Elytra, Tokyo, **22** (2): 221–225, Nov. 15, 1994

Notes on the Bembidiinae (Carabidae) of Japan

VIII. *Ocydromus kamikochii* (JEDLIČKA)

Seiji MORITA

Motoazabu 1-3-28-405, Minato-ku, Tokyo, 106 Japan

Abstract *Ocydromus kamikochii* (JEDLIČKA) is redescribed on the basis of the holotype and a number of specimens from Hokkaido and Honshu, Japan. It is a relative of *O. cnemidotus* (BATES).

In his revision of the bembidiine carabid beetles from East Asia, JEDLIČKA (1965) described several new species from Japan. As was already pointed out by myself (1986, p. 67), most of his species have raised doubt as to their specific independency. According to his accounts and a habitus drawing, however, it is possible that only a single species, *Bembidion kamikochii*, is an independent species in having a peculiar body form and coloration. Recently, I was given an opportunity to examine the type specimen of this species through the courtesy of Dr. BÍLÝ and Dr. KOVÁR of the National Museum, Prague. It has become evident, as has been expected, that *Bembidion kamikochii* is an independent species. Besides, a number of additional specimens of the same species were already obtained by several friends of mine and by myself.

Since PERRAULT's opinion (1981, pp. 237–250), several attempts have been made by various authors to classify European species of "*Peryphus*". I myself am going to try to classify the Japanese species and to redescribe "*Bembidion*" *kamikochii* in this paper.

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

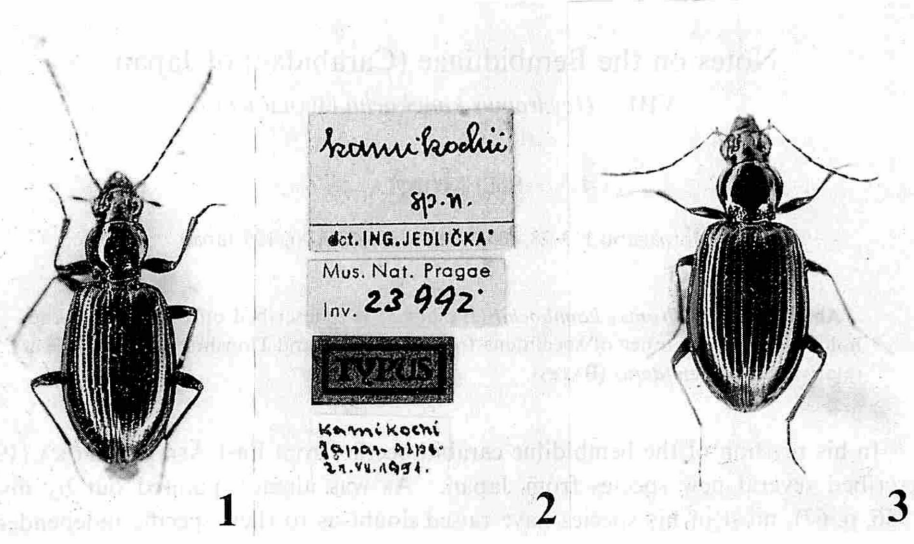
I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the manuscript of this paper. Thanks are also due to Dr. Svatopluk BÍLÝ and Dr. Ivo KOVÁR of the National Museum, Prague, for loan of type material under their care, and to Dr. Kazuo TANAKA, Messrs. Hirofumi HAYAKAWA, Masahiro SAKAGAMI and Satoshi YAMAUCHI for supplying me with important materials.

Ocydromus kamikochii (JEDLIČKA)

[Japanese name: Kamikôchi-mizugiwa-gomimushi]

(Figs. 1-4)

Bembidion kamikochii JEDLIČKA, 1965, Ent. Abh. Mus. Tierk. Dresden, **32**: 143, fig. 31.
Bembidion (Peryphus) kamikochii: NAKANE, 1978, Nat. & Ins., Tokyo, **13** (6): 25. —— KIRSCHENHOFER, 1984, Koleopt. Rdsch., Wien, **57**: 84.



Figs. 1–3. *Ocydromus kamikochii* (JEDLIČKA); 1, holotype; 2, labels attached to the holotype; 3, specimen from Hakushû-chô, Yamanashi Prefecture.

