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A new *Cephennium* of Kyrgyzstan, with notes on subgenera and distribution (Coleoptera, Staphylinidae, Scydmaeninae)

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Abstract

Cephennium chirgisianum sp. n. of western Kyrgyzstan is described. This is the easternmost known locality where this predominantly western European genus occurs. This new species is not placed in any subgenus, and problems with subgeneric diagnoses and systematics of *Cephennium* are discussed. The distribution of *Cephennium* is summarized and possible dispersal routes or areas where this genus can be expected to occur are indicated.

Key words: Cephenniini, new species, Palaearctic, Kyrgyzstan, biogeography, taxonomy

Introduction

The type genus of Cephenniini, *Cephennium* Müller & Kunze, 1822, is one of the most difficult taxa within Scydmaeninae to study. Currently over 160 species are placed in *Cephennium*, of which the majority inhabit the western Palaearctic, and nine are known to occur in North America (Vít & Besuchet 2004; Hopp & Caterino 2009; Stevanović 2014; Meybohm & Zanetti 2014). These minute (often below 1 mm in length) beetles live in leaf litter and show a very uniform external structures. Body size, proportions of body parts, pigmentation, punctures and setae, and male secondary sexual characters are widely used in species diagnoses, but only examination of aedeagi ensures correct identification. Some species are broadly distributed and show some morphological variability, treated by some previous authors as a sufficient reason to define infraspecific taxa (e.g., Franz 1974). Some others are restricted to islands or to small and isolated areas surrounded by mountain ranges. As wingless (and frequently microphthalmous), species of *Cephennium* have presumably rather limited dispersal abilities, and processes associated with habitat fragmentation may play an important role in their population dynamics and evolution.

Most of the nominal *Cephennium* species were described by various authors in the 19th and the beginning of the 20th century. Diagnoses were based on inadequately described external characters and are nearly completely useless for species identification. Six traditionally recognized subgenera are also ill-defined and require a comprehensive revision. This situation makes the study of this large genus difficult. Only descriptions and redescriptions that include detailed illustrations of male copulatory organs can help clarifying the taxonomy of *Cephennium*. Recent studies focused mostly on species from Italy (Castellini 2006, 2011a, 2011b, 2011c; Meybohm & Zanetti 2014), France (Orousset 2006a, 2006b, 2007, 2012) and the Balkans (Stevanović 2011, 2014) can only be treated as initial phase of a comprehensive revision of *Cephennium*.

Cephennium shows an intriguing distribution. Most species inhabit the western part of the Palaearctic region, with continuous range extending from the Iberian Peninsula to the eastern Carpathian Mountains. Several species occur also in isolated localities in the Middle East and Caucasus, and one species is known from the southern range of the Ural Mountains (Vít & Besuchet 2004; Kurbatov 2006). Within the same area, genera closely related to *Cephennium* can be found: *Nanophthalmus* Motschulsky, 1851 and *Etelea* Csiki, 1909. They form a monophyletic clade, the '*Cephennium* group' (Jałoszyński 2011a, 2011b, 2012a). In the eastern part of Palaearctic, this lineage is replaced by the '*Cephennodes* group' and '*Cephennomicrus* group' of genera. In the view of such a distribution, the occurrence of *Cephennium* in North America (Hopp & Caterino 2009) is especially interesting.