

## A List of Danish Aphids.

### 6: *Aphis* L.

By

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Skive Seminarium, Skive

Parts 1—5 appeared in Entomologiske Meddelelser 1960 (29: 193—211), 1961 (31: 77—96), 1962 (31: 205—224), 1964 (32: 341—357), and 1967 (35: 125—141).

The author wishes to thank Professor Dr. F. Ossiannilsson, Uppsala, for loan of slides of *Aphis grossulariae* collected on *Epilobium* in Sweden.

#### List of the species

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156. *A. frangulae* Kaltenbach, 1855.
157. *A. galii-scabri* Schrk., 1801.
158. *A. gossypii* Glover, 1854.
159. *A. grossulariae* Kaltenbach, 1843.
160. *A. hederæ* Kaltenbach, 1843.
161. *A. hieracii* Schrk., 1801.
162. *A. hypochoeridis* (Börner, 1940).
163. *A. idaei* v. d. Goot, 1912.
164. *A. intybi* Koch, 1855.

165. *A. lambersi* (Börner, 1940).
166. *A. leontodontis* (Börner, 1950).
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168. *A. nasturtii* Kaltenbach, 1843.
169. *A. origani* Pass., 1860.
170. *A. pilosellae* (Börner, 1952).
171. *A. podagrariae* Schrk., 1801.
172. *A. pomi* Deg., 1773.
173. *A. proffti* (Börner, 1942).
174. *A. psammophila* Szelegiewicz, 1967.
175. *A. ruborum* (Börner, 1931).
176. *A. rumicis* L., 1758.
177. *A. sambuci* L., 1758.
178. *A. schneideri* (Börner, 1940).
179. *A. sedi* Kaltenbach, 1843.
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181. *A. tormentillae* Pass., 1879.
182. *A. triglochinis* Theobald, 1926.
183. *A. ulmariae* Schrk., 1801.
184. *A. urticata* Fabr., 1781.
185. *A. vaccinii* (Börner, 1940).
186. *A. vandergooti* (Börner, 1939).
187. *A. viburni* Scop., 1763.

Genus **APHIS** Linné, 1758.

141. *Aphis acetosae* Linné, 1767.

*Aphis* (*Doralis*) *acetosae*: Börner 1952, p. 77, no. 215.

This species or complex of species has been recorded from *Rumex acetosa* and *R. acetosella* in other countries. Danish samples from *A. acetosella* display shorter hairs on antennae and tibiae than do specimens from *R. acetosa*. The explanation of this difference may be that two species or subspecies are involved, but until further studies have been accomplished I prefer to treat them as one species. Jacob (1949) warns against subdivision within the so-called "Black Aphids" solely on the basis of hair length characters because he found that *Aphis sambuci* varied to a large degree in this respect. Subterranean life seems to involve shortening of antennal hairs in *A. sambuci*. In Denmark all colonies of the long-haired form of *A. acetosae* have been found on the aerial parts of *Rumex acetosa*, whereas all colonies of the short-haired form of *A. acetosae* have been found on the subterranean parts of *R. acetosella* or in surface level. So it is possible to believe that the morphological difference between these two forms is the result

of non-hereditary modification caused by environment just as seems to be the case in *Aphis sambuci*.

The form on *Rumex acetosa*:

**Distribution:** Europe. It is known from Sweden and Finland. It is very common in Northern Europe, but seems to be rather rare in Great Britain (Stroyan 1955).

**Occurrence in Denmark:** Collected (coll.) or only observed on *Rumex acetosa* s. lat. (= *Rumex acetosa* L. s. str. + *R. thyrsoiflorus* Fing.) in Jutland at Hammer Bakker (28-7-65), Jetsmark in Vendsyssel (25-7-64), Haverslev in Han Herred (22-7-60), Vile in Salling (26-7-59), Skive (21-7-61), Krabbesholm Forest at Skive (21-7-57, 29-6-60), Resen at Skive (18-7-57), Lundø in Fjends (7-7-59, coll.), Hald in Fjends (3-8-57), Rebild (3-8-64), Strandkjær at Femmøller (4-8-59, coll.; 4-7-60), and Tulstrup at Knudsø (21-7-59); on Funen north of Fåborg (12-7-57, coll.), at Bjerne (15-7-57, coll.), Glamsbjerg (6-7-58, coll.), and Lumby in northern Funen (2-7-60); on Sealand at Trollesminde near Hillerød (1-8-56, coll.); on other islands at Byrum on Læsø (10-8-57, coll.), Besser on Samsø (10-8-58, coll.), and Onsbjerg on Samsø (12-8-58, coll.).

*Rumex acetosa* s. str. and *R. thyrsoiflorus* are very similar; they differ in the shape of the leaves, and *R. acetosa* wears flowers in May-June, whereas *R. thyrsoiflorus* flowers in July-August (Rostrup 1961). The aphid attacks both of them in the same way, feeding especially on the stems, which may be infested by so dense colonies that they look as if they have been tarred. The colonies are often visited by ants.

**Measurements in mm:** Arithmetical mean of 39 apt. vivip. females collected in July and August: Body 2,24 (observed range (O.R.) = 1,40—2,91, standard deviation (s) = 0,37), antennal segments III—VI 1,23 (O.R. = 0,93—1,59, s = 0,16), siphunculus 0,37 (O.R. = 0,23—0,46, s = 0,05), cauda 0,23 (O.R. = 0,18—0,29, s = 0,02), apical segment of rostrum 0,15 (O.R. = 0,13—0,17, s = 0,01), 2nd segment of hind tarsus 0,13 (O.R. = 0,11—0,16, s = 0,008). Hairs on IIIrd antennal segment longer than basal diameter of that segment. — Measurements of a single specimen (Læsø, August): Body 2,00, ant. segm. III—VI 0,30: 0,20:0,22:(0,13 + 0,33), siph. 0,34, cauda 0,23, 11 caudal hairs, apical segm. of rostrum 0,15, 2nd segm. of hind tarsus 0,13,

basal diameter of IIIrd ant. segm. 0,025, longest hair on IIIrd ant. segm. 0,029, hairs on hind tibia 0,04—0,05.

The form on *Rumex acetosella*:

**Distribution:** The short-haired, subterranean form is known from England (Stroyan 1955, p. 309, no. 33: *Aphis acetosae* Fabricius, 1775) and Denmark. Finds on *R. acetosella* are also recorded from Poland, Norway, and Sweden, but I do not know if they belong to the same short-haired, subterranean form. Börner (1952) does not mention *Rumex acetosella* as a host plant of *Aphis acetosae*.

**Occurrence in Denmark:** Collected on *Rumex acetosella* on subterranean parts and at the surface of the soil in Jutland at Blokhús (9-8-63, al., apt., juv.; 7-8-64, juv.), Strandkjær at Femmøller (5-8-59, al., apt., juv.; 5-7-60, apt., juv., also nymphs with wing pads), Brunshåb near Viborg (12-7-59, al., apt., juv.), and Henne (1-7-58, al., juv.).

The colonies are found on the host in sandy places in ants' nests. This form is paler than the acetosa-form, greenish black. It is mentioned as *Aphis acetosae* Stroyan (1955) pro Fabr. nec L. in Heie (1965, p. 8).

