

Notes on Some Coleopteran Groups of the Himalo-Japanese Element in Northern Vietnam

I. On the Genus *Nipponhydrus* (Dytiscidae)¹⁾

Masataka SATÔ

Biological Laboratory, Nagoya Women's University,
Mizuho-ku, Nagoya, 467 Japan

Abstract In the course of our faunal researches in northern Vietnam made in 1994 and 1995, I collected many coleopteran species which belong to the Himalo-Japanese element. In the first part, the dytiscid genus *Nipponhydrus* is dealt with, with description of a new species, *N. vietnamicus* M. SATÔ, sp. nov.

From the zoogeographical viewpoint, the Coleoptera belonging to the Himalo-Japanese element are important for analysing the process of establishment of the Japanese fauna. As regards this problem, many works in entomology have hitherto been published, for instance, by SHIRÔZU (1947), ASAHINA (1960), OWADA (1993), and so on. However, studies are still insufficient in the field of Coleoptera, above all, by lacking materials from such intermediate areas as southern China and northern Vietnam. Fortunately, I was able to obtain a long series of coleopteran material in northern Vietnam in 1994 and 1995 through the faunal researches made by the National Science Museum, Tokyo, under the leadership of Dr. Shun-Ichi UÉNO. As a part of the result, I will enumerate in this series of papers some groups of the Coleoptera exhibiting Himalo-Japanese relationship, and the first part is devoted to the dytiscid genus *Nipponhydrus*.

I am very grateful to the members of the expeditions to northern Vietnam, above all to Dr. S.-I. UÉNO for his kind support in many ways.

Genus *Nipponhydrus* GUIGNOT

As was already enumerated (SATÔ, 1981), the genus *Nipponhydrus* GUIGNOT (1954) contains three previously known species which are regarded as representing a Himalo-Japanese element. Up to the present, however, it is unknown from Vietnam, one of the intermediate areas. It was fortunate that I came across a species of the

1) This study is supported by the Grant-in-aid No. 06041116 for Field Research of the Monbusho International Scientific Research Program, Japan.

genus in northern Vietnam in the spring of 1995. After a careful examination, I have come to the conclusion that it is new to science, and am going to describe it as a fourth species of the genus in the present paper.

All the species of the genus *Nipponhydrus* inhabit clean waters of small brooks. This fact seems to suggest that they are restricted to low temperature habitats in the zone of evergreen broadleaved forest as relicts and show an old-type pattern of distribution from the zoogeographical viewpoint.

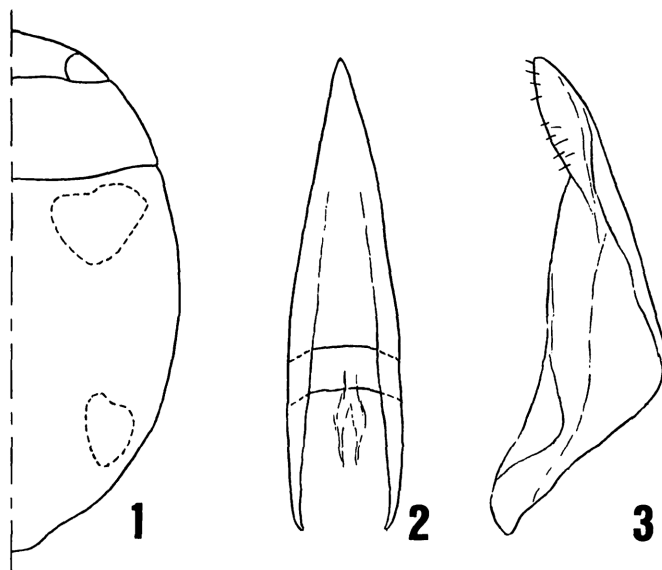
Nipponhydrus vietnamicus M. SATÔ, sp. nov.

(Figs. 1-3)

Body semispherical, moderately convex and shining. Colour mostly dark reddish brown; antennae, mouth appendages and legs brown; four markings of elytra yellowish brown.

Head about 2.2 times as broad as long; surface smooth in the main part, finely shagreened in the anterior area, with scattered minute punctures; a group of punctures at the antero-lateral side of each eye more or less distinct; fronto-clypeus slightly bordered.

Pronotum about 2.7 times as broad as long, broadest at the base which is about 1.4 times as broad as the anterior breadth; sides slightly convergent anteriorly; surface distinctly and closely punctate in the central area and closely, somewhat rugosely so in the posterior area, and longitudinally wrinkled in posterior half; integument smooth.



Figs. 1-3. *Nipponhydrus vietnamicus* M. SATÔ, sp. nov.; 1, right half of body; 2, median lobe of male genitalia; 3, lateral lobe of male genitalia.

