

The 3rd Danish Expedition to Central Asia.

Zoological Results 4.

Odonata, Ephemeroptera and Neuroptera (Insecta) from Afghanistan.

By

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The material from this Expedition was collected in Afghanistan by N. Haarløv and K. Paludan. The Ephemeroptera are rather poorly represented by only eight examples, two of a species of *Caenis* and six of a new species of *Centroptilum*. It is somewhat surprising that there are not more of these insects, since the number of Odonata in the collection shows that suitable aquatic habitats occur. Sixteen species of Odonata were taken, and of the six families the Libellulidae and Gomphidae are the most abundant in species. Four families of Neuroptera are present, with a total of ten species, of which the Myrmeleonidae provide seven, including one new species. As far as one can judge from the material available, the fauna has a strong Mediterranean and Eremian element, with a few Palaearctic species and one or two widely-distributed Asiatic species.

The author wishes to express his thanks to N. Haarløv, and to Dr. S. L. Tuxen, of the Universitetets Zoologiske Museum, København, for enabling me to examine this material from Afghanistan.

LIST OF SPECIES

Odonata.

Fam. *Platycnemididae*.

Platycnemis latipes dealbata Selys.

1 ♂, Pirzada, 19.5.1948; 2 ♂♂, 2 ♀♀, Pirzada, 21.5.1948.

Asia Minor, Egypt, Persia, Kashmir and N.W. India.

Fam. *Coenagriidae*.*Ischnura delicata* (Hagen).

1 ♂, Pirzada, 19.5.1948.

Widely distributed in South and South-east Asia, Borneo, Philippines, New Guinea, Australasia and Samoa.

Fam. *Gomphidae*.*Gomphus flavipes* (Charp.).

1 ♂, Kajkai, 29.5.1948.

This is smaller than examples from Macedonia and with less extensive black on body, but the anal appendages and genital hamules do not appear to differ appreciably.

South and Central Europe, Asia Minor, Persia, Turkestan and Siberia.

Onychogomphus flexuosus (Schneid.).

1 ♂, Girisk, 24.5.1948; 1 ♀, Kajkai, 27.5.1948; 1 ♂, Kajkai, 29.5.1948.

Asia Minor, Caucasus, S. Russia, Turkestan, ?Irak.

Gomphidae nymphal exuviae, ?*Onychogomphus flexuosus* (Schneid.).

4, Girisk, at Helmand river, 24.5.1948.

Ophiogomphus reductus Calvert.

1 ♀, Panjao, 25.7.1948; 1 ♂, Panjao, 26.7.1948.

Kashmir, Bokhara, Turkestan.

Paragomphus pumilio (Ramb.).

1 ♀, Pirzada, 19.5.1948; 1 ♂, Pirzada, 21.5.1948.

Egypt, Sudan, Abyssinia.

Fam. *Aeschnidae*.*Hemianax ephippiger* (Burm.).

1 ♂, Faisabad, Seistan, 12.4.1949; 1 ♀, Faisabad, 13.4.1949; 1 ♀, Baqrabad, Seistan, 25.2.1949; 1 ♀ and exuvia, Sliewe, Nuristan, c. 2500 m., 19.5.1948.

S. Europe, Asia, N. Africa.

Aeshna juncea (L.).

1 ♂, Puistagoli, 1.8.1948.

Europe, N. Asia, N. America.

Fam. *Cordulegasteridae*.*Cordulegaster insignis coronatus* Morton.

1 ♂, Chaishasma, 18.6.1949; 1 ♀, Chasma Obeh, 12.6.1948.
Kokand, Turkestan, Persia.

Fam. *Libellulidae*.*Orthetrum anceps* (Schn.).

1 ♂, Andarab, 30.8.1948.

N. Africa, Asia Minor, Persia, N.W. India.

Orthetrum brunneum brunneum (Fonsc.).

1 ♂, Kajkai, 30.5.1948; 1 ♂, 1 ♀, Panjao, 18.7.1948; 1 ♂, Panjao,
24.7.1948.

S. Europe, N. Africa, Asia Minor, Irak, Kashmir, N.W. India.

Libellula depressa L.

2 ♂♂, Paghman, 11.7.1948.

Europe, Asia Minor, Syria, Transcaucasia, Persia.

Sympetrum fonscolombei (Selys).

1 ♀, Pirzada, 19.5.1948.

Europe, N. Africa, Central Asia.

Sympetrum decoloratum (Selys).

