

## A List of Danish Aphids.

### 1.: *Macrosiphoniella* Del Guerc. and *Dactynotus* Raf.

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Several aphid species are known to be noxious to cultivated plants in Denmark, but a list of species occurring in this country has not been published before. The present list is based upon the writer's collections and observations, mainly since 1956, but besides references are given of other findings known to the writer, partly from the literature and partly from professor, Dr. Math. Thomsen's collection of slides from 1916—1918.

For full descriptions of the genera and most of the species treated here in the first part of the list see Hille Ris Lambers: Contributions to a Monograph of the Aphididae of Europe, I and II (Temminckia III, 1938 and IV, 1939). Notes on the distribution of the species mainly derive from this work and from Börner: Europae centralis Aphides (Mitt. Thür. Bot. Ges., 1952). For synonyms shall be referred to these two publications too.

In Sweden E. Wahlgren has drawn up lists of the aphid species occurring there (1938, 1954, 1955, 1957). As the occurrence of Danish aphids in our neighbouring countries has particular interest records from Sweden will be mentioned, even when the distribution in Europe is not more closely specified.

The writer wishes to thank Dr. D. Hille Ris Lambers, Bennekom, Netherlands, for determination of several specimens and professor, Dr. Math. Thomsen, Copenhagen, who most kindly lent me his collection of slides.

**List of the species.**

1. *Macrosiphoniella artemisiae* (B. d. Fonsc., 1841).
2. *M. millefolii* (De Geer, 1773).
3. *M. oblonga* (Mordvilko, 1901).
4. *M. obtecta* (Börner, 1950).
5. *M. pulvera* (Walker, 1848).
6. *M. sanborni* (Gillette, 1908).
7. *M. sejuncta* (Walker, 1848).
8. *M. tanacetaria* (Kaltenbach, 1843).
9. *M. usquertensis* Hille Ris Lambers, 1935.
10. *M. (Asterobium) asteris* (Walker, 1849).
11. *Dactynotus achilleae* (Koch, 1855).
12. *D. cichorii* (Koch, 1855).
13. *D. cirsii* (L., 1758).
14. *D. hypochoeridis* Hille Ris Lambers, 1939.
15. *D. muralis* (Buckton, 1876).
16. *D. obscurus* (Koch, 1855).
17. *D. sonchi* (L., 1767).
18. *D. tussilaginis* (Walker, 1850).
19. *D. (Uromelan) aeneus* Hille Ris Lambers, 1939.
20. *D. (U.) campanulae* (Kaltenbach, 1843).
21. *D. (U.) jaceae* (L., 1758).
22. *D. (U.) solidaginis* (Fabr., 1794).
23. *D. (U.) taraxaci* (Kaltenbach, 1843).

Genus **MACROSIPHONIELLA** Del Guercio, 1911.

Subgenus **MACROSIPHONIELLA** s. str.

1. *Macrosiphoniella artemisiae* (Boyer de Fonscolombe, 1841).

*Macrosiphoniella artemisiae* Hille Ris Lambers, 1938, p. 15.

*Macrosiphoniella artemisiae* Börner, 1952, p. 168, no. 637.

Distribution: Europe and Siberia. Known from Sweden.

Occurrence in Denmark: Found on *Artemisia vulgaris* at Skive in Jutland (15-7, 3-9-56, 4-8-58), at Fåborg (13-7-57) and Avnslev on Funen (9-7-58), at Onsbjerg on Samsø (12-8-58), and at Sophiehøj on Lolland (15-8-58), especially on the upper parts among the flowers. Both greyish green and dark red specimens have been collected.

*M. artemisiae* like other species of the genus lives on its herbaceous host from spring to autumn. Sexuales developed here produce eggs, which hibernate.

2. *Macrosiphoniella millefolii* (De Geer, 1773).

*Macrosiphoniella millefolii* Hille Ris Lambers, 1938, p. 22.

*Macrosiphoniella millefolii* Börner, 1952, p. 166, no. 626.

Distribution: Europe. Known from Sweden.

Occurrence in Denmark: Very common on *Achillea millefolium*, especially between the flowers, where it often occurs in great numbers. In Jutland found at Harboøre (22-6-57), Nr. Nisum (25-7-57), Struer (8-10-57), Hvidbjerg in Salling (24-6-57), Skive (1957-58), Kisum (22-7-57), Højslev (3-8-57), Rindsholm (16-7-56), Sønderup in Himmerland (22-9-58), Ribe (2-7-58), and near Løgumkloster (5-7-58). On Funen found at Årslev (26-7-55) and in Svanninge Bakker (12-7-57). On Sealand found at Benløse (14-8-58) and Holte (16-8-58). In other parts of the country: Tåsinge (3-7-57) and Læsø (6-8, 8-8-57).

In the autumn (September and October) sexuales were collected on *Achillea millefolium*. It was noticed that some reddish nymphs developed into alate males. The normal colour of this aphid species is green, but reddish larvae may be seen from the end of August.

3. *Macrosiphoniella oblonga* (Mordvilko, 1901).

*Macrosiphoniella oblonga* Hille Ris Lambers, 1938, p. 25, pl. II, fig. 8.

*Paczoskia* (*Phalangomyzus*) *oblonga* Börner, 1952, p. 166, no. 624.

