

## A List of Danish Aphids.

4.: *Longicaudus* v. d. G., *Ericaphis* Börner, *Myzaphis* v. d. G.,  
*Myzus* Pass., *Tubaphis* H. R. L., *Phorodon* Pass.,  
*Ovatus* v. d. G., *Liosomaphis* Wlk., *Cavariella* Del Guerc.,  
and *Coloradoa* Wils.

By Ole Heie  
(Skive Seminarium, Skive)

This is a continuation of earlier papers published in Entomologiske Meddelelser (part 1: 1960, vol. 29: 193—211; part 2: 1961, vol. 31: 77—96; part 3: 1962, vol. 31: 205—224).

### List of the species

80. *Longicaudus trirhodus* (Walker, 1849).
81. *Ericaphis ericae* (Börner, 1933).
82. *E. latifrons* (Börner, 1942).
83. *Myzaphis rosarum* (Kaltenbach, 1843).
84. *Myzus cerasi* (Fabr., 1775).
85. *M. lythri* (Schrk., 1801).
86. *M. ornatus* Laing, 1932.
87. *M. (Nectarosiphon) ascalonicus* Doncaster, 1946.
88. *M. (N.) certus* (Walker, 1849).
89. *M. (N.) ligustri* (Mosley, 1841).
90. *M. (N.) persicae* (Sulzer, 1776).
91. *Tubaphis ranunculina* (Walker, 1852).
92. *Phorodon humuli* (Schrk., 1801).
93. *Ovatus crataegarius* (Walker, 1850).
94. *O. insitus* (Walker, 1849).
95. *Liosomaphis berberidis* (Kaltenbach, 1843).
96. *L. (Elatobium) abietina* (Walker, 1849).
97. *Cavariella aegopodii* (Scop., 1763).
98. *C. archangelicae* (Scop., 1763).
99. *C. pastinacae* (L., 1758).
100. *C. theobaldi* (Gill. & Bragg., 1918).
101. *Coloradoa achilleae* Hille Ris Lambers, 1939.
102. *C. artemisiae* (Del Guercio, 1913).
103. *C. tanacetina* (Walker, 1850).
104. *C. (Lidaja) heinzei* Börner, 1952.
105. *C. (L.) submissa* Doncaster, 1961.

Genus **LONGICAUDUS** van der Goot, 1913.

80. *Longicaudus trirhodus* (Walker, 1849).

*Longicaudus trirhodus* Börner, 1952, p. 118, no. 443.

*Longicaudus trirhodus* Börner & Heinze, 1957, p. 175.

*Longicaudus trirhodus* Heinze, 1960, p. 799, fig. 49.

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

Occurrence in Denmark: In Jutland collected from Rosa at Skive (19-5-59) and at Legind Bjerger on Mors (3-6-59), from Aquilegia at Skive (7-6-59), and from *Thalictrum aquilegifolium* and *Th. diptercarpum* at Studsgård (9-7-59).

This species has migration between Rosa (the winter host) and Aquilegia and *Thalictrum* (the summer hosts).

Genus **ERICAPHIS** Börner, 1939.

81. *Ericaphis ericae* (Börner, 1933).

*Ericaphis ericae* Börner, 1952, p. 118, no. 444.

*Ericaphis ericae* Börner & Heinze, 1957, p. 175.

*Ericaphis ericae* Heinze, 1960, p. 800, fig. 50.

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

Occurrence in Denmark: Collected from *Erica tetralix* on the island of Læsø, partly in the moor on the north coast (7-8-57), partly at Stoklund (9-8-57), and from *Erica tetralix* in Holmsland Klit (30-6-58).

82. *Ericaphis latifrons* (Börner, 1942).

*Metopolophium latifrons* Börner, 1952, p. 157, no. 587.

*Ericaphis latifrons* Heinze, 1960, p. 800, fig. 51.

Distribution: Outside Denmark known from Austria, Iceland, Sweden, Great Britain, ?France.

Occurrence in Denmark: In Jutland collected from *Empetrum nigrum* in Holmsland Klit (30-6-58), at Madum Lake in Himmerland (2-9-58), and at Blokhus (7-8-60) and from a yellow Moericke-tray at Borris (6-7-56, Heie 1960 b). It has furthermore been observed, but not collected, on *Empetrum nigrum* at Henne (1-7-58).

Genus **MYZAPHIS** van der Goot, 1913.

83. *Myzaphis rosarum* (Kaltenbach, 1843).

*Capitophorus rosarum* Theobald, 1926, p. 257.

*Myzaphis rosarum* Börner, 1952, p. 118, no. 445.

*Myzaphis rosarum* Börner & Heinze, 1957, p. 176, Abb. 69 a.

Distribution: Europe, North America, Turkey, China, New Zealand, and South Africa. It is known from Finland (Heikinheimo 1944) and Sweden.

Occurrence in Denmark: On Sealand collected from *Rosa* at Hellebæk (23-6-18, Math. Thomsen leg.) and at Holte (28-6-50). On Ærø collected from *Rosa* at Marstal (10-7-57). In Jutland collected from *Dasiphora fruticosa* at Skive (18-6-57) and from *Rosa* on Fur (22-8-57) and at Skive (19-5-59), from *Rosa canina* at Strandkjær, Mols (5-8-59) and from *R. rugosa* at Blokhus (7-8-60).

The species is non-migrating, feeding on *Rosa* from spring till autumn, frequently also on *Dasiphora (Potentilla) fruticosa*. In Skive adult fundatrices were observed from the beginning of May (1959).