**Measurements in mm:** Arithmetical mean of 13 apt. vivip. females collected in July and August: Body 1,95 (O.R. = 1,47—2,33, s = 0,23), antennal segments III—VI 1,05 (O.R. = 0,86—1,18, s = 0,10), siphunculus 0,27 (O.R. = 0,20—0,34, s = 0,04), cauda 0,21 (O.R. = 0,18—0,23, s = 0,016), apical segment of rostrum 0,14 (O.R. = 0,13—0,15, s = 0,005), 2nd segment of hind tarsus 0,11 (O.R. = 0,10—0,12, s = 0,007). Hairs on IIIrd antennal segment shorter than half of the basal diameter of that segment. — Measurements of a single specimen (Strandkjær, August): Body 2,07, ant. segm. III—VI 0,27:0,17:0,20: (0,12 + 0,29), siph. 0,29, cauda 0,23, 12 caudal hairs, apical segm. of rostrum 0,13, 2nd segm. of hind tarsus 0,11, basal diameter of IIIrd ant. segm. 0,026, longest hair on IIIrd ant. segm. 0,012, hairs on hind tibia 0,03—0,04.

#### 142. *Aphis brohmeri* Börner, 1952.

*Aphis* (*Doralis*) *brohmeri* Börner, 1952, p. 76 and 246, no. 200.

*Aphis brohmeri*: Stroyan 1955, p. 310.

**Distribution:** Germany, Sweden, England, Finland, U.S.S.R., Poland, and Denmark.

**Occurrence in Denmark:** Collected on *Anthriscus silvestris* in Jutland at Strandkjær at Femmøller (5-7-60) and on Funen at Bovense near Nyborg (9-7-58) and at Morud (10-7-58).

The colonies occur on the lower part of the stem and are attended by ants. The species is monoecious.

143. *Aphis chloris* Koch, 1854.

*Cerosipha chloris*: Börner 1952, p. 89, no. 289.

*Aphis chloris*: Stroyan 1955, p. 311.

**Distribution:** Germany, France, England, Switzerland, Rumania, Italy, Poland, U.S.S.R., Hungary, Sweden, and Denmark.

**Occurrence in Denmark:** Found on subterranean parts of stems of *Hypericum perforatum* at Brunshåb near Viborg (12-7-59), Femmøller (6-7-60, not coll.), and Funder (12-7-60), and of *H. maculatum* at Femmøller (5-8-59), all in Jutland.

144. *Aphis comosa* (Börner, 1950).

*Pergandeida* (*Doralida*) *comosa*: Börner 1952, p. 83, no. 251.

*Aphis comosa*: Falk 1958, p. 624.

**Distribution:** Germany, Austria, Finland, Poland, Sweden, and Denmark.

**Occurrence in Denmark:** In Jutland collected at Blokhus on *Lathyrus pratensis* (1-7-66, 17-7-66, 10-8-66). The aphids formed large colonies on the stems of the host in a coniferous plantation in the dunes. The last-mentioned find consisted of a colony covered by soil particles in an ants' nest.

145. *Aphis confusa* Walker, 1849.

*Aphis scabiosae* Schrk., 1801 (not Scop., 1763): Theobald 1927, p. 179.

*Cerosipha confusa*: Börner 1952, p. 90, no. 299.

**Distribution:** Europe. It is known from Sweden and Finland.

**Occurrence in Denmark:** Collected on *Knautia arvensis* on Funen in Svanninge Bakker (12-7-57), on Læsø at Vesterø (9-8-59), and in Jutland at Hune in Vendsyssel (12-6-60), Blokhus (20-7-60), Hirtshals (26-7-60), Brønderslev (2-8-60), Dronninglund Storskov (22-9-58, ovip.), Løgstør (27-7-59), Ulbjerg in Himmerland (22-7-60), Nr. Vinge at Tjele (13 7-59), Hjarbæk Fjord (16-6-59), Dølby near Skive (19-7-57), Grinderslev in

Salling (21-8-57), Dalgas Plantation (15-10-59, ovip.), Haderup (9-7-59), Bryrup (10-7-58), Strandkjær at Femmøller (3-8-59, 5-7-60), Stubbe Lake in Djursland (6-7-60), and Brund near Horsens (28-6-59).

It is a very variable species with regard to size and colour of for instance the siphunculi. These may be all dark or more or less pale with a dark tip. Therefore I do not agree with Szelegiewicz (1967) when he says that Börner's *Cerosipha confusa* from *Knautia arvensis* and other Dipsacaceae cannot be identified with Walker's *Aphis confusa*, "denn Walker schreibt über seine *Aphis confusa*, dass "the tubes are pale yellow, with black tips", was gerade *A. thomasi* (Börn.) entspricht und nicht den Tieren von *Knautia arvensis* (L.) Coult." Szelegiewicz for this reason reduces *thomasi* Börner to a synonym of *confusa* Walker, and *confusa* Börner to a synonym of *ochropus* Koch. This is not obvious as Börner (1952) says that *thomasi* feeds on *Scabiosa columbaria* and *ochroleuca* only, whereas Walker (see Doncaster 1961, p. 46) found his *confusa* on *Scabiosa arvensis* (= *Knautia arvensis*), and as own observations show that it is possible to find large, dark-green specimens with dark siphunculi as well as smaller, paler specimens with pale, dark-tipped siphunculi on *Knautia arvensis*. The last-mentioned specimens do not fit in with Börner's diagnosis of *thomasi*.

146. *Aphis corniella* (Hille Ris Lambers, 1935).

*Comaphis corniella*: Börner 1952, p. 78, no. 217.

**Distribution:** Europe. It is known from Finland, Sweden, and Norway.

**Occurrence in Denmark:** Collected (coll.) or only observed in Jutland on *Cornus* at Skive (coll. 29-6-57, 17-5-59, 24-5-59, 11-5-61) and Oddense in Salling (24-6-67), and on *Chaemaenerium angustifolium* at St. Vildmose (3-8-60, coll.), Blokhus (30-7-63, 15-9-63, 6-10-63 (coll., alate males and viviparous females), 14-8-64), Hammer Bakker (29-7-64, 24-7-67), Dronninglund Storskov (17-8-64), Rebild (3-8-64), Madum Lake (24-8-59), Hvalpsund (27-8-66), Krejbjerg in Salling (25-8-66), Fur (11-8-59, 25-8-60), Haderup (9-7-59, coll.), north of Aulum (9-7-59, coll.), Råsted (1-9-66), Brunshåb near Viborg (12-7-59), Hald Lake at Viborg (27-8-64), Brassø at Silkeborg (12-7-60, coll.), Himmelbjerget (28-8-64), Strandkjær at Femmøller (8-8-59),

Ahl Strand at Ebeltoft (6-8-59), Lyngballe Forest near Århus (21-7-59), and Gesten Forest near Lunderskov (20-8-65); on Sealand in yellow Moericke-tray at Ørslev (27-7-56, coll).

*Cornus* (*alba* and *sanguinea*) is the primary host, the leaves of which are curled up. *Chamaenerium angustifolium* is the secondary host; the aphids gather round the mid rib on the undersides of the middle and lower leaves which turn reddish or yellow-reddish. They are attended by ants.

