

A List of Danish Aphids.

5: From *Brachycolus* Buckton to *Cryptosiphum* Buckton.

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Genus **BRACHYCOLUS** Buckton, 1879.

106. *Brachycolus cerastii* (Kaltenbach, 1846).

Brachycolus cerastii Börner, 1952, p. 108, no. 386.

Distribution: Germany, Sweden, France, England, and Denmark.

Occurrence in Denmark: The gall on *Cerastium* has been found on Sealand at Bodal Mose, on Lolland at Steensgaard, and on Langeland at Tranekjær (Rostrup 1897; Henriksen 1944, p. 99, syn. *Aphis cerastii* Kalt., referring to Ross & Hedicke: Die Pflanzengallen Nord- und Mitteleuropas, Jena 1927, no. 668). Neither the aphids nor the galls have been seen by myself.

The species lives on *Cerastium* from spring till autumn.

107. *Brachycolus stellariae* (Hardy, 1850).

Brachycolus stellariae Börner, 1952, p. 108, no. 385.

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

Occurrence in Denmark: Collected on *Stellaria holostea* in Jutland at Krabbesholm Forest at Skive (24-6-58), Mørk Sø south of Skive (18-9-58, oviparae), Buderupholm (19-6-58), Femmøller (4-8-59), and Kås in Salling (13-9-63, ovip. and apt. ♂). Rostrup (1897) recorded it as rather common in Denmark. Henriksen (1944) mentions finds of galls of *Brachycolus stellariae* on *Stellaria holostea* from Sealand (Holte), Langeland (Vestre Stiktehave), and Jutland (Sæbygaardsskov).

Genus **HOLCAPHIS** Hille Ris Lambers, 1939.108. *Holcaphis frequens* (Walker, 1848).

Brachycolus frequens Börner, 1952, p. 108, no. 390.

Distribution: Europe, perhaps also North America (if *Aphis tritici* Gill. is a synonym as supposed by Börner). It is known from Sweden and Finland.

Occurrence in Denmark: On Sealand collected on *Agropyrum repens* at Lyngby (15-7-62). In Jutland collected on *Agropyrum repens* at Ellidshøj in Himmerland (27-6-59), on grass at Harboøre (25-7-57), on grass at Nørhalne in Vendsyssel (21-7-64), and in a yellow tray at Rønhave on Als (21-6-57).

109. *Holcaphis holci* Hille Ris Lambers, 1939.

Brachycolus holci Börner, 1952, p. 108, no. 387.

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

Occurrence in Denmark: Collected on grass in Jutland at Skals (26-6-57), Vodskov near Nørresundby (18-8-62), and Skive (6-7-63). *Holcus* is the only host.

Genus **HAYHURSTIA** Del Guerc., 1917.110. *Hayhurstia atriplicis* (L., 1767).

Hayhurstia atriplicis Börner, 1952, p. 109, no. 396.

Distribution: Europe, Asia, North America. It is known from Sweden and Finland.

Occurrence in Denmark: Common all over the country. Collected or observed by the writer on the following hosts and localities:

Jutland: On *Chenopodium album* at Tylstrup (11-8-56), V. Hjermitstlev (2-8-60), Hirtshals (26-7-60, 27-7-64), Blokhus (June 60, 18-8-63), St. Vildmose (3-8-60), Roslev (29-6-60), Skive (1-9-57, 17-7-59), Studsgård (13-7-60), Femmøller (3-8-59), and Fuglsø (14-9-62), and on *Atriplex litoralis* at Femmøller (6-7-60), Hirtshals (26-7-60), and Trend (9-6-66).

The Danish islands: On *Chenopodium album* on Læsø (6-8-57), at Dyreborg on Funen (15-7-57), and at Lillebrænde on Falster (16-8-57), on *Atriplex litoralis* on Strynø (7-7-57), Ærø (9-7-57), Avernakø (11-7-57), at Bøjden on Funen (14-7-57), at Kerteminde on Funen (7-7-58), and at Ballen on Samsø (10-8-58), and on

Atriplex hastata on Strynø (7-7-57), at Kerteminde (7-7-58) and Nyborg on Funen (9-7-58), and at Onsbjerg on Samsø (12-8-58).

In 1956 it was among the most numerous aphid species in yellow Moericke-trays at Ørslev on Sealand, Årslev on Funen, and Tylstrup, Borris, and Jyndevad in Jutland from June till September (Heie 1960 b).