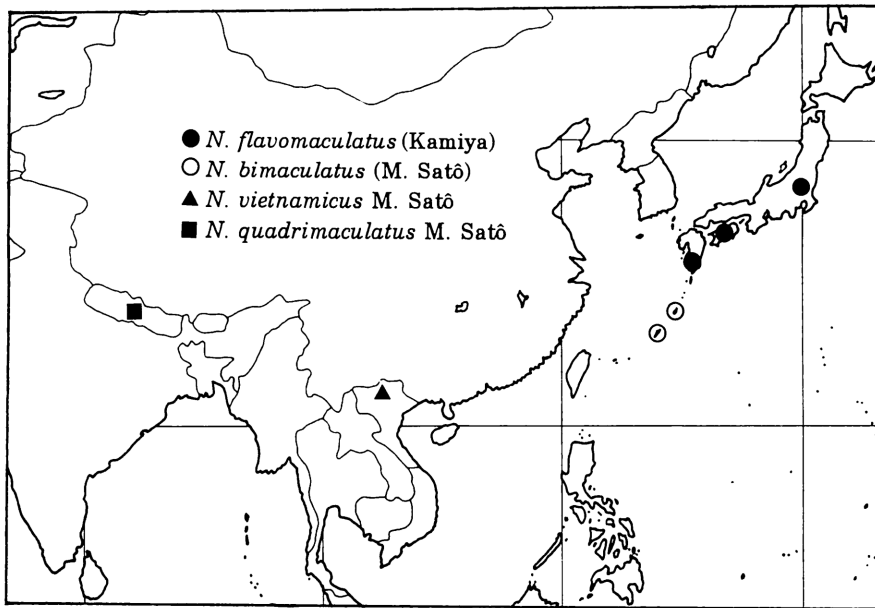


Fig. 4. Map showing the distribution of *Nipponhydrus* species.

Elytra about 1.2 times as broad as pronotum, about 1.1 times as long as broad, broadest at the middle, thence slightly narrowed anteriorly and moderately narrowed posteriorly; surface somewhat closely and minutely punctate, bearing a fine series of pubescence on the postero-lateral portions; integument smooth; each elytron provided with suboval markings at the base near shoulder and at the lateral part near apex.

Prosternal process distinctly expanded apically and with blunt tip; surface rugosely punctate, longitudinally raised at the lateral sides which are smooth. Metasternal wings finely punctate. Metacoxal plate scattered with fine punctures and microreticulated in the central area and somewhat smooth in the lateral areas. Metacoxal line moderately traced. Metacoxal process angulate at the inner sides of trochanters. Abdomen finely and sparsely punctate; 3rd sternite bearing long hairs in the centre. Claws of hind legs unequal, the longer one being slightly shorter than the 5th tarsal segment.

Male genitalia: lateral lobe well sclerotized, inwardly bent with rounded apex and bearing sparse pubescence; median lobe tapered apically with pointed apex.

Male and female closely similar to each other.

Length: 2.5–2.6 mm; breadth: 1.7–1.8 mm.

Holotype: ♂, Deo O Quy Ho (alt. 1,750 m), Sa Pa, Lao Cai Prov., N. Vietnam, 12–V–1995, M. SATÔ leg. Paratypes: 1 ♂, 5 ♀♀, same data as for the holotype.

The holotype and one paratype are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo. Remaining paratypes are now preserved in the collection of the Biological Laboratory, Nagoya Women's University.

This new species is somewhat allied to *N. quadrimaculatus* M. SATÔ, 1981, in general appearance, but is discriminated from the latter and other members of the genus by the following key.

Key to the Species of the Genus *Nipponhydrus*

- 1(2) Head, pronotum, elytra and ventral surface dark reddish brown; each elytron provided with two rather small markings.
 *N. vietnamicus* M. SATÔ, sp. nov.
- 2(1) Head reddish to yellowish brown; elytra dark brown with various markings.
- 3(4) Each elytron provided with two suboval and rather large markings
 *N. quadrimaculatus* M. SATÔ, 1981.
- 4(3) Each elytron provided with a large transverse marking at the base, and sometimes with another marking.
- 5(6) Each elytron provided with a basal marking only
 *N. bimaculatus* (M. SATÔ, 1972).
- 6(5) Each elytron provided with two small markings in addition to a basal marking
 *N. flavomaculatus* (KAMIYA, 1938).

要 約

佐藤正孝：ヴェトナムを經由するヒマラヤー日本系分布要素の甲虫類。I. キボシケシゲンゴロウ属について。——国立科学博物館が組織し、1994、1995年に実施されたヴェトナム昆虫相調査に参加でき、ヒマラヤー日本系分布要素の甲虫類を多く採集することができた。今回は、その要素の一群として、ゲンゴロウ科のキボシケシゲンゴロウ属 *Nipponhydrus* をとりあげた。あわせて、ラオカイ地方で得られた資料に基づいて1新種を記載し、*N. vietnamicus* M. SATÔ と命名した。

References

- ASAHINA, S., 1960. Notes on the relationship between Himalaya and Japanese Insect-fauna. *J. Bengal nat. Hist. Soc.*, **31**: 69–75.
- GUIGNOT, F., 1954. Quarante-unième note sur les Hydrocanthares. *Rev. fr. Ent.*, **21**: 195–202.
- KAMIYA, K., 1938. A systematic study of the Japanese Dytiscidae. *J. Tokyo Nogyo Daigaku*, **5**: 1–68, 7 pls.
- OWADA, M., 1993. Moths of Himalaya, Southeast Asia and Japan. *Looking into the Nature*, 15–56. Kagaku-hakubutsukan Kôenkai, Tokyo. (In Japanese.)
- SATÔ, M., 1972. New dytiscid beetles from Japan. *Annot. zool. japon.*, **45**: 49–59.
- 1981. Notes on the genus *Microdytes* (Coleoptera, Dytiscidae) and its ally from Nepal. *Ibid.*, **54**: 67–72.
- SHIRÔZU, T., 1947. A critical study on the zoogeography of Japanese butterflies with special reference to the importance of the West-Chinese elements. *Matsumushi, Sapporo*, **2**: 1–8. (In Japanese.)