147. *Aphis craccae* Linné, 1758.

*Pergandeida craccae*: Börner 1952, p. 83, no. 240.

**Distribution:** Europe, Asia, North America (Russell 1966). It is known from Sweden, Finland, and Norway.

**Occurrence in Denmark:** Found on *Vicia cracca* in Jutland at Blokhus (July and August, 1963—66), Hammer Bakker (14-8-63), Vodskov (14-8-63), Tambohus in Thy (23-7-63), Jegindø (23-7-63), Handbjerg near Struer (16-7-59), Skive (15-9-56, alate male, ovip., juv.), Frammerslev in Salling (26-7-63), near Legind Bjerger on Mors (19-5-65), and Nr. Vinge at Tjele (13-7-59).

148. *Aphis craccivora* Koch, 1854.

*Pergandeida* (*Doralida*) *craccivora*: Börner 1952, p. 83, no. 250.

*Pergandeida* (*Doralida*) *loti*: Börner 1952, p. 83, no. 248.

*Aphis craccivora*: Falk 1958, p. 620.

**Distribution:** Nearly all over the world (Europe, Asia, Africa, Australia, Pacific Islands, North and South America). It is known from Norway, Finland, and Sweden.

**Occurrence in Denmark:** In Jutland collected at Jebjerg in Salling on *Caragana arborescens* (26-7-58), at Skive on *Lotus* (6-7-63), and at Strandkjær at Femmøller on *Lupinus luteus* (5-8-59) and *Capsella bursa-pastoris* (6-7-60).

149. *Aphis crepidis* (Börner, 1940).

*Cerosipha crepidis* Börner, 1940, p. 4.

*Toxopterina* (*Tuberculaphis*) *crepidis*: Börner 1952, p. 93, no. 322.

*Aphis crepidis*: Stroyan 1955, p. 312.

**Distribution:** Germany, England, Poland, and Denmark.

**Occurrence in Denmark:** Collected on *Crepis capillaris* at Madum Lake in Jutland (3-9-58, 1 ovip., 1 nymph, 2 larvae). The reddish brown aphids sat on the stem and in the inflorescence.

150. *Aphis cytisorum* Hartig, 1841.

*Aphis cytisorum*: Falk 1958, p. 624.

**Distribution**: Europe. It is known from Sweden.

**Occurrence in Denmark**: The *Laburnum*-form (= *A. cytisorum* s. str. = *Pergandeida cystisorum*: Börner 1952, p. 81, no. 238) has been collected on *Laburnum anagyroides* (= vulgare) in Jutland at Skive (7-8-58) and on Samsø at Tranebjerg (10-8-58). It is also recorded from Vihøjgård in Jutland by Henriksen (1944, p. 125), where it was found by Sofie Rostrup in 1886.

The *Sarothamnus*-form (= *A. cytisorum* subsp. *sarothamni* (Franssen, 1928) = *Pergandeida sarothamni*: Börner 1952, p. 81, no. 236) has been collected on *Sarothamnus scoparius* in Jutland at Blokhush (24-7-61), Strandkjær at Femmøller (4-8-59), Himmelbjerget (21-7-59), and Juelsminde (28-6-59), and on Funen at Hylkedam (6-7-58).

151. *Aphis diphaga* Walker, 1852.

*Aphis diphaga*: Theobald 1927, p. 120.

*Cerosipha diphaga*: Börner 1952, p. 87, no. 282.

**Distribution**: England, Germany, Austria, Poland, U.S.S.R., Sweden, and Denmark.

**Occurrence in Denmark**: Collected in Jutland at Flyndersø on *Epilobium hirsutum* (22-7-57, apt., juv.).

152. *Aphis epilobii* Kaltenbach, 1843.

*Aphis epilobii*: Theobald 1927, p. 111.

*Aphidula praeterita*: Börner 1952, p. 79, no. 222 (the true *Aphis praeterita* Walker is according to Doncaster (1961) another species).

**Distribution**: Europe. It is known from Sweden and Finland.

**Occurrence in Denmark**: Collected on *Epilobium montanum* in Jutland at Vodskov in Vendsyssel (29-7-64), Jenle in Salling (28-7-63), Strandkjær at Femmøller (5-8-59), and Lyngballe Forest near Århus (21-7-59); on Funen at Nyborg (9-7-58); on Falster at Nr. Alslev (20-8-64, J. Reitzel leg.); on Læsø at Vesterø (9-8-57).

153. *Aphis fabae* Scop., 1763.

*Aphis (Doralis) fabae*: Börner 1952, p. 73, no. 194.



**Distribution:** All over the world. It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark:** This species or complex of species is very common on many kinds of plants in all parts of the country. Only some findings represented in the writer's collection are mentioned below to show distribution and host plant range, but the species has been observed on many other occasions, especially on beets all over the country, and it is among the most frequent species in yellow Moericke-trays. The records include information about morphs collected (al., apt., juv.) because it is important when deciding if the plant in concern is a host or not. Alate specimens may alight on non-hosts, in certain cases bear youngs on them, too. Only when apterous adults occur on the plant there is some reason to believe that it is a host.

Jutland: On *Euonymus europaeus* at Skive (11-10-56, ovip., al.; 26-9-57, al., juv.; 28-6-58, al., apt., juv.; 7-8-58, juv.; 2-5-59, fundatrices; 16-5-59, fundatrices, al., apt., juv.; 22-7-60, apt.; 22-6-60, al., apt., juv.), on *Viburnum opulus* at Skive (16-5-59, nymphs), on *Beta vulgaris* (beet) at Borris (3-6-64, al., juv., C. Stapel coll.) and Ødum (in beet clamp, July 1957, juv., B. Petersen coll.), on *Chenopodium album* at Dølby near Skive (19-7-57, al., apt., juv.) and Egeris, Skive (31-8-58, apt., juv.), on *Amaranthus caudatus* at Studsgård (9-7-59, al., juv.), on *Polygonum convolvulus* in Krabbesholm Forest (9-9-58, al.), on *Ranunculus* at Tulstrup near Rye (21-7-59, apt., juv.), on *Papaver dubium* at Lundø in Fjends (7-7-59, al., juv.), on *Glaucium flavum* at Kås in Salling (31-8-55, apt., juv.), on *Capsella bursa-pastoris* at Skive (24-7-63, apt.) and Næsbydale in Himmerland (27-7-59, apt., juv.), on *Impatiens noli-tangere* at Støvring Nørreskov at Randers Fjord (13-7-59, al., juv.), on *Tropaeolum* at Blokhus (2-9-62, apt., juv.), on *Fragaria* (indoors) at Spangsbjerg (17-9-58, apt., K. Lindhardt coll.), on *Lathyrus pratensis* at Blokhus (1-8-63, al.), on *Vicia faba* at Højer (8-8-56, apt., juv.), on *Angelica silvestris* at Skive (14-9-58, al., apt., juv.) and Handbjerg (16-7-59, apt.), on *Heracleum sphondyleum* at Mariager (13-7-59, al., apt., juv.), on *Torilis japonica* at Tulstrup near Rye (21-7-59, al., apt., juv.), on *Aster tripolium* at Rønland near Harboøre (2-9-64, apt. it has too few marginal tubercles and too many caudal hairs to be *Aphis tripolii* Laing), on *Chrysanthemum segetum* at Tolne in Vendsyssel (20-8-56, apt., juv.), on *Chrysanthemum* sp. (cultivated) at Skive (8-8-62, al.,

apt., juv.), on *Dahlia* at Skive (5-9-60, al., apt., juv.), on *Matricaria matricarioides* at Skive (1-7-59, apt., juv.), on *M. inodora* at Vodskov in Vendsyssel (18-8-62, apt., juv.), on *Senecio vulgaris* at Lundø (7-7-59, al.) and Studsgård (9-7-59, al., apt., juv.), on *Aphelandra* at Skive (indoors, 22-8-58, apt., juv., N. J. Winther coll.).