The galls on *Chenopodium glaucum*, *Ch. album*, *Atriplex patula*, *A. hastata*, *A. litoralis*, and *A. sp.* are recorded by Henriksen (1944, p. 97—98) from Jutland (Sæby, Aalborg, Viborg), Fanø, Sealand (Ordrup, Tisvilde, Vemmetofte), Amager, and Bornholm (Gudhjem).

The species feeds on *Chenopodium* or *Atriplex* from spring till autumn, causing thickening and fading of the leaves, whose margins fold upwards along the mid rib into a pod-like shape, so the powdered aphids are completely concealed.

111. *Hayhurstia cucubali* (Pass., 1863).

Hayhurstia cadiva (Walker) Börner 1952, p. 109, no. 397.

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

Occurrence in Denmark: Henriksen (1944, p. 100) records the gall of *Aphis cucubali* Pass. on *Silene vulgaris* (= *S. inflata* = *S. cucubalus*) and *S. nutans* from Bornholm (Rønne, Nylarsker) and Sealand (Fårevejle, Nykøbing, Sejro, Slagelse, Alindemagle). It has not been seen by the writer.

Genus **BREVICORYNE** v. d. Goot, 1915.

112. *Brevicoryne brassicae* (L., 1758).

Brevicoryne brassicae Börner, 1952, p. 110, no. 400.

Distribution: All parts of the world. It is known from Iceland, Sweden, Norway, and Finland.

Occurrence in Denmark: Common all over the country. Collected or observed on Sealand on *Brassica* in Copenhagen (17-8-17, M. Thomsen leg.) and in yellow Moericke-tray at Ørslev (1956), on Funen in a tray at Årslev (1956), in Jutland on cultivated *Brassica oleracea* at Skive (7-9-58, 19-9-58), Ø. Lyby, Salling (29-7-59), and Kjellerup (31-7-59), on *B. napus rapifera* (swedes) at Handbjerg near Struer (16-7-59), Hune in Vendsyssel (23-7-59), Vile and Åsted in Salling (26-7-59), Dalgas Plantation

(27-7-59), Ørum near Viborg (3-8-59), Aggersund (27-7-59), Rantum (27-7-59), and Rye near Silkeborg (21-7-59), on *Brassica* spp. at Femmøller, Mols (3-8-59) and Rønhave, Als (27-7-56), on *Raphanus raphanistrum* at Femmøller (6-7-60), on *Cakile maritima* at Ebeltoft (15-9-62, only 1 alate ♂), and in yellow trays at Borris (24-8-56) and Jyndevad (from July to September, 1956).

It is a well-known pest to kale, cauliflower, white and red cabbage, swedes, and other crucifers and may also occur on *Tropaeolum* and some other plants. Several Danish publications treat this species: Rostrup 1897, 1900; Thomsen & Bovien 1933; Stapel & Bovien 1943; Gram & Bovien 1944; Henriksen 1944; Heie 1961 b; several publications from the Danish State Experimental Station for Plant Diseases and Pests. The Danish name is "kålbladlus" or "kållus". Severe attacks on swedes occurred in 1921, 1934, 1948, and 1959.

Genus **LIPAPHIS** Mordv., 1928.

113. *Lipaphis erysimi* (Kaltenbach, 1843).

Lipaphis erysimi Börner, 1952, p. 110, no. 403.

Distribution: Nearly all over the world (syn. *Rhopalosiphum pseudobrassicae* Dav.). It is known from Sweden and Finland.

Occurrence in Denmark: On Sealand collected on *Sinapis alba* at Lyngby (6-8-42). In Jutland collected on *Sisymbrium officinale* at Ribe (2-7-58), Lundø near Skive (7-7-59), and Hune in Vendsyssel (7-8-63), on *Capsella bursa-pastoris* at Ellidshøj (27-6-59), Hirtshals (26-7-60), and Lundø (7-7-59), on *Thlaspi arvense* at Ø. Lyby in Salling (29-7-59), on *Brassica napus rapifera* (swedes) at Aså (8-7-59), Hune (23-7-59), Åsted in Salling (26-7-59), Ø. Lyby (29-7-59), Handbjerg near Struer (16-7-59), and Låsby (21-7-59), and on *Brassica oleracea* at Ø. Lyby (29-7-59); furthermore it has been observed on *Capsella bursa-pastoris* at Vodskov (18-8-62) and Glyngøre (10-7-59), on *Sisymbrium officinale* at Glyngøre (10-7-59), and on *Brassica napus rapifera* at Dalgas Plantation between Skive and Viborg (27-7-59), Dølby in Salling (29-7-59), and Rye near Silkeborg (21-7-59). Its occurrence in Denmark, especially on swedes, has been treated in an earlier paper (Heie 1961 b), where also the possible synonymy with *Rhopalosiphum pseudobrassicae* Dav. is discussed. On swedes its

feeding may cause purple-colouring of the inner leaves. It seems to be common in some years, for instance in 1959.

