



## Review of the genus *Hyperstoma* (Coleoptera: Lampyridae)

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### Abstract

The genus *Hyperstoma* Wittmer, 1979 is reviewed and *Hyperstoma wittmeri* **sp. nov.** from Sri Lanka is proposed as a new species. A key to *Hyperstoma* and illustrations of diagnostic characters are given.

**Key words:** *Hyperstoma wittmeri*, Lampyridae, Otoretinae, new species, Oriental Region

### Introduction

The genus *Hyperstoma* Wittmer, 1979 is distributed exclusively on Sri Lanka. Although a member of Lampyridae (Ototretinae) this genus with its oval body form and flabellate antennae resembles *Selasia* Olivier, 1790 of the family Drilidae. Drilid-like similarities of otoretine fireflies caused that many of these representatives were formerly placed in the family Drilidae (Wittmer 1944). Later Crowson (1972) transferred some of them to the subfamily Otoretinae in Lampyridae.

Although Wittmer (1979) described *Hyperstoma* within Lampyridae, he referred to its external characters as more closely resembling Drilidae than other Lampyridae. Considering some equivocal characters Wittmer (1979) placed *Hyperstoma* in fireflies without subfamily assignment. These confusions in phylogenetic relationships have been clarified recently when first molecular analyses of elateroids were published (Bocakova *et al.* 2007; Sagesami-Oba *et al.* 2007; Stanger-Hall *et al.* 2007). Likewise, Janisova and Bocakova (2010) supported inclusion of *Hyperstoma* in the Otoretinae on the basis of a thorough examination of morphological characters. Crowson's (1972) concept of the Otoretinae was adopted by Lawrence and Newton (1995) and most other authors (Geisthardt and Satô 2007; Brancucci and Geiser 2009; Bocakova and Janisova 2010).

All molecular data analyses supported inclusion of the Otoretinae in fireflies, although internal relationships within Lampyridae remain controversial.

*Hyperstoma* was described as a monotypic genus for the only species *Hyperstoma marginata* Wittmer, 1979. Revision of the material from the Natural History Museum in Basel yielded another species of this Ceylonese genus.

### Material and methods

All specimens were examined under an Olympus SZX 12 stereoscopic microscope. Ink drawings of external characters were elaborated and digital photographs of genitalia and other characters were taken using an Olympus Camedia 5060 digital camera. Morphology measurements were taken using an ocular micrometer, interocular distances were measured at the narrowest point, the eye diameter at the widest point. The body width was measured across the humeri in dorsal view. Male genitalia of examined specimens were boiled in 10% KOH solution, dissected and put into microvials.

Abbreviations: NHMB—Naturhistorisches Museum Basel, Switzerland.