

About the Identity of *Aphis aucta* Walker.

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In the summer of 1957 a green aphid was found on *Honckenya peploides* growing in dunes on the west coast of Jutland and on the north coast of Læsø. It was labelled *Acyrtosiphon auctus* (Walker) in consequence of the conclusions mentioned below, and later on this assumption was proved by Dr. H. L. G. Stroyan, Harpenden, England, whom I want to thank very much.

The aphids were green or yellowish green, nearly the same colour as that of leaves of the host plant (in the autumn pink individuals were found, too), and faintly covered by wax powder accentuating the segmentation. The eyes were red, the siphunculi, cauda, and tips of the legs faintly brownish. The antennae were a little longer than half body length, the siphunculi about one eighth of the body length.

Several characters showed that the species belonged to the genus *Acyrtosiphon* Mordv.: Faint, intersegmental wax-excretion, the existence of a reddish form besides the more common green form, frontal tubercles developed (though weakly), the apterous form with a few rhinaria on basal half of IIIrd antennal segment, antennal hairs considerably shorter than basal diameter of IIIrd antennal segment, first tarsal joint with three hairs, siphunculi cylindrical, cauda well developed, elongate, with about ten hairs (see Hille Ris Lambers 1947).

According to the food-plant catalogue in Börner: Europae centralis Aphides (1952) the only species hitherto found on *Honckenya* (*Arenaria*) *peploides* was *Aphis aucta* Walker, "found in the autumn near Newcastle by Mr. Hardy" (Walker 1849). Walker described a wingless and

a winged form. The description of the wingless female applied to the aphid found in Denmark:

"The body is oval, rather flat, velvet-like, whitish green, tinged with yellow: the antennae are pale yellow, black at the tips, and shorter than the body: the eyes are red: the rostrum is pale yellow with a black tip: the tubes also are pale yellow with black tips, and about one-eighth of the length of the body: the tube of the tip of the abdomen and the legs are pale yellow; the thighs are pale green; the knees and the tips of the tibiae are brown; the tarsi are black" (Walker 1849).

The winged form described by Walker has antennae longer than the body and siphunculi more than one sixth of the body length, so it is fairly different from the wingless form. During a study of some of Walker's species in the collection of the British Museum, F. Laing (1925) found that the winged females of *Aphis aucta* Walk. represented *Myzus persicae* Sulz., whereas he could not identify the wingless form ("the apterous female would appear to be referable to a different species").

Dr. J. P. Doncaster, British Museum, London, most kindly wrote to me that Walker left no types of *A. aucta*, but four alatae viviparae and two oviparae named "*aucta*" in the collections of the British Museum may have been collected by Walker. The oviparae are damaged specimens, but unmistakably different from *Myzus*.

Recently H. L. G. Stroyan (1957) described as a new species *Acyrtosiphon shawi* from *Cakile maritima* and *Honckenya peploides* from Aberdeen in Scotland and the Hebrides. This name shall be reduced to a synonym of *Aphis aucta*. The writer is much indebted to Dr. Stroyan for comparing the types of *Acyrtosiphon shawi* with the slides labelled "*aucta*" in the British Museum. Dr. Stroyan wrote to me that there is no doubt that the identification of *Acyrtosiphon shawi* with *Aphis aucta* is correct.

Clearly Walker described two species under the name of *Aphis aucta*, viz. a wingless form belonging to the genus *Acyrtosiphon* Mordv., which has to be named

Acyrtosiphon auctus (names ending in -siphon belong to the masculine gender according to Börner (1952, p. 18)), and a winged form belonging to *Myzus persicae* Sulzer or a related *Myzus* sp. or a mixture of both.

Evidently Börner did not know that Walker's oviparae were different from *Myzus*, when erroneously he made *Myzus caryophyllacearum* H. R. L. a synonym of *Aphis aucta* Walk. (Börner 1951, 1952), probably because oviparae of *M. caryophyllacearum* are produced on members of *Caryophyllaceae*, whereas oviparae of *Myzus persicae* occur on *Prunus*. The aphid called *Myzodes auctus* by Börner is *Myzus caryophyllacearum* H. R. L. 1946 and not *Aphis aucta* Walker, and consequently *Honckenya peploides*, which till now is only known as food-plant for *A. aucta*, must be struck off the food-plant list of *Myzus caryophyllacearum* given by Börner 1952.