Length: 4.83–5.70 mm (from apical margin of clypeus to apices of elytra).

Medium-sized species with narrow fore body.

Colour black, with bluish and greenish lustre on head and pronotum, and with brownish and slightly bluish lustre on elytra; mandibles, antennal segments 1–2, basal third of antennal segment 3 and legs brown; proximal third to halves of femora rarely dark brown; labrum, palpi and rest of antennal segments dark brown; ventral side dark brown to blackish brown.

Head narrow and convex above; frontal furrows very wide, deep, almost parallel or a little diverging posteriad, usually with several coarse punctures; eyes weakly convex; anterior supraorbital pore(s) situated at about mid-eye level; posterior supraorbital one(s) situated a little before the post-eye level; microsculpture almost vanished, but consisting of wide or transverse meshes on neck; antennae filiform and fairly long; relative lengths of antennal segments as follows:— I: II: III: IV: V: VI: XI≒1: 0.85: 1.08: 1.05: 1.10: 1.11: 1.19 in the holotype, 1: 0.69: 1.07: 1.06: 1.06: 1.07: 1.17 in 8 ♂♂ and 4 ♀♀.

Pronotum narrow and convex; apex usually a little narrower than base; sides strongly arcuate in front, usually very obtusely angulate at the widest part, then strongly sinuate posteriad, and weakly divergent just before hind angles; apical angles not advanced; hind ones rather sharp, slightly produced outwards, and without carinae; anterior transverse impression shallow, rarely with a few coarse punctures; median line very shallow; base nearly straight at middle, slightly oblique on each side; basal foveae deep; basal area densely and coarsely punctate; anterior marginal setae situated at the widest part, posterior ones situated at the hind angles; reflexed lateral borders

Table 1. Standard ratios of body parts in *Ocydromus kamikochii* (JEDLIČKA).

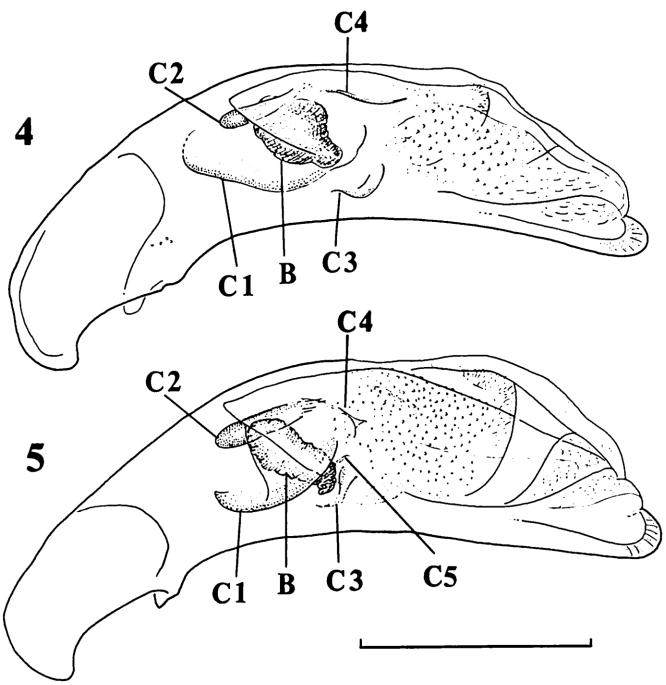
	PW/HW	PW/PL	PW/PA	PW/PB	PA/PB	EW/PW	EL/EW
1 ♂ Obihiro	1.20	1.16	1.41	1.30	0.93	1.77	1.54
2 ♀♀ Obihiro	1.17 1.19 (1.18)	1.17 1.20 (1.19)	1.31 1.31 (1.31)	1.28 1.30 (1.29)	0.99 1.02 (1.01)	1.82 1.84 (1.83)	1.44 1.55 (1.50)
1 ♂ Jûni-ko	1.16	1.14	1.36	1.34	0.99	1.82	1.50
1 ♂ Mt. Daitô-dake	1.18	1.13	1.32	1.35	1.02	1.78	1.50
4 ♂♂ Hakushû-chô	1.16– 1.19 (1.18)	1.13– 1.19 (1.16)	1.36– 1.40 (1.37)	1.26– 1.31 (1.29)	0.93– 0.95 (0.94)	1.72– 1.82 (1.77)	1.55– 1.61 (1.58)
7 ♀♀ Hakushû-chô	1.18– 1.22 (1.21)	1.14– 1.28 (1.19)	1.32– 1.42 (1.37)	1.28– 1.38 (1.32)	0.93– 1.01 (0.97)	1.74– 1.89 (1.83)	1.51– 1.59 (1.54)
3 ♂♂ Hiratsuka	1.16– 1.20 (1.19)	1.12– 1.18 (1.15)	1.35– 1.38 (1.37)	1.27– 1.33 (1.30)	0.91– 0.97 (0.94)	1.73– 1.83 (1.80)	1.50– 1.55 (1.53)
2 ♂♂ Tobira-onsen	1.17 1.19 (1.18)	1.12 1.17 (1.15)	1.33 1.35 (1.34)	1.35 1.35 (1.35)	1.00 1.01 (1.01)	1.80 1.80 (1.80)	1.53 1.53 (1.53)
Holotype ♀ Kamikôchi	1.22	1.14	1.38	1.32	0.96	1.79	1.51
2 ♀♀ Kamikôchi	1.17 1.25 (1.21)	1.14 1.25 (1.20)	1.38 1.31 (1.35)	1.30 1.38 (1.34)	0.99 1.00 (1.00)	1.74 1.79 (1.77)	1.52 1.54 (1.53)
1 ♂ Mt. Daisen	1.25	1.25	1.33	1.30	0.98	1.73	1.50
2 ♀♀ Mt. Daisen	1.17 1.20 (1.19)	1.17 1.17 (1.17)	1.32 1.38 (1.35)	1.26 1.35 (1.31)	0.91 1.03 (0.97)	1.85 1.91 (1.88)	1.46 1.49 (1.48)