Distribution: Europe. Known from Sweden, where Wahlgren (1957) records it from *Artemisia vulgaris*.

Occurrence in Denmark: Oviparous females and larvae have been collected on *Chrysanthemum indicum* at Skive in October 1958 (N. J. Vinther leg.).

According to Hille Ris Lambers it lives on *Artemisia vulgaris*, *A. noxa*, and *Chrysanthemum indicum*, but he writes that it is not absolutely certain that the *Chrysanthemum*-form is identical with the *Artemisia*-form.

4. *Macrosiphoniella obtecta* (Börner, 1950).

*Paczoskia obtecta* Börner, 1950, p. 14.

*Paczoskia obtecta* Börner, 1952, p. 164, no. 618.

*Macrosiphoniella obtecta* Hille Ris Lambers, 1954, p. 276.

Hille Ris Lambers (1954) pointed out that only few of the species placed by Börner in the genus *Paczoskia* Mordv. belong there, viz. those from *Echinops*.

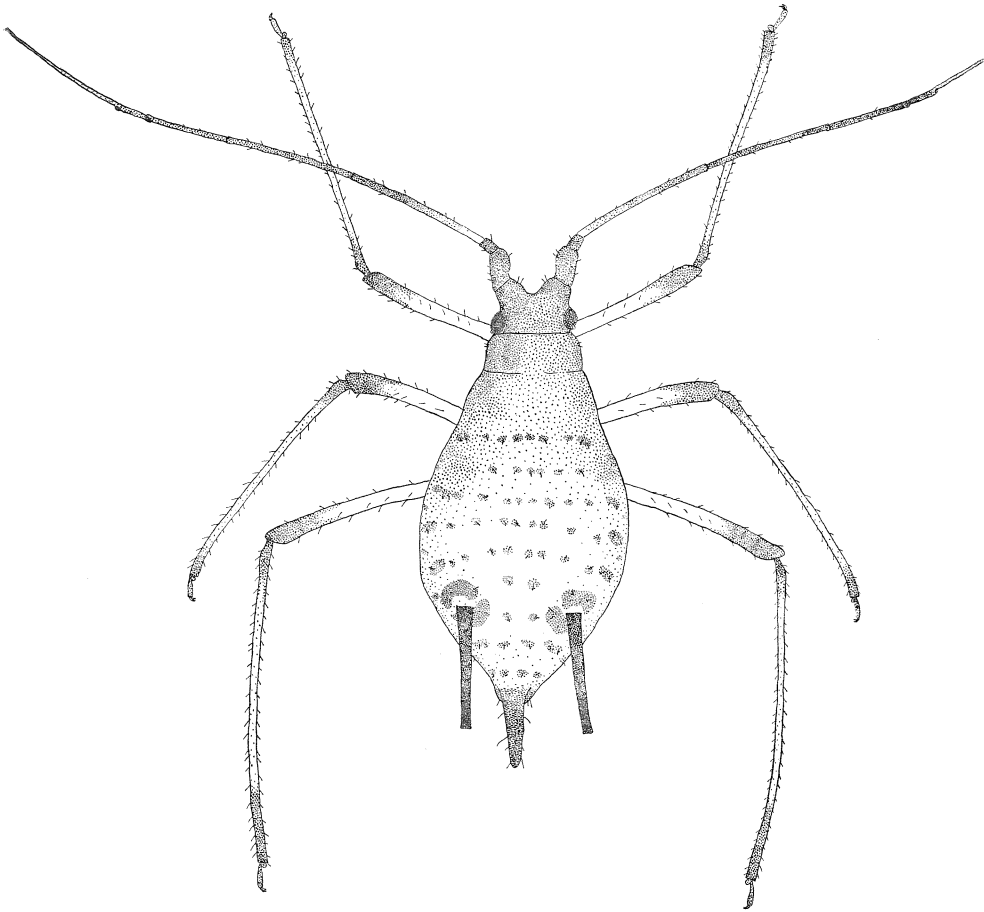


Fig. 1. *Macrosiphoniella obtecta* (Börner), apterous viviparous female.  $\times 19$ .

The original description (Börner, 1950) is brief enough to be quoted in its entirety:

"Ungeflügelte mit 25—34 Rhinarien am Glied 3, die die Gliedermitte überschreiten. Rüssel 0,67—0,70 mm, Endglied so lang oder etwas kürzer als Hintertarsus. Siphonen 0,7—0,8 mm, Netzgürtel  $\frac{1}{3}$ — $\frac{1}{4}$  der Siphon-Länge mit 25—27 Maschenzeilen. 2,8—3,6 mm. An *Centaurea scabiosa*, unterseits der bodennahen Blätter. Verbreitet."

Description of apterous viviparous female (Danish material):

Morphological characters: Body spindle shaped (fig. 1). Abdominal hairs placed on distinct scleroites. Broad, distinct, semiluniform antesiphuncular sclerites present. Postsiphuncular sclerites present too, broad and undivided or abrupt in the middle. Frontal tubercles very well developed, diverging, so that the sinus frontalis becomes distinctly V-shaped. Antennae longer than the body, IIIrd segment with 38—43 secondary rhinaria on basal  $\frac{3}{4}$  (fig. 2, a). Rostrum reaching to 3rd pair of coxae, last segment about as long as second joint of hind tarsi (without claws) or a little longer. Siphunculi  $\frac{1}{5}$ — $\frac{1}{4}$  length of body, reticulated on distal  $\frac{1}{4}$ — $\frac{1}{3}$  (fig. 2, b). Cauda  $\frac{2}{3}$  times the length of the siphunculi, with about 10 hairs. Legs long, with 3-3-3 setae on first tarsal segment.

