

Notes on the Bembidiinae (Carabidae) of Japan

XI. *Ocydromus (Asioperiphus) amaurus* (BATES)

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Abstract *Ocydromus (Asioperiphus) amaurus* (BATES) is redescribed based on ample material from various localities of Japan. *Bembidion osakaensis* [sic] JEDLIČKA is regarded as a junior synonym of BATES' species.

This paper is an extension of my publication in 1991 and deals with the taxonomic position of *Ocydromus amaurus*. At the same time, a brief account based on my own examination of the type material of "*Bembidion osakaensis* [sic]" is given.

The abbreviations used herein are the same as those explained in my previous papers.

I am deeply indebted to Dr. Shun-Ichi UENO for reading the original manuscript of this paper. Thanks are also due to Dr. Svatopluk BÍLY and Dr. Ivo KOVÁŘ of the National Museum, Prague, for loan of the type material under their care, and to Messrs. Tsutomu MATSUDA, Mitsuyasu NISHIDA, and Shotaro TANAKA for supplying me with materials.

Ocydromus (Asioperiphus) amaurus (BATES)

(Figs. 1–4)

Bembidion (Peryphus) amaurum BATES, 1883, Trans. ent. Soc. London, **1883**: 272; type locality: Hakodate. — NAKANE, 1978, Nat. & Ins., Tokyo, **13** (6): 21.

Bembidion amaurum: NETOLITZKY, 1943, Koleopt. Rdsch., Wien, **29**: 4. — NAKANE, 1963, Icon. Ins. Japon. Col. nat. ed., Tokyo, **2**: 27, pl. 14, fig. 2. — JEDLIČKA, 1965, Ent. Abh. Mus. Tierk. Dresden, **32**: 142. — MORITA, 1985, Coleopt. Japan Col., Osaka, **2**: 96, pl. 18, fig. 11.

Peryphus (s. str.) *amaurus*: UENO, 1954, Shin Konchū, Tokyo, **7** (4): 55.

Bembidion osakaensis [sic] JEDLIČKA, 1951, Acta Soc. ent. čech., **48**: 110; type locality: Osaka [syn. nov.]; 1965, Ent. Abh. Mus. Tierk. Dresden, **32**: 142.

Bembidion (Peryphus) osakaense: NAKANE, 1978, Nat. & Ins., Tokyo, **13** (6): 21.

Diagnosis. Medium-sized species; body black; head and pronotum with slightly bluish lustre; elytra without spots; pronotum with rather wide base; aedeagus high in lateral view.

Redescription. Length: 5.0–7.0 mm (from apical margin of clypeus to apices of elytra).

Head, pronotum and labrum black, with slightly bluish lustre; elytra black; ventral side blackish brown; palpi, mandibles and mouth parts brown; antennae, tarsi, tibiae and apices of femora dark brown; rest of femora blackish brown to dark brown.

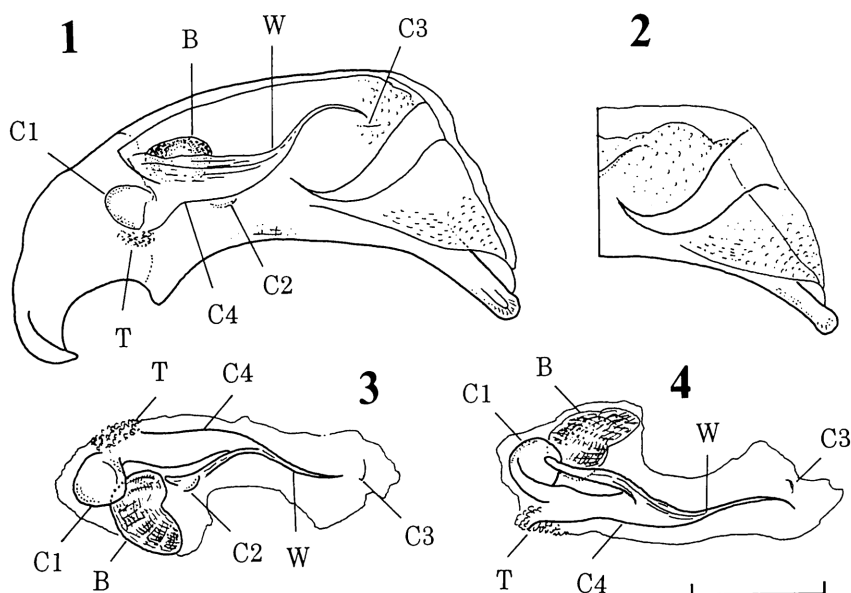
Head convex; eyes hemispherical and strongly convex; frontal furrows very deep, wide and parallel, and with coarse and fine punctures; vertex usually without puncture, rarely with fine punctures or transverse lines; microsculpture almost vanished, but the neck is impressed with isodiametric meshes; anterior supraorbital pores situated at the mid-eye level and the posterior ones situated a little before the post-eye level; relative lengths of antennal segments as follows:— I : II : III : IV : V : VI : XI = 1 : 0.56 : 0.98 : 1.02 : 1.02 : 0.95 : 1.02 in 4 ♂♂, 3 ♀♀ from Kamikôchi and 2 ♂♂, 5 ♀♀ from Aokikôsen; III/II 1.63–2.04 (M 1.79) in 18 ♂♂, 25 ♀♀ from Hokkaido, Kwantô district, Chûbu district, Kinki district, Shikoku and Kyushu; scape dilated.

