

Description of the males of *Acyrtosiphon calvulus* Oss. (Hem.: Hom.)

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In samples collected by Fil. kand. Ulrik Lohm on an expedition to Spitzbergen, specimens of *Acyrtosiphon calvulus* Oss. were found and made it possible to make some additions to the original description of this species (Ossiannilsson 1958).

Mr Lohm sent his aphid material from the expedition to my teacher, Professor Frej Ossiannilsson for determination. The *A. calvulus* Oss. specimens were then passed on to me for further treatment.

The capture was made at two different places on the East side of Longyeardalen, situated in the eastern part of Spitzbergen, latitude $78^{\circ}10'$ N, longitude $15^{\circ}40'$ E, by using tin traps, i.e. small tins dug down into the soil. One place of capture was 10 m o.s. and the other one was a sparsely vegetated morain at 100 m o.s. The capture was done from 4th—6th August 1966.

Apterous viviparous female.

The original description of the species is made on the basis of two apterae virginogeniae (Ossiannilsson 1958). Morphologically this species is closely related to *Acyrtosiphon brevicornis* H.R.L. which occurs both on Greenland and in the northern part of Sweden (Hille Ris Lambers 1960, Ossiannilsson 1958).

According to the original description *A. calvulus* Oss. differs from *A. brevicornis* H.R.L. in the following morphological characters, lateral frontal tubercles are without hairs, shorter body hairs, a more distinct tendency to apical reticulation of the siphunculi, the cauda of *A. calvulus* Oss. is faintly triangular and dark without a constriction but cauda of *A. brevicornis* H.R.L. is light with a distinct constriction.

Unfortunately, in the present material, there is only one aptera virginogenia and the rest males. This aptera virginogenia differs by the presence of hairs on the lateral frontal tubercles, otherwise it is consistent with those characters given previously.

A definite character seems to be the shorter body hairs of *A. calvulus* Oss.

There are just a few body hairs and they are about as long as the diameter of 2nd hind tarsal joint. Biometric datas are given in Table 1.

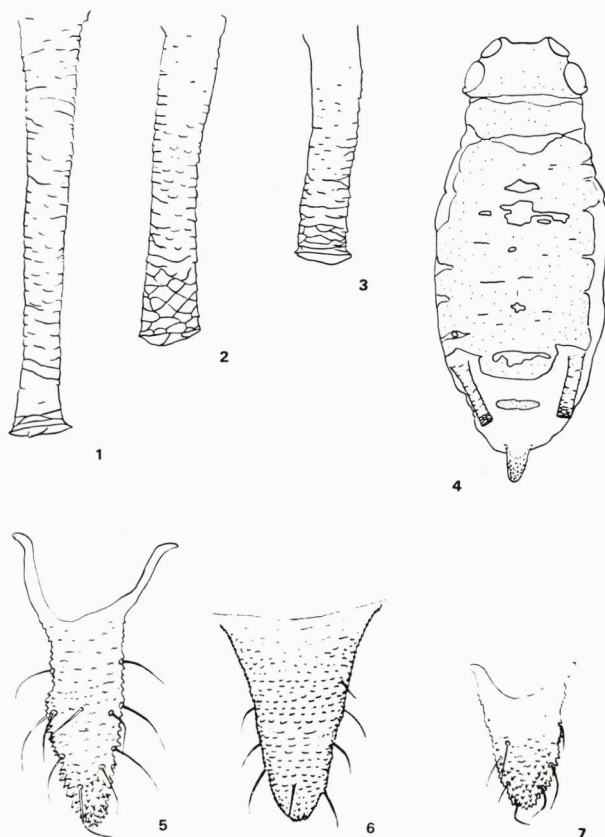


Fig. 1. 1—3 siphunculi: 1. *A. brevicornis* apt. viv. female, 2. *A. calvulus* apt. viv. female, 3. *A. calvulus* male, 4. dorsal sclerites of *A. calvulus* male, 5—7 cauda: 5. *A. brevicornis* apt. viv. female, 6. *A. calvulus* apt. viv. female (after Ossiannilsson 1958), 7. *A. calvulus* male.

Table 1. Biometric data of apterae virginoginae. Measurements in mm

Specimen No	1	2	3
Body length	2.44	2.31	2.25
Length of antennae	1.80	1.57	1.52
" " ant. segm. III	0.41	0.37	0.35
" " " " IV	0.24	0.22	0.25
" " " " V	0.32	0.26	0.24
" " " " VI	0.21+0.46	0.16+0.37	0.15+0.35
" " siphunculi	0.41	0.32	0.34
" " cauda	0.24	0.22	—*
" " ult. rostr. segm.	0.12	0.11	0.11
" " 2nd hind tarsal joint	0.12	—**	0.12

* Cauda twisted
 ** Missing

Datas for no 1 and 2 extracted from the original description (Ossiannilsson 1958).