Colour: Body bronze brown, shining, with darker sclerites. Siphunculi and cauda black. Antennae dark with base of IIIrd segment yellowish. Legs yellow, knees and apices of tibiae black. Eyes bright red.

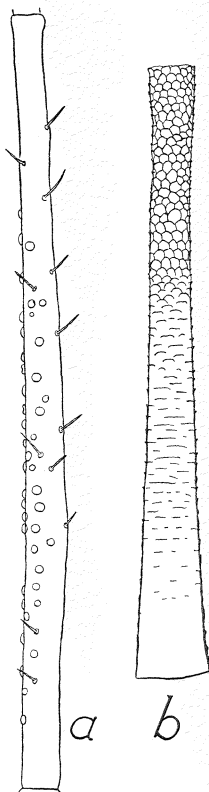


Fig. 2. *Macrosiphoniella obtecta* (Börner), apterous viviparous female, a) IIIrd antennal segment, b) siphunculus.  $\times 100$ .

## Measurements of 3 specimens (in mm):

No.	Body	Antenna (I—VI)	Ant. flag. jt. ratios (III—VI)	Siph.	Cauda	Caudal hairs	Apical joint rostr.	2. jt. hind tarsus
1	3,82	—	75:68:48½:(15+?)	0,93	0,64	9	0,17	0,16
2	3,60	4,04	68:62:42:(14+70)	0,84	0,64	10	0,17	0,16
3	3,97	4,11	74:60:47:(15+67)	0,84	0,57	12	0,17	0,15

(1: Tylstrup, 11-8-56; 2—3: Rønbjerg, 22-7-57).

Distribution: Outside Denmark only known from Germany (Thüringen) and Austria (Steiermark) on lower leaves of *Centaurea scabiosa* (Börner, 1952) and from France (Gironde) on *Centaurea aspera* (Remaudière, 1954).

Occurrence in Denmark: This species was first found on *Centaurea cyanus* at Tylstrup, Vendsyssel (11-8-56), one apterous adult with some larvae on the stem. Dr. Hille Ris Lambers most kindly determined the aphids. Later on the species was found on two places respectively east and west of Rønbjerg (22-7-57), the distance between the two places being about 1½ km. In each case only one apterous viviparous female with its offspring was observed sitting on the upper stem of *Centaurea cyanus*.

Usually great, brown aphids on *Centaurea* spp. will appear to be *Dactynotus (Uromelan) jaceae* (L.), which has black eyes, black legs and no antesiphuncular sclerites.

5. *Macrosiphoniella pulvera* (Walker, 1848).

*Macrosiphoniella pulvera* Hille Ris Lambers, 1938, p. 29, pl. I, fig. 5.

*Macrosiphoniella pulvera* Börner, 1952, p. 168, no. 640.

Distribution: Europe.

Occurrence in Denmark: Found on *Artemisia maritima*, especially on the upper parts, at Frederikshavn (9-8-50), and at Bøjden on Funen (14-7-57). The colour is just like that of the host plant.

6. *Macrosiphoniella sanborni* (Gillette, 1908).

*Macrosiphoniella sanborni* Hille Ris Lambers, 1938, p. 30, pl. II, fig. 9.

*Pyrethromyzus sanborni* Börner, 1952, p. 168, no. 645.

*Pyrethromyzus sanborni* Börner & Heinze, 1957, p. 250, Abb. 99.

**Distribution:** All over the world wherever *Chrysanthemums* are grown.

**Occurrence in Denmark:** Found on *Chrysanthemum* sp. at Lyngby, out of doors (14-9-53, Børge Petersen leg.).

According to Hille Ris Lambers it lives on *Chrysanthemum indicum* and *C. frutescens* during the whole year. Overwintering takes place in the parthenogenetic stage in greenhouses, in warm climates also out of doors.

7. *Macrosiphoniella sejuncta* (Walker, 1848).

*Macrosiphoniella sejuncta* Hille Ris Lambers, 1938, p. 32, pl. III, fig. 10.

*Paczoskia sejuncta* Börner, 1952, p. 166, no. 622.

**Distribution:** Outside Denmark known from England, Netherlands, Germany, and France.

**Occurrence in Denmark:** Collected on *Achillea millefolium* at Skive (28-7-57).

The species lives on the lower leaves of its host, where it is difficult to find, because the aphids by the slightest disturbance fall to earth and play possum, and they are coloured like earth.

8. *Macrosiphoniella tanacetaria* (Kaltenbach, 1843).

*Macrosiphoniella tanacetaria* Hille Ris Lambers, 1938, p. 34.

*Macrosiphoniella tanacetaria* Börner, 1952, p. 167, no. 636.

