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First record of Epimetopidae in Laos (Coleoptera: Epimetopidae)

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Abstract

Eumetopus schuelkei sp.n. (Coleoptera: Epimetopidae) is described from Laos. The family Epimetopidae is recorded for the first time from Laos. A revised key to the species of the genus *Eumetopus* BALFOUR-BROWNE is presented.

Key words: Coleoptera, Epimetopidae, *Eumetopus*, key, new species, Laos.

Introduction

The family Epimetopidae is comprised of three genera and 27 species. A world check list was published by JI & JÄCH (1998a); in this check list, *Eumetopus tibialis* JI & JÄCH was erroneously listed as *E. malickyi* (nomen nudum).

Epimetopidae are morphologically well recognized by the eyes being partly divided by a lateral canthus, and by the pronotum being widest close to its anterior angles, with the anterior margin being provided with a large median, shelf-like projection which partly covers the head. Most species of *Eumetopus* are provided with colorful elytral tubercles (see JI & JÄCH 1998b: Figs. 1 - 4), which led to the popular name ("Jewel Water Beetles").

Epimetopidae are related to Hydrophilidae and other allied staphyliniform families. Only one genus, *Eumetopus* BALFOUR-BROWNE, is represented in Asia. JI & JÄCH (1998b) revised this genus taxonomically. The biology of *Eumetopus* is very poorly studied; all species are very probably truly aquatic (sensu JÄCH 1998b); eggs are carried by the female in an egg case underneath the abdomen (brood care); larva and pupa are still unknown.

Eumetopus is restricted to tropical Asia, where is has so far been recorded from Sri Lanka, India, Nepal, Thailand and SE China.

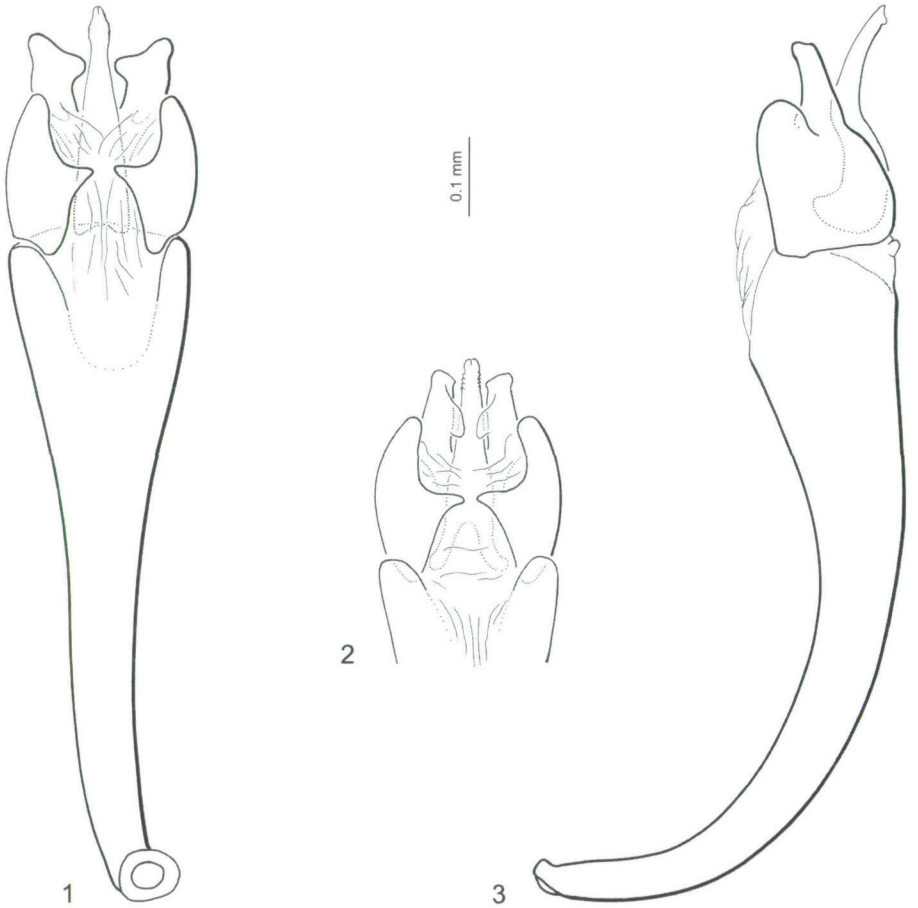
The family Epimetopidae is herein recorded from Laos for the first time and a new species of *Eumetopus* is described.

