

[Reprinted from "The Scottish Naturalist," May-June 1920.]

A NEW BRITISH MOSQUITO.

BY F. W. EDWARDS. B.A., F.E.S.

AMONG a small collection of Culicidæ recently sent for determination by Mr P. H. Grimshaw were a single male specimen collected at Bonhill, Dumbarton, 21st August 1909, by Mr J. R. Malloch, and three females, from Bonhill, 4th May 1907 (Malloch); Newington, Edinburgh, September 1912 (Annandale); and Chambers Street, Edinburgh, 30th September 1909 (Grimshaw) respectively, belonging to the genus *Theobaldia*, and representing a species new to the British list.

In the year 1906 (*Canadian Entomologist*, xxxviii, p. 326) Dr C. S. Ludlow described a species of this genus from Alaska as *T. alaskænsis*; a fuller description of this, also a figure of the male genitalia, is given in Howard, Dyar and Knab's *Monograph of the Mosquitoes of North and Central America* (vol. iii, p. 498). More recently a single male of a very similar species was received at the British Museum from Archangel, having been collected there in 1918 by Captain A. G. Carment. Owing to the widely different locality and to the fact that the genitalia showed slight differences from Howard, Dyar & Knab's figure, I regarded this as a species distinct from *T. alaskænsis*, and briefly described it (*Bull. Ent. Res.*, x., p. 136, end of January 1920) as *T. arctica*. Meanwhile Dr Ludlow has also proposed the name *T. siberiensis* (*Insector Inscitiæ*, vii, p. 151, beginning of January 1920) for a number of females from Eastern Siberia which are almost, if not quite identical, with *T. alaskænsis* in coloration.

I am now inclined to regard these names as indicating at most slight local variations of a single species of holarctic distribution. As, however, no males have been received at the British Museum from Alaska or Siberia, it will perhaps be as well to call our species provisionally by the name *T. arctica*.

T. arctica resembles *T. annulata* in having distinctly spotted wings and a median white stripe on the second abdominal tergite. It differs conspicuously, however, in having no white rings near the tips of the femora and tibiæ,

and none in the middle of the first tarsal joints. There are distinct white rings at the bases of the first three or four tarsal joints, but the legs as a whole have, even to the naked eye, a much less banded appearance than those of *T. annulata*. There are also important differences between the genitalia of the two species, the male of *T. arctica* having on the eighth abdominal sternite a row of short spines which are not found in *T. annulata*, though they occur in some other species of the genus, and are indicated in our British *T. (Culicella) morsitans*. The Scotch male example agrees absolutely with the type from Archangel.

This very interesting addition to our British faunal list was quite unexpected, but there are several other continental forms which are very likely to occur in Scotland, though they have not yet been recorded from our islands. There are almost certainly further discoveries in store for Scottish dipterists who will undertake to collect mosquitoes, and it is much to be hoped they will do so this season. Apart from the likelihood of the discovery of new British forms, it should be noted that both *Theobaldia arctica* and *Culex apicalis* are at present known as British by four and two specimens respectively taken in Scotland. The second (hitherto unrecorded) specimen of *C. apicalis* is from Kinraig, 31st May 1908 (Grimshaw). Another very little known species is *Ochlerotatus concinnus* (Stephens), which was originally described from Scotland, but has only once been taken since Stephens' time. The male is still unknown; its discovery will very likely prove that *O. concinnus* is the same as *O. sylvæ* (Theobald) from the New Forest, and *O. dorso-vittatus* (Villeneuve) from France.

There are also several gaps to be filled in our knowledge of the life-histories of the insects, the early stages of *T. arctica* and *O. concinnus* being entirely unknown. As breeding is the easiest way to obtain good specimens, it is to be hoped that Scottish collectors will undertake it. The larvæ should be isolated in 1-inch tubes, their skins carefully preserved in spirit or mounted on slides, and labelled to correspond with the adults issuing from them.

The present writer will be glad to assist any who may have difficulty in determining their captures.

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