**Distribution:** Europe. Known from Sweden.

**Occurrence in Denmark:** Found on *Tanacetum vulgare* at Lyby in Salling (19-7-56), at Skive (4-9-56), and on *Avernakø* (11-7-57), on *Matricaria inodora* at Skive (3-9-56, Hille Ris Lambers det.), on *Chrysanthemum parthenium* at Skive (21-8-58), on *Chrysanthemum indicum* at Skive (7-10-58, N. J. Vinther leg.), and in a yellow *Moericke-trap* at Borris (3-8-56, Hille Ris Lambers det.).

Sexuales were observed in September-October on *Tanacetum vulgare* and *Chrysanthemum indicum*. The normal host is *Tanacetum vulgare*, which is attacked by colonies among the inflorescences and on the upper

stems. Only once have colonies been observed on *Matricaria*, which never else has been recorded as host plant of this aphid species.

9. *Macrosiphoniella usquertensis* Hille Ris Lambers, 1935.  
*Macrosiphoniella usquertensis* Hille Ris Lambers, 1938, p. 41,  
 pl. III, fig. 11.

*Macrosiphoniella usquertensis* Börner, 1952, p. 167, no. 627.

Distribution: Outside Denmark known from Netherlands, England, Germany, Austria, and France.

Occurrence in Denmark: Found on the lower leaves of *Achillea millefolium* at Østerby on Læsø (8-8-57). They immediately fell to earth when being disturbed. The upper parts of the same plant were infested with *M. millefolii*.

Subgenus **ASTEROBIUM** Hille Ris Lambers, 1938.

10. *Macrosiphoniella (Asterobium) asteris* (Walker, 1849).  
*Macrosiphoniella (Asterobium) asteris* Hille Ris Lambers, 1938,  
 p. 17, pl. I, fig. 3.

*Dactynotus (Uromelan) asteris* Börner, 1952, p. 174, no. 678.

Distribution: Outside Denmark known from England, Netherlands, Italy, Germany, Sweden, and France.

Occurrence in Denmark: Found on *Aster trifolium* on Amager (29-8-51).

Genus **DACTYNOTUS** Rafinesque, 1818.

Subgenus **DACTYNOTUS** s. str.

11. *Dactynotus achilleae* (Koch, 1855).

*Dactynotus achilleae* Hille Ris Lambers, 1939, p. 11, pl. I, fig. 1.

*Dactynotus achilleae* Börner, 1952, p. 169, no. 649.

Distribution: Outside Denmark known from Germany, Netherlands, England, Belgium, France, and Austria.

Occurrence in Denmark: Found on the lower leaves of *Achillea millefolium* at Rindsholm (16-7-56) and at Harboøre (22-6-57). Winged specimens have been caught in a yellow Moericke-trap at Borris (1956). All in Jutland.



This species like the other members of the genus *Dactynotus* does not migrate, but lives on its host from spring to autumn. Hibernation takes place in the egg-stage (holocyclic).

12. *Dactynotus cichorii* (Koch, 1855).

*Dactynotus cichorii* Hille Ris Lambers, 1939, p. 13.

*Dactynotus cichorii* Börner, 1952, p. 171, no. 661.

Distribution: Germany, Netherlands, Italy, Sweden, England, and Denmark.

Occurrence in Denmark: Found on *Cichorium intybus* on Bornholm (22-7-54), at Svendborg (3-7-57), at Rudkøbing (5-7-57), on Avernakø (11-7-57), at Fåborg (13-7-57), and at Brattingsborg on Samsø (10-8-58), on *Crepis biennis* at Hesselager on Funen (8-7-58), and on *Crepis capillaris* at Holte (16-8-58) on Sealand.

The colonies sit on the upper parts of the hosts, mainly on the stems.

Hille Ris Lambers (1939) distinguishes between four subspecies: 1) *cichorii* s. str. on *Cichorium*, 2) *grossus* on *Crepis*, 3) *leontodontis* on *Leontodon*, and 4) *carduicola* on *Carduus*. Only specimens of the first and the second subspecies have been collected in Denmark. The different forms are not only biologically divergent, but also morphologically — at least in the early summer —, as Hille Ris Lambers pointed out that specimens of *cichorii* s. str. had a processus terminalis more than  $5\frac{1}{2}$  times as long as the base of the VIth antennal segment, whereas it was shorter in subsp. *grossus*. I could not find any morphological character separating the two forms, possibly because my material belonged to generations later than the 2nd generation. The ratio VIb/VIa exceeded  $5\frac{1}{2}$  in both forms (apt. viv. from *Cichorium*: 5,6—7,6, apt. viv. from *Crepis*: 6,4—7,7).

13. *Dactynotus cirsii* (Linné, 1758).

*Dactynotus cirsii* Hille Ris Lambers, 1939, p. 18, pl. I, fig. 3.

*Dactynotus cirsii* Börner, 1952, p. 170, no. 656.

**Distribution:** Outside Denmark known from Sweden, England, Netherlands, and Germany.

**Occurrence in Denmark:** Found on *Cirsium ole-raceum* at Søndersø on Sealand (8-9-17, Math. Thomsen leg.) and at Buderupholm in Himmerland (4-9-58, J. Jespersen leg.), on *Cirsium arvense* at Rindsholm (16-7-56) and at Skive (15-8-56, 6-9-58), and on *Cirsium palustre* at Skive (1-9-56).

