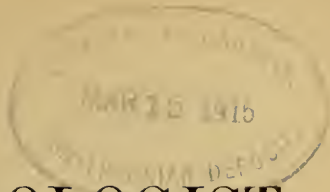




W. J. Lucas del.

SYMPETRUM FLAVEOLUM.

NYMPH ($\times 4$).



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ODONATA, &c., TAKEN BY DR. T. A. CHAPMAN IN
JULY AND IN MAY, 1914.

BY W. J. LUCAS, B.A., F.E.S.

(PLATE III.)

WITH his usual kindness Dr. Chapman secured for me in July last a few Pyrenean insects belonging to the orders Plecoptera, Ephemeroptera, Odonata, Neuroptera, and Trichoptera. We must still, I fear, describe these orders as "neglected," but if other lepidopterists would in the same way spare a little time occasionally for entomology in general, the objectionable epithet would soon tend to become inapplicable. On the present occasion I have particularly to thank Dr. Chapman for enabling me to obtain a figure and description of the nymph of that very interesting dragonfly, *Sympetrum flaveolum*, which, like the Peacock Butterfly, is in Britain on the verge of its permanent habitation, apparently indeed just outside it. *S. flaveolum* occurs here as a migrant, not in most seasons as does *V. cardui*, but only very occasionally, though it is quite possible that after a large migration British-born examples may occur for a season or two, as may also be the case with *S. fonscolombii*. I am not aware that either the description or the figure of these nymphs has so far appeared; I have therefore prepared both for *S. flaveolum* from the material which Dr. Chapman has supplied.

During his visit to the Pyrenees Dr. Chapman's headquarters were: Gavarnie in the Central Pyrenees (July 12th-31st) at an altitude of 4430 ft., and Gabas in the Eastern Pyrenees (July 8th-11th) at an altitude of 3690 ft. In each case collecting was done chiefly up-hill, as high as 8000 ft. from Gavarnie and 6000 ft. from Gabas. The collection, though not an extensive one, was widely scattered over the Insecta, and I have to thank Mr. K. J. Morton and Rev. A. E. Eaton for assisting me with the identification of some of the species.

1. **Plecoptera.**

Perla cephalotes. Female, Gabas.

Arcynopteryx dovrensis. Two males, one female, Gabas.

Chloroperla grammatica. Gabas and Gavarnie.

Nemoura variegata. Gabas.

Nemoura (sp.?). One male, two females, Gabas, belonging to the *marginata* group and somewhere near *obtusa*, but the single male is in poor condition.

2. **Ephemeroptera.**

One male sub-imago, apparently of the genus *Rhithrogena*, without any dark longitudinal, submedian, femoral streaks. The Rev. A. E. Eaton cannot say definitely whether or not it is *Rh. semicolorata*. Gavarnie.

3. **Odonata (= Paraneuroptera).**

Sympetrum flaveolum. One male of mature colouring, four males teneral, one female teneral, one nymph-skin with a female recently emerged from it, another nymph-skin of the same species but without the imago. All from Gavarnie. Dr. Chapman says that the ponds producing *S. flaveolum* were above 4430 ft. in altitude (say 5000 ft.): a "hatful" (size not mentioned) of nymphs, nymph-skins, and teneral imagines might have been obtained there. Mature imagines had usually left the neighbourhood and what efforts he made to catch them were very unsuccessful.

Cordulegaster annulatus. One female, Gabas; the left hind wing deformed near the tip.

Calopteryx virgo. One male, Gabas; wings with teneral colouring.

Lestes dryas. Twelve males, Gavarnie.

Lestes sponsa. One male, Gavarnie.

Pyrrosoma nymphula. One male, Gabas; two females, Gavarnie.

4. **Neuroptera.**

Ascalaphus coccajus. One male, four females, Gavarnie; nice specimens from several localities at about 4800 ft. elevation.

Sialis fuliginosa. One, Gabas.

Panorpa meridionalis. One male, one female, Gabas; three females, Gavarnie; all strongly marked, and with very black spots.

5. **Trichoptera.**

Asynarchus cænosus. Male, Gavarnie.

Drusus discolor. Male, Gabas; male, Gavarnie.

Drusus rectus. Three males, Gavarnie.

Apatania meridiana. Male, Gavarnie.

Sericostoma pyrenaicum. Male, Gabas.

Micrasema morosum. Male, Gavarnie.

Hydropsyche pellucidula. Female, Gabas.

Wormaldia subnigra. Female, Gabas.

Plectrocnemia scruposa. Female, Gavarnie.

Rhyacophila occidentalis. Female, Gavarnie.

Rhyacophila tristis. Female, Gavarnie.

DESCRIPTION OF NYMPH OF *S. flaveolum*. (Plate III.)

