g y :** The species is dedicated to György Makranczy, specialist of Oxytelinae, who discovered the two type specimens.

**C o m p a r a t i v e n o t e s :** *Platydomene gyorgyi* is readily distinguished from its most similar congener *P. sodalis* especially by the more slender pronotum (see Figs. 1, 6) and by the different male primary and secondary sexual characters. In *P. sodalis*, the male sternite VI is impressed, the impression of sternite VII is much more extensive, the posterior margin of sternite VII is distinctly concave, the posterior margin of sternite VIII is much more deeply emarginate, and the aedeagus is larger, more slender, and of completely different shape (Figs. 2-4). All other species of the genus are larger and/or have less distinctly bicoloured elytra, and they differ by their male sexual characters.

**D i s t r i b u t i o n :** The type locality is situated in southwestern Romania, where the two types were collected on a gravel bank of a stream.

### ***Platydomene stoeckleini* (KOCH) (Figs. 10-15)**

*Lathrobium* (*Platydomene*) *Stoeckleini* KOCH 1937: 246f.

**T y p e e x a m i n e d :** Holotype ♀: Mesopotamia, Assur / Sammlung Stöcklein / Typus / Unicum !! / *Lathrobium Stöckleini* Koch det. C. Koch / Holotype 1956 det. Kamp (?) / Sammlung Frey Tutzing (NHMB).

**A d d i t i o n a l m a t e r i a l e x a m i n e d :** 1♂, Iran, III.IV.72, F. Ressler / Bander Abbas Umg. 24.III. / Strand (NHMW).

**C o m m e n t s :** Since the original description, which is based on a single female in poor condition (KOCH 1937), *P. stoeckleini* has never been recorded again. Based on a male from Iran, which was discovered in the collections of the NHMW, a redescription of the external characters is given, and the male sexual characters are described for the first time. Apart from the somewhat denser puncturation on the head and pronotum of the holotype (Figs. 11-12), the holotype and the male from Iran are externally highly similar, suggesting that they are indeed conspecific.

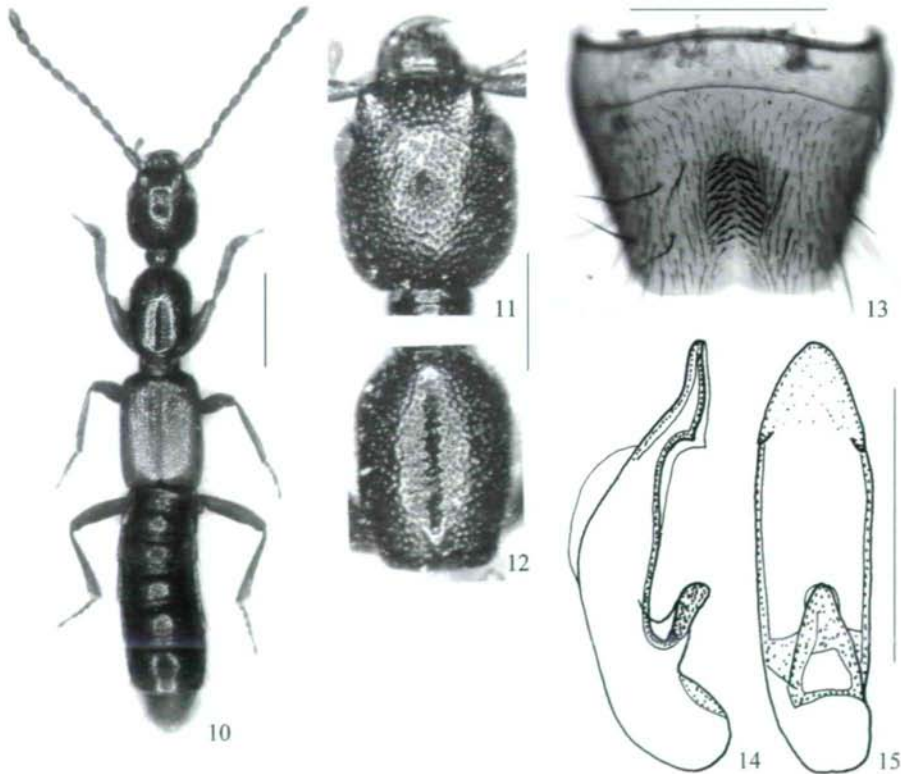
**R e d e s c r i p t i o n :** Measurements (in mm) and ratios (holotype, non-type specimens): HL: 0.97, 0.94; HW: 0.83, 0.83; PW: 0.74, 0.72; PL: 1.00, 1.01; EL: 1.09, 1.07; AL: -, 0.80; TL: 6.9, 6.7; HL/HW: 1.16, 1.13; HW/PW: 1.12, 1.15; PL/PW: 1.37, 1.38; EL/PL: 1.07, 1.08.

