

***PLANAESCHNA CUCPHUONGENSIS* SPEC. NOV.,
A NEW DRAGONFLY FROM NORTHERN VIETNAM
(ANISOPTERA: AESHNIDAE)**

H. KARUBE

Kanagawa Prefectural Museum of Natural History, 499 Iryuda, Odawara,
Kanagawa, 250-0031, Japan

Received January 24, 1999 / Revised and Accepted February 19, 1999

The new sp. is described and illustrated from a single ♂ (holotype: Hoa Binh prov., Cuc Phuong National Park, 2-VI-1998; deposited at Kanagawa Prefectural Mus. Nat. Hist., Odawara, Japan). It is similar to *P. chiengmaiensis* Asah., from Thailand, from which it is distinguished by more slender and strongly bent superior appendages and by a different shape of the inferior appendages.

INTRODUCTION

Last year (1998) I obtained a small male *Planaeschna* specimen at Cuc Phuong National Park (which is a lowland rain forest in good condition) in northern Vietnam. At a glance, the specimen looks close to *P. chiengmaiensis* Asahina from northern Thailand. However, it is easily distinguished from the latter by the structure of the caudal appendages, though undoubtedly belongs to the same species-group as the latter. After a careful study, it became clear that the specimen is, indeed, a new species.

***PLANAESCHNA CUCPHUONGENSIS* SP. NOV.**

Figures 1-6

M a t e r i a l. – **H o l o t y p e** ♂: VIETNAM, Hoa Binh Prov., Cuc Phuong National Park, 2-VI-1998, H. Karube leg., deposited at Kanagawa Prefectural Mus. Nat. Hist., Odawara, Japan.

A slender and relatively small species; black with greenish yellow markings.

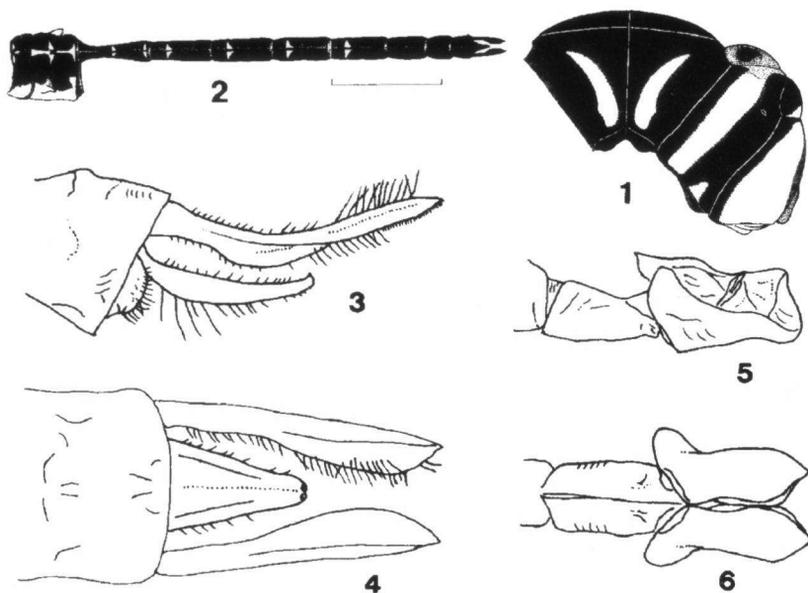
MALE (Holotype). – **H e a d.** – Reddish brown with green and black markings; labium, labrum, anteclypeus, and postclypeus scattered with yellowish brown patches;

antefrons subtriangularly protruded anteriorly, blackish except for about the ventral half, with the vertical surface coarsely wrinkled; eyes meeting over about 1.7 mm; vertex protruded anteriorly above median ocellus; occiput brown, wedge-shaped, small, raised towards the apex and provided with long hairs.

T h o r a x. — Prothorax predominantly yellowish, though blackish above. Pterothorax black, with symmetrical green marks as follows: antehumeral stripe cigar-shaped and curving outwards; stripe of mesepimeron broadened, diverging, except for about 1/4 of the anterior and posterior ends; metepisternum with a small mark on the upper border; metepimeron largely green for about the posterior 3/4; mesinfraepisternum, metinfraepisternum and coxae brown. Legs rather short, black.

Wings hyaline, tinted with reddish brown at their bases; triangle 4-5-celled; anal loop 6-celled; nodal index: 16-23:24-16/18-16:17-19; pterostigma brown, 2.3 mm in length in the forewing, and 2.4 mm in length in the hindwing.

