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Two new species of *Kempnyia* from southern Brazil (Plecoptera:
Perlidae)

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Two new species of *Kempnyia*, *K. auberti* and *K. petersorum* are described. Both were collected in southern São Paulo State and in Paraná State and are related to *K. neotropica* J. & B., a widespread species in southeastern and southern Brazil.

Keywords: Plecoptera, *Kempnyia*, new species, Brazil

INTRODUCTION

Two new species of *Kempnyia* KLAPALEK, both collected in southern São Paulo State and in Paraná State, are described. The types are deposited in the Museum of Zoology, University of São Paulo (MZSP); the paratypes in the National Museum of Natural History, Smithsonian Institution, Washington, DC, USA (NMNH).

DESCRIPTIONS

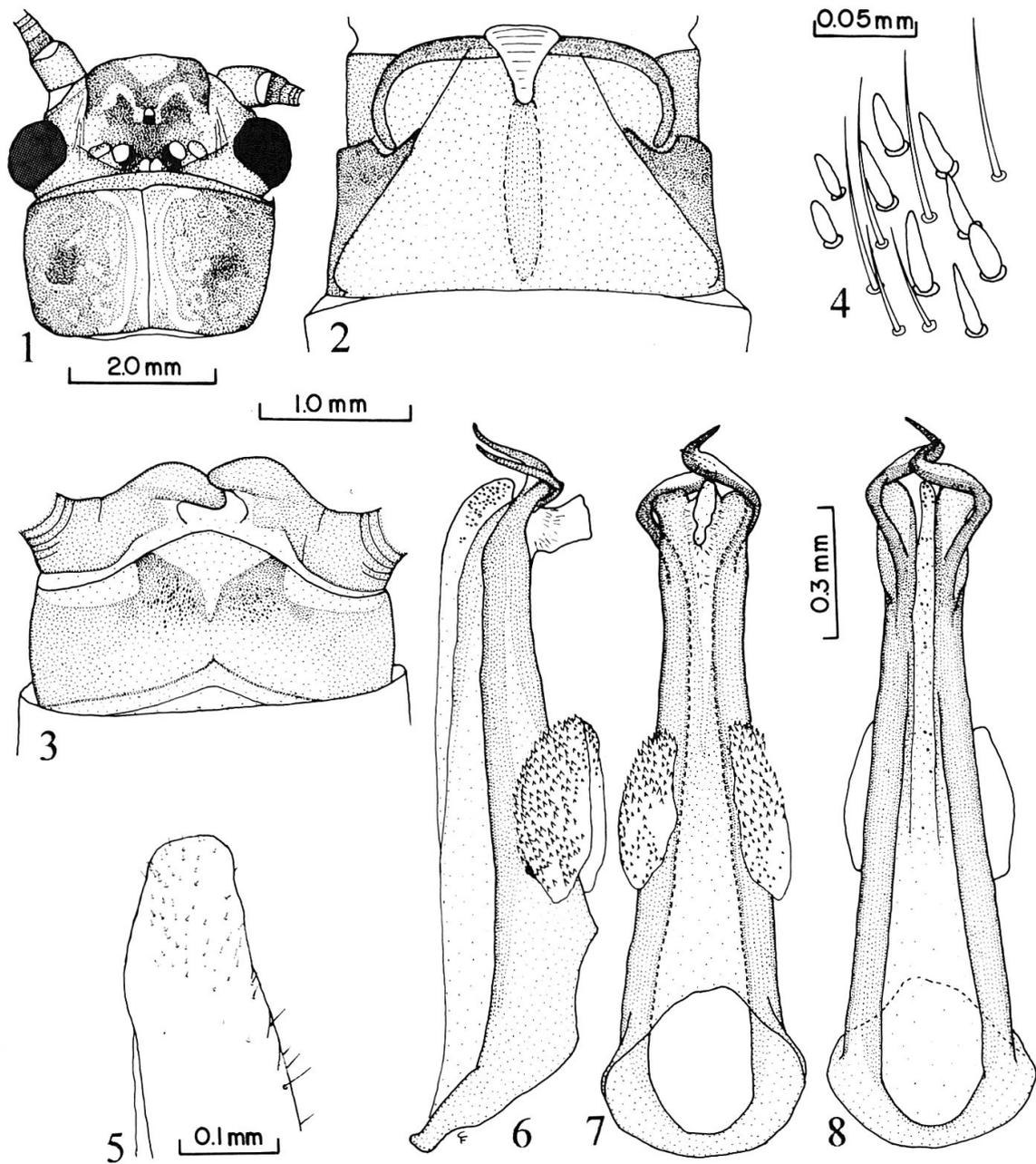
Kempnyia auberti sp.n.

