

FIG. 1. *Gnoriste longirostris* Siebke, entire female.

**GNORISTE LONGIROSTRIS SIEBKE (DIPTERA, MYCETOPHILIDAE)  
NEW TO BRITAIN: ITS SYNONYMY WITH *G. GROENLANDICA*  
LUNDBECK ESTABLISHED**

by PETER J. CHANDLER

(Weston Research Laboratories, 644 Bath Road, Taplow, Maidenhead,  
Berks. SL6 0PA)

A collection of Diptera, mainly composed of Tipulidae, which was recently sent for identification to Mr. A. E. Stubbs by Mr. G. Hosie, contained 110 specimens of fungus gnats (Mycetophilidae) mostly collected in Scotland. Mr. Stubbs kindly passed these on to me and they were found to comprise 45 species, of which several noteworthy records will be published elsewhere. One specimen, which is the subject of the present contribution, was of a species new to the fauna of the British Isles.

Unlike most Mycetophilidae currently being added to the British list, this specimen was comparatively large and easily identified. It belonged to the genus *Gnoriste*, characterised by the elongate proboscis. *Gnoriste* is a small genus of which nine species have been recognised (excluding a doubtful Chilean species), four European, four North American and one has also been described from Japan. One species, *G. bilineata* Zetterstedt has long been known as British although it has been found rarely and is apparently confined to the Scottish Highlands. Edwards (1925, 1932) and Kidd & Ackland (1970) gave details of the known British localities in Inverness (Nethy Bridge, Aviemore and Loch Morlich) and Perthshire (Rannoch). On 28.vi.1974, I swept two males of *G. bilineata* from low vegetation on the wooded banks of the River Feshie at Feshie Bridge, Inverness. *G. bilineata* is one of the largest and most striking of the British Mycetophilidae, brownish yellow with shining black dorsal markings, up to 10 mm in body length and with the slender blunt ended proboscis about 4 mm long.

*Gnoriste longirostris* Siebke 1864, ♂

*Gnoriste groenlandica* Lundbeck 1898, ♂ ♀. New synonymy

The *Gnoriste* male in Mr. Hosie's collection was obtained on 4.vii.1964 by sweeping around the base of rock outcrops near the summit of Ben Ledi, Perthshire. It readily ran in the key of Landrock (1927) to *G. longirostris* Siebke, which is obviously different from *G. bilineata* as the body is mainly dark grey and although the insect is smaller, the proboscis is proportionately longer, reaching half of the body length. Although *G. longirostris* is the only known European species with such a long proboscis, *G. groenlandica* Lundbeck described from Greenland agreed in this respect and another American species, *G. megarrhina* Osten Sacken had the proboscis even longer. The proboscis of *Gnoriste* is presumably modified to probe flowers as is the case in certain Keroplatine genera with this character, but no observations have been recorded for the genus.

*G. longirostris* was described by Siebke (1864) from a single male collected in Norway (Dovre, Opland) and I know of no more recent European records. The Scottish specimen agreed well with his description but it also agreed with Lundbeck's description of *G. groenlandica* and it was not possible to find any clear cut distinction from this species. Lundbeck (1898) described the latter from a male and two females collected in West Greenland, comparing it with *trilineata* (= *bilineata*) and *megarrhina* but did not mention *longirostris*. The only more recent record of *groenlandica* known

to me was by Edwards (1935) who mentioned specimens from East Greenland. The latter were deposited in the British Museum (Nat. Hist.) collection and preliminary examination of them suggested that they were conspecific with the Scottish specimen.

In order to clarify the status of *longirostris* and *groenlandica*, I obtained on loan the types of both species, which are in good condition. My suspicion was confirmed that they belong to the same species, which must be known as *G. longirostris* Siebke, with *G. groenlandica* Lundbeck reduced to synonymy. There are only minor variations in structure in the Norwegian, British and Greenland specimens and the male hypopygium is identical in each case.

The differences between the two British species of *Gnoriste* may be appreciated from the brief descriptions of their salient features which follow. The male genitalia of both species are also figured here for comparison. *G. longirostris* has not been figured before while *G. bilineata* has been figured *in situ* by Landrock (1930).

#### *G. bilineata* Zetterstedt

Head black above, yellow below. Antennae black but scape, pedicel and base of first flagellar segment yellow. Proboscis yellowish brown, darkened apically, slender, of equal diameter to antennae, five times height of head in length, the four-jointed palpi projecting for a short distance immediately before tip to give a splayed appearance to the end.

Body with brownish yellow ground colour. Three broad shining black stripes occupying much of disc of mesonotum, almost confluent behind, reaching scutellum. Brownish yellow pleura bear a dark patch on each of the larger sclerites. Scutellum darkened centrally. Postnotum and abdominal tergites shining black dorsally, yellow laterally. Yellow on tergites 2-5 reduced to posterior triangular markings occupying progressively less of tergal length. Tergite 6 entirely black. Sternites 1-3 yellow, 4-5 black basally, 6 entirely black. Genital capsule black but claspers yellow. All body hairs and bristles are yellow.

