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## ***Hypsilara breweri* n.sp. from Venezuela: description of new species with notes on the morphology and phylogenetic relationships of the genus (Coleoptera: Elmidae: Larainae)**

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### **Abstract**

A new species of the genus *Hypsilara* Maier & Spangler, 2011, collected in the Eastern Venezuela, is described and illustrated. We provide habitus photographs, detail drawings of both male and female genitalia, and description of some morphological features, which were omitted in the description of the genus. Included are also remarks on the distribution and genetic distance of the *Hypsilara* species and possible relations to other South American Larainae.

**Key words:** Coleoptera, Elmidae, Larainae, *Hypsilara*, Venezuela, DNA

### **Introduction**

The genus *Hypsilara* Maier & Spangler, 2011 was described recently from the Cerro de la Neblina, one of the numerous table mountains of the Guyana shield. The genus was monotypic (represented by *H. royi* Maier & Spangler, 2011) similarly to the other Venezuelan genus *Roraima* Kodada & Jäch, 1999 from Mount Roraima (Kodada & Jäch 1999). *Hypsilara* was placed in the subfamily Larainae raising the number of genera to 28 with around 130 species. The larains represent a group of semiaquatic beetles within the family Elmidae with nearly worldwide distribution (Kodada & Jäch 2005), living in the splash zone of streams on rocks, on logs and branches, and in leaf packs and detritus near banks. However, Larainae are grouped based on life style and some morphological (mostly plesiomorphic) features, which can be also analogous. Thus, it is still open to question whether they form a monophyletic group.

The new *Hypsilara* species described herein was found in a slowly flowing stream near Sierra de Lema (Guyana Highlands, Venezuela), which suggests that the genus has a large area of distribution, and that it is not closely connected only with high elevated table mountain habitats.

### **Material & Methods**

Specimens prepared for the study were cleaned and examined under a Leica M205C stereomicroscope with a Planapo 1.0 lens, by using diffuse lighting at magnifications up to 160×. Male genitalia and pregenital segments were studied as temporary glycerine slides at magnifications up to 600× by using a Leica DM1000 light microscope. Drawings were made with a drawing tube. Habitus photographs were made using Leica M205C with digital camera attached.

Metric characters were measured with an ocular grid to nearest 0.05 mm. Abbreviations used in the text: CL—body length, EL—elytral length, EW—maximum elytral width, PL—pronotal length, PW—maximum pronotal width, ID—interocular distance, NMW—Natural History Museum, Vienna, CCB—collection of Fedor Čiampor Bratislava, CKB—collection of Ján Kodada Bratislava.

For DNA extraction, amplification and subsequent sequence editing methods see e.g. Čiampor Jr. & Kodada