A b d o m e n. — Black with green markings, basal 2 segments inflated, gradually attenuated towards 1/2 of segment 3; segment 1 with lateral oblique band over ventral 1/3; narrow longitudinal line running along dorsal carina from anterior border of segment 2 to anterior 1/3 of segment 3, connected with a pair of triangular medio-dorsal spots on part and dorso-posterior border of segment 2, though interrupted at each intersection. Segment 2 with lateral mark on auricle and a band over half the area; segment 3 with two pairs of dorsal spots, a triangular pair cen-



Figs 1-6. *Planaeschna cucphuongensis* sp. n., ♂: (1) thorax; — (2) abdomen (bar 1 cm); — (3) caudal appendages, lateral view; — (4) the same, dorsal view; — (5) penis, lateral view; — (6) the same, ventral view.

trally and a somewhat oval pair at the posterior border, also with an antero-ventral spot and a small spot on the postero-ventral areas. Segments 4-7 each with a pair of triangular spots in the medio-dorsal area which gradually diminishing posteriad; segments 4-8 each with a pair of rectangular spots at the sternite; segments 9-10 entirely black.

Caudal appendages black. Superior appendages slender, flat, sharply bent upwards at about the apical half, pointed at apex and widened in about the apical 2/3 of the inner edge. Inferior appendages slender, attenuated towards apex, gently bent upwards and with a small apical projection as seen from a lateral view; in dorsal view, slender and triangular with a notched apex.

Genitalia. — Penis light brown; vesicle hemispherically projected ventrad, with a round hollow in the anterior area; 2nd rapidly bent dorsad; 3rd tapered towards apex with a deep suture on the ventral surface; 4th with the ventral part shaped as a pair of "boomerangs" in ventral view, with the dorsal part bill-shaped in lateral view and bilobed at apex.

Measurements (in mm). — Abdomen (incl. app.) 45.6; — hind wing 40.0 in length, with maximum width 11.3.

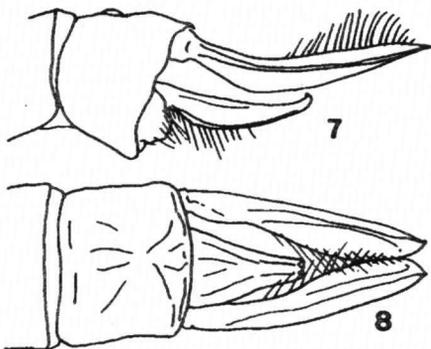
FEMALE unknown.

DISTRIBUTION. — Northern Vietnam.

NOTES. — This new species is closely related to *Planaeschna chiengmaiensis* Asahina from northern Thailand, but is easily distinguished from the latter by its more slender build and more strongly bent superior appendages and by a different shape of the inferior appendages.

Two species of *Planaeschna* have hitherto been recognized from northern Vietnam, *P. tamdaoensis* Asahina (allied to *P. milnei* of Japan) and *P. tomokunii* Asahina (allied to *P. taiwana* of Taiwan), which were both obtained from Mt Tamdao (at about 950 m alt.). The present species is the third *Planaeschna* from northern Vietnam.

It is interesting that it was discovered in Cuc Phuong, a lowland rain forest, since the other Indochinese planaeschnas have been found only in the montane zone (above the elevation of ca 1000 m). Cuc Phuong is located in a limestone zone, with numerous small, relatively cool streams, gushing out from under the limestone cliffs. It is interesting that the new species has survived in such a hot, lowland climate.



Figs 7-8. *Planaeschna chiengmaiensis* Asahina, caudal appendages: (7) lateral view; — (8) dorsal view. — [From ASAHINA, 1985]

ACKNOWLEDGEMENTS

I wish to express my hearty thanks to Dr MASATOSHI TAKAKUWA of the Kanagawa Prefectural Museum of Natural History, Odawara for his critical reading of the original manuscript, and to Mr ITSURO KAWASHIMA, Yokosuka for the splendid illustrations of the thorax and abdomen.

REFERENCES

- ASAHINA, S., 1981. Records of little or unknown Odonata from Thailand. *Tombo* 23(1/4): 3-16.
- ASAHINA, S., 1985. Notes on the genus *Planaeschna* with special reference to two species from Thailand. *Gekkan-Mushi* 175: 16-20.
- ASAHINA, S., 1996. Records of the northern Vietnamese Odonata taken by expedition members from the National Science Museum, Tokyo. 3. Aeshnidae, Corduliidae and Libellulidae. *Bull. natn. Sci. Mus. Tokyo (A)* 22(2): 69-80.
- FRASER, F.C., 1922. Indian dragonflies, pt 13. *J. Bombay nat. Hist. Soc.* 23(3): 610-620.
- FRASER, F.C., 1936. *The fauna of British India, including Ceylon and Burma: Odonata*, Vol. 3. Taylor & Francis, London.
- MARTIN, R., 1909. Aeshnines. *Collns zool. Edm. de Selys Longchamps* 20: 157-219, pls 5-6 excl.
- NEEDHAM, J.G., 1930. A manual of the dragonflies of China. *Zool. sin.* 11(1): 1-344+11 pp., 20 pls excl.
- ZHOU, W. & J. WEI, 1980. A new species of the genus *Planaeschna* from Zhejiang (Odonata: Aeshnidae). *Entomotaxonomia* 2(3): 227-228.