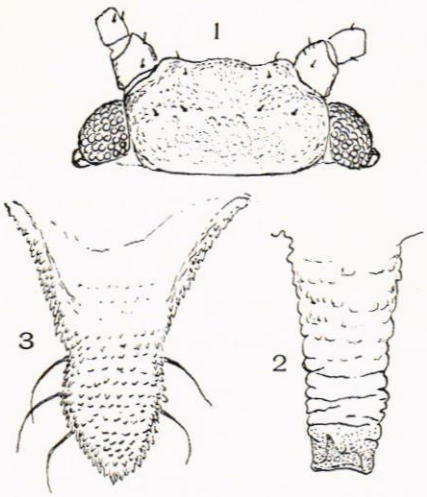
On Three Swedish Aphids (*Hom., Aphidoidea*)

With Description of a New Species

FREJ OSSIANNILSSON

1. Aphis equiseticola, n. sp.

Description. Apterous viviparous female. — Body oval, 1.4—1.85 mm in length. Tergum (except head) membraneous, with short stump hairs, the average length of those on anterior part of abdomen being about $^2/_3$ of basal diameter of ant. segment III, those on abd. segment VIII reaching a length of $1\ ^1/_3\times$ that diameter. Vertex with a more or less distinct reticulate microsculpture, frons distinctly scabrous, with small lateral and a very distinct median frontal tubercle (Fig. 1). Antennae short, about half body length, six-segmented, with short stump hairs, longest hair (on segment I) as long as basal diameter of ant. segment III, remaining antennal hairs shorter. Ant. joints I and II each with 4 hairs. Processus terminalis about $1\ ^1/_3$—$1.5\times$ base of VI. Rostrum reaching to or just past 2nd coxae, terminal segment normal, a trifle shorter than 2nd joint of hind tarsus, with 2+6 hairs. Legs with short hairs, ventral hairs on coxae, trochanters and femora longer, approximately as long as distal diameter of hind trochanter or a little shorter, with fine apices. Tibial hairs spine-shaped, stump or pointed, short, the longest ones (near apex of hind tibia) a little shorter than diameter of hind tibia. 1st tarsal joints with 3,3,2 hairs. Sternal abdominal hairs varying in length, on anterior part of abdomen up to twice as long as basal diameter of 3rd antennal segment. Small conical marginal tubercles present on abd. segments I and VII. Siphunculi (Fig. 2) short, approximately as long as 2nd joint of hind tarsus and a little more than twice their own basal diameter, as a rule gradually tapering towards apex but sometimes approximately cylindrical, without a flange; surface imbricated and strongly transversely wrinkled. VIIIth abdominal tergum with 2—4 hairs, genital plate anteriorly with 2(—4) hairs. Cauda (Fig. 3) finger-shaped, more or less pointed, as a rule distinctly constricted, 1.5 times as long as siphunculi, with 4—5 hairs. Pigmentation weak: in macerated specimens head, antennae, legs, genital plate, anal plate and cauda more or less honey-coloured; ant. segment VI, apices of ant. segments (III,) IV and V, tarsi, apex of rostrum, apical $^1/_4$ of tibiae and sometimes cauda fuscous. Siphunculi light, apically fuscous. In the present material there is a tendency of the pigment of the genital plate being divided into a pair of patches or forming an ∞-like figure, as in the oviparae of many



Figs. 1—3. *Aphis equiseticola,* n. sp. (1) head from above, (2) left siphunculus, (3) cauda of apterous viviparous female.

aphid species. Moreover, the hind tibiae of some specimens are basally a little swollen with a small number of sensoria. Body colour: light green or olive green, or mottled in various gradations of green.