Legs yellow but tarsi darker; small basal antero-lateral dark spots on mid and hind coxae; trochanters darkened. Fore metatarsus 0.9 of tibial length. Claws combed, comb on posterior claw of each leg denser and reaching blunt tip while anterior claw is lengthened by a slender apical spine. Halteres clear yellow.

Wings yellow with a more or less distinct darkened tip (beyond tip of vein *r*<sub>1</sub>) in the male but not in the female. Vein *r*<sub>5</sub> gently downcurved at tip, short costal projection beyond it not reaching tip of wing. Vein *sc* just reaching level of base of *rs*. Base of cubital fork level with base of median fork. Vein *sc* distinctly haired on its entire length.

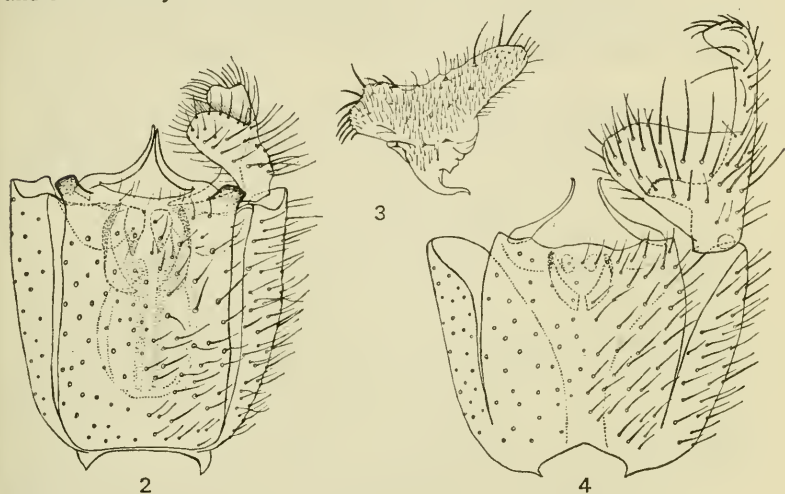
Body 9-10.5 mm long. Wing 6.5-7 mm long. Proboscis 3.5-4 mm long.

#### *G. longirostris* Siebke

Head entirely black, grey dusted. Antennae brown including scape; pedicel dark yellowish brown; basal half or more of first flagellar segment dull brownish yellow. Proboscis dark brown, about 6.5 times height of head, otherwise constructed as in *G. bilineata*.

Body dark, grey dusted. Three shining black stripes on mesonotum, separated by distinct but narrow grey dorsocentral stripes and the median black stripe commencing on the front margin of the scutum but shorter than the laterals behind and not reaching the scutellum. Posterior part of

pronotum clear yellow and lower parts of pleura with dull yellowish markings, both spiracles yellowish. Abdominal tergites somewhat shining grey, sometimes with very narrow pale hind margins, especially on 3-4 (more noticeable in females). Genital capsule shining dark brown with obscurely yellow margins and claspers dark yellowish basally, darker apically, much shorter than in *G. bilineata*, differently shaped (see figures). All body hairs and bristles are yellow as in *bilineata*.



FIGS. 2-4. Male hypopygia of *Gnoriste* species: 2, *G. longirostris*; 3, *G. longirostris* internal face of clasper; 4, *G. bilineata*.

Legs yellow, tarsi darker. Coxae with grey reflections, especially distinct on coxae 3. Fore metatarsus 0.92-0.93 of tibial length (*groenlandica* types), 0.95 (Scottish specimen), equal with tibia (*longirostris* type). Both anterior and posterior claws short with a single tooth near base, nearly equal in length (anterior slightly longer). Halteres clear yellow.

Wings with membrane clear grey but yellowish tinged along veins and at base; no dark tip in either sex. Vein *r*5 strongly downcurved at the tip, the short costal projection beyond reaching the extreme tip of the wing. Vein *sc* exceeding level of base of *rs* in the male, not quite reaching it in the female. Base of cubital fork level with or just before base of stem of median fork. Vein *sc* bare in British specimen but a few (5-6) hairs distributed irregularly in male types of *longirostris* and *groenlandica*, not apparent in the female.

Body 7-8 mm in male, 6.5-7 mm in female. Wing 5.5-6.5 mm long. Proboscis about 4-4.5 mm long.

There is no important difference between the sexes of *G. longirostris* except in the structure of the abdomen, which is laterally compressed in the male but widened dorsoventrally on the posterior half, then tapered to the ovipositor in the female.

