

Coleoptera: Fam. Hydrophilidae, Dryopidae and Elminthidae

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Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel

Coleoptera: Fam. Hydrophilidae, Dryopidae and Elmintidae

By Masataka Satô

Abstract: Nine hydrophilid, one dryopid and one elminthid beetles are reported herein from Bhutan. Two hydrophilid and one elminthid species are described as new to science, viz. *Enochrus (Lumetus) convexius* sp. nov., *Ametor wittmeri* sp. nov. and *Zaitzevia bhutanica* sp. nov. All the recorded species are new to the fauna of Bhutan.

I have had the privilege to examine some aquatic beetles obtained by the Bhutan Expedition 1972 of the Naturhistorisches Museum Basel. There were twenty-two specimens in total divided into nine hydrophilid, one dryopid and one elminthid species. Two hydrophilid and one elminthid species are new to science and subsequently described. Until now, the record of aquatic beetles from Bhutan is limited and almost non existing, except for the dytiscid beetles which were reported in the first volume of the series. Thus, all the species listed in this paper are new records for Bhutan.

I am very grateful to Dr. W. Wittmer who gave me an opportunity to study these valuable specimens.

Family Hydrophilidae

1. *Cryptopleurum* sp.

1 ex., Beguna, Aug. 7, 1975.

Distribution: Bhutan.

Note: The present specimen is almost identical with *C. ferrugineum* Motschulsky, but is slightly different from that in the body more or less large, the color blackened and the punctate striae on elytra rather shallow.

2. *Enochrus (Lumetus) convexius* M. Satô, sp. nov.

Body elliptical, well convex, polished above and subopaque beneath; dorsal surface black with a brownish tinge but peripheries brown; antennae, maxillary palpi and legs brown to yellowish brown.

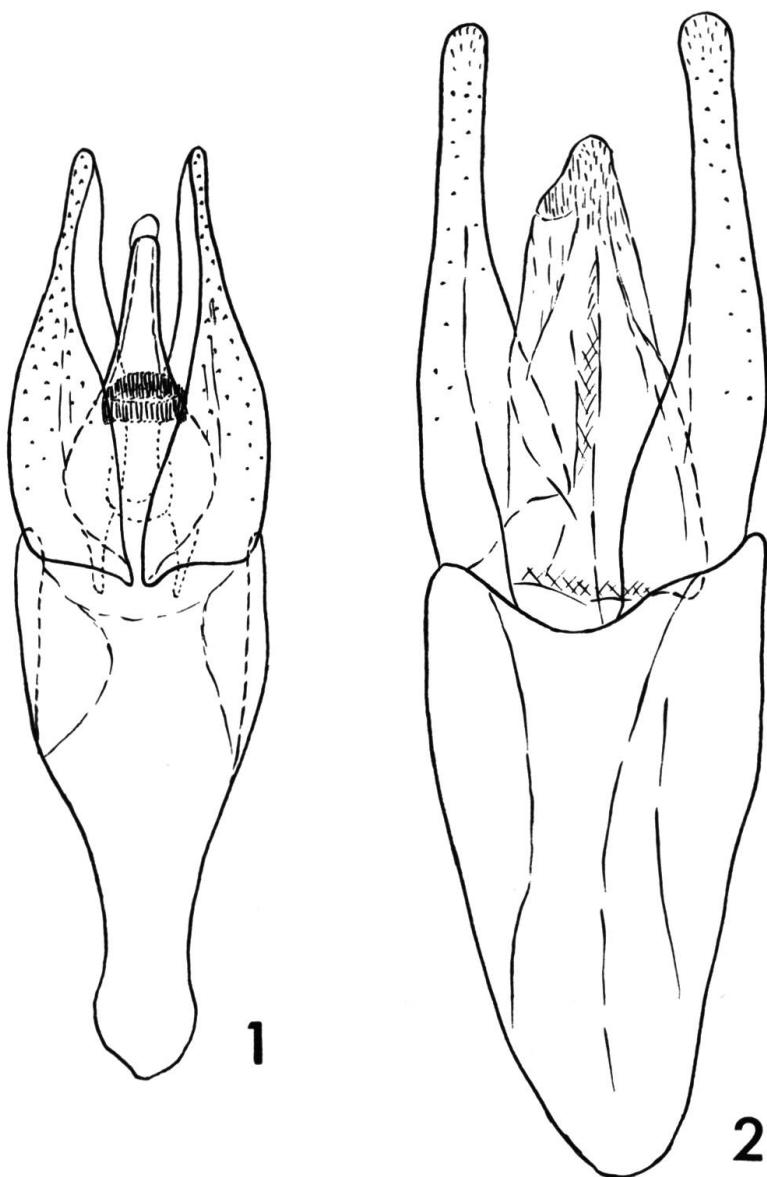
Head about 1.7 times as broad as long; surface closely and finely punctate, punctual interspaces being about 1.5 to 2 times diameter of punctures, the distinct punctures scattered on inner sides of eyes in addition to general punctures; front clypeal suture slightly emarginate; labrum transverse, closely and minutely punctate; eyes moderate, the distance between them about 4.5 times as broad as the breadth of an eye; maxillary palpi conspicuously long, relative length of three terminal joints as 5:4:3. Pronotum about 2.2 times as broad as long, broadest at basal third; margins gently curved; each angle rounded; the punctures on surface almost as same as those on head, but their interspaces being about 2 to 3 times own diameter, the distinct punctures scattered on each antero-lateral side. Scutellum sparsely and finely punctate. Elytra a little broader than pronotum, about 1.3 times as long as broad, broadest at middle; margins regularly arcuate; surface closely and finely punctate as same as those on the pronotum; each elytron provided with a sutural stria which is traced at apical three fifths and with some distinct punctures which are somewhat longitudinally arranged.