Table 2. Some biometric and other datas of *A. calvulus* Oss. male. Measurements in mm

Specimen No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	\bar{x}
Body length	1.67	1.72	1.80	1.67	—	—	1.56	1.67	1.72	1.67	1.56	1.72	—	1.60	1.67	1.72	1.77	1.64	1.68
Length of siphunculi	0.27	0.28	0.27	0.24	0.26	0.25	0.27	0.27	0.25	0.27	0.27	0.27	0.28	0.25	0.23	0.24	0.27	0.25	0.26
" " hind tibia	1.09	1.15	1.15	1.17	1.10	1.09	1.11	1.15	1.11	1.11	1.09	1.09	1.15	1.09	1.01	1.19	1.10	1.16	1.12
" " ant. segm. III	0.36	0.42	0.44	0.44	0.39	0.39	0.34	—	—	0.39	0.42	0.41	0.44	0.41	0.37	0.47	0.44	0.39	0.41
" " " " IV	0.33	0.34	0.40	0.34	0.33	0.32	0.34	—	—	0.34	0.37	0.34	0.42	0.24	0.30	0.36	0.36	0.33	0.34
" " " " V	0.34	0.31	0.34	0.31	0.29	0.28	0.34	—	—	0.25	0.30	0.32	0.34	0.27	0.27	0.34	0.34	0.28	0.31
" " " " VI	0.58	0.61	0.62	0.58	0.57	0.59	0.62	—	—	0.58	0.61	0.67	0.67	0.56	0.56	0.69	0.64	0.58	0.61
<i>Processus terminalis</i>																			
Base of VIth segm.	2.70	3.20	3.30	3.00	3.30	3.30	3.55	—	—	—	3.30	3.78	3.00	3.00	3.85	3.80	3.56	3.11	3.30
<i>Siphunculi</i>																			
Cauda	1.70	1.63	1.80	—	—	1.62	1.69	1.70	1.61	1.70	1.70	1.70	—	1.61	1.5*	1.65	1.71	1.78	1.67
<i>Ultimate rostr. segm.</i>																			
2nd hind tarsal joint	0.86	0.88	0.80	0.86	0.90	0.86	0.86	0.86	—	0.86	1.0	0.86	1.0	0.92	0.92	0.95	0.86	0.90	0.89
Number of caudal hairs	10	10	8	7	7	7	7	7	7	7	8	7	7	7	7	8	7	7	7.5
Number of sec. rhin. and hairs on antennae																			
III Sec. rhin.	33	39	35	34	38	34	44	—	—	35	38	37	34	33	30	44	31	32	35.7
Hairs	15	19	16	15	15	11	12	—	—	14	13	15	13	13	13	17	13	14	14.3
IV Sec. rhin.	34	35	32	29	29	31	23	—	—	34	38	32	35	37	25	30	29	41	31.5
Hairs	7	8	9	7	8	8	6	—	—	11	8	6	8	6	6	7	8	4	7.3
V Sec. rhin.	27	22	24	28	27	26	29	—	—	24	27	27	24	23	23	24	23	22	25.0
Hairs	8	9	10	7	7	7	8	—	—	7	8	8	7	6	8	7	10	9	7.9
VI Sec. rhin.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hairs	12	13	13	12	12	16	16	—	—	11	13	14	13	12	15	13	16	16	13.5

* Cauda twisted

Table 3. *Number of secondary rhinarias on male antennae*

Antennal segment	Number of secondary rhinaria	
	<i>A. brevicornis</i> *	<i>A. calvulus</i>
III	27—40	30—44
IV	13—23	23—41
V	8—17	22—29

* Datas for *A. brevicornis* H.R.L. extracted from the original description (Hille Ris Lambers 1960).

Male.

The male is apterous and the body is narrow with a dark, sclerotized dorsum (Fig. 1). The following parts are dark; head, antennae, coxae, trochanter, femur, tibia, tarsus, cauda and siphunculi.

The occurrence of hairs on the lateral frontal tubercles is varied. The body hairs are not as short as on apterae virginogeniae. The siphunculi are more cylindrical than those of the apterae virginogeniae and with a lesser tendency to apical reticulation. The cauda is a little shorter and more triangular than that of the apterae virginogeniae. There are two main differences between the males of *A. calvulus* Oss. and the males of *A. brevicornis* H.R.L.:

1. Dorsum of the *A. calvulus* Oss. male is dark and sclerotized while that of *A. brevicornis* H.R.L. is membranous.

2. Number of secondary rhinaria on the antennae is greater on *A. calvulus* Oss. Table 3.

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Literature

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