Genus **MYZUS** Passerini, 1860.

Subgenus **MYZUS** s. str.

84. *Myzus cerasi* (Fabr., 1775).

*Myzus cerasi* Theobald, 1926, p. 292.

*Myzus cerasi* Börner, 1952, p. 130, no. 489.

*Myzus pruniavium* Börner, 1952, p. 130, no. 490.

*Myzus cerasi* Börner & Heinze, 1957, p. 201—203, Abb. 77.

*Myzus pruniavium* Börner & Heinze, 1957, p. 203—204.

Distribution: Europe, Asia, North America, North Africa, South Africa, New Zealand. It has been found in Sweden, Norway, and Finland.

Occurrence in Denmark: On Sealand collected from *Cerasus avium* at Holte (18-7-49). On Funen collected from *C. acida* at Fåborg (16-7-57) and observed on *C. avium* on the same locality (13-7-57). In Jutland collected from *Cerasus acida* at Skive (26-9-57), from *C. avium* at Legind Bjerger on Mors (3-6-59), from *Prunus serrulata* at Skive (17-5-59), and from *Galium aparine* at Mariager (13-7-59), *G. mollugo* at Bogens Lake in Mols (11-9-62), and *Solanum nigrum* at Hjørring (10-8-60, only one specimen, probably gone astray). Alate individuals have been found in yellow Moericke-trays in Sealand at Ørslev (from  $\frac{6}{7}$  till  $\frac{8}{10}$  56), on Funen at Årslev ( $\frac{20}{7}$ ,  $\frac{27}{7}$ ,  $\frac{17}{8}$ ,  $\frac{14}{9}$  56), and in Jutland at Tylstrup (10-8-56), Borris (20-7-56), and Jyndevad (20-7-56). Furthermore it has been observed, but not collected by the author, from several localities.

The species has been known in Denmark for a long time (Danish name: Kirsebærbladlus). It is often mentioned in the publications from the Danish State Experimental Station for Plant Diseases and Pests (Statens forsøgsvirksomhed i plantekultur: Plantesygdomme i Danmark, årsoversigter samlet ved Statens plantepatologiske Forsøg; Statens plantepatologiske Forsøg: Månedsoversigter over plantesygdomme). According to Bovien & Thomsen (1945, p. 129) and Henriksen (1944, p. 118, records from Bornholm, Sealand, and Jutland) it is a common pest of cherries, especially *C. avium*. The species migrates in summer from *Cerasus* (the winter host) to *Galium* and *Veronica* (the summer hosts). On *C. avium* the leaves usually will curl, whereas even large colonies on *C. acida* only will cause a weak bending of the leaves. Börner was of the opinion that the aphid on *C. avium* belongs to a different species (*M. pruniavium*), but as it apparently does not diverge morphologically from *M. cerasi* s. str. I prefer (with Ossiannilsson and others) to regard them as biological variants or subspecies of one species (*M. cerasi* s. lat.).

In my garden it occurred on Japanese Cherry (*Prunus serulata*) at least in 1959 and 1960 from May until about July 1 (1959) or the middle of July (1960). Colonies obviously developed later (from about June 1) on Cherry (*C. acida*), though located only a few yards away, and they stayed here for a longer period.

85. *Myzus lythri* (Schrk., 1801).

*Myzus lythri* Theobald, 1926, p. 344.

*Myzus lythri* Börner, 1952, p. 130, no. 492.

*Myzus lythri* Börner & Heinze, 1957, p. 204.

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

Occurrence in Denmark: Collected from *Lythrum salicaria* on Sealand at Malmlose, Holte (15-8-57), in Jutland at Skive (3-9-56), and on Læsø at Byrum (6-8-57). Observed, but not collected, on *Lythrum salicaria* on Luknam at Furesø (16-8-58).

The winter host is *Prunus mahaleb*. *Lythrum* and occasionally *Epilobium* serve as summer hosts.

86. *Myzus ornatus* Laing, 1932.

*Myzus ornatus* Börner, 1952, p. 131, no. 493.

*Myzus portulacae* (Macch., 1883) Börner & Heinze, 1957, p. 205.

Distribution: Europe, U. S. A., South America, and Africa. It is known from Finland (Heikinheimo 1959) and Sweden.

Occurrence in Denmark: On Sealand collected in glass-house in the Botanical Garden of Copenhagen from *Cineraria* (16-2-51), *Fuchsia hybrida* (16-4-59), and *Crataegus mexicana* (16-4-59). In Jutland collected out-doors from *Myosotis* at Skive (27-7-57) and in-doors on *Fuchsia* at Jyndevad (25-4-53, Hardy Knudsen leg.). On Ærø collected out-doors from *Malva silvestris* at Marstal (8-7-57).

It is an anholocyclic and polyphagous species, able to spread a considerable number of virus diseases. The overwintering takes place in glass-houses.

Subgenus **NECTAROSIPHON** Schout., 1901.

87. *Myzus (Nectarosiphon) ascalonicus* Doncaster, 1946.

*Myzus ascalonicus* Doncaster, 1946, p. 17.

*Rhopalomyzus ascalonicus* Börner, 1952, p. 124, no. 478.

*Rhopalomyzus ascalonicus* Börner & Heinze, 1957, p. 185, Abb. 72.

Distribution: Great Britain, Netherlands, Belgium, France, Switzerland, Austria, Germany, Sweden, Norway, Finland (Heikinheimo 1959), Iceland (Heie 1964), Denmark, Canada, and western U. S. A.