Ventral surface covered with fine and close pubescence; mentum shining, distinctly punctate anteriorly and impunctate posteriorly; prosternum tectiform in middle and provided with a transverse sulcus along anterior margin; mesosternum laminate with anterior mucro. Male genitalia as figured. Sex dimorphism indistinct.

Length: 4.5–4.7 mm; breadth: 2.5–2.6 mm.

Holotype: 1 ex., Thimphu (alt. 2,300–2,500 m), May 14, 1972. Paratypes: 1 ex., Paro (alt. 2,300 m), May 19, 1972; 1 ♂, Phuntsholing (alt. 200–400 m) – Thimphu, April 16, 1972. The type-series are deposited in the collection of Naturhistorisches Museum Basel.

The present new species most closely resembles *E. (L.) rubro-cinctus* (Régimbart) in size, color and dorsal punctures, but is separable from it in having the body more convex, the prosternum not carinate at middle, the mentum distinctly punctate and the median lobe of male genitalia rounded at apex with a membrane.



Figs. 1-2. Male genitalia. 1: *Enochrus (Lumetus) convexius* M. Satô, sp. nov., 2: *Ametor wittmeri* M. Satô, sp. nov.

3. *Enochrus (Lumetus) esuriens* (Walker)

Philhydrus esuriens WALKER, 1858. Ann. Mag. Nat. Hist. (3) 2: 209 (Ceylon).

Pylophilus nigriceps MOTSCHULSKY, 1859. Etud. Ent. 8: 46 (Ceylan).

Phlydrus escuriens: SHARP, 1890. Trans. Ent. Soc. London: 350.

Philhydrus escuriens: RÉGIMBART, 1903. Ann. Soc. ent. France 72: 56.

Enochrus (Lumetus) esuriens: KNISCH, 1922. Arch. Naturg. 88 A (10): 151; d'Orchymont, 1926. Philip. J. Sci. 30 (3): 382.

Enochrus (Lumetus) esuriens: BALFOUR-BROWNE, 1945. Occas. Pap. B. P. Bishop Mus. 18 (7): 129.

1 ♂, Samchi (alt. 400 m), May 7–11, 1972.

Distribution: India, Ceylon, Bhutan, Sumatra, Philippines, Australia, Fiji, Society Is.

4. **Enochrus (Lumetus) tetraspilus (Régimbart)**

Philhydrus tetraspilus RÉGIMBART, 1903. Ann. Soc. ent. France 72:335 (Mahé, Calicut).

1 ♀, Samchi (alt. 400 m), May 7–11, 1972.

Distribution: India, Bhutan.

5. **Hydrocassis rufrena d'Orchymont**

Hydrocassis rufrena D'ORCHYMONT, 1942. Mem. Mus. r. Hist. Nat. Belgique (2) 24: 15 (Sikkim).

2 ♂♂, Thimphu (alt. 2,300–2,500 m), April 16, 1972.

