CAENIS DEMOULINI, A NEW EPHEMEROPTERON FROM THAILAND

by

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During a short stay at Bangkok on December 3rd, 1953, Professor H. Boschma observed that enormous quantities of minute insects were attracted by lamplight in the hotel of the Royal Dutch Airlines (K.L.M.) "Plaswijke" at the airport Laksi. From the enormous accumulations of these insects around the lamps he collected a sample which he entrusted to me for examination. This sample proved to consist almost entirely of a new species of mayfly which is described in the present paper.

_Caenis demoulini_ nov. spec.

Female imago.

Head and thorax uniformly yellowish brown. Eyes purple-black, prominent.

Antennae grey-brown; median ocellus prominent, colour light brown with a darker edge.

Abdomen pale yellowish brown, at the dorsal surface with light brown-grey markings, except on the last three tergites. Ventral surface paler, especially the last three segments. Stigmates in or near a faint black or grey spot. Ceri and filum terminale silver-white, rather densely covered with stiff, long, silvery hairs, except at the base of these caudal filaments, where the colour passes into a very light brown, whilst here the hairs abruptly become much shorter, and are placed more densely.

Anterior legs grey-brown, median and posterior legs pure white with a very faint yellowish spot at the end of the femora.

Wings vitreous, veins light grey, except subcosta and radius, which are dark grey-brown. Area subcostalis very light ferruginous.
Measurements: 
- body ♂ 3.5 mm
- wing ♂ 2.9-3.0 mm
- cerci and sternum terminalis ♂ 0.8 mm

Eggs yellowish brown, length 0.13-0.15 mm.

![Illustration](image_url)

Fig. 1. *Cnemis demowi* nov. sp. a. wing ♂; b. abdominal pattern holotype, dorsal surface; c. egg, highly magnified.

Thailand, Bangkok, airport Laksei, 16 Q♂ dry (1 holotype, 13 paratypes); the rest of the material most specimens rather damaged, in alcohol.

All specimens in the Rijksmuseum van Natuurlijke Historie, Leiden; they have all except the holotype and the paratype no. 1, a cluster of eggs at the end of the abdomen. The abdomen of the holotype is broken and the eggs protrude through the 7th segment. The material at hand is strongly uniform...
in colour and measurements 1), only paratype no. 1 has a dark brown ring on the caudal filaments at about 1 mm from their base.

The eggs of the new species closely resemble those of Caenis nigropunctata Klap. (cf. Ulmer, 1913).

I dedicate this new Caenis to Dr. G. Demoulin (Institut Royal des Sciences Naturelles, Brussels), the well known Belgian ephemeropterist, who provided me with literature not easily available elsewhere.

Affinities, Caenis demoulini belongs to the perpusilla-group, known to occur in South East Asia. The species is characterized by short caudal filaments, a uniformly yellowish-brown coloured head and pronotum, and pure white median and posterior legs. Its nearest allies, C. perpusilla Walker, C. nigropunctata Kläpke, C. nigropunctata Navas, and C. piscina Kimmitt, differ from it by the following characters: length of caudal filaments, markings of head and pronotum, and colour of median and posterior legs.

<table>
<thead>
<tr>
<th>species</th>
<th>caudal filaments</th>
<th>head and pronotum</th>
<th>median and posterior legs</th>
</tr>
</thead>
<tbody>
<tr>
<td>perpusilla</td>
<td>12 mm</td>
<td>with dark markings</td>
<td>with black</td>
</tr>
<tr>
<td>nigropunctata</td>
<td>12 mm</td>
<td>with dark spots</td>
<td>with black spots</td>
</tr>
<tr>
<td>piscina</td>
<td>3 mm</td>
<td>with black lines</td>
<td>with black line</td>
</tr>
<tr>
<td>demoulini</td>
<td>3 mm</td>
<td>pale yellow</td>
<td>with purple</td>
</tr>
<tr>
<td></td>
<td></td>
<td>brown</td>
<td>brown</td>
</tr>
</tbody>
</table>

The other members of the perpusilla-group are more different from C. demoulini. C. piscina Kimmitt has a white abdomen and white anterior legs, except femur and apex of the tibia, which have darker markings. C. annulata Navas, described from the Philippines (Luzon), differs from the new species by its annulated legs and the much longer caudal filaments (Q 8 mm), whereas C. jumilcha Navas, reported from the same island, has much longer wings (Q 4.5 mm), whilst the anterior legs, except the femora, are whitish.

C. drainxapi Traver from Kashmir belongs to another group; it is quite different by its red-brown head and thorax, and by its yellow legs and yellow caudal filaments.

1) One of the nearest relatives of the present species, Caenis nigropunctata Kläpke, varies largely in size (cf. Ulmer, 1936).
2) At a certain incidence of the light two somewhat darker lines become evident at the right and left sides of the dorsal surface of the thorax.
The distribution of the *perusilla*-group of the family Caenidae in South East Asia is fixed on the accompanying map. The family is not yet known from French Ind. China (Lestage, 1921, 1924a; Navas, 1924) and from Malaya. *C. perusilla* Wall. has been recorded from Ceylon (type locality) and from Bengal (Rajahahi, cf. Needham, 1909); perhaps this species of *Brahma* occurs along the whole Eastern coast of India. *C. nigromaculata* Klap. has been found on Sumatra, Java, Balf. and the Philippines, consequently showing a rather remarkable distribution. 1) *C. annulata* Navas and *C. psilodina* Navas are confined to the Philippines, whereas *C. nivea* Kimm. and *C. aequina* Kimm. have been reported from Calcutta.

REFERENCES


1) Perhaps the specimens from the Philippines are different from those described from the East Indian Archipelago.
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1) Lestage (1924a) is a reprint of Lestage (1921) with some minimal alterations, probably only misprints.