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## Revision of the subgenus *Persexarthrus* Voss of the genus *Anthonomus* Germar (Coleoptera: Curculionidae: Anthonomini)

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### Abstract

The subgenus *Persexarthrus* Voss, 1944 of the weevil genus *Anthonomus* Germar, 1817 is revised. *Anthonomus (Persexarthrus) behnei* sp. n. is described. A neotype of *Bradybatus ornatooides* Reitter, 1898 and lectotypes for *Anthonomus bauderi* var. *abeillei* Desbrochers des Loges, 1892, *A. cyprius* Marshall, 1925 and *Neobradymbatus variabilis* Hoffmann, 1963 are designated. The five species of the subgenus are described, keyed and their distributions given.

**Key words:** Coleoptera, Curculionidae, Curculioninae, *Anthonomus*, *Persexarthrus*, revision, new species, Iran

### Introduction

*Persexarthrus* was described by Voss (1944), as a subgenus of *Anthomorpha* Weise, 1883, largely based on the antennal funicle being six-segmented. In the original description, a transverse band of hair-like scales slightly behind the middle of the elytra was used as a complementary subgeneric character, as well as simple tarsal claws present in some species of the subgenus *Anthomorpha* Weise (Clark 1987). Later, Hoffmann (1963) described *Neobradymbatus* as a new genus, also based on the six-segmented funicle. He apparently ignored or was not aware of the available subgeneric name *Persexarthrus*. Worldwide, there are several *Anthonomus* subgenera with species characterized by a six-segmented funicle: *Anthonomus s.str.* Germar 1817, *Cnemocyllus* Dietz 1891, *Persexarthrus* and *Sexarthrus* Blatchley 1916. *Sexarthrus* was originally synonymized with *Anthonomus* by Burke (1975). The subgenus *Persexarthrus* was characterized at the time by simple claws and a funicle with six segments. The subgenus *Persexarthrus* remains accepted (Alonso-Zarazaga 1999; Anderson 2002; Caldara 2013) and comprises Palearctic *Anthonomus* species with six funicular segments. Simple claws are no longer a valid subgeneric character, as the newly described *A. behnei* has claws toothed. New World *Anthonomus* species including those with a six-segmented funicle have been thoroughly studied from both Nearctic, for example by Clark & Burke (2005), and Neotropical ecozones, for example by Clark (1987); the most recent study of Palearctic species was published by Dieckmann (1968).

All known *Persexarthrus* species appear to develop on *Prunus*, subgenus *Amygdalus* spp. (Rosaceae), occasionally also on *Prunus persica* (L.) Batsch. They are distributed from Cyprus, Turkey, Syria, Lebanon, Israel, Jordan to Armenia, Azerbaijan, Iran and Afghanistan.

### Material and methods

*Treatment of species.* The sequence of species treated is chronological. Neotype and lectotype designations were made as appropriate, according to Arts. 74 and 75 of the International Code of Zoological Nomenclature (ICZN 1999).

*Abbreviations.* E: elytra; P: pronotum; R: rostrum; l: length; w: width; ≈: approximately.

*Measurements and photographs.* All measurements were made using a stereomicroscope (Intraco Micro NSZ-810) with an ocular micrometer. The body length is interpreted as the distance between the anterior eye margin and

brown to blackish with brown narrow anterior margin, with large, irregularly rounded punctures: intervals between punctures considerably narrower than puncture diameter, shining; on sites and in middle line moderately densely covered with whitish and intermixed brown recumbent seta-like scales forming nearly unnoticeable broad lateral clearly visible medial white longitudinal line; transverse ( $Pw/Pl = 1.52$ ), broadest shortly after middle, with unequally rounded sides, slightly and broadly constricted at anterior margin; disc slightly convex. **Elytra:** Dark brown to blackish, interstria 1 very slightly lighter; suboval ( $El/Ew = 1.45$ ), in first two thirds of length slightly divergent, broadly rounded at posterior third, widest between medium and last third, flat on disc. Striae formed by deep round closely arranged punctures, weakly narrower than interstriae; interstriae very finely sculptured. Whitish recumbent hair-like tiny scales very densely covering scutellum; considerably longer whitish elongated ( $l/w \approx 7$ ) seta-like scales sparsely scattered on elytra and here intermixed with light brown subrecumbent thin scales, especially in posterior half of elytra with blackish suberect seta-like scales. More densely arranged scales only feebly indicate anterior disc macula, broad anterior band and the posterior band. **Legs:** Dark brown to black except brown reddish femoral base, femorotibial junction, tibial apex, tarsomere 1 and basal part of claws, sparsely covered by whitish to brown reddish subrecumbent to suberect seta-like scales; profemora with large triangular sharp tooth (Fig. 3), meso- and metafemora with very small sharp tooth; tarsomere 3 weakly bilobed and only slightly wider than tarsomere 2, onychium shorter than tarsomeres 1–2 combined; claws with small teeth in middle of their length. **Venter:** Regularly covered with white seta-like scales, medial part of metasternum, ventrite 1 and 2 with fine dense transverse furrowing and round deep punctures. **Penis:** Fig. 8a–c. **Plates of sternite IX:** Fig. 8d.

Female (Fig. 21). As in male except rostrum slightly longer ( $Rl/Pl = 1.56–1.65$ ) and more strongly curved. **Spermatheca:** Fig. 12.

**Variability.** Length in males 2.2–3.1 mm, in females 2.6 – 4.0 mm. Integument varies only slightly, especially in some larger specimens which have the humeri brown to brown-reddish. Elytra of densely white squamose specimens with two dark bands with only blackish seta-like scales. Anterior dark band V-shaped, convergent posteriorly, posterior one rectangularly transverse. In some specimens the distal half of the femora is reddish.

**Etymology.** I devote this species to my friend and eminent weevil specialist Lutz Behne, who helped me considerably with material from the Dieckmann collection and with literature.

**Diagnosis.** *Anthonomus behnei* is the only known species of the subgenus *Persexarthrus* with toothed claws.

**Comparative notes.** This species is most similar to dark specimens of *A. variabilis*, from which it differs by having toothed claws and less developed sexual dimorphism and by genitalia of both sexes.

**Biological notes.** I collected this species in Iran in Khaneh Zenyan on *Prunus eburnea* (Spach) Aitchison together with *A. variabilis* and in Morghab on a shrubby species, which was either *P. erioclada* Bornmüller or *P. lycioides* (Spach) C. K. Schneider (I. Mehregan pers. comm.).

**Distribution.** Iran.

**Non-type specimens examined.** None.

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