very narrow, usually becoming narrower towards apex, with marginal gutters distinctly continuous to anterior transverse impression; microsculpture consisting of fine transverse meshes on disc, but almost vanished on apical and basal parts.

Elytra elongate-ovate, well convex, much wider than prothorax, widest at about middle or a little behind middle; sides gently arcuate, and very slightly emarginate before apices; striae superficial, rather strongly punctate, becoming shallower towards apices; striae 5–6 marked with a row of coarse punctures; stria 7 visible except for apical part, and marked with a row of fine punctures; scutellar striole long, strongly punctate; apical striole almost straight, short, rarely approaching stria 5; intervals weakly convex but flat at apices; microsculpture sharply impressed, consisting of wide or transverse meshes.

Metasternal process rather widely bordered at the median part.

Male genital organ elongate and moderately sclerotized. Aedeagus elongate; viewed laterally, apical lobe short and rounded at the extremity. Inner sac covered



Figs. 4–5. Aedeagus, left lateral view; 4, *Ocydromus kamikochii* (JEDLIČKA) from Hiratsuka, Kanagawa Prefecture; 5, *O. cnemidotus* (BATES) from Obihiro-shi, Hokkaido. (C1–C5: copulatory pieces, B: bundle of fibres). (Scale: 0.4 mm.)

with very poorly sclerotized scales and armed with five components of sclerites (B, C1–C4); lamellar copulatory piece (C1) large and poorly sclerotized; elongate copulatory piece (C2) heavily sclerotized and rounded at the proximal part; bundle of fibres (B) situated at the right side of elongate copulatory piece (C2); small copulatory piece (C3) moderately sclerotized and situated at about middle; linear piece (C4) poorly sclerotized, situated at the end of elongate copulatory piece and not dilated at the apical end; ostium flag moderately wide in lateral view. Left style usually provided with a long seta and three short setae at apex; right one usually provided with a long seta and a few short setae at apex, and with a few short setae at subapical part.