Occurrence in Denmark: Found in all parts of the country, rather common. Collected on the following localities: Sealand and Amager: Out-doors on an unknown plant at Dragør on Amager (19-10-57) and on *Fragaria* (cultiv.) at Søborg in Copenhagen (23-10-58). In-doors on *Allium schoenoprasum* at Virum (29-3-51), *A. ascalonicum* at Lyngby (April and May 1958, sent from The State Experimental Station) and Sjællands Odde (22-5-56, Børge Petersen leg.), *Stellaria media* at Rødovre (16-5-52), and *Chrysanthemum* at Ballerup (23-3-53, B. Petersen leg.) and Ringsted (13-2-54, B. Petersen leg.). Funen and other islands: Out-doors on *Stellaria media* at Marstal on Ærø (9-7-57), Søhus near Odense (13-5-58), and Onsbjerg on Samsø (9-8-58). Jutland: Out-doors on *Stellaria media* at Lemvig (25-7-57, 4-7-59), Skive (27-7-57, 5-12-57, 19-12-57, 16-1-58, 2-2-58, 10-4-58, 18-4-58, 5-6-58, 21-5-59, 12-6-59), Strandkjær in Mols (8-8-59), and Hvorup near Nørre Sundby (9-8-62), *Myosotis* at Skive (27-7-57), *Veronica agrestis* at Skive (10-11-57, 4-5-59) and Krabbesholm Forest (15-12-57), *Geranium molle* at Skive (29-1-58, 5 4 58, 5-6-58, 26-2-61), *Viola arvensis* at Skive (4-2-58, 15-7-58), *Capsella bursa-pastoris* at Skive (5-12-57), *Galium aparine* at Harboøre (16-7-59), *Sherardia arvensis* at Skive (4-1-59), *Matricaria* at Skive (30-3-60), *Fragaria* at

Randers (dead, 17-4-58) and Krabbesholm at Skive (28-12-58, 22-2-59), and on *Achillea millefolium* at Harboøre (22-6-57; a single alata; *Achillea* is not a host). In-doors on *Campanula* and *Tulipa* at Skive (12-1-57), *Allium ascalonicum* at Holstebro in a cellar (26-2-57, L. Nielsen leg.) and in a green grocer's shop (February 1958, L. Nielsen leg.), *Allium cepa* in a store-room at Spangsbjerg near Esbjerg (May 1957, K. Lindhardt ded.), *Chrysanthemum* at Skive (21-3-57) and Vinde near Skive (30-4-58), *Gladiolus* at Skive (8-2-60, N. J. Vinther leg.), *Stellaria media* at Rebild (19-6-58), *Fragaria* at Spangsbjerg (April 1958, K. Lindhardt leg.), and *Brassica napus rapifera* (swedes) in clamps at Hvidbjerg in Salling (25-4-57) and Rogenstrup near Viborg (2-5-57). Furthermore it has been observed several times, especially at Skive and in the neighbourhood of this town.

The species was found for the first time in 1951 (Heie 1957 a). The Danish name is Løgbladlus. Virginoparae have been observed throughout the year. Overwintering not only takes place on several plants in glasshouses, on onions in store-rooms, and in swedes in clamps (Heie 1957 b), but also in the open, at least in some winters (Heie 1961 a). Sexuales and eggs have never been seen, neither in this country, nor elsewhere in the world. Alate virginoparae may occur on plants out of doors from May till June in Denmark. Only once I have found an alate individual in the open on another time of the year, viz. in October (on *Fragaria* at Søborg). In-doors alate individuals appear from February till May.

The species is harmful to many cultivated plant species, not least on account of its significance as a virus vector.

88. *Myzus (Nectarosiphon) certus* (Walker, 1849).

*Myzus caryophyllacearum* Hille Ris Lambers, 1946, p. 197—199.

*Myzodes auctus* (errore pro Walker, 1849) Börner, 1952, p. 125, no. 483.

*Myzodes certus* Börner, 1952, p. 125, no. 484.

*Myzus certus* Meier, 1954, p. 361.

Distribution: England, Netherlands, Germany, Switzerland, Sweden, and Denmark. It has also been recorded from Canada (MacGillivray 1954).

Occurrence in Denmark: On Sealand collected from *Cerastium* sp. at Frederikssund (18-10-50), from *Stellaria media* at Benløse near Ringsted (16-8-57), and from *Viola tricolor* in Copenhagen (23-10-58). On Falster collected from *Stellaria media*

at Nykøbing F. (15-8-59). On Funen collected from *Stellaria media* at Dyreborg (15-7-57). On Ærø collected from *Stellaria media* at Marstal (9-7-57). In Jutland collected from *Cerastium* at Harboøre (25-7-57) and at Søndervig (30-6-58) and from *Stellaria media* at Lemvig (4-7-59) and at Hvorup near Ålborg (9-8-62). On Samsø collected from *Stellaria media* at Onsbjerg (9-8-58) and at Ballen (10-8-58). On Læsø collected from *Stellaria media* at Byrum (10-8-57).

This red or brown species lives without migration on members of the plant families Violaceae (*Viola tricolor*) and Caryophyllaceae (e. g. *Cerastium* and *Stellaria*, but not on *Honckenya (Arenaria) peploides*, as mentioned by Börner). Oviparous females were observed in October at Frederikssund (Heie 1957a) on *Cerastium* and in Copenhagen on *Viola tricolor*.

