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TWO NEW MAYFLIES FROM JAPAN

By Kyuemon Gose

Gojo High-school, Gojo, Nara Prefecture

The present article deals with the description of two new Japanese species of Ephemeroptera: one belongs to the genus *Ameletus*, and the other to *Ecdyonurus*.

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Ameletus gojoensis sp. nov.

Measurements : Body length, ♂ 5.7-6.3 mm ; fore-wing length, ♂ 5.7-6.3 mm ; cercus length, ♂ 10.0-11.0 mm.

Male : General colour brownish ; eyes ash gray ; head and thorax brownish. Fore legs brownish, middle and hind legs pale brownish ; in the fore leg, femur : tibia : tarsus=2.0 : 3.0 : 3.8 (Fig. 1, D) ; tarsal joints of the fore leg rank, 2, 3, 4, 1, 5 ; those of the hind leg rank 5, 1, 2 ≐ 2 ≐ 4 (Fig. 1, E).

Wing hyaline, veins brownish tinged with whitish colour along the pterostigmatic portion and the costal and basal areas of both wings (Fig. 1, A, B).

Thorax brownish, ventral side paler, sternite of mesothorax with a pair of blackish clavate markings on the middle ; sternite of metathorax with a pair of blackish spots on near frontal margin (Fig. 1, C).

Abdomen light brownish, tergites 1-8 with a dark brownish band on each posterior margin, last two tergites brownish.

Forceps brownish ; paler apically ; forceps-limbs 4-jointed, the basal joint rather thick, tapering second joint $1\frac{1}{2}$ as long as the last two joints combined together, the last joint slender, a little shorter than the third joint. Penis-lobes widely separated from each other, each lobes slender and divergent ; cerci pale yellowish with darker margin on the basal portion of each joint (Fig. 1, F).

Female and nymph : Unknown.

Holotype : ♂, Gojo-shi, Nara Pref., 15. VI, 1966, K. Gose leg. Paratypes : 3 ♂♂, same data and collector as holotype. Specimens are deposited in Zoological Institute, Nara Women's University.

Remarks : This species is very much similar to *Ameletus costalis* Matsumura, but is easily distinguishable from the latter by 4 blackish spots on the ventral side of thorax.

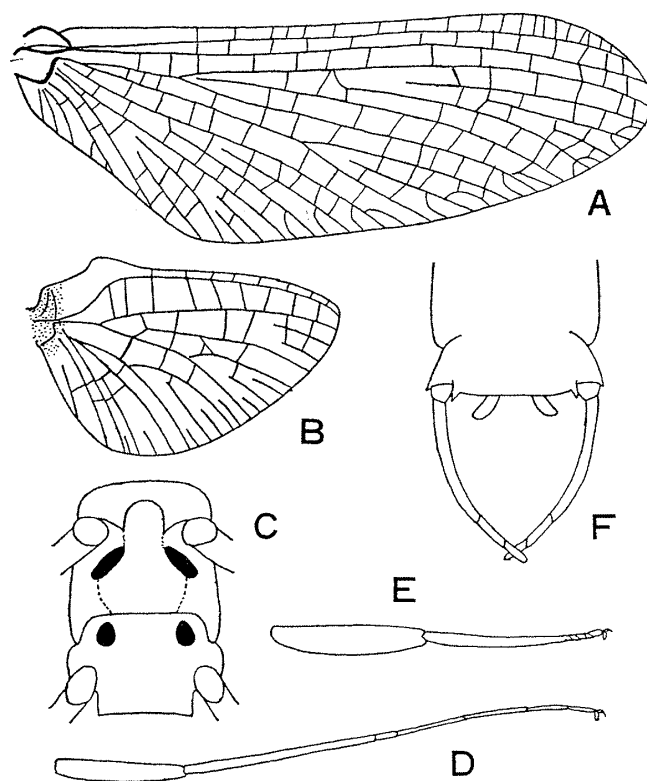


Fig. 1. *Ameletus gojoensis* sp. nov.

A. Right fore-wing; B. Right hind-wing; C. Under side of thorax;
D. Fore leg of ♂, imago; E. Hind leg of ♂, imago; F. End of
abdomen of ♂, imago, ventral view.

***Ecdyonurus naraensis* sp. nov.**

Measurements: Body length, ♂ 6.0-6.5 mm, ♀ 5.8-6.3 mm; fore-wing length, ♂ 5.8-6.1 mm, ♀ 6.8-7.2 mm; cercus length, ♂ 9.8-10.5 mm, ♀ 10.0-10.8 mm.

Male: General colour ochre yellowish. Head brownish yellow, antennae brownish, eyes blackish brown, white dark blackish ring around its base, ocelli brownish white, its basal part black.

Thorax brownish yellow; pronotum pitch brown; mesonotum pale yellowish.

