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A revision of the *Anthaxia (Haplanthaxia) schah* Abeille de Perrin, 1904 species-group, with description of two new species from Iran (Coleoptera: Buprestidae: Anthaxiini)

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Abstract

Two new species of *Anthaxia* Eschscholtz, 1829 endemic to Iran, *Anthaxia (Haplanthaxia) cadusiana* **sp. nov.** and *A. (H.) elamita* **sp. nov.**, are described and compared to their most similar species. The *A. (H.) schah* Abeille de Perrin, 1904 species-group is proposed and revised, and lectotypes for *A. (H.) schah* Abeille de Perrin, 1904 and *A. (H.) wethloi* Obenberger, 1940 are designated. All species of the new species-group are illustrated, including type specimens. A short definition of the new species-group and a key to its species are given, together with data on the distribution, bionomy and taxonomic position for each of the species that compose it.

Key words: Coleoptera, Buprestidae, *Anthaxia*, new species, new species-group, species-group revision, lectotype designation, distribution, bionomy, taxonomy, Iran

Introduction

In the course of my in depth study on the *Anthaxia* Eschscholtz, 1829 of the Middle East, I have been able to observe an unusual convergence of morphological characters present in some poorly known Iranian taxa, namely *Anthaxia (Haplanthaxia) schah* Abeille de Perrin, 1904, *A. (H.) wethloi* Obenberger, 1940, *A. (H.) naviauxi* Bílý, 1995, and in two additional new species that I describe herein, *A. (H.) cadusiana* **sp. nov.** and *A. (H.) elamita* **sp. nov.**

The study of these species also revealed some affinities with species belonging to the *A. (H.) angustipennis* (Klug, 1829) species-group, and for this reason I initially did not understand their real systematic position. In the descriptions of *A. (H.) wethloi* and *A. (H.) naviauxi*, Obenberger (1940) and Bílý (1995) had compared their new species to various species of the *A. (H.) angustipennis* group, but despite their apparent closeness, these species also show substantial differences (Table 1). Moreover, the strong closeness of *A. (H.) schah* and *A. (H.) wethloi* had already been informally treated during exchanges of opinions that I had with other specialists, and for this reasons I considered it preferable to group the species treated in this study, in a new informal species-group defined by *A. (H.) schah*.

In the original descriptions of *A. (H.) schah* and *A. (H.) wethloi* there was no designation of holotypes, hence I will herein proceed to designate a lectotype for each of the two species.

As in all my previous papers, in this study I have paid particular attention to the intraspecific variability, which in this new group proved to be rather large. Regarding sexual characters, particularly the male genitalia which are usually regarded as primary differentiating characters, I consider the shape and the structure of the median lobe (Figs. 70–74) as one of the most reliable and consistent features, even essential in some difficult species-groups for the differentiation of the various species. According to my observations, the conformation of the tegmen (Figs. 75–79) is more subject to variability, while the apex of the penis is one of the most invariable and diagnostic character that I have observed in the many thousands specimens of *Anthaxia* that I have studied so far. The female genitalia have so far been given less relevance in the systematics of Buprestidae, probably because of the absence of sclerotized parts, which are used diagnostically in other families. Nevertheless, together with other characters, they can sometimes help in specific differentiation, as in a case presented in this study.

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