



# Revision of the genus *Eulichas* Jacobson, 1913 (Coleoptera: Eulichadidae) I. Introduction, morphology of adults, key to subgenera and species groups, and taxonomy of *E. funebris* species group

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## Abstract

The predominantly Oriental genus *Eulichas* Jacobson, 1913, family Eulichadidae, is reviewed in part. The *Eulichas funebris* species group is revised. A brief history of classification of the genus, as well as the general morphology of the adults, is presented. The following nine new species are described: *E. birmanica* Hájek, **sp. nov.** (Myanmar: Tenasserim), *E. haucki* Hájek, **sp. nov.** (Thailand), *E. jaechi* Hájek, **sp. nov.** (Malaysia), *E. janbezdeki* Hájek, **sp. nov.** (Laos); *E. kubani* Hájek, **sp. nov.** (Laos, Vietnam), *E. meghalayensis* Hájek, **sp. nov.** (India: Meghālaya), *E. minuta* Hájek, **sp. nov.** (Sumatra, Nias, Siberut), *E. strbai* Hájek, **sp. nov.** (Malaysia), and *E. tanahrata* Hájek, **sp. nov.** (Malaysia). A lectotype is designated for *E. mediocris* (Pic, 1921) (Sumatra).

**Key words:** Coleoptera, Eulichadidae, *Eulichas*, *Eulichas funebris* species group, taxonomy, new species, Palaearctic, Oriental, identification key

## Introduction

The small elateriform family Eulichadidae comprises only two genera worldwide: the monotypic genus *Stenocolus* LeConte, 1853, with the species *S. scutellaris* LeConte (1853) occurring in California, and the predominantly Oriental genus *Eulichas* Jacobson, 1913 (formerly *Lichas* Westwood, 1853) with 21 described species, arranged in two subgenera, occurring from Nepal, north India and southern China through continental south-eastern Asia, and reaching the Greater Sunda Islands (Sumatra, Java, Borneo), and the Philippines in the east.

Larvae of both genera are aquatic. Larvae of *Eulichas dudgeoni* Jäch from Hong Kong have been collected in a stream with a sandy substrate (Jäch 1995), and their gut contents were found to include wood particles (Costa & Vanin 1998). Larvae of *S. scutellaris* have been recorded from substrate or leaf packs in lowland streams and rivers, where they feed on rotting detritus or roots (Shepard 1993). Adults are considered to be short lived (Shepard 2002). They can be collected on vegetation near streams, and *Eulichas* species in particular are often attracted to light.

Although the average length of adult *Eulichas* species is about 2.5 cm, making them “very large beetles”, the family Eulichadidae was overlooked for a long time. More recently, Jäch (1995) has catalogued the family and reviewed the species from China, Laos and Vietnam, Ivie & Jäch (2002) added a new species from Vietnam, and Costa & Vanin (1998) described the larva of *Eulichas*. Nevertheless, a comprehensive revision is still missing and the phylogenetic position of the family remains unresolved.

The study of a large quantity of material deposited in various institutional and private collections (see the list in the Material section), as well as material recently collected during numerous expeditions to south-eastern Asia, enable me to introduce briefly the morphology of adult *Eulichas*, to revise the alpha-taxonomy of the genus, and to describe several new species.

## History of classification

The genera *Lichas*, and *Stenocolus* were both described in the same year. While Westwood (1853) placed his genus in the family Elateridae (although with reservations), LeConte (1853) placed *Stenocolus* in the family Atopidae (= Dascillidae). Subsequently Lacordaire (1857) transferred *Lichas* to the Dascillidae, where both genera remained for nearly 70 years (e.g. Pic 1914). Jacobson (1913) observed that Westwood’s *Lichas* was a junior homonym of *Lichas* Dalman, 1827 (Trilobita) and *Lichas* Steininger, 1837 (Mollusca), and thus established the replacement name *Eulichas*. Descriptions of several additional species of *Eulichas* were the exclusive work of French entomologists (Bourgeois 1891; Deyrolle & Fairmaire 1878; Fairmaire 1891, 1898; Pic 1911, 1913, 1915, 1921, 1923, 1924, 1933, 1939). One species, *E. obscura* Pic, 1923 was subsequently transferred to the genus *Epilichas* White, 1859 (family Ptilodactylidae) by Delève (1971).