

Description of three remarkable new *Enochrus* from eastern Asia
(Coleoptera: Hydrophilidae)
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ABSTRACT

Three new species of the Hydrophilidae genus *Enochrus* THOMSON, 1859, subgenus *Holcophilydrus* KNIZ, 1911, *E. hybridus* sp.n. (China), *E. laoticus* sp.n. (Laos) and *E. parumstriatus* sp.n. (Taiwan), are described and illustrated. Their position within the subgenus *Holcophilydrus* is discussed.

KEY WORDS

Coleoptera, Hydrophilidae, *Enochrus* subg. *Holcophilydrus*, new species, China, Laos, Taiwan.

INTRODUCTION

Within the Hydrophilidae it is hard to find a genus that resists a revision as much as *Enochrus* THOMSON. Some attempts at revision remain unfinished. Even the great specialist in Hydrophilidae, A. d'Orchymont, gave this genus a wide berth. In my own collection there are many undescribed *Enochrus* waiting for a courageous man.

Now three uncommon species from China, Laos and Taiwan kept my special attention, two of them particularly for their primitively seriate elytra. Only one is clearly put into the subgenus *Holcophilydrus* KNIZ, both the other having more transitional characters concerning the elytral series and the mesoventral lamina.

ABBREVIATIONS

CFH Coll. Franz Hebauer, Plattling, Germany.

CHH Coll. Hans Hebauer, Rain-Duernhart, Germany.

SYSTEMATICS

The *Enochrus* subgenus *Holcophilydrus* KNIZ, 1911 was established for *Enochrus ussuriensis*, from Far East Asia (Primorshy Kray, "Ussurigebiet") by monotypy. Three formerly described *Enochrus*: *Philhydrus simulans* SHARP, 1873, (Japan), *Philhydrus umbratus* SHARP, 1884 (Japan), and *Philhydrus seriatus* RÉGIMBART, 1903 (Madagascar) were later included in this subgenus. Two further species, *Enochrus kishidai* KAMIYA, 1935 from China, Hebei), and *Enochrus* (?*Holcophilydrus*) *curtus* BALFOUR-BROWNE, 1958 from Mauritius are added. The latter species indicated already the problematic position of this subgenus because of the variable development of the elytral series, which are considered to be primitive characters. In *E. curtus* these series are merely recognizable in the apical portion of elytra, but here begins the problem of delimitating this subgenus from *Enochrus* s.str. because in some species, such as *E. melanocephalus* (OLIVIER, 1792) it is also possible to observe traces of elytral series preapically. In relation to two of the newly described species another variant of this character is here described, this is the reduction of elytral series transversally from 9 to 5 series. I think it would less acceptable to put these two species into any subgenus other than *Holcophilydrus*. A further reason for this decision is the falcate shape of the mesoventral lamina in one of the two species, therefore clearly deviating from and more primitive than *Enochrus* s.str., more similar to that observed in the subgenus *Hydatotrephis* MACLEAY, 1871, and in the large forms of the subgenus *Methydrus* REY, 1885 such as *E. japonicus* (SHARP, 1873) and *E. haroldi* (SHARP, 1884), which has also a ciliate excision at the apex of the 5th ventrite and the 2nd palpomere hardly curved.

An interesting point of view is the distribution pattern of the species of the subgenus *Holcophilydrus*. The centre of distribution is eastern Asia, where the most typical forms are focussed in China (*E. ussuriensis* KNIZ, *E. simulans* (SHARP), and *E. kishidai* KAMIYA). The more deviating forms are from the edge of the China Sea (Laos, Taiwan). The two known Malgassic species differ greatly from the Asiatic ones in some characters and are more close to west palearctic species such as *E. melanocephalus* and *E. latus*.

***Enochrus (Holcophilydrus) laoticus* sp.n.**

Type material: Holotypus (male): Laos-NE: Hua Phan prov. Ban Saluei; Phu Phan mt., 20°15'N, 104°02'E, 1500-2000 m, 26.4.-11.5.2001, J. Bezdek leg. (CFH). Paratypes (4 males, 6 females): same data as holotype (3, CFH, 6 CHH); Laos-N: Xieng Khuang prov. Nong Haet, 29.-31.5.2001, 19°30'N, 104°03'E, D. Hauck leg. / Coll.H.Hebauer. (CFH).