The aphids form colonies on upper leaves and stems. On the three species of *Cirsium* mentioned oviparous females have been collected in the first part of September. They have only 14—22 secondary rhinaria on the IIIrd antennal segment (Hille Ris Lambers states for a single specimen 28—29), but the number of rhinaria is a variable character of this genus. The variation in number of rhinaria on the IIIrd antennal segment in the apterous viviparous females has been found to be greater than stated by Hille Ris Lambers on Dutch specimens (22—35), viz. 17—43.

14. *Dactynotus hypochoeridis* Hille Ris Lambers, 1939.

*Dactynotus hypochoeridis* Hille Ris Lambers, 1939, p. 21, pl. III, fig. 9.

*Dactynotus hypochoeridis* Börner, 1952, p. 170 and p. 226, no. 658.

**Distribution:** Outside Denmark known from Netherlands, Germany (Frisian Islands), Austria, England, and Sweden. According to Hille Ris Lambers its host is *Hypochoeris radicata*, and Börner adds *Crepis* (an alpine species).

**Occurrence in Denmark:** This aphid is common on *Hypochoeris radicata* and *Leontodon autumnalis* in Jutland. On *Hypochoeris* it was found at Krabbesholm (25-6-57, 5-8-58), at Dølby near Skive (19-7-57), at Rønbjerg (22-7-57), at Fly (24-7-58), at Jebjerg in Salling (26-7-58), at Savstrup near Holstebro (30-6-58), at Bryrup (11-7-58), at Henne (1-7-58), and on Rømø (3-7-58). On Leon-

todon it was found at Skive (1-9-56), at Resen and Dølby near Skive (19-7-57), at Rønbjerg and Kisum (22-7-57), at Fly (24-7-58), at Jebjerg (26-7-58), at Madum Sø in Himmerland (2-9-58), and on Læsø (6-8-57). On Sealand it was found on *Hypochoeris* at Holte (16-8-58), and a slide in Math. Thomsen's collection belongs to this species, collected in Hornbæk Plantage 10-8-16 (host unknown). The aphids sit in colonies on the upper parts of the plants under the inflorescences.

The aphids from *Hypochoeris* found in 1957 (in July) had more secondary rhinaria on the antennae than stated in the original description. Therefore I sent some specimens to Dr. Hille Ris Lambers, who confirmed the determination.

The aphids from *Leontodon* could not be *Dactynotus cichorii* Koch, which is the only *Dactynotus* species hitherto known from *Leontodon* (subsp. *leontodontis* H. R. L.), because the apical segment of labium was too short. Dr. Hille Ris Lambers most kindly identified the *Dactynotus* found on *Leontodon* in Denmark with *D. hypochoeridis*. Morphologically the short apical joint of rostrum (usually a little shorter than the second joint of hind tarsus, respectively on an average 0,17 mm and 0,18 mm) separates this species from *D. cichorii*.

The number of rhinaria on the IIIrd antennal segment is 32—75 on apterous viviparous females of *D. hypochoeridis* found in Denmark in July. Hille Ris Lambers (1939) states 18—40, but the original description was made from specimens of second and third generation, whereas the Danish specimens probably belong to third and later generations. The rhinaria of apterous females seemingly are the more numerous the later they are born. About  $\frac{1}{7}$  1958 the apterous viviparous female had on an average 40 secondary rhinaria on the IIIrd antennal segment (see p. 204). Later in the summer the number had increased (57 rhinaria on an average). Specimens bred

indoors in August had fewer rhinaria, however (31—54, 42 on an average), so it may be considered that the number of rhinaria depends on the surroundings (temperature etc.).

Simple experiments showed that *Dactynotus* from *Hypochoeris radicata* could thrive and reproduce on *Leontodon autumnalis* and vice versa. From  $26/7$  to  $8/8$  1958 aphids from *Hypochoeris* and *Leontodon* were kept on stems and inflorescences of *Leontodon* and *Hypochoeris* respectively in glass tubes multiplying quickly, though several specimens drowned in water dew in the tubes. Some larvae born in the tubes became mature and bore larvae themselves. So it was established that *Leontodon autumnalis* is a host plant of *D. hypochoeridis*. In the nature *Hypochoeris* and *Leontodon* growing on the same place often both are infested with brown aphids, and this fact too confirms that they belong to one species.

Some measurements (in mm) of apterous viviparous females:

	Locality	Body	Antenna (I—VI)	Rhin. on III	Ant. flag. jt. ratios (III—VI)	Siph.	Cauda	Apical joint rostr.	2. jt. hind tars.
From <i>Hypochoeris</i> from 19th July to about 1st July	Savstrup	3,04	2,97	45+47	58:31:30:(10+62)	0,77	0,47	0,16	0,17
	—	3,47	3,63	46+45	74:37:36:(13+73)	0,82	0,60	0,17	0,19
	Henne	3,23	3,10	32+33	65:30:33:(11+60)	0,77	0,54	0,16	—
	—	3,67	3,40	35+36	70:35:34:(12+68)	0,81	0,60	0,17	0,19
From <i>Hypochoeris</i> from 19th July to 16th August	Dølby	3,67	3,99	75+69	82:48:41:(13+76)	0,87	0,64	0,17	0,19
	—	3,36	3,87	64+58	77:47:41:(14+73)	0,82	0,54	0,17	0,19
	Fly	3,92	3,69	52+58	80:39:40:(13+67)	0,94	0,60	0,17	0,19
	—	3,53	—	60+59	79:35:40:(12+?)	0,87	0,60	0,17	0,19
	Holte	3,86	3,93	51+55	82:41:42:(15+75)	0,91	0,64	0,17	0,19
	—	3,69	3,57	45+51	73:36:38:(12+71)	0,77	0,64	0,17	0,19
From <i>Leontodon</i> from 19th July to 6th August	Resen	3,93	3,69	54+53	74:43:38:(11½+70)	1,01	0,56	0,17	0,19
	Kisum	3,24	3,22	59+56	62:34:34:(11+65)	0,71	0,53	0,16	0,17
	—	3,17	3,34	56+54	67:36:36:(11+66)	0,73	0,59	0,16	0,17
	Rønbjerg	3,22	3,83	57+61	76:44:42:(12+75)	0,86	0,57	0,16	0,19
	—	3,36	3,43	60+57	72:40:31:( 9+68)	0,82	0,59	0,16	0,17
	Læsø	3,86	3,62	56+54	71:38:38:(11+74)	0,82	0,54	0,16	0,18
	Fly	3,43	—	64+62	81:41:42½:(13+?)	0,93	0,63	0,17	0,17
Jebjerg	3,22	3,46	56+58	67:40:37:(13+67)	0,77	0,50	0,16	0,17	

The original description includes the fundatrix and the apterous viviparous female (2nd and 3rd generation), but neither the alate viviparous female nor the oviparous female, which shall be described here:

Description of the alate viviparous female (material: 3 specimens from *Hypochoeris* sp., Rømø, 3-7-58):

Morphological characters: Dorsal hairs on small scleroites. Marginal sclerites, antesiphuncular sclerite and postsiphuncular sclerite present. Frontal tubercles well developed, diverging. Antennae longer than body. The IIIrd antennal segment about twice as long as the IVth, Vth segment about as long as IVth. The IIIrd segment with about 60 secondary rhinaria over whole length. Antennal hairs as long as the basal diameter of the IIIrd antennal segment. Last rostral segment as long as second joint of hind tarsi or slightly shorter. Siphunculi long, approximately cylindrical and reticulated on distal  $\frac{1}{4}$ - $\frac{1}{3}$ . Cauda slender, its length about  $\frac{2}{3}$  of the length of the siphunculus. First tarsal joints of all legs with 5 hairs. Wings normal.

Colour: Red-brown. Cauda yellow.

Measurements (in mm):

Body	Antenna (I-VI)	Rhin. on III	Ant. flag. jt. ratios (III-VI)	Siph.	Cauda	Cdl. hairs	Apical joint rostr.	2. jt. hind tars.
3,24	3,52	64+72	73:38:37:(12 $\frac{1}{2}$ +68)	0,73	0,50	15	0,17	0,19
3,17	3,66	54+62	75:39:37:(13 $\frac{1}{2}$ +72 $\frac{1}{2}$ )	0,77	0,52	16	0,17	0,18
3,03	3,59	64+63	70:39:36:(12+74)	0,70	0,47	14	0,17	0,17

Description of the oviparous female:

Morphological characters: Very much like the apterous viviparous female. Antennae a little longer or a little shorter than body. The IIIrd antennal segment with about 50 secondary rhinaria. Siphunculi reticulated on distal  $\frac{1}{5}$ . Hind tibiae swollen with 150—250 pseudo-sensoria on basal  $\frac{2}{3}$ — $\frac{3}{4}$ . Cauda with 18—21 hairs.

Colour: Brown. Cauda yellow.

## Measurements (in mm):

No.	Body	Antenna (I—VI)	Rhin. on III	Ant. flag. jt. ratios (III—VI)	Siph. Cauda	Cdl. hairs	Apical joint rostr.	2. jt. hind tars.	
1	3,43	3,27	49+51	66:34:35:(12+64)	0,79	0,52	18	0,16	0,16
2	2,96	3,33	51+51	72:35:32:(10+66)	0,83	0,52	21	0,16	0,18
3	2,72	3,22	50+44	67:34:32:(10+66)	0,79	0,52	20	0,16	0,17

(1: *Leontodon autumnalis*, Skive, 1-9-56; 2—3: *Leontodon autumnalis*, Madum Sø, 2-9-58).

15. *Dactynotus muralis* (Buckton, 1876).

*Dactynotus muralis* Hille Ris Lambers, 1939, p. 26.

*Dactynotus muralis* Börner, 1952, p. 171, no. 660.

Distribution: Outside Denmark known from England, Germany, Netherlands, France, Austria, and Sweden.

Occurrence in Denmark: Found on *Lactuca muralis* in Krabbesholm Forest (21-7-57, the determination certified by Dr. Hille Ris Lambers), an alate female with some larvae.

16. *Dactynotus obscurus* (Koch, 1855).

*Dactynotus obscurus* Hille Ris Lambers, 1939, p. 28.

*Dactynotus obscurus* Börner, 1952, p. 170, no. 657.

Distribution: Europe. Known from Sweden.