In 1956 it was caught in Moericke-trays, several specimens at Ørslev on Sealand, a few at Årslev on Funen, and Tylstrup, Borris, and Jyndeved in Jutland (Heie 1960 b).

114. *Lipaphis rossi* Börner, 1939.

Lipaphis (Smiela) *rossi* Börner, 1952, p. 111, no. 407.

Distribution: Germany, Sweden, and Denmark.

Occurrence in Denmark: Recorded as "Aphidae sp." from *Arabis hirsuta* at Jonstrup on Sealand (30-6-1896, Hj. Jensen) in Henriksen (1944, p. 103). This aphid must be identical with *L. rossi*, as Henriksen gives a reference to Ross & Hedicke: Die Pflanzengallen Nord- und Mitteleuropas (Jena 1927), no. 259, which according to Börner (1952) refers to *Lipaphis rossi* Börner. It has not been seen by the writer.

115. *Lipaphis turritella* (Wahlgren, 1938).

Lipaphis (Smiela) *turritella* Börner, 1952, p. 111, no. 408.

Distribution: Sweden, Germany, Austria, Czecho-Slovakia, Finland, and Denmark.

Occurrence in Denmark: Recorded as "Aphidae sp." from *Turritis glabra* at Folehaveskov (July, 1855, E. Rostrup) and Holstensborg (19-6-1892, S. Rostrup), both on Sealand, by Rostrup (1897) and Henriksen (1944, p. 103). This aphid must be identical with *L. turritella*, as Henriksen gives a reference to Ross & Hedicke (1927), no. 2834, which according to Börner (1952) refers to *Lipaphis turritella* Wahlgr. It has not been seen by the writer.

Genus **SEMIAPHIS** v. d. Goot, 1913.

116. *Semiaphis dauci* (Fabr., 1775).

Semiaphis dauci Börner, 1952, p. 112, no. 411.

Distribution: Germany, Poland, and Denmark.

Occurrence in Denmark: Found on *Daucus carota* at Lyngby on Sealand (30-7-58, J. Jørgensen coll.).

117. *Semiaphis pimpinellae* (Kalt., 1843).

Semiaphis pimpinellae Börner, 1952, p. 112, no. 413.

Distribution: Europe.

Occurrence in Denmark: Recorded from *Pimpinella*

saxifraga on Sealand at Tisvilde (9-8-1894, 2-5-1895) and in Jutland at Sæby by Rostrup (1897). The record from Tisvilde is mentioned again by Henriksen (1944, p. 145—146). Both authors use the name *Aphis anthrisci* Kalt., but *Semiaphis anthrisci* lives on *Torilis* only. I believe that it really is *S. pimpinellae*, because the gall, which is described as a curling of the leaflets from the side, is identified with no. 1775 in Ross & Hedicke (1927), which according to Börner (1952) is caused by this species.

Genus **HYADAPHIS** Kirk., 1904.

118. *Hyadaphis foeniculi* (Pass., 1860).

Hyadaphis mellifera (Hottes) Börner, 1952, p. 113, no. 419.

Hyadaphis passerinii (Del Guerc.) Börner, 1952, p. 114, no. 420.

Distribution: Europe, Asia, North America, and Australia. It is known from Sweden and Finland.

Occurrence in Denmark: On Funen collected on *Lonicera periclymenum* at Bovense near Nyborg (9-7-58). In Jutland collected on *Lonicera* sp. at Skive (22-9-62, 7-6-63, 4-7-63, 14-7-63), on *Anthriscus silvestris* in Krabbesholm Forest at Skive (25-7-58), on *Pimpinella saxifraga* at Femmøller, Mols (8-9-60) and Jetsmark in Vendsyssel (26-7-64), and on *Daucus carota* at Kalø (29-8-62).

Hyadaphis xylostei Schrk. in Henriksen (1944, p. 108—109) recorded from *Lonicera periclymenum* and *L. xylosteum* from several localities on Bornholm, Sealand, Lolland, Langeland, Funen, and in Jutland is probably the same species.

The species migrates from *Lonicera* to *Umbelliferae*.

Genus **HYDAPHIAS** Börner, 1930.