Funen: On *Beta vulgaris* (beet) at Årslev (28-7-56, al., apt., juv.) and in a clamp at Blangstedgård (July 1957, al., apt., juv., B. Petersen coll.), on *Dipsacus silvestris* in Odense (12-9-60, apt., juv., P. Hammer coll.), on *Carduus crispus* at Nyborg (9-7-58, apt., juv.).

Sealand: On *Euonymus europaeus* at Tryggevælde, Stevns (7-5-50, fundatrices), on *Philadelphus coronarius* at Holte (2-6-60, apt., juv.; 17-10-60, ovip., al., juv., J. Jørgensen coll.), on *Philadelphus* sp. at Virum (23.7.54, al., apt., juv., O. Wagn coll.), on *Urtica urens* at Høng (5-8-55, apt., juv.) and Lyngby (3-7-58, al., apt., juv.), on *Chenopodium album* near Næstved (14-8-58, al.), on *Capsella bursa-pastoris* at Lyngby (3-7-58, al., juv.), on *Pyrus communis* at Lyngby (6-7-59, al., apt., juv., and 14-7-59, apt., juv., large colonies, Hille Ris Lambers det.), on *Trifolium pratense* at Klampenborg (22-7-63, juv., C. Stapel coll.), on *Calendula arvensis* at Bagsværd (15-8-58, apt.), on *Chrysanthemum segetum* near Næstved (14-8-58, al., apt., juv.), on *Cirsium palustre* on Luknam at Furesø (16-8-58, apt., juv.), on *Dahlia* at Virum (4-9-50, apt.), on *Larix decidua* at Bagsværd (15-8-58, al., juv.).

Other islands: On *Papaver somniferum* at Sophiehøj near Rødby on Lolland (4-8-56, al., apt.), on *Malva silvestris* at Landet on Tåsinge (3-7-57, al., juv.), on *Cirsium arvense* on Avernakø (11-7-57, al., apt.), on *Chenopodium album* at Onsbjerg on Samsø (10-8-58, al., apt., juv.), on *Hypericum perforatum* at Ballebjerg on Samsø (11-8-58, al., juv.), on *Anchusa officinalis* at Hårdmark on Samsø (12-8-58, juv.), and on *Solanum nigrum* at Onsbjerg on Samsø (10-8-58, al., juv.).

The species has been mentioned by several Danish authors, e. g. Sofie Rostrup (1900, 1912), Sv. G. Larsson (1940, 1940a, 1941, 1941a, 1943), Henriksen (1944, from *Chenopodium* and beets), Bovien & Thomsen (1945, 1950), Børge Petersen (1959), Heie (1951, 1960b, 1961, 1962), and in the monthly and annual surveys from the Danish State Experimental Station for Plant Diseases and Pests (syn. *Aphis papaveris*). The Danish name is: Bedebladlus (or bedelus).

Euonymus, Viburnum, and Philadelphus are primary hosts, and numerous plant species may serve as secondary hosts. The aphid is most abundant on cultivated plants as beets, Dahlia, Vicia faba a. o. Among the weeds Chenopodium, Matricaria, and Capsella are often attacked. It is not common to find attacks on pear, but large colonies may develop here in early summer causing leaf curling.

Hibernation takes place as eggs on primary hosts. Though the aphids are brought into the beet clamps in the autumn they cannot survive during the winter there. When specimens are found on beets in clamps in early summer, they have been born by alate mothers arrived from other plants in the spring.

154. *Aphis farinosa* Gmelin, 1788.

*Aphis saliceti* Kaltenbach, 1843: Theobald 1927, p. 171.

*Aphidula farinosa*: Börner 1952, p. 78 (*Medoralis* f.), p. 265, no. 218.

**Distribution:** Holarctic. It is known from Sweden, Finland, and Norway.

**Occurrence in Denmark:** In Jutland collected on *Salix caprea* at Madum Lake (19-6-58), on *S. cinerea* on Rømø (3-7-58) and at Kongsø near Bryrup (11-7-58), on *S. smithiana* (one dying aptera) and *S. dasyclados* (only one alata) at Studsgård (18-6-64), on *S. sp.* at Madum Lake (17-6-58) and at Kjellerup (24-6-64), and observed on *Salix* south of Vejle (12-6-66). On Sealand collected on *Salix* in Copenhagen (30-6-18, M. Thomsen leg.) and on *S. viminalis* at Bagsværd (15-8-58, 2 apt. viv. + 1 juv.).

The species is monoecious. According to the literature colonies are found on *Salix* in spring and early summer, only. The eggs are laid in early summer. The sample from Kongsø from July 11 thus consisted of oviparous females and males. The record from Bagsværd of viviparous females as late as in the middle of August is rather unusual, as viviparous females normally disappear in July.

155. *Aphis forbesi* Weed, 1889.

*Cerosipha forbesi*: Börner 1952, p. 90, no. 296.

**Distribution:** Europe, North America.

**Occurrence in Denmark:** Collected on *Fragaria*

(cultivated strawberries) at Lyngby on Sealand (3-7-58, al., apt., juv.; 10-9-59, juv.; K. Lindhardt coll.).

There are no other records from this country though strawberries have been examined at several localities in 1958—59 (Heie 1961b, p. 60—61). The Danish name is: Den lille jordbærbladlus.

156. *Aphis frangulae* Kaltenbach, 1855 s. lat.

*Cerosipha frangulae* Kalt.: Börner 1952, p. 87, no. 279.

*C. beccabungae* Koch: Börner 1952, p. 87, no. 280.

*C. epilobiina* Walker: Börner 1952, p. 87, no. 281.

*Aphis praeterita* Walker: Doncaster 1961, p. 109.

*A. frangulae* s. lat.: F. P. Müller 1961, p. 49.

**Distribution:** Europe. It is known from Sweden, Finland, and Norway.

**Occurrence in Denmark:** Collected in Jutland on *Frangula alnus* at Madum Lake in Himmerland (25-5-59), on *Lamium amplexicaule* in the city of Århus (14-8-57), and on *Chamaenerium angustifolium* at Lyngballe Forest near Århus (21-7-59), at Brunshåb near Viborg (12-7-59), and at Hald Lake south of Viborg (27-8-64).