Distribution: Assam, Bhutan.

6. **Ametor wittmeri M. Satô, sp. nov.**

Male. Body oval, moderately convex, more or less shining above and subopaque beneath; color almost black with a brownish tinge; antennae, labial and maxillary palpi and tarsi brown to dark brown.

Head slightly convex, but more or less impressed at the inner sides of eyes; surface rugosely and closely punctate; labrum transverse, rugosely punctate and distinctly emarginate at middle; front clypeal suture deeply emarginate; approximate ratio of joints in maxillary palpi as 6:4:5. Pronotum about 1.9 times as broad as long, broadest at near middle, thence slightly narrowed posteriorly, moderately rounded anteriorly; margins narrowly rebordered; sides crenulate; front angles rounded; hind angles obtuse; surface closely and strongly punctate on middle and cariosus on lateral areas, the punctures being well defined and separated from one another by about a half to the same size own diameter; each side of the middle just before the scutellum shallowly impressed. Elytra about 1.2 times as broad as pronotum, about 1.2 times as long as broad; sides crenulate; surface closely scabrous, provided with 10 striae of castanate punctures together with a short accessory stria on the base between the first and the second striae, 1st, 3rd, 5th, 7th and 9th interstriae bearing a longitudinal series of vague punctures.

Ventral surface closely covered with pubescence; mentum rugosely and closely punctate; prosternum gibbose, somewhat rised at middle;

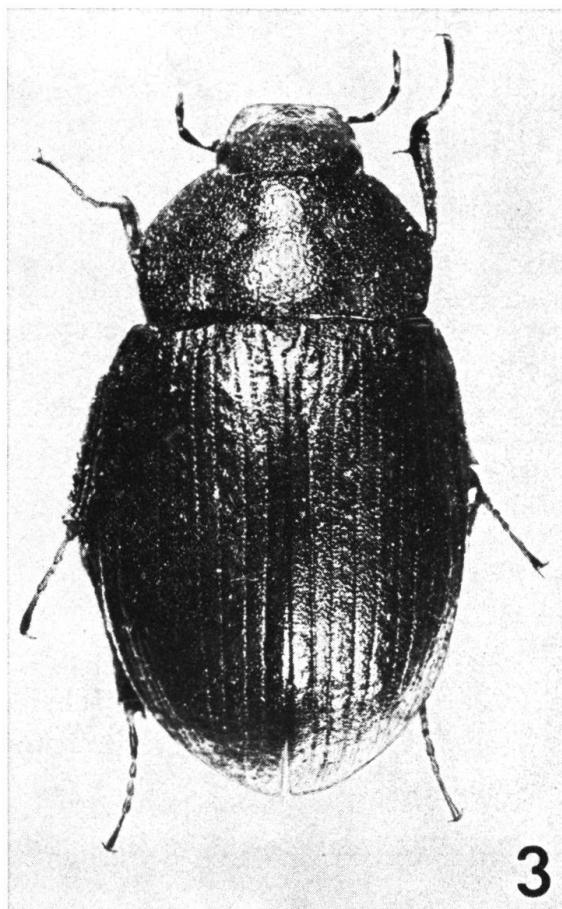


Fig. 3. *Ametor wittmeri* M. Satô, sp. nov.

furcasternum developed posteriorly between front coxae with obtuse apex; mesosternum tuberculate posteriorly; metasternum hexagonally rised medially and slightly concave at posterior center; visible terminal sternite of abdomen crescentic at apex. Male genitalia as figured.

Length: 7.6–8.2 mm; breadth: 3.9–4.3 mm.

Female. Body somewhat larger than male.

Length: 8.7–8.8 mm; breadth: 4.6–4.8 mm.

Holotype: ♂, Thimphu (alt. 2,300–2,500 m), April 16, 1972. Paratypes: 2 ♂♂, same data as holotype; 2 ♀♀, 20 km south of Thimphu (alt. 2,300 m), May 18, 1972. Holotype and 3 paratypes are preserved in the collection of Naturhistorisches Museum Basel and a paratype in M. Satô's Biological Laboratory, Nagoya Women's University.

This new species may be distinguished from *A. oberthuri* d'Orchymont by the body fairly large and the mentum rugosely punctate.

7. *Laccobius* sp.

1 ♀, Samchi (alt. 400 m), May 7–11, 1972.

Distribution: Bhutan.

