

*Brachysomus (Hippomias) xanthianus* sp. n. from Thrace, Greece  
(Coleoptera, Curculionidae)

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From northern Greece we describe *Brachysomus xanthianus* sp. n. morphologically similar to both, species of the *transylvanicus* and the *ponticus* species-group. *B. xanthianus* sp. n. is well characterized within the subgenus *Hippomias* Yunakov, 2006 by its exceptionally small size and the scarce and short vestiture of the body.

Keywords: Entiminae, Sciaphilini, *Brachysomus*, new species, taxonomy, Greece.

#### INTRODUCTION

The genus *Brachysomus* Schoenherr, 1823 was divided by Yunakov (2006) into two subgenera, where *Hippomias* Yunakov, 2006 comprises at present 31 species (Yunakov 2006, Białooki 2007, Yunakov & Germann 2012, Borovec 2013), 10 of them are known from Greece, the present species included (Yunakov 2006, Yunakov & Germann 2012). The subgenus *Hippomias* is characterized, apart from other traits, by the apically strongly narrowed epifrons, the dorsally clearly visible pterygia, and the moderately sclerotized median lobe of the penis, its membranous dorsal surface and its flattened blunt apex. In the course of an excursion to the top of Mount Xanthi, a new very tiny member of *Hippomias* was discovered and is described in the following.

#### MATERIAL AND METHODS

For sifting leaf litter a beetle sifter with grid width of 7 mm was used. The extraction method applied follows Germann (2014).

Photographs were taken with a 5-megapixel digital camera (Leica DFC 420), the genital organs were photographed in glycerine. Series of images were captured through a binocular (Leica MZ16) and processed by an Auto-Montage software (Imagic Image Access, Version 8).

Body length was measured from the fore margin of the eyes to the apex of the elytra. The morphological terminology follows Oberprieler (1988, 2014). Additional remarks on label data are set in square brackets ([ ]).

Abbreviations: NMBE – Naturhistorisches Museum der Burggemeinde Bern; NMSO – Naturmuseum Solothurn; cCB – collection Carlo Braunert; Mens-

dorf, cCG – collection Christoph Germann, Thun; cGK – collection George Kakio-poulos, Athens; cRB – collection Roman Borovec, Sloupno.

## TAXONOMIC PART

***Brachysomus (Hippomias) xanthianus* sp. n.**

(Figs 1-3)

*Material.* Holotype: ♂ 284\_16.10 GREECE, Mt. Xanthi, W-Xanthi, N 41°11'56"/ E 24°45'28", 660 m, Kalk, offene Wäldchen, [limestone, open forest] 26.5.2016, leg. C. Germann. Red label: Holotype *Brachysomus (Hippomias) xanthianus* sp. n. des. Germann, Braunert & Kakiopoulos 2016 (NMBE).

Paratypes: 12 ♂♂, 4 ♀♀, same data as holotype (cCG, cRB, cGK, NMSO). 13 ♂♂, 6 ♀♀, «2016-19 GREECE, Mt. Xanthi, W-Xanthi, N 41°11'25"/ E 24°46'23", 820m, Kalk, arteneiche Bergwiese mit Gebüschsaum, [limestone, meadow with high diversity of plants] 26.5.2016, leg. C. Braunert» (cCB). All with red labels: Paratype *Brachysomus (Hippomias) xanthianus* sp. n. des. Germann, Braunert & Kakiopoulos 2016

*Description.*

Size: males 1.4–1.6 mm; females 1.7–1.9 mm; holotype: 1.5 mm. Habitus: Figs 1A–B. Colour: dark brown, antennae, and legs auburn.

Head, rostrum and antennae: head with temples as long as diameter of eye, rostrum as long as wide, vertex almost twice as wide as epifrons between antennae. Epifrons in lateral view strongly bulged in middle, in dorsal view weakly carinate apically. Head with transverse impression at frons. Pterygia clearly visible in dorsal view, parallel sided. Antennal scrobe distinct, margins diverging to eye in lateral view. Eyes bulged, on upper side of head. Head and rostrum irregularly and coarsely punctate. Vestiture consisting of very short, oval bristles. Antennal scape bowed and clubbed, twice as long as width of epistome. Antennal funiculus consisting of 7 segments. First and second segment as long as wide, following 5 segments transverse, constantly broadening, club egg-shaped, 1.5 times wider than last segment. Antennal segments and club set with whitish hairs.

Pronotum: transverse (length/width: 0.7–0.75) widest in the middle, laterally strongly rounded, irregularly and coarsely punctate, interspaces between punctures reduced to small ridges. Vestiture consisting of oval, clubbed, recumbent, whitish bristles. Scutellum not visible.

Elytra: long-oval (length/width: 1.34 to 1.38 in males) to broader oval (length/width: 1.4 to 1.47 in females), widest in or just behind middle, rounded to basis (apterous) and apex. In lateral view flattened at disc, regularly rounded at decline. Striae regularly punctate. Intervals about twice as wide as striae, glabrous, faintly and irregularly punctate. Intervals set with both, one row of clubbed, oval recumbent bristles, and sparsely standing, much smaller, narrow, attached or weakly bowed scales.