As in Heie & Heikinheimo (1966, p. 121) *Aphis frangulae* in accordance with the opinion of Müller (1961) is considered a complex of forms comprising Börner's species nos. 279, 280, and 281, all of which being holocyclic and heteroecious with *Frangula alnus* as the primary host. According to the host plants the aphids from *Lamium* may be *beccabungae*, and the aphids from *Chamaenerium praeterita* (Walker, not Börner). The biology and taxonomy of this species complex is very difficult, and no adequate information has thus far been published to separate the various inferior taxa from each other and from the very similar anholocyclic species *gossypii* Glover.

For occurrence on potatoes, see *Aphis gossypii*.

157. *Aphis galii-scabri* Schrk., 1801.

*Cerosipha* (*Uraphis*) *galii-scabri*: Börner 1952, p. 84, no. 260.

**Distribution:** Europe. It is known from Finland and Sweden.

**Occurrence in Denmark:** This aphid is mentioned as *Aphis galii* Kaltenbach by Henriksen (1944, p. 165, no. 481) from Lolland at Ravnsby Bakke on *Galium mollugo* (27-7-1901, Ove Rostrups obs.) with reference to no. 1140 in Ross & Hedicke.

158. *Aphis gossypii* Glover, 1854.

*Cerosipha gossypii*: Börner 1952, p. 88, no. 286.

**Distribution:** All over the world. It is recorded from Norway, Sweden, and Finland.

**Occurrence in Denmark:** Collected in Jutland on potato, *Solanum tuberosum*, at Fjelsevang (9-8-56) and Studsgård (13-7-60). Observed on potato leaves on Sealand at Virum and Glostrup, and on Lolland at Vesterborg. Rather common on potatoes, though not as common as *A. nasturtii*. *Aphis gossypii* is mentioned as a pest to pumpkins in Bovien & Thomsen (1945, 1950). In the annual surveys of pests from the Danish State Experimental Station for Plant Diseases and Pests (Statens plantepatologiske Forsøg) attacks of this species on Cucurbitaceae are mentioned several times, on late melons at Bækkeskov on Sealand in 1920 (p. 743), on cucumbers at Lyngby on Sealand and at Aalborg in Jutland in 1921 (p. 228) and at Glostrup on Sealand in 1922 (p. 286), and — with question mark after the species name — on cucumbers at Blangsted on Funen in 1924 (p. 395), on cucumbers and melons at Odense on Funen in 1925 (p. 124), and on melons at Oringe on Sealand in 1926 (p. 817), and on melons in Denmark (no locality mentioned) in 1930 (p. 472).

It is not possible to separate this anholocyclic species with certainty from the holocyclic *A. frangulae*. The records from potato may concern *frangulae* (Tambs-Lyche 1957, Müller 1961).

*Aphis gossypii* is polyphagous and according to Börner (1952) it hibernates in glass houses.

159. *Aphis grossulariae* Kalténbach, 1843.

*Aphis grossulariae*: Theobald 1927, p. 169.

*Aphidula grossulariae*: Börner 1952, p. 78, no. 220.

*Aphidula despecta*: Börner 1952, p. 79, no. 223.

**Distribution:** Europe. It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark:** In Jutland collected on *Ribes uva-crispa* at Skive (5-6-58, fundatrix, juv.; 24-5-59, apt.), on *Epilobium obscurum* at Skive (16-7-58, apt., juv.), on *E. hirsutum* at Lyby in Salling (2-8-57, 1 alate male, 1 nymph) and at Flyndersø south of Skive (22-7-57, apt.), and on *E. montanum* at Løgumkloster (5-7-58, al., apt., juv.). On Sealand collected on *E. montanum* at Holte (16-8-58, apt., juv.) and on *E. hirsutum*

at Luknam at Furesø (15-8-57, apt., juv.).

Börner (1952) says that *grossulariae* is a monoecious species whereas Stroyan (1952) gives *Epilobium* as summer host. This is confirmed by later authors. On gooseberry it causes leaf curling in the spring. Bovien & Thomsen (1945) mention *grossulariae* as a pest to gooseberries in this country (Danish name: Stikkelsbær-bladlus). The records of *grossulariae* from *Ribes rubrum* and *R. nigrum* given by Henriksen (1944, p. 107) and Jensen (1962, p. 156) presumably concern *Aphis schneideri*, however.

160. *Aphis hederæ* Kaltenbach, 1843.

*Aphis* (*Doralis*) *hederæ*: Börner 1952, p. 75, no. 198.

**Distribution:** Europe, Israel, Turkey, South Africa, North America. It is known from Sweden.

**Occurrence in Denmark:** Collected on *Hedera helix* (ivy) at Skive (4-6-59, N. J. Winther leg.). Traces of aphid attacks on ivy have also been observed on Funen at Fåborg (10-7-57), but the aphids had been killed by an insecticide and could not be examined.

161. *Aphis hieracii* Schrk., 1801.

*Cerosipha hieracii*: Börner 1952, p. 91, no. 302.

**Distribution:** Germany, Austria, Sweden, France, Norway, Finland, U.S.S.R., Poland, and Denmark.

**Occurrence in Denmark:** Collected on *Hieracium umbellatum* in Jutland at Blokhus (14-8-63), Holmslands Klit (30-6-58), Henne Strand (1-7-58), and on Rømø (3-7-58).

162. *Aphis hypochoeridis* (Börner, 1940).

*Cerosipha hypochoeridis*: Börner, 1940, p. 4.

*Cerosipha hypochoeridis*: Börner 1952, p. 91, no. 305.

**Distribution:** Germany, England, Scotland, Sweden, Poland, and Denmark.

**Occurrence in Denmark:** In Jutland collected on *Hypochoeris radicata* at Sejstrup in Fjends (16-6-59, apt., juv.) and Haderup (13-7-60, al., apt., juv.), on *Hypochoeris* sp. at Strandkjær at Femmøller (4-8-59, apt., juv.; 8-9-60, ovip.), and on Rømø (4-7-58, apt., juv.); it has also been observed at Blokhus (17-7-60) and Fuglsø (14-9-62).

The aphids have been found partly on undersides of the rosettes, partly on the root, attended by ants. The intraspecific variation with regard to size and colour is considerable.

163. *Aphis idaei* v. d. Goot, 1912.

*Aphis idaei*: Theobald 1927, p. 147.

*Aphidula idaei*: Börner 1952, p. 80, no. 227.

**Distribution**: Europe. It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark**: In Jutland collected on *Rubus idaeus* in Dronninglund Storskov (22-9-58), at Madum Lake in Himmerland (10-6-58, 5-9-58), Brunshåb near Viborg (12-7-59), and Studsgård (9-7-59) and observed at Strandkjær at Femmøller (7-8-59) and in Lyngballe Forest near Århus (21-7-59). On Funen collected at Morud (10-7-58) and at Årslev (in yellow Moericke-tray, 27-7-56). On Sealand collected at Ørslev (in yellow tray, July 1956).

As a pest to raspberries it is only of minor importance in Denmark.

164. *Aphis intybi* Koch, 1855.

*Pergandeida* (*Doralida*) *intybi*: Börner 1952, p. 83, no. 254.