Acronyms: PL: Projected Length of aedeagus (sensu JÄCH 1998a), NMW: Naturhistorisches Museum, Wien

Eumetopus schuelkei sp.n.

TYPE LOCALITY: surroundings of Ban Khoun Nguen, 18°07'N 104°29'E, province of Khammouan, central Laos.

TYPE MATERIAL: **Holotype** ♂ (NMW): "LAOS centr.:Khammouan prov.4.-16.XI, 25.-30.XI.2000BAN KHOUN NGUEN env.18°07'N 104°29'E, 250 m leg. E. Jendek & P. Pacholatko". **Paratypes** (NMW): 6 ♂♂, 11 ♀♀, same label data as holotype.



Figs. 1 - 3: *Eumetopus schuelkei* sp.n., aedeagus; 1) ventral view, paratype, slightly teneral specimen, thus parameres unusually widely diverging (followig treatment with lactic acid); 2) ventral view of apical third, holotype; 3) lateral view of paratype.

DESCRIPTION: Length: 3.1 – 3.8 mm. Body form strongly convex, moderately acuminate apically. Dorsal surface (except labrum) conspicuously granulate and tuberculate. Coloration dark brown to black; legs paler brown; lateral and posterior margin of elytra translucent brown; granules and tubercles on elytra (and occasionally those on pronotum as well) with metallic (green or red) lustre; antennae and palpi yellowish.

Labrum short, anteriorly gently emarginate. Clypeus transverse, subtrapezoidal, widest across hind angles; vaulted medially, impressed laterally; anterior and lateral margin strongly deflexed, submarginally ridged; fronto-clypeal suture well demarcated, arcuate, continued posteriorly to form a median longitudinal groove. Frons partly concealed under anterior pronotal median projection. Eyes large, protruding; posteriorly emarginate (lateral view); anteriorly deeply divided horizontally by a conspicuous canthus. Antennae 9-segmented; club compact, pubescent.

Maxillary palpi short, slightly shorter than width of labrum; terminal segment slightly asymmetrical.

Pronotum distinctly wider than long, widest near anterior corners; anteriorly with three projecting lobes, the median lobe being the widest and longest of these lobes; margin of median lobe strongly deflexed and ridged submarginally, distinctly excised at anterior tip; upper surface of median lobe with a conspicuous semi-umbilicate, elongate tubercle; lateral margin sinuately convergent to base, denticulate; posterior angles obtuse; disc with numerous granules and some larger tubercles.

Scutellum small, elongate. Elytra strongly convex, strongly declivitous laterally and apically, moderately acuminate apically. Elytral striae and strial punctures hardly apparent. Intervals 3, 5, 7, and 9 with several prominent, rounded or elongate, glabrous tubercles; interval 2 with a small series of smaller subbasal tubercles; interval 4 with only one larger tubercle near base; shoulders prominent; area between suture and shoulders subbasally elevated; elytra shallowly impressed posterior of subbasal elevation; lateral margin only very narrowly explanate, serrate in anterior third.