Pronotum transverse, strongly convex and widest at apical 2/5; apex slightly emarginate, narrower than base; apical angles narrowly and slightly produced; sides strongly arcuate in front and strongly sinuate posteriad, and then parallel for a short way towards hind angles; reflexed lateral borders very narrow; base nearly straight at middle, usually slightly oblique on each side; hind angles nearly rectangular, and with carinae close to lateral borders; median line impressed, though reaching neither apex nor base; anterior transverse impression deep at the sides and distinctly continuous to marginal gutters; basal foveae rounded and deep; anterior pair of marginal setae situated at the widest part, posterior one situated a little before hind angles; microsculpture not sharply impressed, though partially consisting of transverse meshes.

Elytra elongate and convex; shoulders widely rounded; sides gently arcuate, or parallel at about middle, and with very shallow preapical emargination; apex of each elytron rounded, forming a small re-entrant angle at suture; stria 1 entire, becoming shallower towards apices, and rather coarsely punctate, the punctures becoming indistinct towards apices; stria 2 similar to stria 1, but disappearing at apex, rarely joining stria 1 at apex; striae 3–6 becoming shallower towards apices, and rather coarsely punctate, the punctures becoming indistinct at apical part; stria 7 very shallow and finely punctate; apical striole deep, almost straight and usually joining stria 5, rarely close to stria 7; scutellar striole long and coarsely punctate; two dorsal pores situated at 3/10–2/5 and 13/20–7/10 from base, respectively; microsculpture clearly impressed and consisting of wide or transverse meshes.

Metasternal process widely bordered.

Aedeagus short and high in lateral view; ostium flag narrow and gently curved in lateral view; apical lobe slightly produced; apex simply rounded, rarely slightly dilated in lateral view. Inner sac covered with very poorly sclerotized scales and armed with several copulatory pieces (C1–C4), a teeth-patch (T), a bundle of fibres (B), and a whip-shaped piece (W); bundle of fibres (B) situated at the right side of whip-shaped piece (W); small copulatory piece (C1) situated at the basal orifice and continuous to elongate copulatory piece (C4); a teeth-patch (T) consisting of rather poorly sclerotized teeth and continuous to the proximal left end of copulatory piece (C4); copula-



Figs. 1–4. Male genital organ of *Ocydromus (Asioperypus) amaurus* (BATES). — 1, Aedeagus, left lateral view; 2, apical part of aedeagus, left lateral view and showing the individual variation; 3, extracted inner armature, ventral view; 4, extracted inner armature, dorsal view. — 1, 3, 4, Specimen from Kamikôchi, Nagano Prefecture; 2, specimen from Jôzankei, Hokkaido. (Scale : 0.3 mm.)

tory piece (C3) very short.

Left style with two long setae at apex, right one with a long seta and two short setae at apex and with a long seta at apical part.

Specimens examined. 1 ex., “Near Osaka Coll. YOSHIO YANO” //“(an illegible hand writing)” //“TYPUS” //“Mus. Nat. Prage Inv 23991” //“osakaensis sp. n. det. ING JEDLIČKA”.

