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**A NEW MOSQUITO OF THE GENUS
ORTHOPODOMYIA FROM A BEECH
TREE-HOLE IN ENGLAND**

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Department

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A NEW MOSQUITO OF THE GENUS ORTHOPODOMYIA FROM
A BEECH TREE-HOLE IN ENGLAND.

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DURING the past few months certain investigations on the English anophelinæ have been in progress at this laboratory, and among larvæ collected by Major Angus Macdonald, R.A.M.C., from a beech tree-hole in Epping Forest, where *A. nigripes* were present in large numbers, I recognized a new culicine species. The mosquitoes that bred out were sent to Mr. F. W. Edwards of the British Museum, who confirmed the find, and he referred the species to the genus *Orthopodomyia*.

I succeeded later in obtaining other specimens (larvæ and pupæ) from the same tree-hole and these have been bred out in the laboratory here. The mosquito has so far, however, not been found elsewhere in the forest,¹ although a large number of other beech tree-holes have been examined.

The mosquito is a black-and-white species with conspicuous and beautiful ornamentation.

Orthopodomyia albionensis sp. nov. ♂ ♀.

Antennæ.—Black, with a patch of white scales on the inner sides of the basal joints.

Palps.—Penultimate joints much longer than the terminal joints. Palps of the ♂ slightly longer than the proboscis, and in the ♀ about half as long as the proboscis. ♂ palps black with white scales at the bases,

¹ Since the above was written I hear that Mr. Hugh Main has found larvæ of this species in another tree-hole in Epping Forest.

white bands at the joints, and a white terminal joint. ♀ palps black with some white scales at the bases, a white band at about the middle, and white terminal joints.

Proboscis.—Black, with a white band situated at a point some two thirds of the length of the proboscis from the basal end.

Head.—Black in ground colour, with a line of white scales encircling the upper border of the compound eyes. These lines of scales meet in the middle line and the scales extend for a short distance down the vertex. Nape of the head clothed with numerous black forked scales, long black hairs, and a large number of brilliantly white curved scales.



Thorax.—Black in ground colour, ornamented with six parallel lines of white scales, and long black hairs. The lines at the middle point of the thorax are nearly equally inter-spaced. The two outermost lines border the dorsal edges of the thorax. The middle pair of lines diverge from each other at about the middle point, become somewhat broader, and cross the scutellum, the terminal scales actually hanging over its edge. The two intermediate lines between the outermost and middle pairs are only half the length of the latter. These lines start about the middle of the thorax, and the terminal scales slightly overlap on to the scutellum. Pleura ornamented with broad lines of white scales.

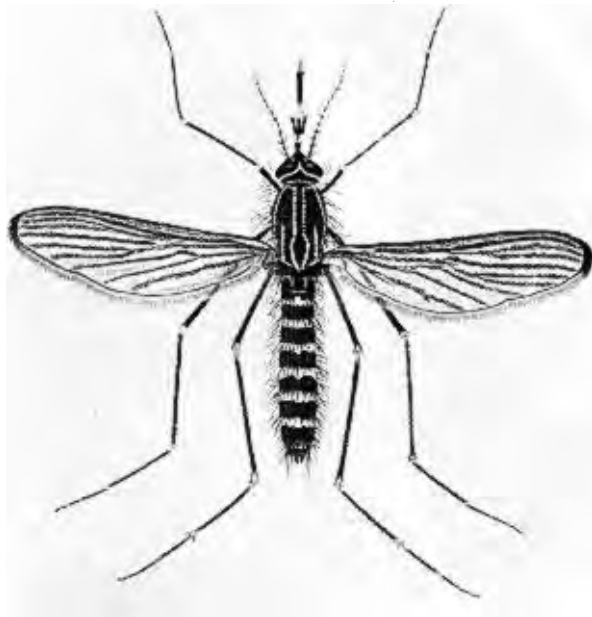
Wings.—Black scaled, except at the basal end of the first longitudinal vein, which is clothed with silvery white scales to the extent of about one millimetre. Fork cells unusually long, especially the lower.

Abdomen.—Blackish-brown in ground colour, clothed with long black hairs, and (except the first abdominal segment) ornamented with bands of

A
NEW MOSQUITO

of the genus
Orthopodomyia
from a beech tree
hole in England.

To illustrate
Capt. M. E. Macgregor's
Paper on "A New Mosquito
of the genus *Orthopodomyia*
from a beech tree hole in
England."



Orthopodomyia albionensis
Sp. nov.



CAUDAL EXTREMITY
OF LARVA

SCHWARZ

FULL-GROWN LARVA OF *O. albionensis*

WELLCOME BUREAU OF SCIENTIFIC RESEARCH

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black and yellowish-white scales on each of the segments. Each of the segments practically divided with equal bands of black and yellowish-white scales, the latter being situated basally. The first abdominal segment differs from the other segments in that it has a fan-shaped patch of white scales situated medianly, on each side of which there are long black hairs projecting backwards.