**Distribution**: Europe, Israel. It is known from Sweden.

**Occurrence in Denmark**: Collected (coll.) or only observed on *Cichorium intybus* on Funen east of Fåborg (13-7-57), on Tåsinge east of Bjerreby (3-7-57, coll.), on Langeland at Rudkøbing (5-7-57, coll.), on Strynø (7-7-57), on Ærø (8-7-57), on Avernakø (11-7-57), and on Lolland at Sandby near Harpelunde (22-6-60).

165. *Aphis lambersi* (Börner, 1940).

*Doralina lambersi*: Börner, 1940, p. 3.

*Toxopteryna* (*Tuberculaphis*) *lambersi*: Börner 1952, p. 92, no. 311.

*Aphis lambersi*: Stroyan 1955, p. 314.

**Distribution**: Germany, Switzerland, England, Poland, U.S.S.R., Hungary, and Denmark.

**Occurrence in Denmark**: Collected on *Daucus carota* in Jutland at Funder (12-7-60, apt., juv.); on Avernakø (11-7-57, apt., juv.); on Samsø north of Ballen (10-8-58, apt., juv.) and at Permelille (12-8-58, apt., juv.). The aphids are found on lower parts of stems and leaf sheaths and the upper part of the root.

166. *Aphis leontodontis* (Börner, 1950).

*Doralina leontodontis*: Börner, 1950, p. 7.

Toxopterina (*Tuberculaphis*) *leontodontis*: Börner 1952, p. 93, no. 324.

**Distribution:** Germany (Naumburg), Sweden (Uppsala), Poland, and Denmark.

**Occurrence in Denmark:** In Jutland collected on undersides of etiolated proximal parts of basal rosettes of *Leontodon autumnalis* in the coniferous plantation in the dunes at Blokhus (10-7-64, al., apt., juv.), attended by ants, who had covered the aphid colony with soil particles.

167. *Aphis mirifica* (Börner, 1950).

*Cerosipha mirifica*: Börner 1952, p. 87, no. 283.

*Aphis mirifica*: Stroyan 1957, p. 332.

**Distribution:** Germany, England, Poland, and Denmark.

**Occurrence in Denmark:** Collected on *Chamaenerium angustifolium* in Jutland at Brassø at Silkeborg (mainly on subterranean parts of the host, 12-7-60), in coniferous plantation at Fly south of Skive (on subterranean parts and undersides of curled leaves, 25-7-59), and at Blåbjerg at Henne (in the top of the plant, 1-7-58).

168. *Aphis nasturtii* Kaltenbach, 1843.

*Aphis solanina*: Theobald 1927, p. 166.

*Doralis rhamni*: Ossiannilsson 1943, p. 29.

*Aphidula nasturtii*: Börner 1952, p. 79, no. 226.

**Distribution:** Cosmopolitan. It is known from Finland, Sweden, and Norway. For further information, see Gleiss (1966).

**Occurrence in Denmark:** Common on potato (*Solanum tuberosum*) all over the country; observed 1948—52 by the writer on Amager, on Sealand (Glostrup, Tåstrup, Virum, Boeslunde, Skælskør), and on Lolland (several localities); in Jutland observed at Ø. Lyby in Salling (19-7-56) and Holstebro (1-7-59) and collected at Studsgård (9-8-56, 9-7-59).

As a pest to potato it is mentioned by Rostrup (*Vort Landbrugs Skadedyr*, from the 4th edition, 1928) and Bovien & Thomsen (1945).

According to Börner the primary host is *Rhamnus* (*cathartica*, *alnifolia*) and the secondary hosts are *Nasturtium*, *Veronica*, *Solanum*, and several other plants belonging in several families.

169. *Aphis origani* Pass., 1860.

*Cerosipha origani*: Börner 1952, p. 86, no. 271.



*Aphis origani*: Stroyan 1957, p. 333.

**Distribution:** Europe.

**Occurrence in Denmark:** Henriksen (1944, no. 444, p. 155) mentions *Aphis nepetae* Kaltenbach from *Origanum vulgare* at Bøllesminde Hestehave on Lolland (22-7-1900, Sofie Rostrup leg.), referring to Ross & Hedicke no. 1670. According to Börner (1952, p. 86) *Aphis nepetae* occurs on *Nepeta* only, whereas the closely related *Aphis origani* lives on *Origanum*, and its gall corresponds with Ross & Hedicke no. 1670. Consequently this record must apply to *A. origani*. I have not seen the species myself.

170. *Aphis pilosellae* (Börner, 1952).

*Cerosipha hieracii* Börner, 1940, p. 4.

*Cerosipha pilosellae* Börner, 1952, p. 91, no. 306.

*Aphis pilosellae* Hille Ris Lambers, 1955, p. 236.

*Aphis pilosellae*: Stroyan 1957, p. 335.

**Distribution:** Germany, Austria, England, Netherlands, U.S.S.R., Poland, Sweden, and Denmark.

**Occurrence in Denmark:** In Jutland collected at Strandkjær at Femmøller on undersides of basal leaves of *Hieracium pilosella* (5-7-60, apt., juv.), attended by ants (Heie 1965).

171. *Aphis podagrariae* Schrk., 1801.

*Aphis (Doralis) podagrariae*: Börner 1952, p. 76, no. 201.

*Aphis podagrariae*: Stroyan 1955, p. 316.

**Distribution:** Europe. It is known from Sweden.

**Occurrence in Denmark:** Collected on Funen at Horne on *Aegopodium podagraria* (14-7-57, apt., juv.).

The leaflets of the infested plant were folded around the aphids. According to Börner the species is monoecious.

172. *Aphis pomi* Deg., 1773.

*Aphis pomi*: Theobald 1927, p. 133.

*Aphidula (Medoralis) pomi*: Börner 1952, p. 81, no. 231.

**Distribution:** Nearly all over the world. It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark:** In Jutland found on *Pyrus malus* at Aalborg (20-8-50), Hammer Bakker (24-7-67), Skive (17-6-56, 3-9-56, 17-6-59, 14-7-63), between Skive and Fly (13-5-59), and Lyngballe Forest near Århus (21-7-59), on *Crataegus*

monogyna at Hune in Vendsyssel (5-6-65), and on *Crataegus* sp. at Aalborg (2-8-62), Skive (13-9-58), and Lundø in Fjends (28-7-63). On Funen collected on *Crataegus oxyacantha* east of Bjerne near Fåborg (15-7-57). On other islands found on *Crataegus oxyacantha* on Lyø (11-7-57), on *Crataegus* sp. on Læsø (7-8-57), on *Pyrus malus* at Brattingsborg on Samsø (10-8-58), and on an unknown bush belonging in Pomaceae at Nykøbing on Falster (15-8-58).

It is a well known pest to apple trees in all parts of Denmark, mentioned by several authors (Bovien & Thomsen 1945, Henriksen 1944; Danish name: Den grønne æblebladlus). It is a non-migrating species which according to Börner & Heinze (1957) lives on several genera within Pomaceae: *Crataegus*, *Mespilus*, *Sorbus*, *Pyrus*, *Cydonia*, *Cotoneaster*. It is attended by ants.

173. *Aphis proffti* (Börner, 1942).

*Doralina proffti* Börner, 1942, p. 261.

*Aphidula proffti*: Börner 1952, p. 80, no. 230.