119. *Hydaphias hofmanni* Börner, 1950.

Hydaphias hofmanni Börner, 1952, p. 114, no. 422.

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

Occurrence in Denmark: Recorded as *Aphis bicolor*, which is a synonym, from *Galium verum* at Rønne and Helligdommen on Bornholm (Bayer) and Tisvilde (2-6-1895, S. Rostrup) and Vemmetofte (1897, R. H. Stamm) on Sealand by Henriksen (1944, p. 165—166), with reference to no. 1141 in Ross & Hedicke (1927), and from Sæby in Jutland by Rostrup (1897). It has not been seen in Denmark by the writer.

Genus **BRACHYCAUDUS** v. d. Goot, 1913.120. *Brachycaudus cardui* (L., 1758).

Brachycaudus cardui Börner, 1952, p. 104, no. 374.

Distribution: Europe, Asia, and North America. It is known from Sweden, Finland, and Norway.

Occurrence in Denmark: Found in all parts of the country, rather common. On Sealand collected on *Prunus fructicans* in Copenhagen (6-6-52), *P. cerasifera* in Copenhagen (3-5-53, Børge Petersen coll., Hille Ris Lambers det.), *Cirsium palustre* in Malmlose at Holte (3-7-50, 16-8-58), *Senecio vulgaris* and — accidentally — *Fragaria* (only one alata) at Lyngby (3-7-58); indoors collected on *Echium candicans* and observed on *Echium bifrons* in the Botanical Garden in Copenhagen (16-4-59); furthermore caught in a Moericke-tray at Ørslev (27-7-56). On Funen collected on *Arctium* at Fåborg (13-7-57) and at Årup (6-7-58) and observed on *Matricaria* at Nyborg (9-7-58). On other islands collected on *Matricaria inodora* at Vindeby on Tåsinge (3-7-57), on *Myosotis* on Turø (4-7-57), on *Arctium*, *Carduus crispus*, and *Matricaria inodora* at Rudkøbing on Langeland (5-7-57, 6-7-57), on *Cirsium vulgare* on Ærø (8-7-57), and on *Anchusa officinalis* north of Ballen on Samsø (10-8-58). In Jutland collected on *Senecio vulgaris* at Hirtshals (26-7-60), on *Anchusa officinalis* at Ellidshøj (27-6-59), on *Cirsium palustre* at Skive (1-9-56), on *Anthemis arvensis* at Femmøller, Mols (3-8-59), and on *Cirsium vulgare* on Rømø (5-7-58).

Its occurrence on plum trees is mentioned by Bovien & Thomsen (1945). It migrates from *Prunus* spp. to several herbs, chiefly belonging in *Compositae* and *Boraginaceae*.

121. *Brachycaudus helichrysi* (Kaltenbach, 1843).

Brachycaudus helichrysi Börner, 1952, p. 106, no. 379.

Distribution: Europe, Asia, Africa, and Australia. It is known from Sweden, Norway, and Finland.

Occurrence in Denmark: Found in all parts of Denmark, common. On Sealand collected on *Artemisia maritima* at Dragør (19-10-57), and on *Trifolium pratense* at Hårlev (August 1932), Lyngby (29-6-59, July 1961, C. Stapel coll.), Tåstrup (16-9-59, C. Stapel coll.), Kollekolle (10-9-59, C. S. coll.), near Hillerød (26-7-61, C. S. coll.), and Ringsted (18-9-62, C. S. coll.), and indoors on *Chrysanthemum* in Copenhagen (16-2-51); on Sealand