(Figs. 1-8)

Material: Holotype male: SP, Ribeirão Grande, Fazenda Intervalles, 10.XI.1993, C.G. FROEHLICH and H. PAPROCKI (MZSP). Paratype male: PR, Rio Marumbi, 15-16.II.1969, W.L. and J.G. PETERS (NMNH).

Measurements: Holotype: forewing length, 22.0 mm; paratype: forewing length, 18.4 mm.

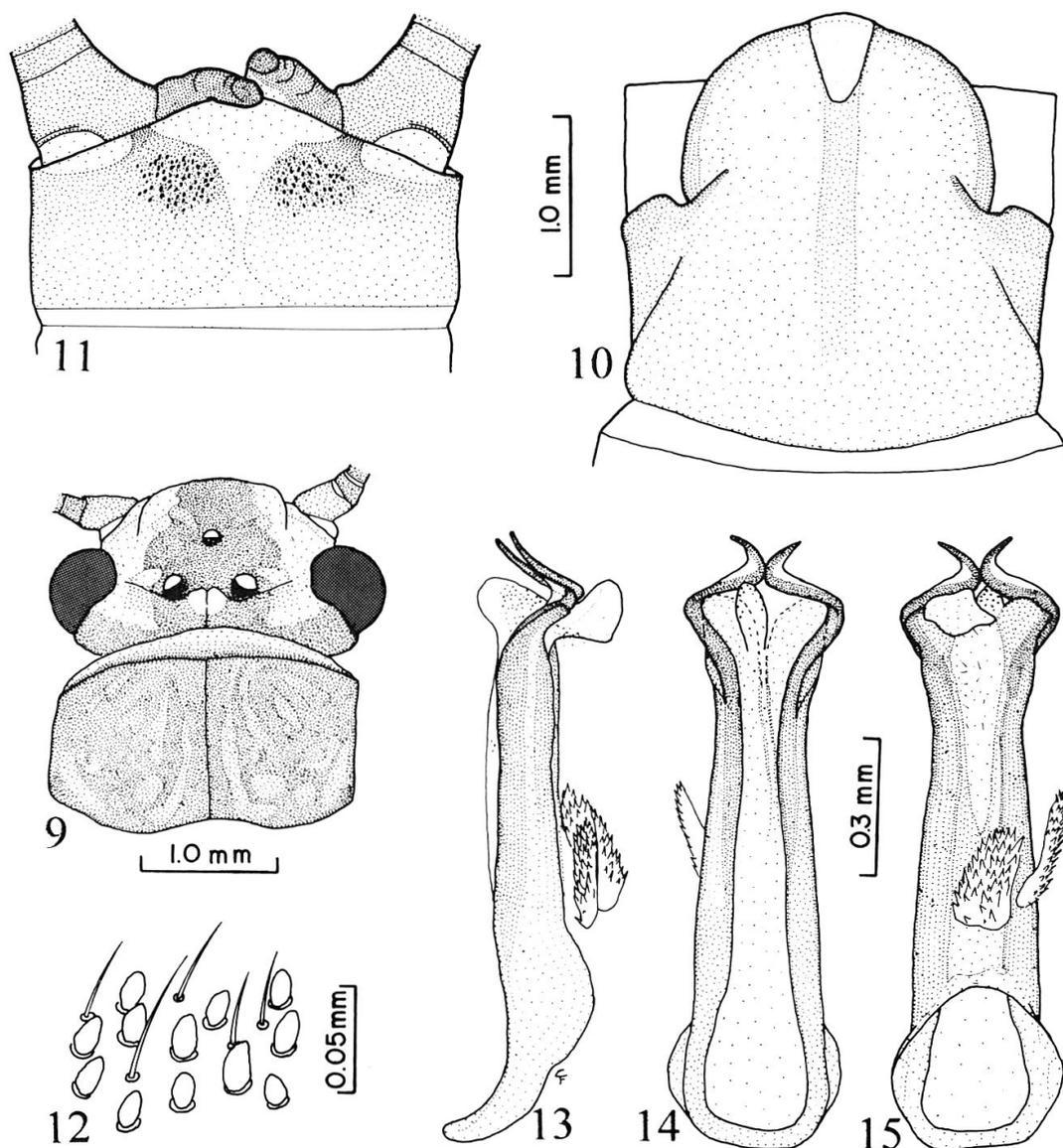
Male: Head (Fig. 1) brown on both sides of the ochraceous M-line, at lappets, and backwards to postfrontal line. Sides of head ochraceous brown to ochraceous. Scape of antennae ochraceous on dorsal and ventral sides, brownish on anterior and posterior faces. Pedicel brown, darker basally. Flagellum medium brown. Palpi light brown. Pronotum (Fig. 1) brown, rugosities a shade lighter, broad median ochraceous stripe. Meso- and metanotum brown to ochraceous. Dorsal abdomen pale yellowish. Femora yellowish, changing to brown apically. Tibiae brownish, darker at both ends. Tarsi ochraceous, brown apically. Wing membrane brown, lighter in centre of many cells. C, Sc, R, M in part, A₂ and A₃ pale, rest of veins brownish. Cerci medium brown, brown hairs on paler cuticle. Ventral side pale, basisterna in part brown.