Description: Total length: 6.5 mm; total width: 3.5 mm.- Body broadly oval, moderately convex; reddish brown. Head and labrum black with a pair of large preocular patches of eye width. Maxillary palpi unicoloured rufotestaceous, not at all infuscated. Pronotum with a large trapezoidal black discal patch, reaching anterior and posterior margins. Elytra black in basal half, except sides. Legs brown with black femora. Underside piceous.

Head as pronotum and elytra finely, very densely punctate; punctural interstices about of punctural diameter, shining. Systematic punctures besides eyes and at sides of pronotum distinct but not conspicuous. Maxillary palpi long and slender, reaching as far as anterior third of pronotum; 2nd, 3rd and 4th palpomeres in length as 20:20:15. Antennae 9-segmented. Pronotum c. 2.6 x as wide (basally) as long (medially), strongly narrowed anteriorly; sides slightly and evenly curved; angles obtusely rounded; margin very narrow, not continued around hind angle.

Elytra almost parallel-sided in anterior half, evenly narrowed posteriorly, with 9 distinct series of rather fine, but densely arranged punctures from base to apex, external series slightly coarser and more irregular than internal ones; intervals 3, 5 and 7 with irregular rows of coarser punctures. Sutural stria abbreviated in anterior half.

Scutellum of eye width, almost equilateral, triangulate, punctate as pronotum.

Mentum almost rectangular, 1.5 x as wide as long, moderately impressed at anterior margin, rather coarsely and densely punctate, without microsculpture between punctures.

Mesoventral lamina falcate (convex anteriorly, concave posteriorly). the 5th ventrite with distinct ciliate emargination at apex (Fig. 3 b).

Legs long and slender; beneath all femora are pubescent, except the extremity, which is reddish and impunctate. Posterior tarsi 0.7 x as long as tibia.

Aedeagus 1.7 mm; basal piece c. $\frac{3}{4}$ as long as parameres; the latter strongly narrowed from base to apex, apices widened, obtusely truncate and bent outwards. Median lobe as long as parameres, rather narrow, curved upwards, slightly impressed at apex (Fig. 1).

Discussion: This species comes close to *E. ussuriensis* in most external characters, but differs clearly in the larger size, in the colour pattern of elytra, in the maxillary palpi not infuscated apically and in the quite different aedeagus.

Distribution: Known only from Laos.

Bionomics: Nothing is known about this species.

***Enochrus (Holcophilydrus) parumstriatus* sp.n.**

Type material: Holotypus (female): TAIWAN: Kaohsiung. Shangping, 640 m, 1-10 April 1988, R. Davidson, J. Rawlins, C. Young (CFH).

Description: Total length 5.5 mm; total width: 3.0 mm.- Body broadly oval, moderately convex. Surface black, shining, head with a pair of reddish preocular patches, about half as eye width. Sides and angles of pronotum, also sides and apex of elytra ferrugineous. Maxillary palpi and tarsi unicoloured ferrugineous. Underside, femora (except knees) and tibiae black.

Head very finely, very densely punctate; systematic punctures between eyes conspicuous. Maxillary palpi of moderate length, reaching as far as anterior third of pronotum; 2nd, 3rd and 4th palpomere in length as 20:15:12., 2nd palpomere hardly curved, almost straight; antennae 9-segmented.

Pronotum c. 2.2 x as wide (basally) as long (medially) seen from above, strongly narrowed anteriorly, sides slightly and evenly curved; extremely finely punctate (almost impunctate), shining; lateral rim very narrow, continued around anterior and posterior angles; systematic punctures very distinct, forming two densely arranged arcuate rows converging towards pronotal disc.

Scutellum equilateral, triangulate, punctate as pronotum.

