Kempnyia (Plecoptera) from the Mantiqueira Mountains of Brazil

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Abstract
Eight species of Kempnyia Klapálek were collected in the Mantiqueira Mountains at Campos do Jordão, of which six were known: K. colossica (Navás, 1934), K. flava Klapálek, 1916, K. neotropica (Jacobson and Bianchi, 1905), K. obtusa Klapálek, 1916, K. reichardti Froehlich, 1984 and K. tamoya Froehlich, 1984; two are new, K. pirata and K. tupinamba. One new synonymy is proposed. Comments are provided for all species from the area and a key to these species is presented.

Key words: Stoneflies, Campos do Jordão, Kempnyia, Brazil, São Paulo

Introduction
The genera Eutactophlebia and Kempnyia were introduced by Klapálek 1914 in his keys to the Perlidae, the first having numerous crossveins in the apical half of the wings, only exceptionally present in Kempnyia. In 1916 he designated as type of Eutactophlebia his new species E. reticulata and added Acroneuria gracilenta Enderlein, 1909 to the genus. For Kempnyia he designated as type his new species K. tenebrosa Klapálek, 1916, describing six more species and including two Perla species, P. brasiliensis (Pictet, 1841) and P. klugi (Pictet, 1841). His new species K. magellanica Klapálek, 1916, from southern Chile, was synonymized by Illies (1964) with Pictetoperla gayi (Pictet, 1841). Zwick 1983 showed that E. reticulata fit into Kempnyia, placing Eutactophlebia as a synonym of Kempnyia. Zwick (1988) showed that K. melagona Klapálek, 1916 is a junior synonym of K. neotropica (Jacobson & Bianchi, 1905). Kempnyia, at present, comprises 35 species, including the two new ones described here and a new synonym (DeWalt et al. 2011) and is known from the southern half of Brazil. Potentially, it also may occur in neighbouring areas of Uruguay, Argentina and Paraguay. Recently, nymphs of an unnamed species were described from the Pantepui biogeographic province of Venezuela (Derka & al. 2010).

The Mantiqueira Mountains begin in eastern Minas Gerais State not far from the town of Barbacena (21°13’S, 43°32’W). They extend southwest to the border with Rio de Janeiro State (RJ) and proceed west to São Paulo State (SP) to near the town of Bragança Paulista (22°57’S, 43°46’W).


The bulk of the material comes from the State Park of Campos do Jordão (PECJ), SP and has been collected by the author, students and collaborators. For more information on the area, see Froehlich (2010).

Methods
The collection sites in the park were delimited by a polygon defined by the coordinates 22°39’49” to 22°41’44”S and 45°26’56” to 45°29’30”W. Altitudes varied between 1500 and 1600 m. The streams were 1st to 4th order and...