Legs.—Coxæ with a patch of white scales on the anterior aspects. Upper ends of the femoræ yellowish, lower ends purple-black, with numerous white scales scattered on the dorsal surface. The purple-black scales on the legs have a metallic sheen. Knee spots white, the white scales embracing the ends of both the femoræ and tibiæ. In the hind pair of legs the tibiæ are purple-black with numerous white scales scattered along their length. Tarsal joints (1-4) white banded at the joints, the bands embracing both ends of the joints. Fifth tarsal joint all white. In the front and middle pair of legs, only the knee spots and first tarsal joints are white scaled. The other tarsal joints are unbanded, but some of the scales on these tarsal joints, and on the fifth tarsal joints especially, may be fawn coloured. In the ♂ the fourth tarsal joints of the fore and middle pairs of legs are much shorter than the third and fifth tarsal joints.

Claws.—These are remarkable. In the ♂, the claws of the fore and middle pairs of legs are large and unequal in size and structure. The fore legs carry claws on the inner side of the terminal tarsal joints that are "toothed" with a single spine, while the claws on the outer side of the joints are smaller than the companion "toothed" claws, and are untoothed. On the other hand, the claws of the middle pairs of legs carry similar unequal claws, but the arrangement is reversed, the "toothed" claws being on the outer sides of the terminal tarsal joints. The claws of the hind pairs of legs are small, equal in size, and untoothed. In the ♀ all the claws are small, equal in size, and untoothed.

Length of body 5.5 millimetres, length of proboscis 3 millimetres.

Beech tree-hole, Epping Forest, Essex, England.

Eight females and five males taken as larvæ and bred out in the laboratory at Sandwich.

Mature Larvæ.—The larvæ in life are of a semi-transparent pale lilac colour and measure about 7 millimetres in length, by 2.5 millimetres across the thorax. The thorax is unusually broad, and the abdomen is markedly truncated, with the terminal joints chitinized, so that the larvæ are easily distinguished by the naked eye from the other culicinæ larvæ *O. geniculatus* with which they were associated.

The *head* is large and about as long as it is broad, with the eyes set well back.

The antennæ are straight, well developed, light in colour, and have a small tuft of hairs at a point situated rather more than one third of the length of the antennæ from the base. Frontal hairs plumose, dark and stout. The two median hairs are small and short; the four adjacent hairs

long and heavier; while the other hairs are considerably shorter. The thoracic hairs are mainly arranged on the margin, and are plumose and conspicuous. There are a few long straight hairs on the dorsal surface of the thorax. First and second abdominal segments with a lateral plumose tuft, the remaining segments bearing long scattered hairs.

On the dorsal surface of the sixth abdominal segment there is a small chitin plate roughly oval in outline and about 0.4 of a millimetre in transverse length. The seventh abdominal segment is heavily chitinized by a large plate that completely covers the dorsal and most of the lateral aspects of the segments. The ventral aspect of the segment is unchitinized. The eighth abdominal segment is likewise covered by a heavy chitin ring which comes round to the ventral aspect, but is there incomplete, leaving the median part of the segment unchitinized. Anal segment with a *ventral* chitin plate situated about the middle of the segment, but it does not extend to the dorsal aspect, although it embraces the sides of the segments to a slight extent. There is also a small narrow chitin plate bordering the bases of the anal segment, and situated laterally.

The comb is formed of two rows of spines arranged in arched lines. The spines (six in number) in the posterior row are heavier and longer than the spines (ten in number) in the anterior row. There is also a single spine situated behind the posterior row near the middle point.

Siphon dark, and about four times as long as its breadth at the base. The siphonal and subsiphonal plumes are conspicuous. The former are situated at a point on the ventral surface of the siphon about one third of the length of the siphon from the base.

The anal segment is somewhat longer than it is broad, and the tufts of hairs on the dorsal and ventral surfaces are simple, long and dark brown in colour.

Papillæ unequal. The dorsal pair being about as long as the anal segment, while the ventral pair are only one third of this length.

I have not seen any but fully grown larvæ myself, but I take the following from a recent letter to me by Mr. F. W. Edwards: "The two (larvæ) which Main gave me were in the third stage, and they have the thorax and abdomen of a fairly uniform light red colour, thus differing strikingly from the fourth stage larvæ we had before. They also lack the abdominal plates, and, like the fourth stage larvæ, appear to be identical in structure with the North American *O. signifer*, Coq."

Pupa.—There is a well-marked keel medianly situated at the anterior end of the thorax.

The discovery of this mosquito is interesting as there is no species of the genus hitherto reported from England.