Elytra c. 1.33 x as long as their combined width, subparallel in basal half, widest in apical third; margin hardly visible from above; extremely finely, very densely punctate, punctural distances about punctural diameter; sutural stria abbreviated in basal third; elytral disc with 4 series of rather coarse, moderately densely arranged punctures; 3rd and 4th series very coarse and rather crowded in basal half; intervals with irregular rows of coarser punctures close to the following series. Underside of elytra 10-striate, visible from above only as rows of translucent dark punctures at elytral apex.

Mentum almost rectangular, moderately coarsely, moderately densely punctate, without microsculpture between punctures.

Mesoventral lamina strongly elevated, triangular, perpendicularly raising anteriorly, front angle acute, straightly declining posteriorly (Fig. 3 c).

The underside of the femora are covered with hydrofuge pubescence, except the extremities which are impunctate; the 5th ventrite with a ciliate emargination at apex.

Legs long and slender; posterior tarsi c. $\frac{3}{4}$ as long as tibia.

Male unknown.

Discussion: This species is closest to *E. hybridus* sp.n. from China, but differs mainly in the more stout maxillary palpi and in the mesoventral lamina not falcate but barely triangular. The whole surface is almost impunctate, while in *E. hybridus* very finely but distinctly punctate.

Distribution: Known only from the type locality.

Bionomics: Nothing is known about this species

***Enochrus (Holcophilydrus) hybridus* sp.n.**

Type material: Holotypus (male): China, W Hubei, 10.VII., road Badong-Jianshi, 30.8N, 109.9E., 1500 m, 10km W ZHASHUPING, Jaroslav Turna leg. 2003 (CFH). Paratypes: 1 male same data as Holotype (CHH)

Description: Total length: 5.5 mm; total width: 2.8 mm.- Body broadly oval, moderately convex. Surface black, shining; head with a pair of reddish preocular patches, half as wide as one eye. Maxillary palpi and antennal whip unicoloured testaceous, antennal club dark. Pronotum with well delimited testaceous margins and angles, narrowly pale also at anterior margin. Elytral margin and apex similarly testaceous. Underside black; femora black except knees, tibiae ferrugineous.

Head finely, very densely punctate, punctural distances less than punctural diameter, without microsculpture between punctures, shining; systematic punctures between eyes conspicuous. Maxillary palpi long and slender, reaching as far as the middle of pronotum; 2nd, 3rd and 4th palpomere in length as 25:17:12; 2nd palpomere distinctly curved. Antennae 9-segmented.

Pronotum punctate as head, c. 2.7 x as wide (basally) as long (medially), strongly narrowed anteriorly, sides evenly and slightly curved, lateral rim very narrow throughout, continued around anterior and posterior angles; systematic punctures conspicuous, forming two rather crowded rows; the anterior row longer and more arcuate than posterior row.

Scutellum equilateral, triangular, punctate as pronotum.

Elytra c. 1.25 x as long as their combined width, widest in the middle, margins not visible from above; punctate as pronotum. Sutural stria abbreviated in basal third; elytral disc with 4 coarse series of rather densely arranged punctures, the two submarginal series very irregular and much coarser than the internal series; between the 2nd and 3rd series there are to observe

traces of an additional very fine series; intervals between series with irregular rows of coarser punctures close to each following series respectively. Underside of elytra 10-striate, visible from above only as rows of translucent dark punctures at elytral apex.

Mentum almost rectangular, moderately coarsely, moderately densely punctate, shining, without microsculpture between punctures.

Mesoventral lamina, clearly falcate (Fig. 3 a). The 5th ventrite with a ciliate emargination at apex.

Legs long and slender, posterior tarsi 2/3 as long as tibia.

Aedeagus: Basal piece about as long as parameres; the latter strongly narrowed terminally, with the apices point and curved outwards. Median lobe filiform, point, shorter than parameres (Fig. 2).

Discussion: This species differs from the very similar *E. parumstriatus* sp.n. mainly in the distinctly longer maxillary palpi, in the punctuation of surface, though very fine but always distinct, and in the falcate mesoventral lamina.

Distribution: Known only from the type locality.