8. *Berosus (Berosus) pulchellus* MacLeay

Berosus pulchellus MACLEAY, 1825. Annal. Java.: 35 (Java); MacLeay, 1833 Annal. Java. ed. 2: 140.

Berosus pubescens MULSANT et REY, 1859. Opusc. Ent. 9: 61 (Philippines); RÉGIM-BART, 1903. Ann. Soc. ent. France 72: 60.

Berosus decrescens WALKER, 1859. Ann. Mag. Nat. Hist. (3) 3: 258 (Ceylon); SHARP, 1890. Trans. Ent. Soc. London: 353.

Berosus vestitus SHARP, 1884. Trans. Ent. Soc. London: 456 (Japan).

Hygrotophus devisi BLACKBURN, 1898. Trans. R. Soc. S. Australia 22 (2): 225 (Australia).

Berosus (s.str.) pulchellus: d'ORCHYMONT, 1923. Mem. Dep. Agr. India 8 (1): 11; NAKANE, 1966. Fragm. Coleopt. 14: 48.

1 ♀, Samchi (alt. 400 m), May 7–11, 1972.

Distribution: India, Ceylon, Bhutan, Burma, Thailand, Cambodia, Vietnam, Sumatra, Java, Borneo, S. China, Formosa, Philippines, Ryukyus, Japan, Australia.

9. *Berosus (Enoplurus) indicus ineditus* d'Orchymont

Berosus (Enoplurus) indicus ineditus d'ORCHYMONT, 1937. Bull. Mus. r. Hist. nat. Belgique 8 (30): 11 (Inde, Chine, Tonkin, Birmanie).

2 exs., Samchi (alt. 400 m), May 7–11, 1972; 1 ex., Wangdi Phodrang (alt. 1,300 m), June 6–9, 1972; 1 ex., Charee, Dorjee Khandu Dukpa, Aug. 16, 1975.

Distribution: India, Bhutan, Burma, Vietnam, China.

Family Dryopidae

1. *Sostea fasciata* Grouvelle

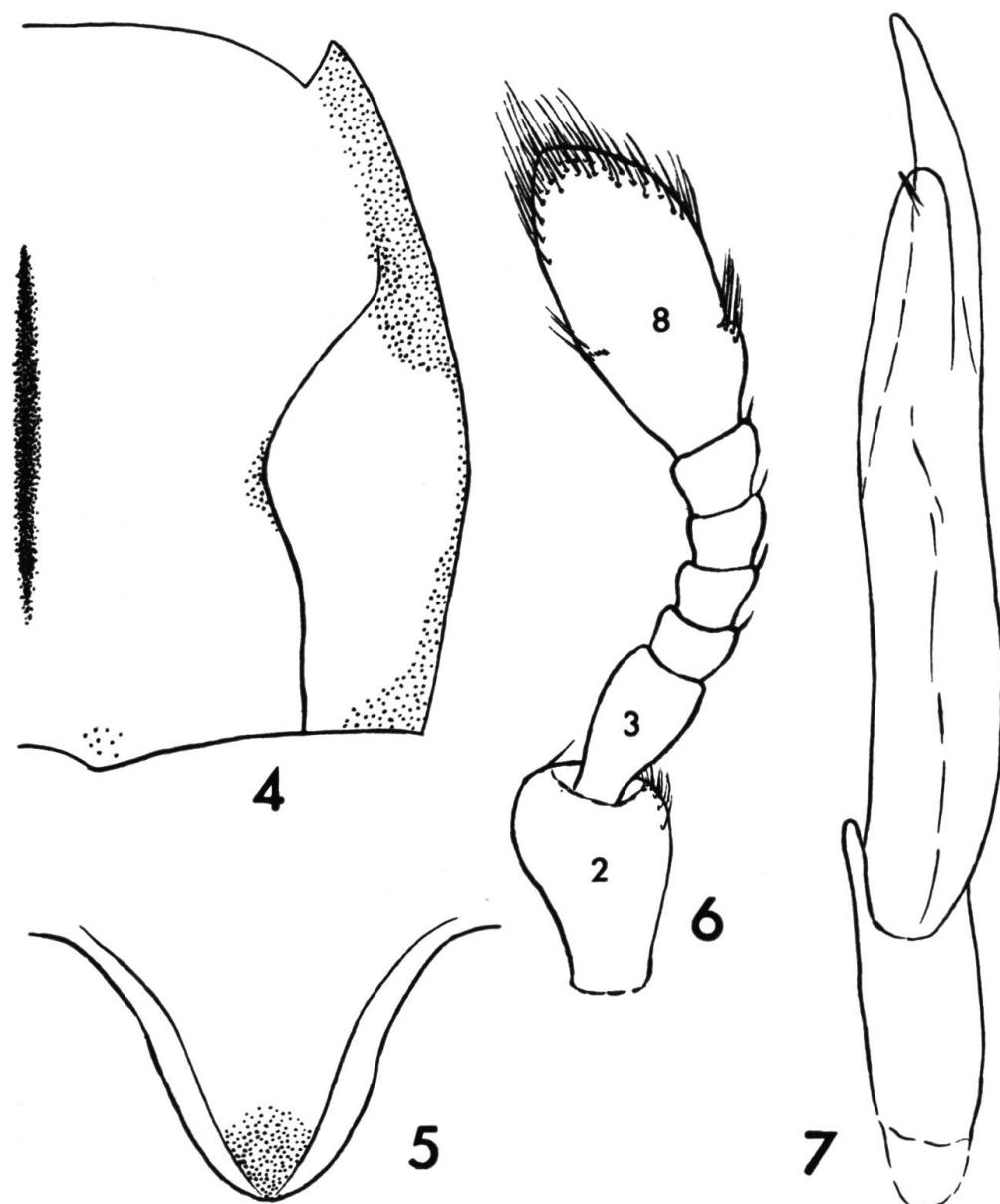
Sostea fasciata GROUVELLE, 1896. Ann. Mus. Civ. Stor. Nat. Genova (2) 17: 37 (Assam).