Femur of fore leg brownish and fuscous at its tip; joinings of tibia and tarsus, and the first tarsal segment infuscated; ratio of femur, tibia and tarsus; 4.4 : 5.0 : 6.2, tarsal joints rank 2, 3, 4, 5=1 (Fig. 2, C); hind legs yellowish; ratio of femur, tibia and tarsus 7.6 : 5.7 : 2.7, tarsal joints rank 5, 1, 2, 3, 4 (Fig. 2, D, E); last tarsal segment and claws infuscated in all legs; claws dissimilar in all legs.

Wing hyaline, apical angle obscured, veins whitish (Fig. 2, A, B).

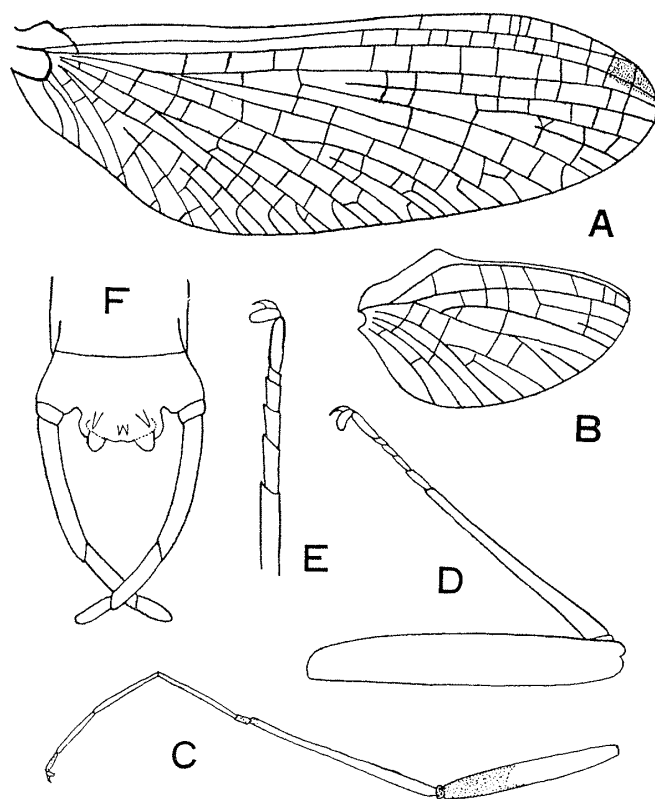


Fig. 2. *Ecdyonurus naraensis* sp. nov.

A. Right fore-wing; B. Right hind-wing; C. Fore leg of ♂, imago; D. Hind leg of ♂, imago; E. Hind tarsus of ♂, imago; F. End of abdomen of ♂, imago, ventral view.

Abdomen yellowish, first segment pale brownish, second to sixth segments whitish translucent; each of the tergites 1-7 with a narrow dark brownish band on its posterior margin; segments 7-10 appearing somewhat pruinose, posterior margin of sternite 10 incised at the base of forceps.

The hind margin of tenth sternite remarkably divergent, somewhat arched between the base of the forceps.

Forceps long and slender, 4-jointed, basal joint very short, tapering to the size of the second joint, second joint about $1\frac{1}{3}$ as long as the last two joints combined together (Fig. 2, F)

Caudal filaments white, articulations not darkened.

Penis lobes pale yellowish, separated, the inner margin slightly curved outwards at the apex and a pair of small brownish spines bear on the middle of penis lobe and a pair of large spines bear on near both lateral sides of penis lobe (Fig. 2, F).

Female : Similar in most morphological features to the male. General colour light ochre yellowish. Eyes dichoptic, dark brownish; between the eyes and each ocellus ringed with a brownish band.

In the fore leg, femur brownish and its distal end dark brownish; joining of tibia and tarsus, the first and last segment of tarsus infuscated; femur : tibia : tarsus=3.5 : 2.0 : 1.8, tarsal joint rank 2, 1≠2≠3≠5≠4.

Hind legs pale yellowish; femur : tibia : tarsus=5.0 : 3.2 : 1.4, tarsal joints rank 5, 1, 2≠4≠3, claws dissimilar in all legs.

Wing hyaline. Thorax brownish yellow; pronotum with a dark brownish triangle spot on median area.

Abdomen yellowish, each of the tergites 1-6 with a narrow dark brownish band on its posterior margin; cerci whitish.

Nymph : Unknown.

Holotype : ♂, Go-joshi, Nara Pref., 20. VI. 1965, K. Gose leg. Allotype : ♀, same data and collector as holotype. Paratypes : 13 ♂♂, 9 ♀♀, same data and collector as holotype. Specimens are deposited in Zoological Institute, Nara Women's University.

Remarks : This species is similar to *Ecdyonurus flavus* Takahashi, but easily distinguishable by the form of genital organ from the latter.

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