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# Taxonomic review of *Drilus* Olivier, 1790 (Elateridae: Agrypninae: Drilini) from Asia Minor, with descriptions of seven new species and comments on the female antennal morphology in Drilini

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## Abstract

The neotenic elaterid genus *Drilus* Olivier, 1790 in Asia Minor is reviewed. Twelve species are recognized, of which seven are described as new: *Drilus badius* **sp. nov.**, *D. huijbregtsi* **sp. nov.**, *D. mertliki* **sp. nov.**, *D. robustus* **sp. nov.**, *D. sanliurfensis* **sp. nov.**, *D. teunisseni* **sp. nov.**, and *D. turcicus* **sp. nov.** All known species are listed with diagnoses, data on variability and distribution. A key to the males of *Drilus* species in Asia Minor is provided and information on prey of known larvae is summarized. Antennal morphology of Drilini females is briefly discussed.

**Key words:** antenna, Turkey, Elateroidea, larva, neoteny, taxonomy, snails

## Introduction

The genus *Drilus* Olivier, 1790 belongs to the soft-bodied elaterid tribe Drilini (Kundrata & Bocak 2011, Kundrata *et al*. 2014a). Fully winged males are characterized by the serrate to pectinate antennae, convex lateral pronotal margins, almost complete sharp edges at lateral prothoracic margins, and the deeply emarginate or v-shaped frontal margin of mesoventrite (Kundrata & Bocak 2007, Kundrata *et al*. 2014b). The neotenic females undergo incomplete metamorphosis and remain larviform and wingless as mature adults (Bocak *et al*. 2010). Most of the 35 *Drilus* species occur in the Mediterranean (Wittmer 1944, Bocak 2007), but information on real diversity, intraspecific variability and species distributional ranges is very limited. The alpha-taxonomy of this genus was studied for the Iberian Peninsula and Balearic Islands (Bahillo de la Puebla & López Colón 2005), mainland Levant (Kundrata *et al*. 2014b) and Crete (Kundrata *et al*. 2015). These studies showed that *Drilus* is more speciose than previously believed and thus, many new species are expected to be found in underinvestigated regions such as Asia Minor. Only five species of *Drilus* are known from that region, all of them described between the years 1867 and 1902 (Wittmer 1944). Since then, nobody has paid attention to the *Drilus* fauna of that area. Therefore, herein we provide a taxonomic review of this genus in Asia Minor.

## Material and methods

This study is based primarily on the examination of adult male morphology but where possible, we also studied female and larval characters. Genitalia were dissected after a short treatment in hot 10% aqueous solution of potassium hydroxide. The membranous parts of the female genitalia were dyed with chlorazol black. Important diagnostic characters were photographed using a digital camera attached to a stereoscopic microscope. The line illustration of the female genitalia was derived from the photograph. The following measurements were taken with an ocular scale bar on a microscope: BL–body length, measured from the fore margin of head to the apex of elytra (in males) or body (females, larvae); BW–body width, measured at the widest part of the body; EL–elytral length;

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