General colour sepia, but varying in depth of tint. *Length*, including anal appendages, about 16.5 mm.; greatest *breadth* about 5.5 mm. *Head*, transversely about 4.25 mm.; longitudinally about 3 mm.; in shape pentangular, somewhat rectangular behind; surface fairly smooth, except for a few hairs of considerable length on the occiput; top of head rather flat; colour of head fairly uniform, though in places there are some slightly darker markings. *Eyes*, rather large, situated at the forward corners of the head, nearly hemispherical in shape. *Antennæ* of seven segments; length about 2 mm.; the basal segment globular, the next cylindrical, the rest hair-like; the fourth segment is short compared with the rest of the hair-like ones. *Labium* (mask) decidedly and deeply spoon-shaped, covering the mouth, somewhat rapidly narrowed towards the hinge, which is situated in front of the insertion of the mid-legs; mid-lobe, with apical angle considerably greater than a right angle, and margin almost entire; moveable lobes (palpi) sub-triangular, outer and inner margins convex and nearly entire, distal margin nearly straight and slightly toothed; moveable joint at junction of outer and distal margins rather long and slender (to all appearance of little use for purposes of holding); mental setæ about nine in each comb, lateral about eleven in each, all pale and slender, inserted in a rufous socket. *Prothorax* narrow, collar-like. *Mesothoracic spiracles* large and conspicuous. *Mesothorax* and *metathorax* smooth, mottled with darker brown markings. *Legs* nearly concolorous, neither very rough nor very hairy, though tibiæ have a fringe of hairs; length of fore-legs about 9 mm., of mid-legs about 9.5 mm., of hind legs about 14 mm. *Abdomen* practically without hairs, slightly mottled and bearing a few dark dots dorsally, smooth and unicolorous ventrally; a small blunt mid-dorsal spine on the hind margin of each of segments six, seven and eight, and small lateral sharp ones on the hind margin of segments eight and nine; the ninth segment truncated behind, the tenth small. *Anal appendages* small, pointed, surrounded by hairs, dorsal appendage of moderate length, triangular; laterals shorter and more slender; lower ones slender and longer than the other three.

Material.—A nymph-skin with the recently emerged female, and another nymph-skin presumably of the same species (and agreeing on examination); from Gavarnie, Hautes Pyrenees, July 12th–31st, 1914; brought home and given to the author by Dr. T. A. Chapman.

When compared with the nymph of *S. striolatum* (*vide* Entom. xlvii. pl. ii. 1914) the great difference in length of the lateral abdominal spines will be at once noticed, and these provide a sufficient means of discriminating the species.

In May Dr. Chapman paid a visit to Pallanza in Italy, whence he brought:—

Odonata.

Libellula quadrimaculata. One male.

Orthetrum cancellatum. One female.

Trichoptera.

Tinodes wæneri. A series.

Polycentropus flavomaculatus. One.

Neuroptera.

Megalomus hirtus. One specimen. As it is a female, it does not give much assistance towards identification in its anal structures, but it is more like the northern *hirtus* than the southern *tortricoides*.

Kingston-on-Thames: February, 1915.

THE BUTTERFLIES OF THE BUCKS. CHILTERNs.

BY H. ROWLAND-BROWN, M.A., F.E.S.

(Continued from p. 30.)

8. *Agriades thetis*, v. Rott. (= *bellargus*, v. Rott.). I had always supposed this species to be extinct in the Chilterns, or, at all events, in that part of the range then known to me, until in June, 1900, I came across a small colony on a piece of ground less than an eighth of an acre in extent. Being abroad that year I did not revisit the spot at the normal time of the second emergence, but I have done so both in spring and in autumn many times since; though never again have I been fortunate enough to repeat the experience (*cp.* 'Entomologist's Record,' vol. xii. p. 349).

Writing to me on December 30th, 1900, Mr. Peachell, who was then living at High Wycombe, says: "*Re P. bellargus*, it is curious that we have never found the species in this neighbourhood till the present year." Mr. Spiller informs me that Mr. Hatton, of Postcombe, took a series in a chalk-pit somewhere between this point and mid-Bucks., but that he too had since visited the locality without result. Just over the county border, in Oxfordshire, the Rev. J. W. B. Bell discovered the species in September, 1899, at Pyrton, near Watlington. But Mr. Spiller, who recently searched the locality given ('Entomologist's Record,' vol. xiv. p. 51), did not observe it; and probably the attempt to extend westward had failed there also. But at no very distant date it must have pervaded the range, for the Rev. H. H. Crewe records it from Drayton-Beauchamp; the Rev. Joseph Greene from Halton. In 1900, also, it seems to have reached thus far, as Mr. N. C. Rothschild writes ('Entomologist,' vol. xxxiii. p. 352) that "it occurs about two miles from Tring, just beyond the Hertfordshire border, though it is always rare." Later search of these localities appears to have been fruitless. It remains to hope that under favourable conditions *A. thetis* (if that be the true specific name, which I doubt) may once more be re-established on a terrain apparently so well adapted to its natural history.

Earliest seen, June 9th, 1900; a week later the females