89. *Myzus (Nectarosiphon) ligustri* (Mosley, 1841).

*Rhopalosiphoninus ligustri* (Kalt., 1843) Theobald, 1926, p. 216.

*Myzodes ligustri* (Mosl.) Börner, 1952, p. 125, no. 480.

*Myzodes ligustri* Börner & Heinze, 1957, p. 188.

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

Occurrence in Denmark: In Jutland collected from *Ligustrum vulgare* at Skive (1-7-59) and observed at Vile in Salling (26-7-59) and Skive (29-6-60). According to "Plantesygdomme i Danmark" (årsoversigter samlet ved Statens plantepatologiske Forsøg) it did harm to *Ligustrum* near Copenhagen in 1948 and 1949 (syn. *Phorodon ligustri*). Bovien & Thomsen (1950) write that the species (syn. *Aphis ligustri*) often causes leafcurling and loss of leaves on *L. vulgare* and *L. v. atrovirens*, whereas attacks on *L. ovalifolium* are rare.

It lives on *Ligustrum vulgare* from spring till autumn.

90. *Myzus (Nectarosiphon) persicae* (Sulzer, 1776).

*Myzus persicae* Theobald, 1926, p. 318.

*Myzodes persicae* Börner, 1952, p. 125, no. 485.

*Myzodes persicae* Börner & Heinze, 1957, p. 189.

Distribution: All parts of the world, though not the Faroes, Iceland, and Greenland. In Sweden north to Östersund, in Norway north to Skogn in North Trøndelag; also common in Finland, though most in glasshouses (Heikinheimo 1944).

Occurrence in Denmark: Found in all parts of Denmark. On Sealand it has been collected from beets (*Beta vulgaris* cult.) in clamps at Skælskør (16-4-50), Tjæreby near Sla-

gelse (22-4-50), Tryggevælde (7-5-50), Glostrup (16-5-50), Gjorslev (20-5-50), and Jyderup (May 1958, Tvergaard leg.), beets in house at Sigerslev on Stevns (6-5-50), beets in fields at Hemmeshøj (22-4-50, just planted out from a clamp), Virum (26-9-50, 14-11-51, 9-2-52), and Ringsted (5-10-51), *Beta maritima* at Kalundborg (8-10-50), *Prunus persica* at Nærum (3-6-50), Copenhagen (13-10-50, 24-10-51, 7-11-51), Sigerslev on Stevns (20-5-50), and Virum (10-10-50, furthermore in glasshouse 2-3-51: fundatrices), *Prunus serotina* in Copenhagen (16-11-51), *Prunus serrulata* at Nærum (27-5-52), *Chenopodium* and *Matricaria* in a glasshouse and on its windows at Rødovre near Copenhagen (16-5-52), *Dianthus* in glasshouse at Hvidovre (18-3-52, B. Petersen leg.), *Asparagus* in glasshouse at Lille Værløse (14-4-53, B. Petersen leg.), *Ixora* in glasshouse on Amager (19-12-50), *Tulipa* in glasshouse (10-2-32, sample from The State Experimental Station at Lyngby), from a glasshouse at Helsingør (14-2-51), *Atropa* and *Melandrium vesperinum* in Copenhagen (11-7-18, Math. Thomsen leg.), *Stellaria media* at Ringsted (16-8-57), *Capsella bursa-pastoris* at Lyngby (3-7-58), turnips (*Brassica campestris* var.) at Mern and Kalvehave (14-7-58, Grøntved leg.), and *Brassica* at Roskilde (15-12-51). On Lolland collected from red beet and *Spinacia oleracea* (7-7-51) and *Stellaria media* (15-8-58) at Sophiehøj. On Falster collected from *Zinnia* at Nykøbing F. (16-8-57). On Bornholm collected from beets in clamp at Rønne (30-5-50). On Funen collected from a cruciferous host at Nyborg (8-7-58). In Jutland collected from beets in clamps at Ø. Lyby (12-11-56, 14-3-57), Skive (21-3-57), Viborg (11-3-57), and Håsum in Salling (21-3-57), *Prunus persica* at Skive (15-10-56), swedes (*Brassica napus rapifera*) at Ødum (24-7-56), and Tylstrup (11-8-56), *Capsella bursa-pastoris* at Skive (5-12-57), Studsgård (13-7-60), and Store Vildmose (3-8-60), *Zinnia* in Ålborg (20-8-50), *Cerastium* at Søndervig (30-6-58), *Amaranthus caudatus* at Studsgård (9-7-59), *Cakile maritima* at Knud Strand in Salling (19-7-59), Hirtshals (26-7-60), and Ebeltoft (15-9-62), *Galium aparine* at Harboøre (16-7-59), *Cerastium* at Harboøre (25-7-57), *Chenopodium album* at V. Hjermitslev (2-8-60, an alate only), and *Solanum* sp. (cult.) in a house at Glyngøre (28-3-60). On Samsø collected from *Althaea rosea* at Onsbjerg (10-8-58, an alate only). On Læsø collected from *Malva neglecta* at Vesterø (12-8-57).

Furthermore the author has observed this species numerous

times in all parts of the country, especially on potatoes, beets, swedes, turnips, and peach trees, and it has as well been caught in yellow Moericke-trays in 1953-56 on several localities in Jutland and on the Danish islands (Heie 1959 a, 1960 b, 1962) and in 1958-60 on Lyø (Heie 1961).