Figs. 1-8: *Kempnyia auberti* sp.n., male holotype. Fig. 1, head and pronotum; Fig. 2, sternum 9; Fig. 3, tergum 10; Fig. 4, detail of tergum 10 (peg-like setae); Fig. 5, detail of paraproct; Figs. 6-8, penial armature in lateral, ventral and dorsal views.

Sternum 9 (Fig. 2) light in colour, brownish at sides and darker at bases of the subgenital plate rim. A median pale brown stripe backwards from hammer. Subgenital plate relatively short and broad, hammer with an elongate triangular shape. Field of special (peg-like) bristles on tergum 10 (Fig. 3) moderate in size, most bristles carrot-shaped (Fig. 4). Paraprocts digitiform, with minute sensillae apically (Fig. 5). Penial armature (Figs. 6-8) elongate, hooks moderately twisted, a pair of spiny pads on ventral membranous penis wall, basally from armature.

Female and nymph: Unknown.



Figs. 9-15: *Kempnyia petersorum* sp.n., male holotype. Fig. 9, head and pronotum; Fig. 10, sternum 9; Fig. 11, tergum 10; Fig. 12, detail of tergum 10 (peg-like setae); Figs. 13-15, penial armature in lateral, dorsal and ventral views.

Discussion: The penis of *K. auberti* is very similar to that of *K. neotropica* (ZWICK, 1972) both in the shape of the armature and the presence of the ventral spiny pads. *K. auberti*, however, is larger and lighter in colour. *K. neotropica* is a dark species, as several of the names given to it indicate: *obscura* PICTET, *aterrima* KLAPALEK, and *fusca* NAVAS. In the type locality both species are sympatric.

Etymology: The name honours the late Prof. J. AUBERT.

Kempnyia petersorum sp.n.

(Figs. 9-15)

Material: Holotype, male: SP, Ribeirão Grande, Fazenda Intervalas, 7.II.1989, E. TRAJANO (MZSP). Paratypes, 4 males: PR, Rio Marumbi, 15-16.II.1969, W.L. and J.G. PETERS (NMNH).

Measurements: Holotype, forewing length, 12.4 mm; paratypes: forewing length, 11.1-11.7 mm.

Male: Head (Fig. 9) with broad longitudinal brown band; sides of head brownish-ochraceous but parietalia brown posteriorly. Scape brownish-ochraceous, rest of antennae medium to light brown. Palpi light brown. In both antennae and palpi, brown hairs on pale cuticle. Pronotum (Fig. 9) brown, rugosities a shade lighter. Meso- and metanotum ochraceous, some lines brownish. Abdominal terga light brown, darker towards terminalia. Wing membrane brownish, veins pale but with row of brown microtrichia along them. Legs brown, bases of femora yellowish, tarsi light brown. Ventral side yellowish, basisterna in part brown. Abdominal sterna light brown, darker towards terminalia. Cerci brownish; from about the 10th cercomere on, bicoloured.

Sternum 9 (Fig. 10) relatively long, light-coloured. Subgenital plate rounded, hammer long-oval; anteriorly to hammer, a pale brown longitudinal stripe. Field of special (peg-like) bristles on tergum 10 (Fig. 11) moderate in size, most bristles elliptical (Fig. 12). Paraprocts digitiform, with minute sensillae apically. Penial armature (Figs. 13-15) elongate, hooks moderately twisted, a pair of spiny pads on ventral membranous penis wall, basally from armature.

Female and nymph: Unknown.

Discussion: The penis of *K. petersorum* is also similar to that of *K. neotropica* both in the shape of the armature and in the presence of spiny pads. It differs from *K. neotropica* and *K. auberti* in the colour pattern, the brown band along the head being very characteristic. Also the contrast of the brown pronotum with the light-coloured meso- and metanotum is striking. It is sympatric with both *K. neotropica* and *K. auberti*. If the spiny penial pads prove to be a synapomorphy, they form a natural group.

Etymology: Dedicated to William L. and Janice G. PETERS, the collectors of the paratypes.

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