Bionomics: Nothing is known about this species

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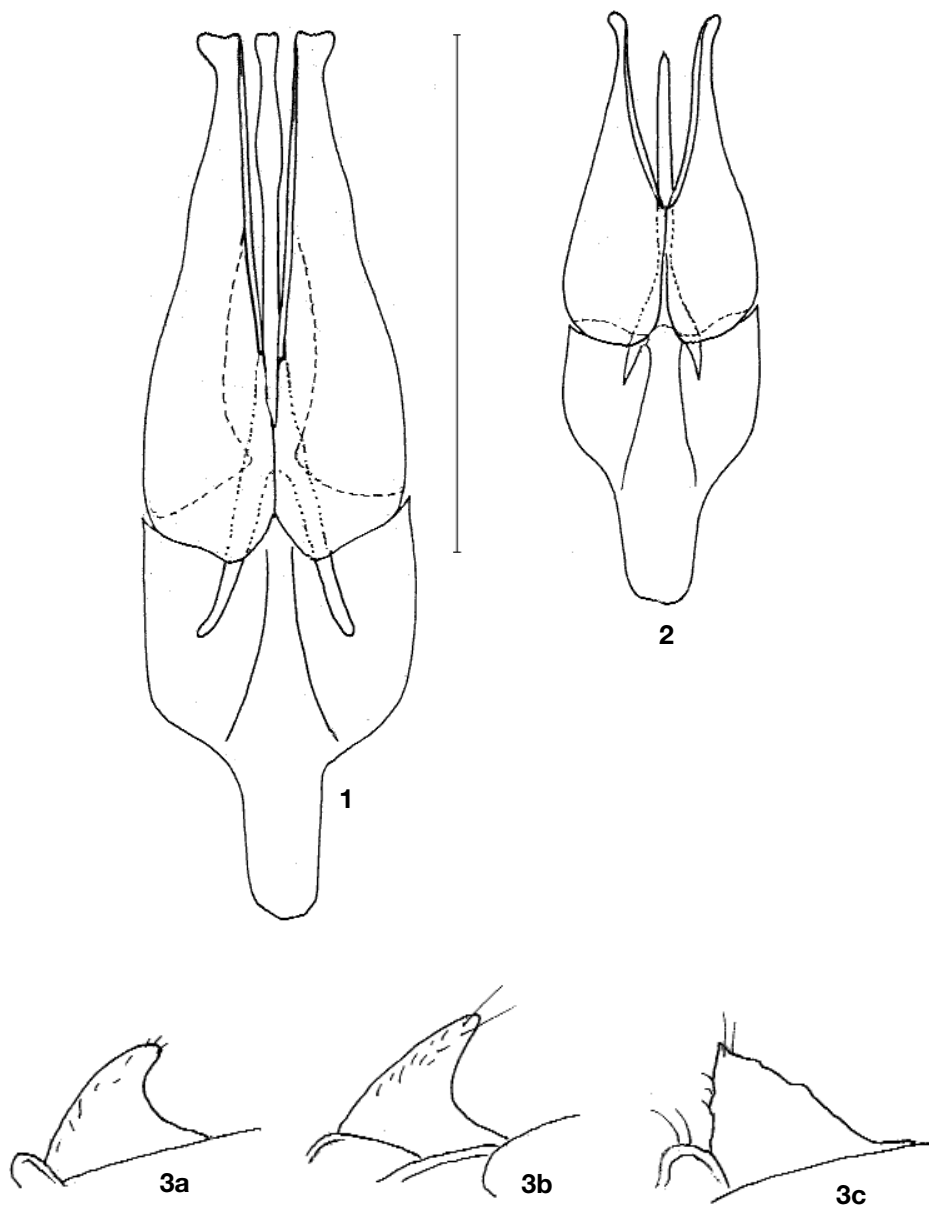


Fig. 1. *Enochrus (Holcophilydrus) laoticus* sp.n.: Aedeagus.

Fig. 2. *Enochrus (Holcophilydrus) hybridus* sp.n.: Aedeagus.

Fig. 3. Mesoventral lamina of: **a)** *Enochrus (Holcophilydrus) hybridus* sp.n., **b)** *Enochrus (Holcophilydrus) laoticus* sp.n., **c)** *Enochrus (Holcophilydrus) parumstriatus* sp.n.

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