Its occurrence in Denmark has been known for many years (Danish name: Ferskenlus or — better — Ferskenbladlus). It is mentioned in the publications from the Danish State Experimental Station for Plant Diseases and Pests (Statens forsøgsvirksomhed i plantekultur: Plantesygdomme i Danmark, årsoversigter samlet ved Statens plantepatologiske Forsøg; Statens plantepatologiske Forsøg: Månedsoversigter over plantesygdomme), for instance as a pest to peach trees in 1920, and in the textbooks on plant pests by Rostrup (from the 4th edition, 1928) and by Thomsen & Bovien (from 1933 and the following issues) as a pest to peaches, potatoes, and plants in glasshouses. Studies of the biology of this aphid in connection with its role as a very important virus vector have been undertaken by several workers in Denmark, and results have been published by Larsson (1940, 1941, 1942), Hansen (1941, 1950, 1960), Heie (1952, 1954, 1959 b, and the papers mentioned above), and Petersen (1959). Special attention has been paid to the hibernation, which does not take place only as eggs on *Prunus persica* (peach) and a few other *Prunus* spp., but also as virgins on herbs (summer hosts) in sheltered places as for instance glasshouses and especially beet-clamps. Petersen found that the wintering in clamps may be prevented if an average of 4° C. is not exceeded for 3 months or more within the clamps.

Genus **TUBAPHIS** H. R. L., 1947.

91. *Tubaphis ranunculina* (Walker, 1852).

*Tubaphis ranunculina* Börner, 1952, p. 120, no. 487.

*Tubaphis ranunculina* Heinze, 1961, p. 29, fig. 88.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Collected by sweeping in a field with *Ranunculus* at Madum Lake, Himmerland (28-5-59).

The species is restricted to *Ranunculus* (*acer*, *repens*).

Genus **PHORODON** Passerini, 1860.

92. *Phorodon humuli* (Schrk., 1801).

*Phorodon humuli* Theobald, 1926, p. 273.

Phorodon humuli Börner, 1952, p. 123, no. 474.

Phorodon humuli Börner & Heinze, 1957, p. 183.

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

Occurrence in Denmark: On Sealand collected from plum tree (*Prunus*) at Hellebæk (13-6-18, Math. Thomsen leg.), from *Humulus lupulus* at Holte (3-7-50), and from a Moericke-tray at Ørslev near Ringsted (several times from 13-7-56 till 17-8-56, maximum flight from July 13 until 20). On Amager collected from *Prunus triloba* (20-10-51). On Funen collected from a tray at Årslev (3-8, 17-8-56) and from *Humulus lupulus* at Morud (10-7-58). On Turø collected from *Prunus spinosa* at Grasten (4-7-57). On Langeland collected from *Prunus spinosa* and *Humulus lupulus* at Tullebølle (6-7-57). In Jutland caught in Moericke-trays at Tylstrup (27-7, 3-8-56), Borris (27-7-56), and Jyndevad (20-7-56).

The species is mentioned in "Oversigt over Sygdomme hos Landbrugets og Havebrugets Kulturplanter i 1920" (Ferdinandsen & Rostrup, p. 737) and by Bovien & Thomsen (1945). It migrates between *Prunus* (e. g. *spinosa*, *insititia*, *domestica*), the winter host, and *Humulus lupulus*, the summer host. The spring migration seems to take place during June and the first part of July under Danish conditions. The oviparous female was found on *Prunus triloba* in October.

Genus **OVATUS** van der Goot, 1913.

93. *Ovatus crataegarius* (Walker, 1850).

*Aphis menthae* Walker, 1852, p. 1045.

*Ovatus crataegarius* Börner, 1952, p. 122, no. 465.

*Ovatus crataegarius* Börner & Heinze, 1957, p. 182.

Distribution: Eurasia, New Zealand, South Africa, and North America. It is known from Sweden.

Occurrence in Denmark: Collected on Sealand from *Mentha arvensis* at Holte (16-8-58), on Funen from *Crataegus* at Nyborg (8-7-58, Hille Ris Lambérs det.), in Jutland from *Mentha* sp. at Fiskbæk near Viborg (15-9-56), from *Mentha aquatica* at Fuglsø (6-8-59), and from *Crataegus* at Estvad near Skive (17-6-59, Hille Ris Lambérs det.).

It migrates between *Crataegus* (the winter host) and *Mentha* (the summer host).

94. *Ovatus insitus* (Walker, 1849).

*Phorodon crataegarium* Theobald, 1926, p. 280 (according to Doncaster 1961).

*Ovatus insitus* Börner, 1952, p. 122, no. 464.

*Ovatus insitus* Börner & Heinze, 1957, p. 182.

Distribution: Eurasia.

Occurrence in Denmark: Collected on Sealand from *Lycopus europaeus* at Holte (16-8-58), in Jutland from *Lycopus europaeus* at Sønderbæk between Viborg and Randers (3-8-59) and from *Crataegus* at Estvad near Skive (17-6-59, Hille Ris Lambers det.).

It migrates between *Mespilus* and *Crataegus* (the winter hosts) and *Lycopus* (the summer host).

Genus **LIOSOMAPHIS** Walker, 1868.

Subgenus **LIOSOMAPHIS** s. str.

95. *Liosomaphis berberidis* (Kaltenbach, 1843).

*Liosomaphis berberidis* Theobald, 1927, p. 40.

*Liosomaphis berberidis* Börner, 1952, p. 120, no. 454.

*Liosomaphis berberidis* Börner & Heinze, 1957, p. 180.