**Distribution:** Austria, Germany, Sweden, Poland, Hungary, and Denmark.

**Occurrence in Denmark:** Collected on Lolland at Sophiehøj near Rødby on *Agrimonia* (15-8-58, 5 apt.).

174. *Aphis psammophila* Szelegiewicz, 1967.

*Aphis psammophila* Szelegiewicz, 1967, p. 555.

**Distribution:** Poland, Netherlands, Czecho-Slovakia (according to Szelegiewicz 1967), and Denmark.

**Occurrence in Denmark:** Collected on subterranean parts of *Campanula rotundifolia* at Strandkjær at Femmøller, the area of the Mols Laboratory, in Jutland (7-7-60, apt.). Attended by ants. This species, which recently has been described from Poland, has only been found on *Jasione montana* previously, and according to Szelegiewicz it does not migrate, but lays its eggs on the subterranean parts of its herbaceous host in the autumn.

The present material deviates from the type material of *A. psammophila* by having marginal tubercles not only on abdominal segments I and VII, but also on interjacent segments. I want to thank Dr. Szelegiewicz for sending me a paratype for comparison.

In my list of aphid species from the area of the Mols Laboratory it is recorded as *Aphis* sp. (Heie 1965, p. 1 and 8).

175. *Aphis ruborum* (Börner, 1931).

*Aphidula mordvilkiana* (Dobrowljansky, 1913): Börner 1952, p. 80, no. 228.

*Aphis ruborum*: Stroyan 1955, p. 317.

**Distribution**: Europe, Israel, Turkey. It is known from Sweden (Öland).

**Occurrence in Denmark**: Collected on *Rubus fruticosus* (bramble) in Jutland at Strandkjær at Femmøller (4-8-59) and on Funen near Fåborg (13-7-57).

176. *Aphis rumicis* Linné, 1758.

*Aphis* (*Doralis*) *rumicis*: Börner 1952, p. 77, no. 214.

**Distribution**: Europe, Asia. It is known from Sweden and Norway.

**Occurrence in Denmark**: In Jutland collected on *Rumex* at Kjellerup (1-8-59), Strandkjær at Femmøller (6-7-60), Lønstrup in Vendsyssel (24-7-60), St. Vildmose (19-6-63), Krabbesholm Forest at Skive (11-6-63), and Skive (4-7-63, 16-7-63).

The aphids mainly occur on the undersides of leaves rolled inwards along the mid rib. The species is monoecious on *Rumex* spp., especially *R. obtusifolius*.

177. *Aphis sambuci* Linné, 1758.

*Aphis sambuci*: Theobald 1927, p. 95.

*Aphis sambuci*: Börner 1952, p. 73, no. 192.

*Aphis sambuci*: Iglisch 1966.

**Distribution**: Holarctic. It is known from Sweden and Finland.

**Occurrence in Denmark**: Very common. Collected (coll.) or only observed in Jutland on *Sambucus nigra* at Skive (2-9-56, coll.; 25-6-57, coll.; observed several times), Krabbesholm Forest at Skive (23-7-58), Glyngøre (10-7-59), Vodskov in Vendsyssel (29-7-64), Blokhus (15-6-65), Legind Bjerger on Mors (3-6-59), Højris on Mors (10-7-60), Tvede near Randers Fjord (13-7-59), Juelsminde (28-6-59), Studsgård (9-7-59), and Bryrup (10-7-58), on *Melandrium rubrum* in Krabbesholm Forest (8-7-59, coll.), on *Melandrium album* at Brunshåb near Viborg (12-7-59, coll.), on *Rumex* sp. at Sdr. Lem Vig near Skive (28-8-60, coll.), and in yellow Moericke-trays at Tylstrup, Borris, and Jynde vad (July and August, 1956); on Funen on *Sambucus nigra* at Svendborg (3-7-57), Fåborg (10-7-57), and Diernæs (12-7-57), and in yellow

tray at Årslev (20-7-56, 17-8-56, coll.); on Sealand on *Sambucus nigra* at Ringsted (13-10-57, coll.), Ålsgårde (16-6-18, M. Thomsen coll.), and Holte (16-8-58), on *Poa annua* (incidentally, it is not a true host) at Lyngby (24-6-61, coll.), in yellow Moericke-tray at Ørslev (from 22-6-56 to 10-8-56, coll.), flying in the air at Holte (30-6-59, J. Jørgensen coll.), and on *Dianthus* sp. in Copenhagen (August, 1928, unknown collector); on other islands on *Sambucus nigra* at Onsbjerg on Samsø (10-8-58, coll.), Tranebjerg on Samsø (10-8-58), Tullebølle on Langeland (6-7-57), Marstal on Ærø (10-7-57), on Avernakø (11-7-57), and on Lyø (11-7-57).

The species is mentioned from *Sambucus nigra* by Bovien & Thomsen (1945, 1950) and Heie (1967). The Danish name is: Hyldebladlus (hyldehus).

Large colonies occur on *Sambucus* in June, July, and August, often visited by ants. Oviparous females have been collected in October (at Ringsted). I have never found males, eggs, or fundatrices. In July and August viviparous females (apterae and alatae) were collected from secondary hosts belonging to the plant families Caryophyllaceae (*Dianthus*, *Melandrium*) and Polygonaceae (*Rumex*), partly underground, partly close above soil level.

It is still unknown how it hibernates in Denmark. In the beginning of June so large numbers of *Aphis sambuci* have been observed on basal shoots growing from soil level that it may be assumed that overwintering of parthenogenetic, viviparous females in mild winters may take place on subterranean parts of *Sambucus* like in England (Jacob 1949). In England it can overwinter on *Sambucus* as eggs and as viviparae and on secondary hosts as viviparae.

The biology has recently been thoroughly studied in Germany near Berlin by Iglisch (1966). Here the aphids leave *Sambucus* in July and migrate to *Rumex* and Caryophyllaceae, from which gynoparae and males return to *Sambucus* in autumn. Oviparae can, but males cannot — according to Iglisch — arise from mothers bred on *Sambucus*, so consequently the host alternation is obligate.

178. *Aphis schneideri* (Börner, 1940).

*Doralina schneideri* Börner, 1940, p. 3.

*Apidula schneideri*: Börner 1952, p. 79, no. 221.

*Aphis schneideri*: Stroyan 1955, p. 318.

**Distribution:** Europe, Turkey. It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark:** Collected in Jutland at Hornum on *Ribes nigrum* (25-6-59), on Funen at Fåborg on *Ribes nigrum* (16-7-56, 6-7-58) and *R. rubrum* (6-7-58), and on Sealand at Hørsholm on *Ribes rubrum* (6-8-64, J. Reitzel coll.).

179. *Aphis sedi* Kaltenbach, 1843.

*Aphis sedi*: Theobald 1927, p. 127.

*Cerosipha sedi*: Börner 1952, p. 88, no. 284.

**Distribution:** Europe, North America, perhaps also Australia (Eastop 1966). It is known from Sweden, Norway, and Finland.

**Occurrence in Denmark:** In Jutland collected on *Sedum telephium* in Krabbesholm Forest at Skive (28-9-58, ovip., apt., juv.), at Fly south of Skive (21-9-67, ovip., apterous male), and at Ebeltoft (6-8-59, apt., juv.), on *Sedum spurium* at Sjørrind in Thy (July 1957, apt.), and on cultivated *Sedum* sp. at Ø. Lyby in Salling (19-7-56, al., apt.). On Sealand collected on *Sedum telephium* at Ålsgårde (9-8-17, al., M. Thomsen coll.).