1 ♂, Schirparak, Koh-i-Baba, 8.8.1948; 1 ♀, Paghman, 11.7.1948.

N. Africa, Egypt, Persia, Irak, N.W. India.

Diplacodes lefebvrei (Ramb.).

1 ♂, Kajkai, 30.5.1948.

Africa, Irak, West coast of India.

Pantala flavescens (Fab.).

3 ♀♀, Herat, 8.6.1948.

Widely distributed in tropical and sub-tropical areas.

Ephemeroptera.Fam. *Caenidae*.*Caenis* sp.

2 ♀♀ sub-imagines, St. 97, Panjao, 28.7.1948.

A genus with an almost world-wide distribution.

Centroptilum rubidum sp. n. Fig. 1.

♂ (in alcohol). Turbinate eyes pale yellow, rather low and broad

lower eyes blackish. Antennae luteous, segments finely margined basally with fuscous. Thorax yellowish-brown. Anterior legs missing in the type, median and posterior pairs whitish. Wings hyaline, neuration colourless; anterior with 6—7 simple cross-veins in the pterostigmatic area. Posterior wing with rounded apex, extending to about the apex of the third abdominal segment; costal process long, erect and hooked. First abdominal segment brownish, segments 2—6 translucent, basal margins narrowly bordered with fuscous, and the entire surface with a faint suffusion of rose-pink; segments 7—8 opaque, whitish, the basal margins bordered with fuscous and the surface similarly flushed with pink. Segments 9—10 whitish or very pale brownish, 9th sternite with the lateral apical angles fuscous. Forceps and setae white. Forceps with basal segments large, broader than long, inner basal angles contiguous. Second segment moderately large, a little shorter than basal segment, third segment longer than first and second together, its apex slightly dilated, fourth segment small and pear-shaped. Chitinous margin of penis broadly rounded.

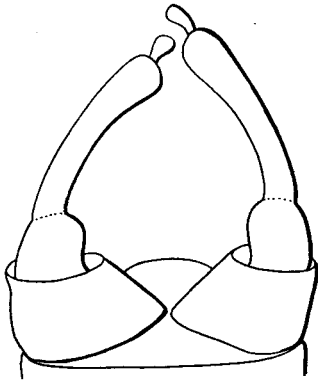


Fig. 1. *Centroptilum rubidum* sp. n. ♂.
Genital forceps from beneath.

♀ (in alcohol). Head luteous, faintly suffused with rose-pink; eyes and base of ocelli blackish. Thorax pale yellowish-brown, faintly marked with pink on sides, legs creamy-white. Wings as in ♂. Abdomen yellowish (translucent after oviposition) almost all segments with a definite pinkish suffusion, sternites 2—8 with a pinkish-purple spot on each side towards basal angles, tergites with the tracheae showing through as brownish or reddish marks. Setae white, with faint pink annulations basally.

Length of fore-wing..... ♂ 6.6 mm.

Afghanistan: Seistan, Faisabad, 15.4.1949, 1 ♂, 16.4.1949, 5 ♀♀.

Type ♂, paratypes ♀♀ (in alcohol) in the Universitetets Zoologiske Museum, København. In stature this species is smaller than *C. pennulatum* Etn. but resembles it in the rounded apex of the hind-wing,

the approximation of the basal segments of the forceps and the rounded margin of the penis. It differs in the more pronounced, hooked costal process of the hind-wing, shorter and broader basal segments of the forceps, shorter and more dilated terminal segments and in the rose-pink suffusion of the abdominal segments. I was at first inclined to consider this coloration as a post-mortem change, but it seems unlikely that all would be similarly affected, or that it would be restricted to certain areas.

Neuroptera.

Fam. *Myrmeleonidae*.

Neuroleon tenellus (Klug).

1 ♀, Pizxada, 1.6.1948.

A widely distributed Mediterranean species.

Creoleon plumbeus (Oliv.).

1 ♀, Kabul, 5.7.1948.

A widely distributed Mediterranean species.

Pignatellus limassolicus Nav.

1 ♂, Kajkai, 29.5.1948.

Previously recorded from Cyprus.

Myrmecaelurus atrox (Walk.).

1 ♂, 5 ♀♀, Kajkai, 29.5.1948; 2 ♀♀, Pizxada, 1.6.1948; 1 ♀, Pizxada, 3.6.1948.

Turkey, N. Africa, Transjordan, Irak.

Myrmecaelurus major McLach.

1 ♀, Sarchasma, 10.7.1948; 1 ♂, Panjao, 27.7.1948.