the species has furthermore been observed at Holte, Næstved, and Vordingborg. On Funen collected on *Myosotis arvensis* and *Achillea millefolium* at Svanninge Bakker (12-7-57), on *Matricaria inodora* near Fåborg (13-7-57), and on *Matricaria matricarioides* at Nyborg (8-7-58). On Bornholm collected on *Trifolium pratense* at V. Marie (13-7-63, C. Stapel coll.). On other islands collected on *Veronica* sp. at Arninge on Lolland (16-8-57), on *Matricaria inodora* and *Prunus spinosa* on Turø (2-7-57, 4-7-57), on *Tanacetum vulgare* on Strynø (7-7-57), on *Anchusa officinalis* at Hårdmark on Samsø (12-8-58), on *Tanacetum vulgare* at Langør on Samsø (13-8-58), and indoors on *Cineraria* at Sdr. Alslev on Falster (6-4-55, Børge Petersen coll.); it has furthermore been observed on Tåsinge, Ærø, Avernakø, and Lyø. In Jutland collected on *Prunus spinosa* at Højris on Mors (10-7-60), on *Achillea millefolium* at Resen near Skive (18-7-57), and at Rimmer Strand near Lemvig (25-7-57), on *Myosotis* sp. at Resen near Skive (18-7-57) and in Skive (27-7-57), on *Veronica* sp. at Dølby near Skive (19-7-57), on *Veronica agrestis* at Lemvig (4-7-59), on *Senecio vulgaris* at Rønbjerg near Skive (22-7-57), on *Fur* (22-8-57), and at Hirtshals (26-7-60), on *Gnaphalium silvaticum* at Harboøre (25-7-57), on *Symphytum* at Skive (27-7-57) and at Studsgård (9-7-59), on *Stellaria media* west of Skive (28-9-57), on *Matricaria maritima* at Bovbjerg (8-10-57) and on *M. inodora* at Hirtshals (26-7-60) and at Vodskov (18-8-62), on *Bidens* at Nr. Vinge at Tjele Langsø (13-7-59), on *Glaux maritima* (only a single alata; this is not a host) and *Aster tripolium* at Mellerup (13-7-59), on *Trifolium pratense* in Thy (17-8-59), at Demstrup near Kjellerup (2-9-59), at Skanderborg (3-9-59), at Ørslevkloster (13-9-59), *Tastum* near Skive (26-9-59), *Fovslet* near Kolding (29-9-59, Ruby coll.), *Simmelkjær* (1-10-59), Skive (23-6-60), and Balle near Silkeborg (12-7-60); the species has been observed on various hosts at several other localities in Jutland: Hvidsten, Strandkjær at Femmøller, Ejer Bavnehøj, Herrup at Hagebro, Vinderup, Handbjerg, Sundsøre, and Oddense in Salling; indoors in Jutland collected on *Chrysanthemum* at Vinde near Skive (10-1-57) and at Skive (12-1-57, 18-2-60).

This species has furthermore been caught in yellow *Moericke*-trays at Ørslev on Sealand, Årslev on Funen, Borris, Tylstrup, and Jyndevad in Jutland, and Rønhave on Als.

Its occurrence in Denmark has been known for many years.

It is mentioned as a pest to plum trees by Ferdinandsen & Rostrup (1921) and Bovien & Thomsen (1945) and as a pest to red clover by Bovien (1935, in "Månedsoversigter over Plantesygdomme (Statens plantepatologiske Forsøg)") and by Heie & Stapel (1964). It is also a pest to *Chrysanthemum*, *Cineraria*, and other ornamental plants in glass houses. It migrates from *Prunus* (*domestica*, *insititia*, *spinosa*) to various herbs, mostly composites. In hot-houses propagation can continue parthenogenetically on herbs all winter.

122. *Brachycaudus klugkisti* (Börner, 1942).

Brachycaudus klugkisti Börner, 1952, p. 103, no. 372.

Distribution: Germany, Austria, Poland, Belgium, England, Sweden, Finland, and Denmark.

Occurrence in Denmark: Collected on *Melandrium rubrum* in Jutland in Krabbesholm Forest at Skive (20-6-57, 20-5-59, 31-5-61), at Toftum Bjerger near Struer (24-6-57), and at Avnsbjerg (13-8-59). The species lives exclusively on *Melandrium rubrum*.

123. *Brachycaudus lychnidis* (L., 1758).

Brachycaudus lychnidis Börner, 1952, p. 103, no. 371.

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

Occurrence in Denmark: Collected on *Melandrium album* on Funen at Tybrind (30-5-57), in Jutland at Rindsholm near Viborg (16-7-56), Skive (4-8-58), St. Vildmose (3-8-60), Femmøller (4-7-60), and Fuglsø (14-9-62). It has furthermore been observed on Funen at Horne (14-7-57) and Dyreborg (15-7-57). The species lives exclusively on *Melandrium album*.

124. *Brachycaudus mimeurii* Remaudière, 1952.

Brachycaudus mimeurii Börner, 1952, p. 304, no. 373 e.

Distribution: France, Denmark.

Occurrence in Denmark: Collected on *Euphrasia officinalis* at Boderne on Bornholm (2-9-65, J. Reitzel leg., D. Hille Ris Lambers det.).

125. *Brachycaudus napelli* (Schrk., 1801).

Brachycaudina napelli Börner, 1952, p. 103, no. 370.

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

Occurrence in Denmark: On Sealand observed at Charlottenlund in the Copenhagen area (8-7-50) and collected at Roskilde (2-8-64, J. Reitzel leg.), both times on *Aconitum napellus*. These records have been published already by Reitzel (1965).