180. *Aphis subnitida* (Börner, 1940).

*Doralina subnitida* Börner, 1940, p. 3.

*Toxopterina* (*Tuberculaphis*) *subnitida*: Börner 1952, p. 92, no. 313.

**Distribution:** Austria, Poland, U.S.S.R., Finland, Sweden, and Denmark.

**Occurrence in Denmark:** Collected on Langeland at Ristinge Klint on *Pimpinella saxifraga* (6-7-57, apt., juv.). A colony was found on the stem, attended by ants,

181. *Aphis tormentillae* Pass., 1879.

*Aphis tormentillae*: Theobald 1927, p. 190.

*Cerosipha tormentillae*: Börner 1952, p. 90, no. 293.

**Distribution:** Italy, England, Scotland, Germany, U.S.S.R., Poland, Hungary, Sweden, Finland, and Denmark.

**Occurrence in Denmark:** In Jutland collected on *Potentilla erecta* on Rømø (3-7-58). On Sealand collected on *Comarum palustre* at Luknam at Furesø (16-8-58).

182. *Aphis triglochinis* Theobald, 1926.

*Aphis triglochinis*: Theobald 1927, p. 195.

*Aphidula triglochinis*: Börner 1952, p. 80 (*Medoralis* (*Leucosiphon*) tr.), p. 265, no. 226a.

**Distribution**: England, Germany, Sweden, Netherlands, Poland, and Denmark.

**Occurrence in Denmark**: Collected in Jutland at Skive on *Ribes nigrum* (9-6-57, apt., juv.) and at Mellerup at Randers Fjord on *Triglochis maritima* (13-7-59, apt., juv.).

According to Hille Ris Lambers & Dicker (1965) the primary host is *Ribes* (*rubrum* and *nigrum*) and the secondary hosts are *Triglochis maritima*, *Rorippa silvestris*, *Barbarea vulgaris*, *B. stricta*, *Myosotis palustris*, *Anemone coronaria* a.o.

183. *Aphis ulmariae* Schrk., 1801.

*Aphidula ulmariae*: Börner 1952, p. 80, no. 229.

**Distribution**: Europe. It is known from Sweden and Finland.

**Occurrence in Denmark**: In Jutland collected on *Filipendula ulmaria* at Skive (2-9-56, apt.) and at Tranum (16-8-63, apt., juv.). Visited by ants.

The leaves of the host plant are strongly curled. This deformity is mentioned by Henriksen (1944, p. 114) as caused by aphids which probably belong with this species: "*Aphidae* spp. (an *Macrosiphum ulmariae* Schrk.?)" The generic name in the parenthesis is due to confusion between *Aphis ulmariae* Schrk. and *Macrosiphum cholodkovskyi* Mordv. which lives on the same host, but never causes leaf-curling. Henriksen recorded the leaf-curling from Tisvilde on Sealand and Sæbygårdsskov in Jutland (Sofie Rostrup obs.).

184. *Aphis urticata* Fabr., 1781.

*Aphis urticaria* Kaltenbach, 1843: Theobald 1927, p. 176.

*Aphidula urticata*: Börner 1952, p. 78, no. 219.

**Distribution**: Europe, Middle East. It is known from Sweden, Finland, and Norway.

**Occurrence in Denmark**: Collected (coll.) or only observed on *Urtica dioica* in Jutland at Sødal near Viborg (16-6-57, coll.), Dølby at Skive (19-7-57), and — by sweeping — at Strandkjær at Femmøller (7-8-59, coll.); on Funen at Hylkedam (6-7-58); on other islands on Turo (2-7-57).)

185. *Aphis vaccinii* (Börner, 1940).

*Doralis vaccinii* Börner, 1940, p. 2.

*Aphis* (*Doralis*) *vaccinii*: Börner 1952, p. 75, no. 197.

**Distribution:** Germany, Netherlands, Austria, Switzerland, Poland, U.S.S.R., Sweden, England, Finland, and Denmark.

**Occurrence in Denmark:** Collected on *Vaccinium uliginosum* in Jutland at Madum Lake in Himmerland (3-9-58), St. Vildmose (19-6-63), and Blokhús (4-8-63, 30-7-64). An alate male was found on August 4, and an oviparous female was found on September 3, both times together with viviparous females. According to Börner the species does not migrate.

186. *Aphis vandergooti* (Börner, 1939).

*Aphis plantaginis* (pro Schrk., 1801): Theobald 1927, p. 129.

*Toxopterina vandergooti*: Börner 1952, p. 93, no. 325.

**Distribution:** Europe. It is known from Sweden and Finland.

**Occurrence in Denmark:** Very common on subterranean parts of *Achillea millefolium* and other composites. In Jutland collected (coll.) or only observed on *Achillea millefolium* at Hirtshals (26-7-60, coll.; 27-7-64), Blokhús (19-7-60, coll.), V. Hjermitsev (2-8-60), south of Hjørring (10-8-60), Brønderslev (2-8-60), Brovst (22-7-60), Haverslev in Han Herred (22-7-60), Skive (23-7-58, coll.; 4-8-58; 28-8-58), Krabbesholm Forest at Skive (28-8-58), Resen at Skive (18-7-57, coll.), Haderup (13-7-60), Brunshåb near Viborg (12-7-59), Studsgård (13-7-60), Strandkjær at Femmøller (5-7-60, coll.), Henne (1-7-58, coll.), Ribe (2-7-58, coll.), and Arrild near Løgumkloster (5-7-58, coll.), on *Matricaria chamomilla* at Resen at Skive (18-7-57, coll., 1 apt.), on *Tussilago farfara* at Skive (30-7-58, coll.), and — probably incidentally — on *Potentilla argentea* on Rømø (3-7-58, coll., only 1 al.). On Funen on *Achillea millefolium* at Udby (6-7-58, coll.) and Avnslev north of Nyborg (9-7-58). On Sealand on *Achillea millefolium* at Holte (16-8-58, coll.) and Fakse (15-8-58). On other islands on *Achillea millefolium* at Frejlev on Lolland (15-8-58, coll.) and at Onsbjerg on Samsø (9-8-58, coll.).

187. *Aphis viburni* Scop., 1763.

*Aphis* (*Doralis*) *viburni*: Börner 1952, p. 76, no. 202.

**Distribution:** Europe. It is known from Sweden.

**Occurrence in Denmark:** Collected on *Viburnum*

opulus in Jutland at Skive (4-5-59 (fundatrix), 30-6-57, 31-8-58), Studsgård (13-7-60), Rebild (4-9-58), and Vorså in Vendsyssel (6-8-62); on Sealand at Lyngby (17-10-60, parasitized specimens, incorrectly recorded as *Ceruraphis eriophori* in the 5th part of the list, no. 138); on the island of Lyø south of Funen (1-7-58, P. Overby coll.). Colonies can be found on Viburnum from spring till autumn.

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(continued from Entom. Medd. 35, 1967, p. 141)

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