Occurrence in Denmark: Found on *Hieracium umbellatum* on Strandbyhede at Frederikshavn (19-8-56), in Hammer Bakker (26-6-57), on Læsø (9-8-57), at Henne (1-7-58), at Fly near Skive (24-7-58), and at Jebjerg (26-7-58), and on *Hieracium pilosella* at Henne (1-7-58).

The aphids infest stems and leaves of the host plant, especially the upper parts of stems and the inflorescences. Sexuales (oviparous female and alate male) were present in the sample from Strandbyhede (August).

17. *Dactynotus sonchi* (Linné, 1767).

*Dactynotus sonchi* Hille Ris Lambers, 1939, p. 37.

*Dactynotus sonchi* Börner, 1952, p. 170, no. 659.

Distribution: Europe, Central Asia, and South America. Known from Sweden.

Occurrence in Denmark: Found on *Sonchus* sp.

at Ålsgårde (2-8-17, Math. Thomsen leg. et det.), on *Sonchus arvensis* at Skive (15-7-56), on *Sonchus asper* at Refsvindinge on Funen (8-7-58), and on *Chrysanthemum segetum* at Stenskov near Næstved (14-8-58). Winged specimens have been caught in a yellow Moericke-trap at Borris (1956).

The normal host is *Sonchus*. In other countries this aphid does harm to lettuce, but hitherto it has not been noticed on *Lactuca* in Denmark.

The number of secondary rhinaria on the IIIrd antennal segment of the apterous viviparous female is 9—27 for Danish material (Hille Ris Lambers states 20—35).

18. *Dactynotus tussilaginis* (Walker, 1850).

?*Aphis basalis* Walker, 1848, p. 2220.

*Aphis tussilaginis* Walker, 1850, p. 390.

*Dactynotus tussilaginis* Hille Ris Lambers, 1939, p. 43.

*Dactynotus basalis* Börner, 1952, p. 169 and p. 226, no. 648.

Distribution: Outside Denmark known from England, Netherlands, Germany, Austria, France, Sweden, and Central Asia.

Occurrence in Denmark: Found on *Tussilago farfara* at Skive (14-7, 15-8-56, 4-8-57, 4-8-58), occurring on the underside of the leaves as single specimens or in colonies, Winged individuals have been caught in yellow traps at Årslev on Funen and at Borris in 1956.

From 1952 Börner began to use the name *basalis* Walker, but here the name *tussilaginis* Walker is preferred, though *basalis* is two years older, because the meaning of *basalis* must be regarded as dubious. Usually the long siphunculi of *D. tussilaginis* are brownish yellow with black bases and tips. In 1848 Walker described *Aphis basalis* mentioning this character, but other statements in the short description (host: *Lycopsis* (*Anchusa*) *arvensis*, colour of body: greyish green, size: rather small) do not fit in with the normal appearance of the big, brown aphid from *Tussilago*. Theobald (1917, p. 77) held *basalis*

as a synonym of *Aphis lycopsidis* Walker (1848, p. 2219), which is described with nearly the same words, and the type of this species appeared to be *Sitobion avenae* Fabr. (= *Macrosiphum granarium* Kirby) as shown by F. Laing (Theobald, 1926, p. 364), and Theobald adds: "No one could have identified this from Walker's description". The type of *Aphis basalis* has not been found, so no one can say with certainty what the name really means. Walker's description of *Aphis tussilaginis* is quite adequate, so that the meaning of this name is clear enough, and for more than 100 years it has been used by every aphidologist dealing with the species.

Subgenus **UROMELAN** Mordvilko, 1914.

19. *Dactynotus (Uromelan) aeneus* Hille Ris Lambers, 1939.

*Dactynotus (Uromelan) jaceae* subsp. *aeneus* Hille Ris Lambers, 1939, p. 54.

*Dactynotus (Uromelan) aeneus* Börner, 1952, p. 172, no. 665.

Distribution: Europe. Known from Sweden.

Occurrence in Denmark: Colonies were found on upper stems and underside of leaves of *Carduus crispus* at Fåborg (13-7-57) and near Næstved (14-8-58, N. F. Buchwald leg.).

20. *Dactynotus (Uromelan) campanulae* (Kaltenbach, 1843).

*Dactynotus (Uromelan) campanulae* Hille Ris Lambers, 1939, p. 47, pl. IV, fig. 13.

*Dactynotus (Uromelan) campanulae* Börner, 1952, p. 174, no. 677.

Distribution: Europe. Known from Sweden.

Occurrence in Denmark: Found on the calyx and the upper part of the stem of *Campanula rotundifolia* at Østerby on Læsø (8-8-57).

21. *Dactynotus (Uromelan) jaceae* (Linné, 1758).

*Dactynotus (Uromelan) jaceae* Hille Ris Lambers, 1939, p. 51.

*Dactynotus (Uromelan) jaceae* Börner, 1952, p. 172, no. 664.

Distribution: Europe and Central Asia. Known from Sweden.



Occurrence in Denmark: Found on *Centaurea jacea* at Lyby in Salling (22-7-57), on *C. cyanus* at Rønbjerg (22-7, 22-9-57) and at Skive (1-9-57), on *C. scabiosa* on Jegindø (20-9-56), on Avernakø (11-7-57), in Svanninge Bakker (12-7-57), at Fåborg (13-7-57), and at Ørby on Samsø (10-8-58), and on *C. sp.* on Langeland (6-7-57).