**F a c i e s** as in Fig. 10. Head, pronotum, and abdomen dark brown, with the abdominal apex distinctly lighter; elytra yellowish brown; legs and antennae light brown to ferruginous.

Head distinctly oblong and of subrectangular shape (Figs. 10-11); eyes relatively large, approximately half the length of postgenae; puncturation dense and coarse, not distinctive; antennae moderately slender (Fig. 10).

Pronotum of similar shape and with similar puncturation as in other species of the genus (see ratios HW/PW, PL/PW, and Figs. 10, 12). Elytra at suture slightly longer than pronotum (see ratio EL/PL and Fig. 10); puncturation dense and mostly well-defined. Abdomen with distinct, but relatively shallow microsculpture and with subdued shine, more shining than, e. g., in *P. bicolor*.

♂: sternite VI unmodified; sternite VII only indistinctly depressed (not impressed), without modified setae, and with very weakly concave posterior margin; sternite VIII with relatively narrow median impression; this impression with cluster of black modified setae; posterior margin of sternite VIII only weakly excavate in the middle (Fig. 13); aedeagus rather small, even smaller than in *L. sodalis* and *L. gyorgyi*, and of distinctive morphology (Figs. 14-15).



**Figs. 10-15:** *Platydomena stoeckleini* (KOCH) (11-12: holotype): 10 – facies of ♂ from Iran; 11, 12 – head and pronotum of holotype; 13– ♂ sternite VIII; 14-15 – aedeagus in lateral and in ventral view. Scales: 10: 1.0 mm; 11-15: 0.5 mm.

**Comparative notes:** *Platydomene stoeckleini* is distinguished from other species of the genus especially by the shape of the head (Figs. 10-11) and by the male sexual characters (Figs. 13-15).

**Distribution and bionomics:** The species has become known only from two localities in southern Iran and northern Iraq. According to one of the labels ("Strand"), the male specimen was collected on a beach, which, however, is very unlikely to represent the true habitat of the species. All other Western Palaearctic species of the genus are ripicolous.

***Platydomene lanugo* sp. n. (Figs. 16-20)**

**Holotype** ♂: Cangal/Ayancik, Anat., leg. Schubert / A8.79 [overleaf] / Holotypus ♂ *Platydomene lanugo* sp. n. det. V. Assing 2002 (NHMW).

**Description:** Measurements (in mm) and ratios (holotype): HL: 0.91; HW: 0.77; PW: 0.66; PL: 0.95; EL: 0.92; AL: 0.79; TL: 5.6; HL/HW: 1.18; HW/PW: 1.16; PL/PW: 1.43; EL/PL: 0.97.

Facies as in Figs. 16 and 17. Body reddish brown, with the elytra and the appendages ferruginous. Head distinctly oblong (see ratio HL/HW and Fig. 17); eyes hardly projecting from contours of head, in dorsal view less than 1/3 the length of postgenae (Fig. 17); puncturation moderately dense and coarse, interstices in central dorsal area approximately as wide as punctures, in lateral areas narrower (Fig. 17); antennae long and slender (Fig. 16).

Pronotum moderately oblong and slender (see ratios PL/PW and HW/PW, and Fig. 17); puncturation only slightly coarser and somewhat sparser than that of head; median impunctate line narrow (Fig. 17). Elytra at suture almost as long as pronotum (see ratio EL/PL); punctures rather large, dense, relatively ill-defined, and shallow.

Abdomen approximately as wide as elytra (Fig. 16); puncturation fine and relatively dense, on segment IV as fine as on tergite VII; microsculpture pronounced, integument only with weak shine; posterior margin of tergite VII with palisade fringe.

