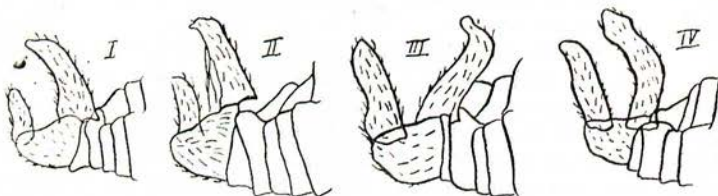


PSYLLA BAGNALLI (HARRISON) : A NEW SPECIES OF PSYLLID.

J. W. HESLOP HARRISON, B.Sc.
Middlesbrough.

IN the main the genus *Psylla* (Geoffroy) is very homogeneous but even in it are some small but well marked groups of closely allied species; these, however, are not sufficiently distinct from the main groups to be dignified with even subgeneric rank. Such a minor group is formed by the subject of the present paper, *Psylla bagnalli* (mihi) and the three species *Ps. melanoneura* (Forster), *Ps. nigrita* (Zetterstedt), and *Ps. subferruginea* (Edwards). In addition to these, I possess a fifth species, provisionally named *Ps. proxima*, allied to *Ps. melan-*



Male caudæ.

Fig. I.—*Ps. bagnalli*.

„ II.—*Ps. subferruginea*.

Fig. III.—*Ps. melanoneura*.

„ IV.—*Ps. nigrita*.

oneura, but differing from it in thoracic pattern and, more particularly, in the genal cones which, instead of being approximated and darkish, diverge widely and have somewhat knobbed whitish tips. This I refrain from describing as up to the present I have only taken specimens of the female sex. Judging from the food plants, the group is northern in origin for *Ps. nigrita* and possibly *Ps. melanoneura* feed on *Pinus*; *Ps. subferruginea* on birch, and *Ps. bagnalli* on rush.

PSYLLA BAGNALLI (sp. n.).

Length of body 1·8-2 m.m.; wing length, 2·25 m.m.; width of head 75-8 m.m. General colour reddish orange. Vertex broad, twice as broad as long, pale in colour, tending to white centrally. Genal cones palish, almost white, yellowish at the base, pubescent, not divergent, rounded at the tip, about four-fifths as long as the vertex. Eyes, blackish in front, then sharply rust coloured and posteriorly white. Front ocellus reddish orange. Antennae one and a half times as long as breadth of head, joints 1, 2 and 3 fuscous, 4, 5, and 6 black at apex, fuscous at base, 7, 8, 9, and 10 black, 9 and 10

forming a slight club. Mouth parts blackish. Pronotum outlined in black anteriorly, pale (almost white) behind with a fine black line terminally; praescutum reddish orange; scutum the same, thoracic pattern much the same pattern as in *Ps. melanoneura* but very indistinct.

Wings smoky fuscous, clearer in the two basal cells and near the veins. Pterostigma pale, appears white in some lights; veins brownish black.

Legs rather stout, palish, claws blackish; spur at base of tibiae obsolete but two or three black bluntish spines at apex; claws blackish. Abdomen paler, in some cases even greenish.

GENITALIA—MALE.—Anal valve longish but quite typical, finely hairy as are also the forceps which are rather small, sinuate or thumb-like in outline; forceps one half the length of valves.

FEMALE.—Genital segment very long, as long as the rest of the abdomen. Dorsal valve long, slender pointed, longer than the ventral valve.

HABITAT.—Taken by Mr. R. S. Bagnall, after whom I have named it, on rushes on Blanchland Common, Northumberland.

The nearest ally of the present species is *Ps. subferruginea*, but it is readily distinguished from that form by its size, for it is only about two thirds of the size of *P. subferruginea*. Structurally, the two are easily separated in the male sex by the genitalia. The genitalia of *Ps. bagnalli* bear much the same relation to those of *Ps. ferruginea* as do those of *Ps. submelanoneura* to those of *P. nigrita*.

The males of the four allied forms can be easily recognised by the following table, and when once the males are known the females are just as readily separated on general characters:—

(1) General colouration of insect reddish brown or orange; forceps one half the length of the anal valve (2).

Insect dark in tone; forceps two-thirds or more the length of the anal valve (3).

(2) Insect smaller; outer edge of forceps sinuate, *Ps. bagnalli* (mihi).

Insect larger; outer edge of forceps concave, *Ps. subferruginea* (Edw.).

3. Outer edge of forceps distinctly sinuate, *Ps. melanoneura* (Forst).

Outer edge of forceps basally straightish, concave toward the tip, *Ps. nigrita* (Zett.).

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Mr. C. B. Moffat writes on 'The Crossbill and its Diet' in *The Irish Naturalist* for January.

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EDITED BY

T. SHEPPARD, M.Sc., F.G.S., F.R.G.S., F.S.A.Scot.,
THE MUSEUMS, HULL;

AND

T. W. WOODHEAD, Ph.D., M.Sc., F.L.S.,
TECHNICAL COLLEGE, HUDDERSFIELD.

WITH THE ASSISTANCE AS REFEREES IN SPECIAL DEPARTMENTS OF

J. GILBERT BAKER, F.R.S. F.L.S.,
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