[Hokkaido] 3 exs., Obihiro, Riv. Tokachi-gawa, 18–VI–1976, S. MORITA leg.; 1 ex., same locality, 8–VII–1982, S. MORITA leg.; 1 ex., Jôzankei, 26–VII–1974, S. MORITA leg.; [Aomori Pref.] 2 exs., Nurukawa-onsen, 23–VI–1973, S. MORITA leg.; [Tochigi Pref.] 2 exs., Mt. Kôshin-zan, 9–VI–1976, S. MORITA leg.; [Kanagawa Pref.] 14 exs., Houkisawa, Tanzawa, 21–V–1983, S. MORITA leg.; [Shizuoka Pref.] 1 ex., Kamido, Riv. Abe-gawa, 17–XI–1984, S. MORITA leg.; 6 exs., same locality, 29–IV–1988, S. MORITA leg.; [Yamanashi Pref.] 5 exs., Mt. Amari-yama, 16–VI–1973, S. MORITA leg.; 9 exs., Aokikôsen, 1–VII–1978, S. MORITA leg.; [Nagano Pref.] 6 exs., Kamikôchi, 2–VII–1976, S. MORITA leg.; 3 exs., same locality, 2–VIII–1986, S. MORITA leg.; 1 ex., same locality, 16–VII–1988, S. MORITA leg.; 3 exs., Shimashima, 18–V–1985, S. MORITA leg.; [Nara Pref.] 1 ex., Ômata, Higashiyoshino-mura, 11–V–1985, T. MATSUDA leg.; [Wakayama Pref.] 2 exs., Gobô-shi, 17–V–1975, S. MORITA leg.; 2 exs., Sakatai-dani, Nakaheji-chô, 19–V–1991, S. TANAKA leg.; [Tokushima Pref.] 1 ex.,

Kamiakui, Riv. Akui-gawa, 21-IV-1990, S. MORITA leg.; 7 exs., Ichinomiya, Riv. Akui-gawa, 21-IV-1990, S. MORITA leg.; [Ôita Pref.] 6 exs., Kusuike, Kokonoe-chô, 24-V-1997, M. NISHIDA leg.

Range. Japan (Hokkaido, Honshu, Shikoku, Kyushu).

Variation. Range of body size was presented at the head of the descriptive part. Its extremes are as follows: the smallest specimen is a male collected at Kamikôchi, while the largest one is a female from Mt. Amari-yama.

Data of the ratios of body parts in two populations (Kamikôchi and Aokikôsen) were shown in the redescription. Similar measurements in 18 ♂♂ and 25 ♀♀ from Hokkaido, Honshu, Shikoku and Kyushu were made, but the ranges of respective data broadly overlap and I cannot detect geographical variation in this bembidiine.

The male genitalia were examined of 15 specimens. The apex of the aedeagus exhibits slight variation in shape as shown in Fig. 2. The aedeagus in a specimen from Asakawa, Tokyo was shown by HABU and BABA (1957).

Notes on the synonymy. The type specimen of *Bembidion osakaensis* [sic] JEDLIČKA has the following characteristics:— L: 5.6 mm; PW/HW 1.33, PW/PL 1.25, PW/PA 1.55, PW/PB 1.27, EW/PW 1.53, EL/EW 1.61; two dorsal pores situated at basal 7/20 and 7/10, respectively; apical striole deep, becoming shallower towards base, and close to stria 7.

Relationship. This species is different from the members of the subgenus *Asioperiphus* (VYSOKÝ, 1986, p. 94) in the lack of elytral spots, but its male genitalia, particularly the basic structure of the inner sac, are similar to those of the two known species, *O. (A.) semilunius* (NETOLITZKY) (1914, p. 170) and *O. (A.) bandotaro* (MORITA) (1991, p. 119). Therefore, I tentatively place it in the same subgenus.

要 約

森田誠司：日本産ミズギワゴミムシ類の知見。XI. *Ocydromus (Asioperiphus) amaurus* (BATES) について。—— じゅうらい *Bembidion (Peryphus) amaurum* として取り扱われてきた種を再記載し、所属の変更を行った。また、*Bembidion (Peryphus) osakaensis* [sic] JEDLIČKA をその下位同物異名と認めた。

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Two New Localities of *Eocnides fragilis* (Coleoptera, Trechinae), with Brief Notes on its Habitats

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Eocnides fragilis S. UENO (1989, p. 14, figs. 1–3) is a hygrophilous trechine beetle originally described from Lake Xiajijie Hai in the Zechawa Valley of Jiuzhaigou in northern Sichuan, Southwest China. Several additional specimens of the same species were collected in the summer of 1993, when I had an opportunity to visit the type locality, but no other specimens were found by the lakes and streams in its vicinities. This is rather surprising, since the beetle is fully winged and capable of flight. Besides, this species is taxonomically important in view of the fact that the type species of the genus, *E. assamensis* JEANNEL (1954, p. 11, fig. 1; UENO, 1989, pp. 14, 16) from Assam, has been known from only a single female and cannot be easily reobtained under the present political situation.