Turkestan.

Myrmecaelurus afghanus sp. n. Fig. 2.

♀. Head luteous, marked with fuscous as follows:— two small spots partly encircling the antennal bases on the inner side, a short median line and two curved transverse spots on the vertex and some obscure markings on the occiput. Antennae mainly fuscous, only the two basal segments partly luteous. Palpi luteous, shaded with fuscous, terminal segment of labial palp with the inflated part dark shining fuscous. Eyes greenish grey. Pronotum luteous, with three longitudinal fuscous stripes, longer than broad, slightly narrower anteriorly. Meso- and metanota luteous, with considerable fuscous markings. Femora

mainly fuscous, with white pubescence and setae. Tibiae luteous, banded with fuscous at apex and before the middle, clothed with white pubescence and with black spines. Tibial spurs reddish, about as long as basal segment of tarsus, which is shorter than the fifth. Tarsi luteous, segments tipped with fuscous, claws reddish. Abdomen (rather discoloured) mainly fuscous, tergites with traces of longitudinal luteous bands, and a luteous patch at the apex.

Wings (fig. 2) hyaline, veins luteous, much interrupted with fuscous, which tends to spread on to the membrane; moderately broad, apices

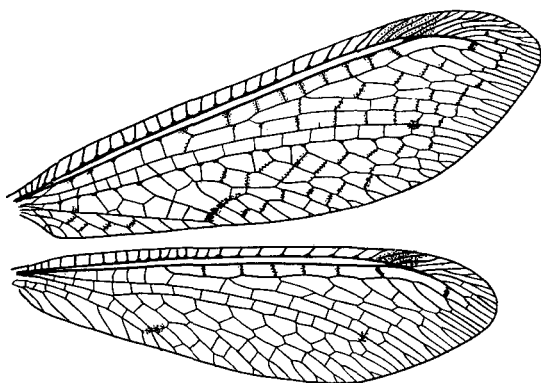


Fig. 2. *Myrmecaelurus afghanus* sp. n. ♀. Wings.

obtusely rounded. The anterior and posterior Banksian lines are only lightly indicated in both wings, and the stigmas are shaded with brownish. In the anterior wing there is a short, curved, brownish streak arising from the apex of Cu_2 and a trace of a similar streak in the posterior wing. For other details of neuration see fig. 2.

Length of body	20 mm.
Length of fore-wing	21 mm.
Length of hind-wing	18 mm.

Afghanistan: Pirzada, 3.4.1948, 1 ♀.

Type in Universitetets Zoologiske Museum, København.

This species somewhat resembles *M. punctulatus* Hag. from S. Europe but it is smaller, with rather more rounded wings. The neuration is less dense, the Banksian lines less distinct. The penultimate radial cross-vein below the stigma is much less oblique. It is possible

that this species may be one of the many described by Navas from various parts of the Mediterranean and Eremian sub-regions; his species are unfortunately often inadequately described and, in the absence of the types, very difficult to identify with certainty.

Cueta lineosa (Ramb.).

1 ♀, Kajkai, 29.5.1948.

N. Africa, Arabia, Turkestan.

Acanthaclisis occitanica (Vill.).

1 ♀, Sarchasma, 16.7.1948.

S. Europa, Astrakhan.

Myrmeleonidae larvae.

3, Firzada, 19.5.1948; 1, Pirzada, 23.5.1948; 5, Farah, 18.6.1948.

Fam. *Nemopteridae*.

Halter nutans Nav.

1 ♂, Pirzada, 19.5.1948; 1 ♀, Kajkai, 29.5.1948; 2 ♀♀, Kajkai, 29.5.1948; 1 ♂, 1 ♀, Pirzada, 1.6.1948; 2 ♂♂, Girisk, 6.5.1949.

Persia, Baluchistan, Irak, N.W. India.

Fam. *Osmylidae*.

Osmylus nubeculosus Navas.

1 ♀, Pashki, 6.7.1948; 1 ♀, 1 ♂, Pashki, 26.7.1948.

Turkestan.

Fam. *Chrysopidae*.

Chrysopa sp.

10 examples, Pirzada, 25.5.1948.

Chrysopidae larvae.

1, Pirzada, 1.6.1948; 1, Paghman, Kabul, 8.7.1948; 1, Paghman, Kabul, 12.7.1948; 1, Panjao, 25.7.1948; 3, Panjao, 27.7.1948.

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With the Author's Compliment

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