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The Japanese Species of the Genus *Hydraena*
(Coleoptera, Hydraenidae)

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Abstract *Hydraena watanabei* n. sp. is described from Japan. A key is provided for all Japanese species, whose distributions are shown on sketch maps.

The strictly aquatic genus *Hydraena* is very poorly represented in the Japanese Islands. This may be due to the isolated geographic position of the islands or to inadequate faunistic investigations. To date only three species have been reported: *Hydraena riparia* KUGELANN, *H. notsui* M. SATÔ and *H. miyatakei* M. SATÔ. A parcel with more than 100 specimens of *Hydraena* species from Japan, recently received by the first author, contained a fourth species, hitherto undescribed.

Hydraena (s. str.) *watanabei* n. sp.

(Figs. 1, 6-7)

Holotype ♂: Daibosatsu Pass, Yamanashi Pref., 17. V. 1964, N. WATANABE; deposited in Nagoya Women's University.

Paratypes: 18 exs. from the same locality; 5 exs.: Ohtaki-gawa, Miyagi Pref., 5. VI. 1978, M. SATÔ; 1 ex.: Mt. Iwaki, Aomori Pref., 4. V. 1960, T. KIKUCHI; 1 ex.: 5. VI. 1960, Tsuruoka, Yamagata Pref., K. SHIRAHATA; in coll. Nagoya Women's University, Natural History Museum, Vienna, and Natural History Museum, Budapest.

Length 2.3-2.4 mm. Dark brown to black, legs and palpi reddish. Labrum deeply emarginate in the middle, clypeus densely punctured; last segment of maxillary palpus slightly asymmetrical in male, inner surface flattened. Pronotum not very densely punctured in middle, interstices smooth; sides strongly sinuate and convergent to posterior angles. Elytra with approximately 9 regular striae between suture and humeral callus; striae not impressed; short accessory striae present; explanate margin well developed and wide; apices truncate in male and strongly acuminate in female (Figs. 6-7).

Inner surface of middle tibia with about 4 recurved spines in male; hind tibia

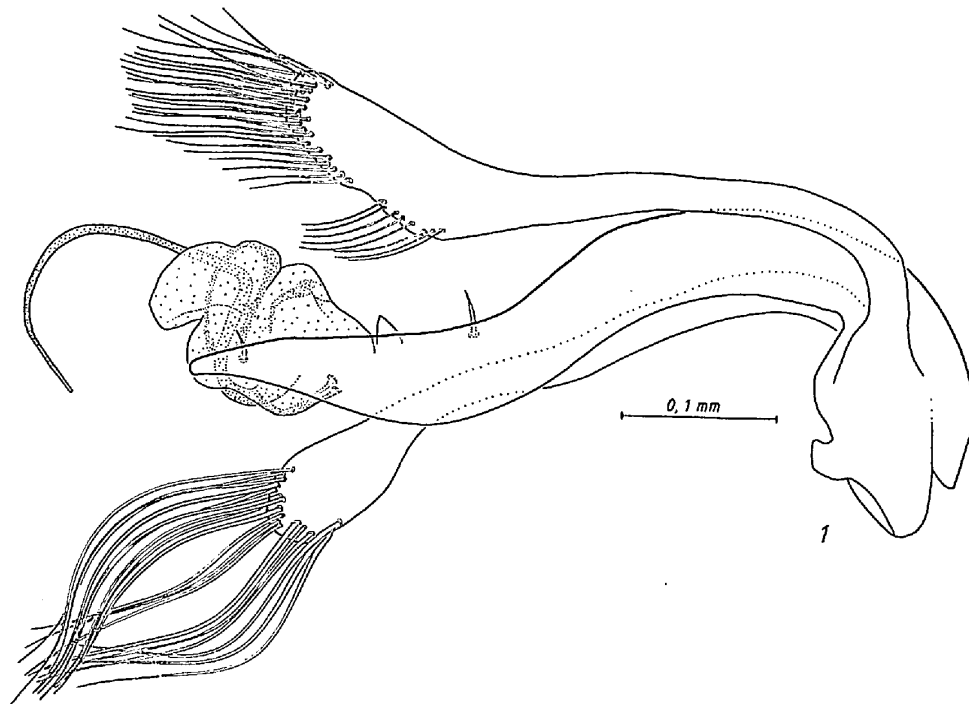


Fig. 1. Aedeagus of *Hydraena watanabei* n. sp., in lateral view.

slightly excised in apical third in male, this excision being finely denticulate; femora stronger in male than in female.

Metasternum slightly impressed in middle, more so in male than in female; metasternal plaques narrower in male; last abdominal segments enlarged in male.

Aedeagus (Fig. 1) typical for the *riparia* group: proximal piece rather straight, only slightly bisinuate, with four clearly visible setae; distal piece rather strongly sclerotized with a long curved flagellum; parameres almost equal in length.

Hydraena watanabei resembles *H. riparia*, from which it can be distinguished by the unicoloured maxillary palpus, by the wide pronotum and the well developed elytral margin; the female of *H. watanabei* is characterized by the strongly acuminate elytral apices.