1 ♀, Wangdi–Dorju-la (alt. 3,100 m), June 6, 26, 1972.

Distribution: Assam, Bhutan.

Family Elminthidae

1. *Zaitzevia bhutanica* M. Satô, sp. nov.



Figs. 4-7. *Zaitzevia bhutanica* M. Satô, sp. nov. 4: right half of pronotum, 5: prosternal process, 6: antenna, 7: lateral aspect of male genitalia.

Male. Body elongate, shining above and coriaceous beneath except for smooth median areas; dorsal surface black with a brownish tinge; ventral surface and legs dark brown; mouth parts, antennae, front of clypeus and labrum and tarsi testaceous.

Head slightly convex, sparsely pubescent; labrum transverse, microreticulate; clypeus and vertex sparsely punctate and microreticulate in integument; eyes somewhat large, the breadth of each eye

about 2.2 times as broad as the distance between them. Pronotum somewhat convex, about 1.2 times as broad as long, broadest at basal third, thence moderately narrowed anteriorly and more or less narrowed posteriorly; front angles projected towards the outside of each eye with acute apex, hind angles rectangular; surface finely and sparsely punctate and sparsely pubescent, impressed at lateral sides, each side of middle just before scutellum and near front and hind angles and all of which are shagreened; the punctures separated from one another by two to four times their diameter; integument somewhat smooth; median longitudinal groove short, distinct and not extending to front and hind margins; sublateral keels distinct, curved outwards and extending from base to apical fifth. Elytra moderately convex, about 1.3 times as broad as pronotum, nearly twice as long as broad, broadest at apical third, thence slightly narrowed anteriorly and rather distinctly so posteriorly; surface obsoletely aciculate, each elytron bearing 7 punctate striae and 3 carinae on 5th to 7th interstriae, the punctures on striae distinct, becoming finer posteriorly and laterally and their inter-spaces separated longitudinally by about one third the diameter on 1st stria, about a half the diameter on 2nd, and nearly as large as to a half the diameter on 3rd, 1st interstria provided with fine punctures which are arranged longitudinally.

Prosternal process broad, its apex rounded, the sides ridged. Central areas of metasternum and abdomen finely and sparsely punctate. Male genitalia as figured.

Length: 2.07 mm; breadth: 0.77 mm.

Female. Unknown.

Holotype: ♂, Samchi (alt. 400 m), May 7–11, 1972. Paratype: 1 ♂, same data as holotype. The type-series are deposited in the collection of Naturhistorisches Museum Basel.

The species is closely allied to *Z. solidicornis* Champion, but is different from that in the antennae, the pronotal keels and groove, the elytral punctures in striae and in the prosternal process.

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