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

Occurrence in Denmark: In Jutland collected at Skive from *Berberis* (cult.) (15-6-57, K. Juhl Christensen leg.) and *Mahonia* (19-8-58), and taken in yellow *Moericke*-trays at Tylstrup (22-6-56) and St. Jyndeved (1-6-56).

It lives from spring till autumn on *Berberis*, sometimes also occurring on *Mahonia*.

Subgenus **ELATOBIMUM** Mordvilko.

96. *Liosomaphis (Elatobium) abietina* (Walker, 1849).

*Neomyzaphis abietina* Theobald, 1926, p. 262.

*Liosomaphis (Elatobium) abietina* Börner, 1952, p. 119, no. 452.

*Liosomaphis (Elatobium) abietina* Börner & Heinze, 1957, p. 179, Abb. 70.

Distribution: England, Norway, Sweden, Denmark, Netherlands, Germany, France, Austria, Eire, the Faroes, Iceland, U. S. A., Canada, New Zealand.

Occurrence in Denmark: Found in all parts of the country. In Jutland collected by the author from *Picea glauca* at Tastum near Skive (12-5-57), from *P. abies* at Sødal near Viborg (16-6-57), and from *P. sitchensis* at Legind Bjerge on Mors (7-6-57) and at Blokhush (17-6-61).

Furthermore it has been observed by the author on the following localities in May and June 1957, especially on *Picea sitchensis*: On Funen at Gelsted, in Jutland in Rold Forest, at Toftum Bjerger near Struer, and between Viborg and Skive.

The species has been observed in Denmark already in 1920 (on *Picea pungens* at Lerchenborg according to "Oversigt over Sygdomme hos Landbrugets og Havebrugets Kulturplanter i 1920" (by Ferdinandsen & Rostrup (1921) in Tidsskr. f. Planteavl 27, p. 745)) and especially in 1921 (Boas 1924). Beier Petersen (1957a, 1957b, 1960, 1962) recently investigated the ecology in Denmark (Danish name: Sitkalus or — better — Sitkagranbladlus). The species lives exclusively on *Picea*. The attacks are most harmful to *P. sitchensis*, which may lose all its leaves. Overwintering as eggs is normal in Central Europe (according to Börner), but in Western Europe reproduction by constant parthenogenesis has been found to be common. Usually it is rather difficult to find the aphids, but after mild winters and high temperature in March severe attacks may occur in the first part of the summer, as was the case in this country especially in 1921 and 1957. From the last part of June the number of aphids decreases.

Genus **CAVARIELLA** Del Guercio, 1911.

97. *Cavariella aegopodii* (Scop. 1763).

*Cavariella aegopodii* Theobald, 1927, p. 10.

*Cavariella aegopodii* Hille Ris Lambers, 1947 a, p. 310—11.

*Cavariella aegopodii* Börner, 1952, p. 121, no. 457.

*Cavariella aegopodii* Börner & Heinze, 1957, p. 180.

Distribution: Europe, West Asia, Central Asia, North Africa, South Africa, North America, Australia, New Zealand. It is known from Sweden, Norway, Finland, and Iceland.

Occurrence in Denmark: On Sealand collected from *Pimpinella saxifraga* at Gelsted near Næstved (14-8-58), *Daucus carota* at Lyngby and Lammefjord (27-6-58), and a Moericke-tray at Ørslev (several times from 8-6-56 till 17-8-56). On Falster collected from *Daucus carota* (6-8-18, sent from the State Exper. Sta. at Lyngby). On Funen collected from *Anthriscus silvestris* at Hvedholm (14-7-57), *Aegopodium podagraria* at Horne (14-7-57), *Torilis japonica* at Dyreborg (15-7-57), *Pimpinella saxifraga* at Refsvindinge (8-7-58) and Hylkedam (6-7-58), *Salix* sp. at Nyborg (9-7-58), and *Picris echioides* (gone astray, this is not a host)

at Fyns Hoved (17-10-62), and from a Moericke-tray at Årslev (several times from 8-6-56 till 20-7-56). On Langeland collected from *Beta vulgaris* cult. (not a host) (7-6-61). In Jutland collected from *Pimpinella saxifraga* at Skive (4-9-56), *Salix caprea* at Harrevig in Salling (15-10-56), *Anthriscus silvestris* in Krabbesholm Forest (25-7-58) and Sundsøre in Salling (23-6-59), *Potentilla erecta* (this is not a host) at Skatskov near Ålestrup (22-9-58), *Torilis japonica* at Tulstrup (21-7-59), *Daucus carota* at Studsgård (9-7-59) and Kalø (29-8-62), *Sium latifolium* and *Angelica silvestris* at Store Vildmose (3-8-60), and Moericke-trays at Tylstrup (from 20-7-56 till 28-9-56) and Jyndevad (8-6-56, 13-7-56).

It is mentioned by Bovien & Thomsen (1950) as a pest to *Daucus carota*.

Migration from the winter host, *Salix*, goes to Umbelliferae, where the aphids occur on the leaves and in the inflorescences.

98. *Cavariella archangelicae* (Scop., 1763).

*Cavariella capreae* (Fabr., 1775) Theobald, 1927, p. 5.

*Cavariella archangelicae* Hille Ris Lambers, 1947 a, p. 310—311.

*Cavariella archangelicae* Börner, 1952, p. 121, no. 459.

*Cavariella archangelicae* Börner & Heinze, 1957, p. 181.