Mentum and submentum forming an almost right angle. Gula triangular. Prosternum short, medially carinate; procoxal cavities open posteriorly. Outer hypomeron very narrow, separated from inner hypomeron by a sharp ridge; inner hypomeron strongly concave. Mesosternum with glabrous median patch and with conspicuous small gibbosity between mesocoxae. Metasternum rimmed anteriorly; with a transverse, elongate, conspicuously glabrous torus, distinctly tapering laterad, more or less widely interrupted laterally (tripartite); with a short longitudinal carina connecting anterior margin of metasternum and mesial end of lateral transverse torus.

Abdomen glabrous, with five ventrites; first ventrite very short.

Legs rather stout; with conspicuous squamous setae. Femora with obtuse tooth on ventral face. Tibiae with longitudinal ridges covered by squamous setae. Tarsi 5-segmented, setose ventrally; apical segment with bisetose empodium; claws rather small.

Aedeagus (Figs. 1 - 3): PL: 1040 – 1200 µm. Median lobe short and slender; more or less straight in ventral view, somewhat bisinuous in lateral view; with very small lateral "scales" subapically. Parameres distinctly bilobed; basal (lateral) lobe with a conspicuous acute mediad ventral process, area between lobes ventrally covered by faint plicate membrane; apical (mesial) parameral lobe with a small subapical mediad projection and a very conspicuous rounded mediad lamella near midlength. Phallobase very long, about three times as long as median lobe, gradually tapering toward base; distinctly and more or less evenly curved (lateral view).

Secondary sexual characters: Elytral apices very slightly more acuminate in female. Tarsal segments (especially protarsal ones) of males slightly wider, more densely setose, claws slightly stronger. Female hind tibia more strongly compressed laterally.

DIFFERENTIAL DIAGNOSIS: Externally, the new species is hardly distinguishable from *E. acutimontis*, *E. flavidulus*, and *E. tibialis*. Hind tibia more or less as in *E. tibialis*. Apex of second and third elytral intervals of female less conspicuously elevated than in *E. flavidulus*. Genitalically, males of *E. schuelkei* are sufficiently distinguished from all known species of the genus by the parameral projections.

HABITAT: All specimens were collected by "washing" the banks of a river (E. Jendek, pers. comm.).

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for Mr. Klaus Schülke (Berlin), who is heartily acknowledged for supporting Southeast Asian biodiversity projects.

Key to the species of *Eumetopus* (modified after JI & JÄCH 1998b)

1 Elytral intervals 3, 5, 7 and 9 with prominent tubercles (see JI & JÄCH 1998b: Figs. 1, 3, 4) 2

- Tubercles of elytral intervals 3, 5, 7 and 9 not very prominent (see JI & JÄCH 1998b: Fig. 2)... ..... ***asperatus* (CHAMPION)**

2 Penis approximately as long as parameres or shorter than parameres (see JI & JÄCH 1998b: Figs. 5 - 7, 9, 10) 3

- Penis surpassing parameres 2a

2a Penis surpassing parameres distinctly; basal lobe of parameres without distinct ventral projections (see JI & JÄCH 1998b: Fig. 8) ..... ***acutimontis* JI & JÄCH**

- Penis surpassing parameres slightly; basal lobe of parameres with distinct ventral projections (see Figs. 1 – 3) ..... ***schuelkei* sp.n.**

3 Penis approximately as long as parameres (see JI & JÄCH 1998b: Figs. 5 - 7, 10) 4

- Penis shorter than inner lobe of parameres (see JI & JÄCH 1998b: Fig. 9) ..... ***tibialis* JI & JÄCH**

4 Parameres deeply bilobed, consisting of two long and slender parts (see JI & JÄCH 1998b: Figs. 5 - 7) 5

- Parameres not bilobed, but with conspicuous parabolic, ventral velum (see JI & JÄCH 1998b: Fig. 10) ..... ***maindroni* (RÉGIMBART)**

5 Phallobase distinctly widened apically (see JI & JÄCH 1998b: Fig. 5) ..... ***bullatus* (SHARP)**

- Phallobase only gently widened apically (see JI & JÄCH 1998b: Fig. 7) ..... ***flavidulus* (SHARP)**

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