Measurements in mm:

No.	Body length	Ant.	Siph.	Cauda	Ant. III	IV	V	VI
1	1.75	0.81	0.11	0.17	0.16	0.13	0.13	0.12+0.16
2	1.60	0.91	0.13	0.17	0.21	0.15	0.15	0.12+0.17
3	1.85	0.75	0.10	0.17	0.16	0.10	0.11	0.10+0.16
4	1.70	0.80	0.11	0.18	0.17	0.10	0.12	0.11+0.16
5	1.60	0.70	0.10	0.15	0.15	0.11	0.11	0.10+0.15
6	1.43	0.80	0.11	0.16	0.15	0.11	0.13	0.11+0.19
7	1.55	0.75	0.10	0.15	0.15	0.10	0.11	0.11+0.17
8	1.58	0.75	0.10	0.16	0.17	0.11	0.12	0.10+0.16

Alate male. (Described on 2 specimens.) — Head and thorax sclerotic, black, head almost smooth. Antennae fuscous except proximal $^1/_{10}$ of segment III, nearly as long as body. Secondary rhinaria on antennal segments as follows: in one specimen, left: (III) 34, (IV) 17, (V) 16, (VI) 0; right: (III) 29, (IV) 18, (V) 13, (VI) 0; in the second specimen, left antenna: (III) 34, (IV) 19, (V) 13, (VI) 3; right antenna: (III) 31, (IV) 18, (V) 15, (VI) 5. These rhinaria are arranged over the whole length of the antennal joints, most of them on their ventral and outer sides. Wings hyaline with dark veins indistinctly bordered with fuscous. M in fore wing twice forked. Coxae, trochanters, 2nd and 3rd femora, tarsi and apices of tibiae fuscous, fore femora and basal $^3/_4$ of tibiae light. Abdomen broad, dark olive green, with small transverse unpaired spinal tergites, peritremes and large marginal sclerites, siphunculi, genitalia and cauda fuscous. Postsiphuncular sclerites well developed, antesiphuncular sclerites very small. Siphunculi more or less cylindrical, wrinkled, twice as long as wide. Cauda triangular, basal width $^2/_3$ of length. Genitalia well developed. Measurements in mm of one specimen: body

length 1.4, antenna 1.2, siphunculus 0.07, cauda 0.11, antennal segment III 0.31, IV 0.20, V 0.21, VI 0.16+0.24; of the second specimen: body not extended, calculated length approximately 1.3 mm, antenna 1.2, siphunculus 0.07, cauda 0.10, antennal segment III 0.27, IV 0.25, V 0.23, VI 0.16+0.24. Remaining characters as in apterous viviparous female.

Notes. The material on which the above description is based (33 apterous viviparous females and 2 males) was collected on *Equisetum silvaticum* in a pine-forest in Upl., Upsala-Näs, Ytternäs (Sweden), on 1.VIII. 1963. On 22nd September I searched for more specimens on *Equisetum* in the same forest, in order to secure the oviparae, but then only *Macrosiphum equiseti* (Holman) was found. This and the presence of males as early as on August 1st indicates that sexual reproduction takes place comparatively early in the present species.

Aphis equiseticola seems to be well characterized by its short, wrinkled, flangeless siphunculi. In shape and surface structure, these remind of those of *Aphis avicularis* (H.R.L.), differing however from the latter by the absence of a distinct flange. Of course *avicularis* is very different in several other respects, e.g. shape of cauda and pigmentation. As far as I know, *equiseticola* is the first species of this genus described from *Equisetum*.

Types. Holotype (apterous viviparous female, mount No. 14960), and paratypes (32 apterous viviparous females and 2 males) in the collection of the Department of Plant Pathology and Entomology, Uppsala.

2. *Schizaphis pilipes* (Ossiannilsson), new combination. (Syn.: *Rhopalosiphum pilipes* Ossiannilsson, Ann. R. Agric. Coll. Sweden 25, 1959, p. 13.)

3. *Schizaphis wahlgreni* (Ossiannilsson), new combination. (Syn.: *Rhopalosiphum wahlgreni* Ossiannilsson, Ann. R. Agric. Coll. Sweden 25, 1959, p. 15.)

Both of these species were described on apterous specimens only. However, in 1961 I succeeded to find one alata of *pilipes* and two alatae of *wahlgreni*. Examination of these shows that M in the fore wings of both species is only once forked, which means that they should be transferred to *Schizaphis*. Supplementary descriptions of these two species will be published later.