126. *Brachycaudus prunicola* (Kaltenbach, 1843).

Appelia tragopogonis (Kalt., 1843) Börner, 1952, p. 107, no. 382.

Appelia prunicola Börner, 1952, p. 107, no. 383.

Appelia schwartzi (Börner, 1931) Börner, 1952, p. 107, no. 384.

Brachycaudus prunicola s.lat. Thomas, 1962, p. 325 ff.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: *B. prunicola* s. str. collected on *Prunus spinosa* on Funen at Fåborg (12-7-57), Holckenhavn (8-7-58), and Hesselager (8-7-58). The aphids cause strong curling of the leaves.

B. prunicola subsp. *schwartzi* Börner collected on *Prunus persica* on Sealand in Copenhagen (22-10-52, Børge Petersen coll.) and indoors at Virum (5-4-50). The aphids cause curling of the leaves. *Anuraphis persicae* B.d.F., which is a synonym, is mentioned as a pest to peach trees by Bovien & Thomsen (1945).

B. prunicola subsp. *tragopogonis* Kalt. collected on *Tragopogon pratensis* on Funen at Horne (14-7-57) and east of Bjerne (14-7-57, only observed), on Turø (4-7-57), and in East Jutland at Kolding (5-7-58), Rude Strand near Odder (3-6-64), and Boller near Horsens (28-6-59, only observed).

127. *Brachycaudus spiraeae* (Oestl., 1887).

Brachycaudus spiraeae Börner, 1952, p. 105, no. 377.

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

Occurrence in Denmark: On Sealand collected on *Spiraea salicifolia* at Luknam, Holte (16-8-58). In Jutland collected on *Spiraea salicifolia* at Holstebro (1-7-59) and Fosdalen in Han Herred (5-8-63). The aphids cause narrow leaf rolls in which they live concealed. Possibly some galls on *Spiraea* mentioned by Henriksen (1944, p. 109) belong to this species, viz. no. 287: "*Macrosiphum ulmariae* Schr.? Jutland, Fanø. Dense gathering of leaves irregularly rolled towards the underside" and no. 288: "Aphidae sp. (an *Macrosiphum ulmariae* Schr.). Sealand, Ørholm; Jutland, Viborg. The leaves curled and rolled towards the

underside" (translated by the writer). The last-mentioned locality is already recorded by Rostrup (1897), who says that the leaves of *Spiraea salicifolia* are irregularly curled and folded. Neither *Macrosiphum cholodkovskyi* Mordv. nor *Aphis ulmariae* Schrk. does live on *Spiraea*. Both feed on *Ulmaria palustris*.

Genus **DYSAPHIS** Börner, 1931.

Subgenus **DYSAPHIS** s. str.

128. *Dysaphis apiifolia* (Theobald, 1923).

Yezabura kunzei Börner, 1952, part., p. 102, no. 367.

Yezabura inculta (Walk.) Börner, 1952, p. 103, no. 369.

Dysaphis apiifolia Stroyan, 1963, p. 38.

Distribution: Europe. It is not recorded from Sweden.

Occurrence in Denmark: Collected in Jutland at Studsgård (13-7-60) on *Apium graveolens* (celery), *Anethum graveolens* (dill), and *Petroselinum crispum*.

Attack of aphids on celery at Blangsted on Funen in July, 1927, is recorded by Gram, Jørgensen & Rostrup (1928, p. 806); the aphids were not determined, but probably belonged in this species, too. A sample of *Dysaphis apiifolia*, the label of which is left without locality, dated "1927?", which has been found in the collection of the State Experimental Station for Plant Diseases and Pests, perhaps derives from this attack.

The Danish material belongs to subspecies *petroselini* Börner sensu Stroyan. According to Stroyan it migrates from *Crataegus* to *Umbelliferae*.

129. *Dysaphis crataegi* (Kaltenbach, 1843).

Yezabura crataegi Börner, 1952, p. 102, no. 368.

Dysaphis crataegi Stroyan, 1963, p. 31.

Distribution: Europe, Israel, Central Asia, North America. It is known from Norway, Finland, and Sweden.

Occurrence in Denmark: Collected on *Daucus carota* on Sealand at Lyngby (27-6-58, 11-6-59, 15-7-60, 12-9-60) and in Jutland at Studsgård (13-7-60). It feeds on the root. Aphids on carrot roots mentioned by Bovien & Thomsen (1945) must be this species. Bovien (1939, in "Plantesygdomme i Danmark 1938", p. 40) reported that *Anuraphis tulipae* had been found on roots of carrots in the Århus area. This must also have been *Dysaphis crataegi*, as the related species *tulipae* does not live on *Daucus*.