The distributional range of *H. watanabei* is confined to the Island of Honshu, where it lives in mountain streams between 200 and 800 m altitude (Fig. 2).

The species is dedicated to Mr. Nobutaka WATANABE, Tokyo Metropolitan University.

Hydraena (s. str.) *riparia* KUGELANN

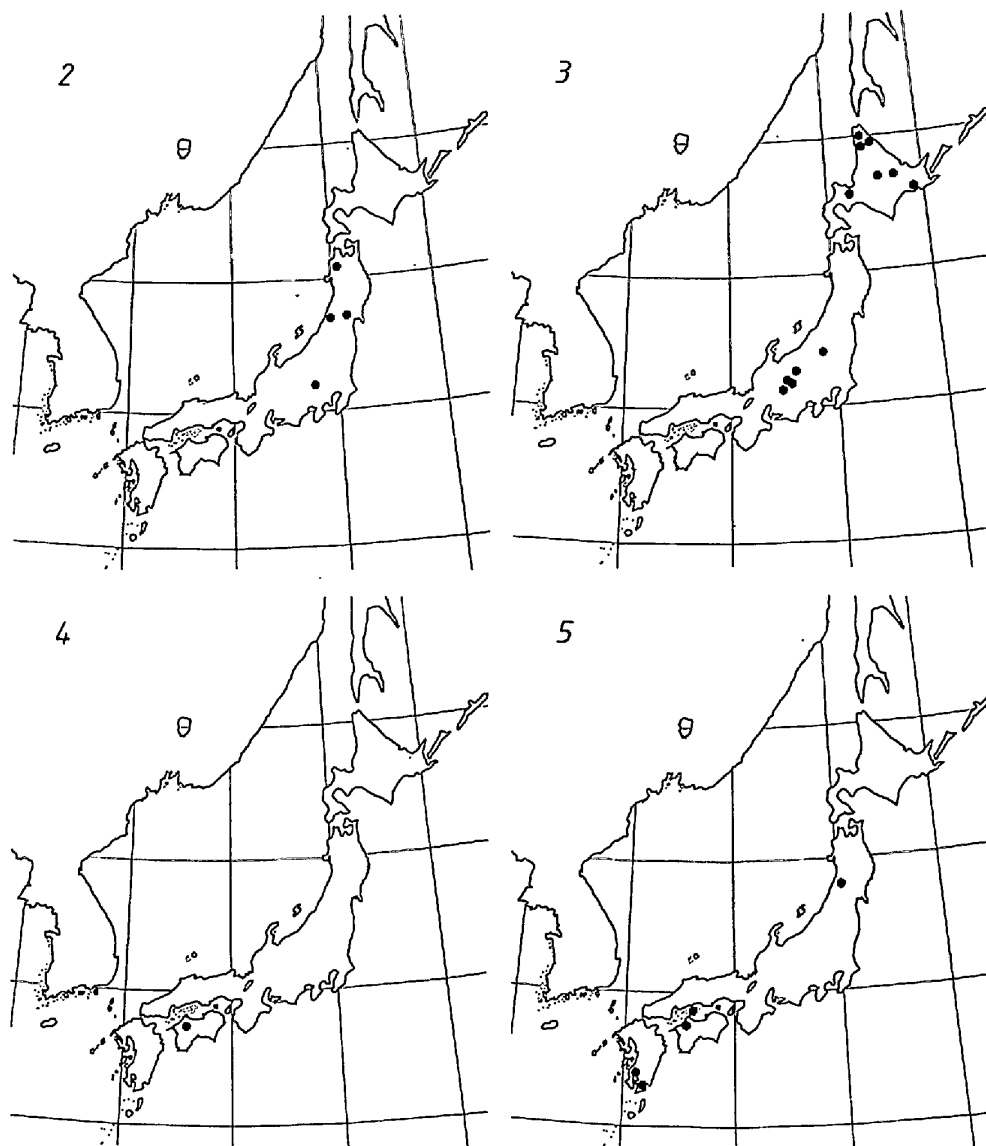
(Fig. 9)

Hydraena riparia KUGELANN, 1794, Schneiders Mag., 5: 579.

Hydraena riparia: M. SATÔ, 1959, Trans. Shikoku ent. Soc., 6: 63.

Hydraena riparia: M. SATÔ, 1968, J. Nagoya Wom. Coll., (14): 115 (partim).

Hydraena riparia: M. SATÔ, 1982, Ozegahara, Sci. Res. Highmoor C. Japan, 385.



