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“Nature is ever making signs to us, she is ever whispering to us the beginnings of her secrets; the scientific man must be ever on the watch, ready at once to lay hold of Nature’s hint however small, to listen to her whisper however low.”

Michael Foster.

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formis, and others, suggesting greater shelter and warmth than at Bossekop. Probably these also occur at Bossekop, but were not abundant enough to come under our notice.

We did not make so complete observations as we could have wished on the effect of continuous daylight on the times of flight of different insects. As regards the butterflies, the weather was too dull to give us reasonable opportunity to come to any definite conclusion; but a bright warm morning at Bossekop induced the butterflies in the immediate vicinity to fly as early as 8 a.m., and to fly freely by 9 a.m.; these were: *Ercbia Medusa*, *Polyommatus Phlæas*, *Argynnis Pales*, *Pamphila comma*, *Lycæna Optilete*; on the other hand, a day dull and overcast till 4 or 5 p.m., and then brilliantly fine, did not result in many butterflies being then seen on the wing. Amongst moths different species had their special times of flight. *Melanippe hastata* was on the wing at all hours. *Pachnobia hyperborea* often flew at 4 or 5 in the afternoon, and at the same time *Cidaria abrasaria* flew freely; but it was not till 7 or 8 p.m. that most species of moths began to fly. We did not sugar or go mothing at "midnight," as we ought to have done, to the considerable increase of our list of species, but we concluded that the hours of flight of different species, both of butterflies and moths, varied very little from those natural to them in the south, notwithstanding the continuous day.

Betula, Reigate :
October, 1898.

TRICHOPTERA, PLANIPENNIA, AND PSEUDO-NEUROPTERA,
COLLECTED IN FINMARK

IN 1898 BY DR. T. A. CHAPMAN AND MR. R. W. LLOYD.

BY ROBERT McLACHLAN, F.R.S., &c.

The graphic description of his journey already given by Dr. Chapman (*cf. ante* pp. 20—28), is sufficient general introduction to this short article. The results obtained were so interesting as to make it a matter of regret that a trained Neuropterist was not of the party. Where no locality is given the specimens were from Bossekop (lat. 69° 50' N.). A few are indicated from Hammerfest (lat. 70° 40' N.), taken by Mr. Lloyd.

I have also mentioned the species taken by Dr. Chapman at Saeterstoen (South Norway, lat. 60° 12' N.). All were kindly presented to me.

TRICHOPTERA.

PIRYGANEA OBSOLETA, McLach., 1 ♀ at Hammerfest.

LIMNOPHILUS RHOMBICUS, L., 1 ♂.

LIMNOPHILUS SCALENUS, Wallengr., 10 ♂, 9 ♀. My original description, made from Wallengren's typical examples from the Dovre Alps (*cf.* Rev. and Synops., Suppl., p. xxii), gives no good idea of the anterior wings as exemplified in this long series from Finmark. There is nearly always a large pale anastomosal space, and a distinct fenestrate spot, and there is also usually a blackish spot at the pterostigma, frequently broken in two and enclosing a whitish spot; in fact, the affinity to its very near ally *L. bipunctatus* is brought prominently forward, even in wing markings. The ♀ is structurally much like *L. bipunctatus*. I have seen undoubted specimens of *L. bipunctatus* from Finland of equally small size, and some of the examples of the latter from the little alpine Lac de Gers in Savoy (*cf.* Rev. and Synops., Suppl., p. xxi) deceptively resemble these exponents of *L. scalenus*. Dr. Chapman observed the final metamorphosis of this species, which he describes in the following note:—

"On a little tarn high up (perhaps 1200 feet) on the Skaadavara, we one day noticed a Trichopteron emerging from the pupa in considerable numbers. The pupæ were seen swimming on the surface of the water with some rapidity, and when they reached a stone or a plant, climbed up and at once changed, the emergence and the simultaneous expansion of the wings being very rapid. They were all evidently in a hurry, yet could submit to a certain amount of delay if not allowed to land; nevertheless, there was a limit to this, and a good many were seen that had emerged on the surface, and were floating, waiting for their wings to harden, on the empty pupa shells; the wing-hardening took place rapidly, the wings being useful for flight in a very few minutes."