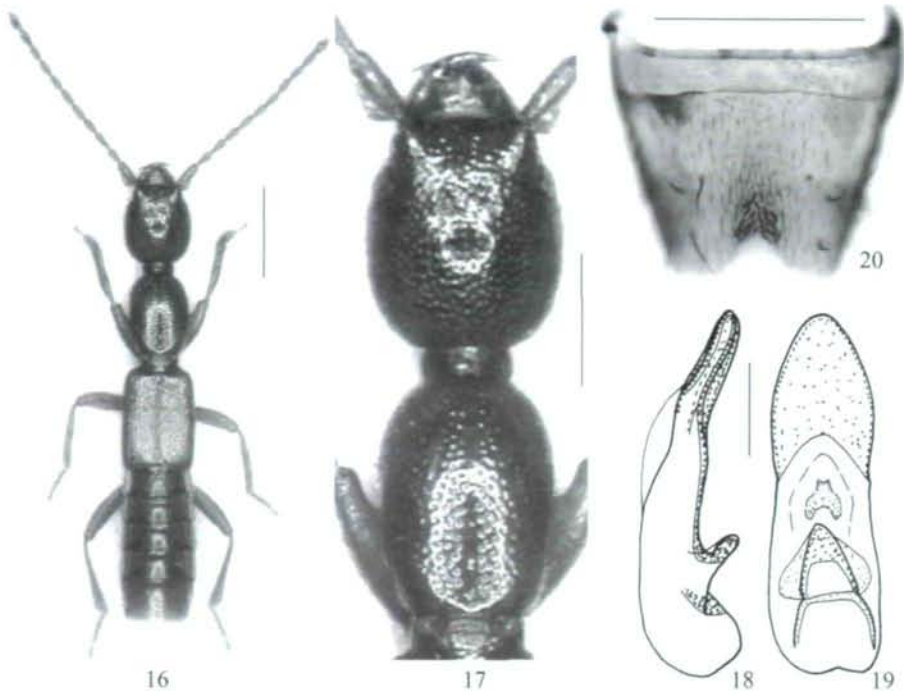
♂: sternite VI unmodified; sternite VII with broadly, but weakly concave posterior margin; sternite VIII posteriorly with emargination, anterior to this emargination with small elevated area with sparse black modified setae (Fig. 20); aedeagus of distinctive shape, small, rather broad, and apically rounded (Figs. 18-19)

**Etymology:** The name (Lat.: fluff, first beard) is a noun in apposition (gender: feminine) and refers to the low number of modified setae on the ♂ sternite VIII.

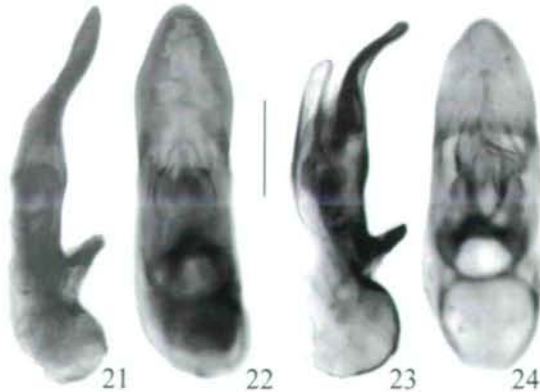
**Comparative notes:** *Platydomene lanugo* is highly similar and apparently closely related to *P. caucasica* SCHÜLKE (holotype and additional specimen [cSch] examined), with which it shares a similar external appearance, a similar general morphology of the aedeagus, and the general arrangement of the modified setae on the male sternite VIII. In *P. caucasica*, however, the pronotum is somewhat flattened (i. e. less convex in cross-section), the aedeagus is broader (ventral aspect), and in lateral aspect the ventral process of the aedeagus is strongly bent and narrower (Figs. 21-22). In addition, the coloration of the body is slightly darker, the eyes are relatively smaller, and the antennae are slightly stouter. *Platydomene lanugo* is easily separated from other small species of the genus by the almost uniformly light coloration, the small eyes, by the

modifications of the ♂ sternite VIII (small elevated area with few modified setae) and by the distinctive shape of the aedeagus.

**Distribution:** The type locality is in Sinop, central northern Anatolia, Turkey.



**Figs. 16-20:** *Platydome lanugo* sp. n.: 16 – facies; 17 – head and pronotum; 18, 19 – aedeagus in lateral and in ventral view; 20 – ♂ sternite VIII. Scales: 16: 1.0 mm; 17, 20: 0.5 mm; 18, 19: 0.2 mm.



**Figs. 21-24:** *Platydome lanugo* sp. n. (21-22) and *P. caucasica* SCHÜLKE (23-24): aedeagus in lateral and in ventral view. Scale: 0.2 mm.

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## Zusammenfassung

*Platydomea sodalis* (KRAATZ), *P. gyorgyi* sp. n. (Südwest-Rumänien), *P. stoeckleini* (KOCH) (Iran, Irak) und *P. lanugo* sp. n. (Nordtürkei) werden beschrieben bzw. redeskribiert und von anderen Arten der Gattung unterschieden. Die primären und sekundären Sexualmerkmale der Männchen werden abgebildet.

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