As it is possible that further species of this boreal genus might occur in the Scottish Highlands, the following key is included, which is intended as a rough guide to the species known from Europe and North America, the



latter being included because *G. longirostris* has now been established to be holarctic. The key has been compiled from Johannsen (1912), Curran (1927) and Landrock (1927); apart from the two species discussed here only *G. apicalis* Meigen has been examined and some of the characters may be subject to variation. Edwards (1935) commented that his material of *groenlandica* had the front tarsus distinctly shorter than the tibia in which it did not agree with Lundbeck's description and as demonstrated above there is a small amount of variation in this character in *longirostris*. The body colour of *longirostris* is more typical for the genus than that of *bilineata*, although *megarrhina* and *apicalis* tend towards the last.

1. Proboscis over 0.7 of total length of insect (body 7 mm; proboscis 5.5 mm). Base of cubital fork before base of stem of median fork. Costa distinctly produced beyond tip of vein *rs*. One claw on each leg of male modified ..... *G. megarrhina* Osten Sacken (U.S.A.; Canada)
- Proboscis less than two-thirds total length of insect. .... 2
2. Proboscis longer, exceeding hind coxae. .... 3
- Proboscis shorter, not exceeding mid coxae. .... 4
3. Mesonotum yellow in ground colour. Proboscis yellow, less than half body length. Cubital fork level with base of median fork. Male claws modified. .... *G. bilineata* Zetterstedt (Central & North Europe)
- Mesonotum greyish black. Proboscis dark, more than half body length. Base of cubital fork at or before level of base of stem of median fork. Male claws simple.  
*G. longirostris* Siebke (Greenland, Norway, Britain)
4. Fore metatarsus and tibia of equal length. Proboscis short, hardly reaching to tip of fore coxae.  
*G. harcyniae* von Röder (Harz Mts., Germany; Pyrenees, France)
- Fore metatarsus distinctly shorter than tibia. Proboscis equal in length to head and thorax, i.e. reaching back to level of mid coxae. .... 5
5. Cubital fork proximal to base of *rs*. *Sc*<sub>2</sub> indistinct, before middle of *sc*. Claws as in *G. megarrhina* ..... 6
- Cubital fork nearly under base of *rs*. *Sc*<sub>2</sub> beyond middle of *sc*.  
*G. apicalis* Meigen (Central & North Europe)
6. Lateral lobe of forceps forked. Fore metatarsus 0.85-0.9 of tibia.  
*G. macra* Johannsen (North U.S.A.)
- Lateral lobe of forceps entire. .... *G. macroides* Curran (Canada)

#### ACKNOWLEDGEMENTS

I would like to thank Mr. G. Hosie for the opportunity to record this interesting addition to the British list. For the loan of type specimens of *Gnoriste longirostris* and *G. groenlandica* I am respectively indebted to Dr. A. Lillehammer (Oslo) and Dr. L. Lyneborg (Copenhagen).

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## PROCEEDINGS

13th November 1975

The President, Dr. M. G. MORRIS, in the chair.

### EXHIBITS

Mr. T. N. D. PEET showed microlepidoptera from Hickling, Norfolk, taken in 1975. *Eudonia pallida* (Curtis) a local but widely distributed wet land insect, *Phalonidia manniana* (F. von R.) whose larva feeds on water mint, *Monopis monachella* (Hübner) a rare insect whose larva does not seem to be known; it was illustrated in the proceedings for 1974 from a Suffolk specimen taken by Mr. Chipperfield. Finally, a specimen of *Monochroa divisella* (Douglas) an insect poorly represented in most collections.

Mr. G. PRIOR: a larva of *Eupithecia phoeniceata* (Rambur).

Mr. C. O. HAMMOND: some superb examples of the leaves of *Ginkgo biloba* L., the maidenhair tree, showing bifurcation of the leaves almost to the stem: from four trees at Watertower Flats, Campden Hill Road, W.8, on 1.xi.75. Normal leaves from a female tree in Broomfield Park, N.13, for comparison and a specimen of the fruit from the same tree.

Mr. A. E. STUBBS: a specimen of *Tipula (Lunatipula) dilatata* (Schummel) collected by Mr. P. J. CHANDLER in the pass of Killiecrankie, Perth, on 1.viii.75 and sent to the Crane-fly recording scheme with other enveloped material. The Crane-fly is new to Britain.

Professor J. A. OWEN: a piece of oakwood that had been infested with *Lasius brunneus* (Latreille) (Hym., Formicidae) from Cobham, Surrey, in July.

### COMMENTS ON ANNUAL EXHIBITION

Mr. EVANS remarked on the very great interest of the exhibit shown by Mr. PRIOR consisting of documents from the archives illustrating the early history of the Society and he hoped that it would be repeated and perhaps extended next year.

Dr. C. G. M. DE WORMS said he thought it was a good exhibition and that although the numbers exhibited were slightly less than in previous years the quality was very high. There were a number of interesting and fine aberrations, including varieties of the chalkhill blue. He added that there were some very fine exhibits of foreign lepidoptera.

Mr. HEATH drew attention to the very fine water colour drawings of life histories and the display of colour reproductions by various photographic prints exhibited by Mr. UFFEN with notes on their fading characteristics.