It will be remembered that Eaton observed the pupæ of the alpine form of *L. bipunctatus* at the Lac de Gers; the habits of the two are evidently very similar. ASYNARCHUS sp.?, 1 ♀ of the typical group, scarcely to be determined without the ♂.

ASYNARCHUS PRODUCTUS, Morton, 2 ♂, 1 ♀. This species was described recently from examples taken by Dr. J. Sahlberg at Mandojärvi in Finnish Lapland (*cf.* Medd. Soc. Faun. et Flora Fennica, xxi, p. 109, 1895). The examples from Bossekop are slightly smaller. The undescribed ♀ is generally similar to the ♂. The 9th dorsal segment is not unusually produced. The tubular piece, viewed laterally, forms two very prominent broadly triangular obtuse valves, deeply divided above and below, and enclosing a nearly circular opening.

ASYNARCHUS CÆNOSUS, Curt., 1 ♂ larger than the British form.

STENOPHYLAX NIGRICORNIS, Pict., 4 ♂. Also 2 ♂ and ♀ from Hammerfest. It was taken by Mr. F. Walker in 1837, probably at the latter locality.

STENOPHYLAX STELLATUS, Curt., Hammerfest, 3 ♂, 2 ♀.

APATANIA STIGMATELLA, Zett., many examples. It was taken by Mr. Walker at Alten.

The following were taken by Dr. Chapman at Saeterstoen (South Norway):—*Phryganea obsoleta*, McLach., 2 ♂. *Stenophylax nigricornis*, Pict., 1 ♂. *Apatania stigmatella*, Zett. (?), 1 ♀.

PLANIPENNIA.

HEMEROBIUS NERVOSUS, F., 1 ♂. I think this is very probably *H. betulinus*, Ström, and if so, his name would have priority.

HEMEROBIUS sp., 1 ♂ 1 ♀ of an apparently undescribed species allied to *nervosus* and *subnebulosus*, which occurs also in Scotland and in the Alps of Central Europe.

PSEUDO-NEUROPTERA.

PERLIDÆ.

DICTYOPTERYX COMPACTA, McLach. (?), 1 ♀. The identification is very probable.

The species was originally described from Eastern Siberia.

NEMOURA VARIEGATA, Oliv., and another species not identified with certainty.

EPHEMERIDÆ.

The few examples have been examined by Mr. Eaton, who reports as follows:—

BAETIS VERNUS, Curt., 1 ♂ imago. The species has been already recorded from Hammerfest and Alten, taken by Mr. F. Walker.

CHIROTNETES sp., 1 ♂ subimago and 1 ♀ imago. These captures form an interesting feature in the distribution of the genus, and may probably form the subject of a separate communication.

At Saeterstoen (South Norway) Dr. Chapman took 1 ♀ imago and 1 ♀ subimago of an undetermined species of *Siphurus*.

ODONATA.

SOMATOCHLORA ARCTICA, Zett., 1 ♂. S. ALPESTRIS, Selys, 4 ♂, 4 ♀.

ÆSCHNA JUNCEA, L., 1 ♀.* Æ CÆRULEA, Ström (*borealis*, Zett.), 3 ♂, 6 ♀, also 1 ♂ from Hammerfest.

At Saeterstoen (South Norway) Dr. Chapman collected the following:—*Leucorrhinia rubicunda*, L., 1 ♂, 2 ♀. *L. dubia*, V. d. L., 4 ♂, 1 ♀. *Somatochlora metallica*, V. d. L., 2 ♂, 1 ♀. *Agrion puella*, L., 1 ♂. *A. hastulatum*, Charp., 1 ♂. *Lestes Dryas*, Kby. (*nympha*, Selys), 1 ♂.

Lewisham, London:

January, 1899.

BRITISH DIPTERA UNRECORDED OR UNDESCRIBED BY ENGLISH AUTHORS.

BY R. H. MEADE, F.R.C.S.

Having found a good many indigenous *Diptera* during the last few years, chiefly belonging to the tribe of *Muscidæ*, which have not been described by Walker or any other British author; I think that a short diagnostic description in English of each species will be of more interest to those who are taking up the study of this neglected Order than a mere enumeration of names.

* Wallengren says that *juncea* does not occur in Lappmark. I think there can be little doubt of the identity of the specimen I have referred to that species.—R. McL.