A general description of the apterous viviparous female of *Acyrtosiphon auctus* shall not be given here, because it will be a repetition of the detailed description (though without colour notes) of *A. shawi* by Stroyan (1957). Only some measurements of Danish specimens are given below (in mm):

No.	Body	Ant.	III: IV: V: (VIa + VIb)	Rhin. on III	Siph.	Cau.	Cdl. hairs
1	2,14	1,30	0,31:0,23:0,21 (0,11+0,28)	2 & 2	0,27	0,25	9
2	2,72	1,49	0,37:0,26:0,23 (0,11+0,31)	0 & 1	0,37	0,31	10
3	2,45	1,38	0,34:0,22:0,22 (0,11+0,27)	1 & 2	0,32	0,28	8
4	2,58	1,36	0,34:0,23:0,21 (0,12+0,27)	0 & 1	0,33	0,30	8
5	2,44	1,43	0,36:0,23:0,21 (0,11+0,31)	2 & 2	0,37	0,31	8

No. 1: Thyborøn, 22-6-57; nos. 2-4: Knopper at Thyborøn, 25-7-57; no. 5: Læsø, 7-8-57.

The alate form has not been found. The oviparous female has swollen hind tibiae covered with numerous pseudosensoria. In Denmark it was noticed at Svinkløv in October. Some measurements (in mm): 1) Body 2,21, ant. 1,35, III-VI: 0,33:0,24:0,21:(0,11+0,28), sec. rhin. on III: 2 & 1, siph. 0,32, cauda 0,26, 12 caudal hairs.

2) Body 2,81, ant. 1,41, III-VI: 0,37:0,23:0,21:(0,11+0,28), sec. rhin. on III: 2 & 1, siph. 0,31, cauda 0,28, 14 caudal hairs.

Stroyan (1957) supposed that *Honckenya peploides* was the true host, though most of the Scottish material derived from *Cakile maritima*, because the related *Acyrtosiphon silenicola* H. R. L. from Iceland lives on *Silene maritima* (*Caryophyllaceae*), and since *Cakile maritima* is a drift-line annual the seeds of which are transported by waves, and successful overwintering by the aphids is therefore not possible on this plant. The occurrence of oviparous females on *Honckenya* shows that Stroyan's assumption is correct.

The species has been found in Denmark only on *Honckenya peploides*. The localities hitherto established for *Acyrtosiphon auctus* in Denmark are dunes (Thyborøn, Langer Huse, Knopper at Thyborøn, north coast of Læsø, Svinkløv), where it has been found from June to October 1957. The aphids mainly sat on the stem between the thick, succulent leaves or on the under side of leaves with the head close to the stem. They did not occur in great, dense colonies, but scattered on the plants. At Thyborøn and Knopper ($\frac{25}{7}$) aphids were found on respectively 2 and 16 % of the shoots examined, on the north coast of Læsø ($\frac{7}{8}$) on about 15 % and at Svinkløv ($\frac{5}{10}$) on 16 %. Plants on stony beaches or sea-meadows have been studied with negative result on many places (Amager, north of Frederikshavn, Hirsholmene, Avernakø, Lyø, Virksund, Skive, West-Salling). Further investigations are needed to show if the distribution of the aphid species really is mainly restricted to sand-hills, or if it accidentally has been found only on such places in Denmark.

Summary.

The wingless form described as *Aphis aucta* by Walker belongs to a species of *Acyrtosiphon* Mordv., which ought to be named *Acyrtosiphon auctus* (Walker 1849), being the same species as *Acyrtosiphon shawi* H. L. G. Stroyan 1957, which then is reduced to a synonym. The aphid called *Myzodes auctus* Walker by Börner is *Myzus caryophyllacearum* H. R. L. 1946. The alate female described as *Aphis aucta* by Walker is *Myzus persicae* Sulzer or a related *Myzus* sp.

Acyrtosiphon auctus has been found on *Honckenya peploides* in dunes in Denmark from June to October 1957, and oviparae were produced on this plant in the autumn.

References.

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