Börner (1950) showed that aphids from *Centaurea scabiosa* could not feed on *C. jacea*, for which reason subsp. *heinrichi* Börner was erected. *Dactynotus jaceae* s. str. according to Börner can thrive only on *Centaurea jacea*, *C. phrygia*, and *C. cyanus*.

The aphids mainly occur on the upper stems. Sexuales (oviparous female and alate male) were collected on *Centaurea scabiosa* on September 20th, 1956, and green eggs were observed. Among the animals collected on *C. cyanus* on September 22nd, 1957, no sexuales, however, were noticed, whereas alate females and nymphs with wing pads occurred in great numbers.

22. *Dactynotus (Uromelan) solidaginis* (Fabricius, 1794).

*Dactynotus (Uromelan) solidaginis* Hille Ris Lambers, 1939, p. 62.

*Dactynotus (Uromelan) solidaginis* Börner, 1952, p. 173, no. 670.

Distribution: Europe. Known from Sweden.

Occurrence in Denmark: Colonies were found on the upper parts of *Solidago virga-aurea* in Hammer Bakker (26-6-57), near Ålestrup (22-9-58), at Skive (28-8, 9-9-58), at Rønbjerg (18-9-58), and at Svendborg (2-7-57).

23. *Dactynotus (Uromelan) taraxaci* (Kaltenbach, 1843).

*Dactynotus (Uromelan) taraxaci* Hille Ris Lambers, 1939, p. 64, pl. IV, fig. 14.

*Dactynotus (Uromelan) taraxaci* Börner, 1952, p. 172, no. 669.

Distribution: Europe and U. S. A. Known from Norway (Tambs-Lyche, 1957) and from Sweden.

Occurrence in Denmark: A single apterous viviparous female was found on *Beta vulgaris* (beet) in a root clamp at Ørslev on Sealand (23-7-54). The normal

host is *Taraxacum*, but in 1957 and 1958 I looked for this aphid on dandelions in vain. The collected specimen probably had gone astray from a dandelion plant close to the beet on which it was found. Tambs-Lyche observed this aphid on potato leaves in Norway.

Winged individuals have been caught in a yellow Moericke-trap at Borris (27-7-56, the determination is certified by Dr. Hille Ris Lambers).

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### Anmeldelse.

J. L. Cloudsley-Thompson: **Spiders, Scorpions, Centipedes and mites.** The ecology and natural history of woodlice, myriapods, and arachnids. London (Pergamon Press) 1958, 228 pp. Pris: 50 sh.

Ved i Forordet at fortælle, at denne Bog overvejende er blevet til under den hjemlige Opvask, tager Forf. Brodden af mange Indvendinger undtagen denne ene: hvorfor man overhovedet skriver en saadan Bog ved Opvasken og ikke i mere samlede Stunder. Forklaringen er den enkle, at Forf. er en "Strøtanke-Forfatter", og dette bærer baade Bogen og de utallige egne Afhandlinger, han henviser til, Præg af. Men dermed være ikke sagt, at det er en daarlig Bog, for en lang Række spredte Iagttagelser, ikke blot af Forfatteren, faar man her samlet og bragt i Rubrikker, skematisk for hver Gruppe: Classification, Behaviour, Food etc., Enemies, Life cycle etc. Bogen er overvejende biologisk-økologisk lagt til Rette; Forf. undgaar dog ikke den moderne Fælde, at omskrive simple biologiske Iagttagelser i pseudovidenskabeligt Sprog ("they normally collect at the moist end of a humidity gradient", hvor der slet og ret menes, at de søger Fugtighed (p. 8) o. l.), og er selvfølgelig ikke sparsom med teleologisk-selektionistiske Formodninger ("no doubt")<sup>1)</sup>. At Bogen er skrevet for Englændere især, fremgaar af Anvendelsen af Halfpenny-Stykker til Sammenligning paa Figurer, samt af Betegnelsen  $\frac{1}{20}$  Tomme for 1 mm (eller endog en Størrelsesangivelse paa en Tooghalvfjerdsindstyvendedel af en Tomme, p. 63), hvorimod Størrelsesangivelsen af et aarligt Gennemsnitsantal (hvad det saa er) paa 1.672.704 Pauropoder pr. acre simpelthen skyldes Mangel paa Virkelighedssans.

Bogen vilde udfylde et Hul, hvis den ikke havde disse Skønhedspletter, for medens Insekter kan findes i talrige Haandbøger, saa er en samlet Haandbog over de øvrige Landarthropoder meget savnet (selvom Grassé's *Traité* dog giver Cheliceraterne); der er da ogsaa mange Afsnit man læser med Glæde i Bogen, især naturligvis Kapitlerne om de tropiske Former, Solifugerne, "Pedipalperne" (som de tidligere hed), Skorpionerne, Skolopendrene, og ogsaa Fremstillingen af de hjemlige Mejerers Livsforhold er der Momenter i. Bogen er for Naturhistorikere "everywhere", samt for Skolelærere og Universitets-Studentere — siger Forlæggeren.

Prisen er exorbitant.

S. L. Tuxen

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<sup>1)</sup> Det antydes endog, at Edderkoppernes Rovgriskhed er Skyld i, at Insekterne udviklede Vinger — men saa lavede Edderkoppen til Gengæld Fangnet!