The species migrates from *Crataegus* to *Daucus*.

130. *Dysaphis radicola* (Mordv., 1897).

Dysaphis radicola Börner, 1952, p. 99, no. 350 a.

Dysaphis radicola Stroyan, 1963, p. 14.

Distribution: U.S.S.R., Poland, England, France, Netherlands, Germany, Switzerland, and Denmark.

Occurrence in Denmark: Collected on Sealand at Islev in Copenhagen on *Rumex crispus* by J. Reitzel (5-7-64). The species lives all the year round on the roots of *Rumex*.

131. *Dysaphis ranunculi* (Kaltenbach, 1843).

Yezabura ranunculi Börner, 1952, p. 102, no. 365.

Dysaphis ranunculi Stroyan, 1963, p. 41.

Distribution: Germany, England, Belgium, Netherlands, Austria, Italy, U.S.S.R., Central Asia, Sweden, Finland, and Denmark.

Occurrence in Denmark: Trapped in a yellow Moe-ricke-tray on Sealand at Lyngby (14-6-58). Dr. V. F. Eastop, London, most kindly made the determination.

The species migrates from *Crataegus* to *Ranunculus*.

132. *Dysaphis tulipae* (B. d. Fonsc., 1841).

Yezabura tulipae Börner, 1952, p. 101, no. 360.

Dysaphis tulipae Stroyan, 1963, p. 43.

Distribution: Europe, Africa, North America, Australia, and New Zealand. It is known from Sweden (but only on tulip bulbs imported from the Netherlands).

Occurrence in Denmark: Collected on bulbs of *Tulipa* on Sealand at Roskilde (22-11-30; the State Experimental Station for Plant Diseases and Pests). The species is said to live all the year round on monocotyledoneous plants, e. g. *Tulipa*, *Gla-diolus*, *Lilium*, and *Iris*, without forming sexuales.

Subgenus **POMAPHIS** Börner, 1936.133. *Dysaphis (Pomaphis) plantaginea* (Pass., 1860).

Sappaphis mali (Ferrari) Börner, 1952, p. 98, no. 342.

Sappaphis plantaginea Stroyan, 1957, p. 24.

Distribution: Europe, Asia, North America. It is known from Sweden, Norway, and Finland.

Occurrence in Denmark: On Funen collected by sweeping at Glamsbjerg (6-7-58, 2 al.). On Langeland collected on *Pyrus malus* (apple) at Rudkøbing (5-7-57). In Jutland col-

lected on apple on Rømø (5-7-58), at Femmøller, Mols (6-7-60), Lemvig (4-7-59), and Estvad near Skive (17-6-59), and on *Plantago lanceolata* at Tulstrup near Silkeborg (21-7-59) and Brund near Horsens (28-6-59).

It is rather common in Denmark (Danish name: "Den røde æblebladlus") according to Henriksen (1944, syn. *Anuraphis sorbi* Kalt. partim), Bovien & Thomsen (1945, syn. *Dentatus malifolii*) and "Plantesygdomme i Danmark" (syn. *Yezabura malifolii*). It is a pest to apple, the leaves of which are curled. *Plantago* is the summer host.

134. *Dysaphis (Pomaphis) pyri* (B. d. Fonsc., 1841).

Sappaphis piri (Matsumura) Börner, 1952, p. 98, no. 344.

Sappaphis pyri Stroyan, 1957, p. 17.

Distribution: Europe and Asia. It is known from Sweden.

Occurrence in Denmark: Collected on *Sealand* on *Pyrus communis* (pear) at Lyngby (20-6-44; 6-8-64, J. Reitzel leg.). At the State Experimental Station for Plant Diseases and Pests, Lyngby, attacks on pear and migration from pear to *Galium aparine* have been observed according to Bovien (1950, p.41, syn. *Yezabura pyri*, Danish name: "Den røde pærebladlus").

135. *Dysaphis (Pomaphis) sorbi* (Kaltenbach, 1843).

Sappaphis sorbi Börner, 1952, p. 97, no. 338.

Sappaphis sorbi Stroyan, 1957, p. 29.

Dysaphis (Pomaphis) sorbi Stroyan, 1963, p. 54.