Distribution: Europe, North America, Australia, Hawaii. It is known from Sweden, Norway, Finland, and Iceland.

Occurrence in Denmark: In Jutland collected from *Angelica silvestris* at Skive (Sept. 1956), Karup Å south of Skive (24-9-57), Lyngballe Forest (21-7-59), and Grejsdal (10-7-58), from *Salix caprea* at Harrevig in Salling (15-10-56), and from *Salix* sp. at Blokhush (13-8-62). On Ærø collected from *Salix purpurea* at Lille Rise (9-7-57). Caught in Moericke-trays at Årslev on Funen (24-8-56) and at Borris in Jutland (8-6-56, 21-9-56).

It migrates from *Salix* to *Angelica*.

99. *Cavariella pastinacae* (L., 1758).

*Cavariella pastinacae* Theobald, 1927, p. 13.

*Cavariella pastinacae* Hille Ris Lambers, 1947 a, p. 311.

*Cavariella pastinacae* Börner, 1952, p. 121, no. 460.

*Cavariella pastinacae* Börner & Heinze, 1957, p. 181.

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

Occurrence in Denmark: On Sealand caught in a Moericke-tray at Ørslev (several times from 22-5-56 till 3-8-56). On Funen collected from *Salix cuspidata* east of Fåborg (13-7-57),

*Heracleum sphondylium* at Svendborg (4-7-57) and Brenderup (2-7-60), and *Angelica silvestris* at Brenderup (2-7-60). On Langeland collected from *Salix cuspidata* at Rudkøbing (5-7-57). On Turo collected from *Sonchus oleraceus* (2-7-57; only a single alate individual; *Sonchus* is not a host of this species). In Jutland caught in Moericke-trays at Borris (13-7-56, 20-7-56) and Jyndevad (6-7-56) and collected from *Salix pentandra* at Hald Sø (20-5-59) and Skørping (27-5-59) and from *Heracleum sphondylium* at Næsbydale near Ranum (27-7-59).

It migrates from *Salix* to *Umbelliferae*.

100. *Cavariella theobaldi* (Gill. & Bragg, 1918).

*Cavariella umbellatarum* (Koch, 1854) Theobald, 1927, p. 15.

*Cavariella theobaldi* Hille Ris Lambers, 1947 a, p. 311.

*Cavariella umbellatarum* Börner, 1952, p. 120, no. 456.

*Cavariella umbellatarum* Börner & Heinze, 1957, p. 180.

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

Occurrence in Denmark: On Sealand caught in a Moericke-tray at Ørslev (several times from 1-6-56 till 3-8-56). In Jutland collected from *Heracleum sphondylium* at Tapdrup near Viborg (6-9-56) and at Mariager (13-7-59) and from *Salix cinerea* at Kongsø near Bryrup (11-7-58) and caught in a Moericke-tray at Borris (6-7-56).

It migrates from *Salix* to *Umbelliferae*.

Genus **COLORADOA** Wils., 1910.

Subgenus **COLORADOA** s. str.

101. *Coloradoa achilleae* Hille Ris Lambers, 1939.

*Coloradoa achilleae* Börner, 1952, p. 117, no. 433.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Collected from *Achillea millefolium* on Sealand at Gelsted near Næstved (14-8-58), on the island of Strynø (7-7-57), on Læsø at Byrum (6-8-57), on Samsø at Dyret (9-8-58) and Kolby (12-8-58), and in Jutland on the following localities: Rimmer Strand near Struer (25-7-57), Skive (28-7-57), Dommerby near Skive (4-9-57), Resen near Skive (18-7-57), south of Herrup (6-9-59), Tipperne (2-7-58), Strandkjær at Femmøller (6-7-60), Jelstrup in Vendsyssel (24-7-60), and Dokkedal (4-10-57).

The aphids partly sit among the inflorescences, partly on the

lower leaves of *Achillea millefolium*, the only host. The sexual forms have been found in October.

102. *Coloradoa artemisiae* (Del Guercio, 1913).

*Coloradoa artemisiae* Börner, 1952, p. 117, no. 435.

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

Occurrence in Denmark: Collected from *Artemisia vulgaris* on Ærø at Marstal (9-7-57), on Funen in Svanninge Bakker (12-7-57), and in Jutland at Vinde near Skive (19-7-57).

It feeds on *Artemisia vulgaris* from spring till autumn. The aphids were found on the upper parts of the host.

103. *Coloradoa tanacetina* (Walker, 1850).

*Coloradoa tanacetina* Börner, 1952, p. 117, no. 434.

*Coloradoa tanacetina* Börner & Heinze, 1957, p. 174.

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Collected from *Tanacetum vulgare* in Jutland at Dølbyvad near Skive (18-8-57) and at Breum in Salling (21-8-57) and on Samsø at Langør (13-8-58).

The species has furthermore been seen at Hellerød in Thy (20-9-56).

The aphids often sit in rather large numbers on the edges of the lobes of the leaves. *Tanacetum* is the only host.

Subgenus **LIDAJA** Börner, 1952.

104. *Coloradoa (Lidaja) heinzei* Börner, 1952.

*Lidaja heinzei* Börner, 1952, p. 117 + 252, no. 441.

Distribution: Germany, Sweden, and Denmark.

Occurrence in Denmark: Collected from *Artemisia maritima* on Funen at Bøjden (14-7-57), on Læsø at Færøn (11-8-57), and on Samsø at Langør (13-8-58).