Underside: Vestiture sparse with similar narrow, attached or weakly bowed scales as on intervals. Apical edge of 5<sup>th</sup> ventrite in males almost straight, in females half-round.

Legs: femora edentate, strongly swollen in middle. Tibiae strong, weakly s-shaped at inner margin, all with rows of reddish spines at apex. Metatibiae in male



Fig. 1. — A. Habitus of *Brachysomus xanthianus* sp. n. holotype lateral view; — B. dorsal view (Photos: C. Germann).

weakly mucronate. Four visible strong tarsal segments; first broadly triangular, second transverse, third bilobed, claw segment gracile and elongate almost as long as the preceding three segments together, claws simple. Vestiture consisting of oval, clubbed, recumbent whitish scales.



Fig. 2. Genital organs of *Brachysomus xanthianus* sp. n. — A. Penis, ventral view; — B. lateral view; — C. Sternite VIII; — D. Spermatheca; — E. Ovipositor (Photos: C. Germann).

Male genitalia: Figs 2A–B. Penis elongate, tip triangular with blunt apex, flattened in dorsal/ventral view. Apodeme one fourth longer than median lobus. Penis dorsally weakly sclerotized. No visible sclerites in the internal sac, but containing a spiculate field. Tegmen without parameres, tegminal apodeme slightly bowed, half as long as apodeme of aedeagus.

Female genitalia: Figs 2C–E. C. Sternite VIII with long and slender apodeme and a narrow, scarcely sclerotized lamella, setose at fore margin. D. Spermatheca with very long C-shaped cornu, small globular nodulus and bigger globular ramus. E. Ovipositor with one pair of weakly sclerotized segments, without styli, set with long sensillae.

Sexual dimorphism: small differences; males have a more long-oval body (females more rounded oval), the base of the 10th elytral interval is more strongly depressed (thus more angular in lateral view) and metatibiae are faintly mucronate (not in females).

*Etymology*: The new species' epithet “*xanthianus*” derives from Mount Xanthi where it was discovered.

*Ecology*: *Brachysomus xanthianus* sp. n. was sifted from mosses, leaf litter, plant debris, and cushion plants together with the weevils *Omius sandneri* Reitter, 1906, *Stomodes* Schönherr, 1826 sp., *Stuebenius romani* (Fremuth, 1992), *Styphlus jonicus* (Reitter, 1899) and *Trachyphloeus alternans* Gyllenhal, 1834 (Fig. 3). The



Fig. 3. Locus typicus of *Brachysomus xanthianus* sp. n. on Mount Xanthi (Photo: C. Braunert).

habitat consisted of a low *Quercus ilex* and *Juniperus* forest and a rich herbaceous cover growing on xerothermic limestone outcrops near the top of Mount Xanthi at altitudes between 660 and 820 m a.s.l.

#### DIAGNOSIS AND DISCUSSION

*Brachysomus xanthianus* sp. n. is at present one of the smallest species of the whole genus with solely 1.4–1.9 mm (other small species are *B. (Hippomias) subtilis* Yunakov, 2006 with 1.5–2.3 mm, and *B. (Hippomias) merkli* Yunakov, 2006 with 1.6–2.2 mm), and combined with the very scarce and short vestiture and the dark brown body colour well recognisable. Based on the shape of the rostrum (see above) it clearly belongs to the subgenus *Hippomias*, and there it shares similarities with both, the *B. transylvanicus* (Seidlitz, 1868) species group by Košťál (1992), and the *B. ponticus* Apfelbeck, 1899 species group sensu Yunakov (2006).

In the first species group, the general habitus of *B. tenuicollis* Yunakov, 2006 with a rather elongate body, the relatively sparse vestiture, and the shape of the rostrum is similar (*B. xanthianus* sp. n. is much smaller, it has even scarcer vestiture with shorter bristles, and head with rostrum more broadly triangular, eyes more protruding, transverse depression at frons deeper). Furthermore, *B. armatus* Yunakov, 2006 shows similarly transverse antennal segments 3–7, but differs in the strongly s-shaped metatibiae, and their sharp inner face at apex. The similarly minute *B. merkli* shows a similar body shape, especially head and pronotum, but differs in the

stronger punctate striae on the elytra, the much longer elytral bristles, and the less transverse antennal segments.

In the second species group, *B. fallax* Yunakov, 2006 with the protruding eyes situated high on the head, the rostral sulcus, the recumbent setae on the elytra and the shape of the penis is similar (just weakly carinate rostrum, and elytra not strongly rounded in *B. xanthianus* sp. n.). Additionally *B. samos* Yunakov & Germann 2012 shows similarities regarding the shape of rostrum, but the eyes are much flatter, the antennal segments 3–7 are as long as wide, the body vestiture is denser, the shape of the scales is different, and the base of 10th elytral interval is more strongly depressed in males.

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