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

Occurrence in Denmark: A common species. Collected or observed on *Sorbus aucuparia* on *Sealand* at Bagsværd (15-4-59, coll.), on Funen at Hylkedam (28-5-57, coll.), on Læsø at Hventgård (7-8-57, coll.), and in Jutland at V. Hjermitsev (2-8-60, coll.), Hammer Bakker (29-7-64), Legind Bjerger on Mors (30-5-60, coll.), south of Skive (1-8-58, coll.), Flyndersø (21-5-59, coll.), Kjellerup (13-8-59), Madum Sø in Himmerland (9-6-58, coll., 2-9-58, coll., 13-9-60, coll., 18-5-61, 31-5-62), Hvalpsund (27-8-66), and Femmøller, Mols (7-8-59, coll., 6-7-60).

The typical leaf galls or nests are recorded by Rostrup (1897), who says that the aphid is common in Denmark, and by Henriksen (1944, p. 123). According to Stroyan (1957) a closed cycle on *Sorbus aucuparia* exists, though migration to *Campanula* and

Jasione may take place in summer. Gynoparae on Sorbus may come either from Sorbus or from Campanulaceae, but males apparently derive from Campanulaceae only. I have found the aphids only on Sorbus aucuparia, even as late as in the beginning of September. The leafnests are often, but not always, empty in the last part of the summer. Oviparous females were found on September 13, 1960, at Madum Lake on undersides of fresh, not deformed leaves.

Genus **ANURAPHIS** Del Guerc., 1907.

136. *Anuraphis farfarae* (Koch, 1854).

Anuraphis farfarae Börner, 1952, p. 99, no. 347.

Distribution: Eurasia and North America. It is known from Sweden and Finland.

Occurrence in Denmark: On Sealand collected on *Fragaria* (not a host) under a pear tree at Holte (24-10-58, ovip.) and caught in a Moericke-tray at Ørslev (June and July, 1956). On Funen caught in a Moericke-tray at Årslev (June and July, 1956). In Jutland collected on *Tussilago farfara* at Skive (30-7-58, 4-8-58). Pear is the winter host, where galls are produced in spring. In the summer the species lives on *Tussilago* below the surface of the soil.

137. *Anuraphis subterranea* (Walker, 1852).

Anuraphis subterranea Börner, 1952, p. 99, no. 348.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: In Jutland collected on *Pastinaca sativa* at Hammer Bakker in Vendsyssel (14-8-63). According to Börner it migrates from pear to *Pastinaca sativa* and *Heracleum sphondylium*.

Genus **CERUAPHIS** Börner, 1926.

138. *Ceruraphis eriophori* (Walker, 1848).

Ceruraphis eriophori Börner, 1952, p. 96, no. 335.

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

Occurrence in Denmark: On Sealand collected on *Viburnum opulus* at Lyngby (17-10-60), Sorgenfri (8-7-57, B. Petersen leg.), and Holte (17-10-57). On Falster collected on *Viburnum opulus* at Nr. Alslev (3-7-57, B. Petersen leg.). In Jut-

land caught in a Moericke-tray at Borris (28-9-56), by sweeping in a bog with *Eriophorum* at Femmøller, Mols (8-8-59), and on *Viburnum opulus* at Skive (20-4-59, 4-5-59, 16-5-59). The species migrates from *Viburnum* to monocotyledoneous plants (*Eriophorum*, *Carex*, and others). In the spring the leaves of *Viburnum* are strongly curled and sticky of honey-dew.

Genus **ACAUDINUM** Börner, 1930.

139. *Acaudinum scabiosae* Hille Ris Lambers, 1959.

Acaudinum centaureae (Koch) Börner, 1952, p. 95, no. 333.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Collected on *Centaurea scabiosa* on Avernakø south of Funen (11-7-57).

Genus **CRYPTOSIPHUM** Buckton, 1879.

140. *Cryptosiphum artemisiae* Buckton, 1879.

Cryptosiphum artemisiae Börner, 1952, p. 95, no. 331.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Rather common on *Artemisia vulgaris*, on the leaves of which it causes reddish galls. On Funen collected at Svanninge Bakker (12-7-57). In Jutland collected at Sundsøre (12-8-57), Skive (9-5-60), Dommerby near Skive (4-9-57), and Femmøller, Mols (3-8-59). Rostrup (1897) tells that the species (syn. *Aphis gallarum* Kalt.) is rather common on *Artemisia vulgaris* in Denmark. Henriksen (1944) gives records from several localities on Bornholm, Sealand, and Lolland.

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(continued from Entom. Medd. 32, 1964, p. 357)

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