Specimens examined. 1 ♀ (holotype), "Kamikochi Japan alps. 27. VII. 1954."/"typus"/"Mus. Nat. Pragae Inv. 23992"/"*kamikochii* sp. n. det. ING. JEDLIČKA"; 1 ♂, 2 ♀♀, Obihiro, Riv. Tokachi-gawa, Hokkaido, 18–VI–1976, S. MORITA leg.; 1 ♂, Jûniko, Aomori Pref., 7–V–1989, S. YAMAUCHI leg.; 1 ♂, Mt. Daitô-dake, Miyagi Pref., 24–V–1974, S. MORITA leg.; 1 ♂, Hiratsuka, Kanagawa Pref., 14–VIII–1959, K. TANAKA leg.; 2 ♂♂, same locality, 27–IX–1959, K. TANAKA leg.; 2 ♂♂, same locality, 12–VIII–1960, K. TANAKA leg.; 1 ♂, 5 ♀♀, Hakushû-chô, Riv. Oshiro-gawa, Yamanashi Pref., 17–VII–1982, S. MORITA leg.; 5 ♂♂, 8 ♀♀, same locality, 26–IV–1986, S. MORITA leg.; 1 ♀, Kamikôchi, Nagano Pref., 3–VII–1976; 1 ♀, same locality, 9–VII–

1983; 2♂♂, Tobira-onsen, Nagano Pref., 13–IV–1993, M. SAKAGAMI leg.; 2♂♂, 2♀♀, Daisenji, Mt. Daisen, Tottori Pref., 14–VII–1989, S. MORITA leg.

Range. Japan: Hokkaido, Tôhoku District (Aomori Pref., Miyagi Pref.), Kantô District (Kanagawa Pref.), Chûbu District (Nagano Pref., Yamanashi Pref.), Chûgoku District (Tottori Pref.).

Notes. Most specimens recorded from Yamanashi Prefecture were found from under stones at the edges of rivers. When alive, this species can be easily discriminated from other bembidiine carabids by its body form and by having strongly bluish lustre. At a short distance from the collecting spots, other common bembidiine carabids, *Ocydromus trajectum* (NETOLITZKY) and *O. misellum* (HAROLD), were obtained.

This rare species can be distinguished from *O. cnemidotus* (BATES) by the following points: 1) larger body, 2) coloration of dorsal side, 3) sharply impressed microsculpture in ♂ and ♀, and 4) lack of a small copulatory piece (C5).

要　約

森田誠司：日本産ミズギワゴミムシ類の知見. VIII. *Ocydromus kamikochii* (JEDLIČKA) について. —— 原記載以降ほとんど記録のみられなかったカミコウチミズギワゴミムシを，正基準標本ならびに各地から採集された標本を基に再記載し，雄交尾器を図示した．この種は，ウスモンミズギワゴミムシに似ているが，大型で，背面に強い青色光沢があることや微細彫刻と交尾片の相違などによって容易に区別できる．

ところで，ミズギワゴミムシ属 *Bembidion* があまりにも大きい異質的なグループであるため，それらを分割しようという試みは幾度となく行なわれてきた．PERRAULT (1981) の雌交尾器を用いた研究以来，その試みもひとつの流れとなりつつある．筆者も日本産の種類について分割を試みた結果，カミコウチミズギワゴミムシを *Ocydromus* に所属させるのがよかろうという結論に達した．

References

JEDLIČKA, A., 1965. Monographie des Tribus Bembidiini aus Ostasien (Coleoptera, Carabidae). *Ent. Abh. Mus. Tierk. Dresden*, **32**: 79–198, 1 col. pl.

KIRSCHENHOFER, E., 1984. Neue paläarktische Bembidiinae unter besondere Berücksichtigung der von Eigen SUENSON in Ostasien druchgeführten aus Sammlungen (Col. Carabidae). 1. Teil, *Bembidion* LATREILLE. *Koleopt. Rdsch., Wien*, **57**: 57–92.

MORITA, S., 1986. A note on *Bembidion yanoi* JEDLIČKA (Coleoptera, Carabidae). *Ent. Rev. Japan, Osaka*, **41**: 67–72. (In Japanese.)

NAKANE, T., 1978. The beetles of Japan (new series) 50. Harpalidae 4. *Nat. & Ins., Tokyo*, **13** (6): 20–25. (In Japanese.)

PERRAULT, G. G., 1981. Études sur la tribu des Bembidiini (Coleoptera, Carabidae). I. Notes sur la classification supraspécifique. *Nouv. Rev. Ent.*, **11**: 237–250.