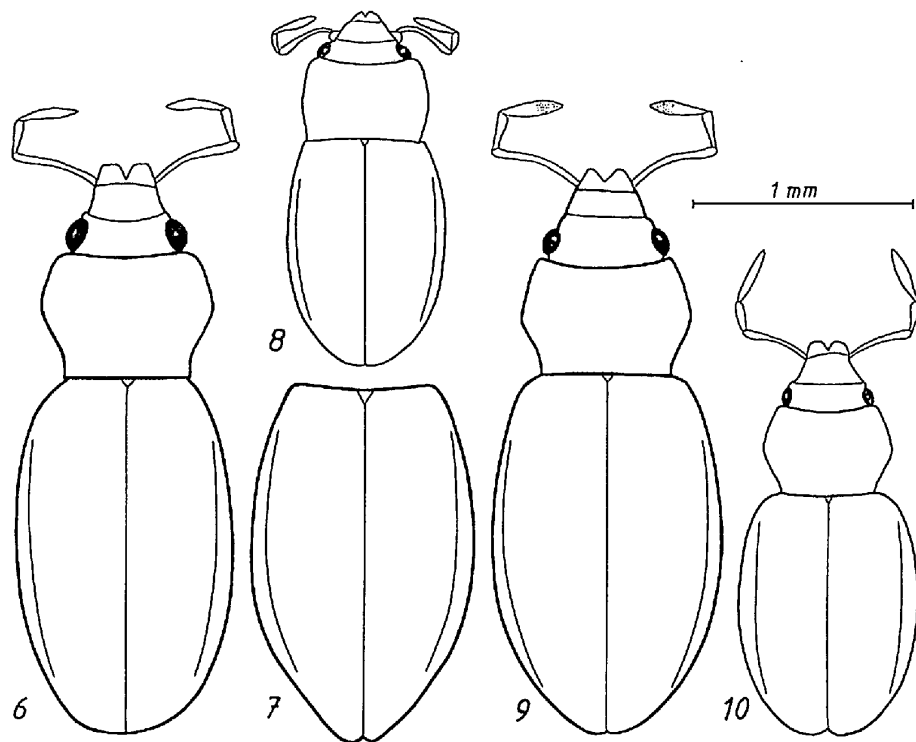
Figs. 2-5. Geographical distribution of *Hydraena* species in Japan. — 2, *H. watanabei* n. sp.; 3, *H. riparia*; 4, *H. notsui*; 5, *H. miyatakei*.

This widespread species has been found on the islands of Hokkaido (0–1,000 m alt.) and Honshu (400–1,500 m alt.).

Hokkaido: Akkeshi, 18. VII. 1976; Sekihoku-tôge, 27. VIII. 1977; Kabuto-numa, 24. VIII. 1977; Kitami-Aioi, 16. VII. 1976; Tohro-ko, 18. VII. 1976; Jôzankei, 19. VII. 1976; Matsuneshiri, 26. VII. 1976; Toyotomi-onsen, 24. VII. 1976.

Honshu: Ozegahara, Gunma Pref., 28–31. VIII. 1978; Kamikôchi, Nagano Pref., 20. IV. 1958; Hiwada, Hida, Gifu Pref., 16. VIII. 1966; Wara-gawa, Gifu Pref., 24. VIII. 1967.

All the specimens were collected by the second author.



Figs. 6–10. Body outline of *Hydraena* species. — 6, *H. watanabei* n. sp., male; 7, *H. watanabei* n. sp., female; 8, *H. miyatakei*; 9, *H. riparia*; 10, *H. notsui*.

Hydraena (s. str.) *notsui* M. SATÔ

(Fig. 10)

Hydraena notsui M. SATÔ, 1978, Trans. Shikoku ent. Soc., 14: 39.

Since its description, *H. notsui* has not been collected again. Known only from the Island of Shikoku (Fig. 4).

Hydraena (*Hydraenopsis*) *miyatakei* M. SATÔ

(Fig. 8)

Hydraena miyatakei M. SATÔ, 1959, Trans. Shikoku ent. Soc., 6: 62.

Hydraena miyatakei: MATSUI, 1986, Pap. Ent. pres. Nakane, Tokyo, 85.

Contrary to the first three species which live in swiftly running mountain streams, *H. miyatakei* prefers lowland ponds. Its known localities are shown in Fig. 5.

Honshu: Mt. Chôkai; Ômi-shima Island. Shikoku: Matsuyama (type locality). Kyushu: Aira-chô; Kouyama-chô.

Key to the Species

1. Elytra yellowish; sides of pronotum only slightly arcuate (Fig. 8); very small

- species (1.4–1.5 mm).....*H. miyatakei* M. SATÔ.
 — Elytra always dark (teneral specimens may be light brown); pronotum cordate;
 at least 1.6 mm long 2.
 2. Last segment of maxillary palpus darkened in apical third; pronotum and
 explanate margin of elytra less wide (Fig. 9)*H. riparia* KUGELANN.
 — Last segment of maxillary palpus unicoloured; pronotum wide; explanate
 margin of elytra well developed (Figs. 6, 10) 3.
 3. Length 1.6 mm, sexual dimorphism not pronounced (Fig. 10)
*H. notsui* M. SATÔ.
 — Length 2.3 to 2.4 mm, male with modified legs and maxillary palpus (Fig. 6);
 female with strongly acuminate elytral apices (Fig. 7)
*H. watanabei* n. sp.

References

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