It feeds on *Artemisia maritima* from spring till autumn on the upper parts of the plants.

105. *Coloradoa (Lidaja) submissa* Donc., 1961.

*Coloradoa (Lidaja) submissa* (Walker MS) Doncaster, 1961, p. 125—127, plate VII.

Distribution: England (found in Kent by Walker in 1848 and by Doncaster in 1953) and Denmark.

Occurrence in Denmark: Two oviparous females collected from *Artemisia maritima* at Dokkedal in Himmerland, Jutland (4-10-57).

Only the apterous viviparous female has been described, but the oviparous female is very similar. The middle two thirds of the hind tibiae are dark, swollen, and bearing 30—60 pseudo-sensoria. The body is dirty yellowish brown or greenish brown with wax powder, which makes the aphids look like the leaves of the host, the head is rather dark brown, and cauda and siphunculi are black.

### References

(continued from Entom. Medd. 31, 1962, p. 224)

- Boas, J. E. V. (1924): Dansk Forstzoologi. 2. udg. København.
- Doncaster, J. P. (1961): Francis Walker's Aphids. British Museum, London.
- Hansen, Henning P. (1941): Studier over Kartoffelviroser i Danmark III. Om Betingelserne for Virusspredning samt Kortlægning af deres geografiske Fordeling. København.
- (1950): Undersøgelser over virusgulrot hos bederoer i Danmark. Akademiet for de tek. Vidensk., Virusudvalgets 1. beretning: 9—67.
- (1960): Betingelser for ferskenlusens geografiske fordeling i Danmark i årene 1955—57. Ugeskrift for Landmænd nr. 19—20.
- Heie, O. (1952): Foreløbig meddelelse om undersøgelser over ferskenlusens overvintring i Danmark. Tidsskr. f. Planteavl 55: 346—360.
- (1957 a): To nye bladlusarter for Danmark, *Myzus ascalonicus* Donc. og *M. caryophyllacearum* H. R. L. (Hom.: Aph.). Flora og Fauna (Århus) 63: 85—89.
- (1957 b): Studier over løgbladlusen (*Myzus ascalonicus* Donc.) i Danmark i foråret 1957. Tidsskr. f. Planteavl 61: 737—748.
- (1959 a): Bladlus fra fangbakker i Danmark. 1. Ferskenbladlus (*Myzus persicae* Sulz.) i 11 fangbakker opstillet ved kartoffelparceller i virus-smitteforsøg 1953—56. Tidsskr. f. Planteavl 62: 879—900.
- (1959 b): Ferskenbladlusen i bederoekuler i Nordjylland 1952—57. Akademiet for de tekn. Vidsk., Virusudvalgets 4. beretning.
- (1961 a): Frilandsforekomst af løgbladlusen (*Myzus ascalonicus* Donc.). Flora og Fauna (Århus) 67: 51—62.
- (1962): Bladlus fra fangbakker i Danmark. 2. Resultater fra 1953, 1954 og 1955, særlig vedrørende ferskenbladlusen (*Myzus persicae* Sulz.). Tidsskr. f. Planteavl 66: 149—172.
- (1964): Aphids collected in Iceland in August, 1961. Entom. Medd. 32: 220—235.
- Heikinheimo, O. (1944): Für die finnische Fauna neue Blattläuse (Hom., Aphidoidea). Ann. Entomologici Fennici 10: 1—7.
- (1959): Kasviviruksia siirrostavien lehtikirvojen esiintymisestä maassamme (On the occurrence of virus vector aphids in Finland). Publications of the Finnish State Agricultural Research Board 178: 20—40.
- Heinze, K. (1960—61): Systematik der mitteleuropäischen Myzinae. Beiträge zur Entomologie 10: 744—842, 11: 24—96.

- Hille Ris Lambers, D. (1947 a): On some mainly western European aphids. *Zool. Mededeelingen* 28: 291—333.
- Larsson, Sv. G. (1940): Bladlusene og deres Betydning som Virusspredere på Beder og Kartofler. *Tidsskr. f. Planteavl* 45: 97—139.
- (1941): Svingninger i Bedelusens og Ferskenlusens Biologi, forårsaget af den strænge Vinter 1939—40. *Naturens Verden* 25: 178—188.
- (1942): Iagttagelser over Ferskenlusen, *Myzus persicae* Sulz. Dens Overvintring i Danmark. *Tidsskr. f. Planteavl* 47: 171—178.
- Mac Gillivray, M. E. (1954): Note on *Myzus certus* (Walker), an aphid new to North America (Hom.: Aphidae). *Canadian Ent.* 86: 190.
- Meier, W. (1954): Über *Myzus varians* Davidson und einige weitere *Myzus*-Arten aus der Schweiz. *Mitt. d. Schweiz. Ent. Ges.* 27: 321—409.
- Petersen, B. Beier (1957 a): Bladlusangreb på sitkagran. *Forstlig Budstikke* (København) 17: 41—42.
- (1957 b): Bladlusangrebet på sitka- og hvidgran. *Ibid.* 17: 65—66.
- (1960): Sitkalusen. *Dansk Skovforenings Tidsskr.* 45: 511—526.
- (1962): Peak years and regulation of numbers in the aphid *Neomyzaphis abietina* Walker. *Oikos* Vol. 13, Fasc. I: 155—168.
- Theobald, F. V. (1927): *The Plant Lice or Aphididae of Great Britain.* Vol. II.

---

### Anmeldelse.

Nils Rydén, Leif Lyneborg og Boy Overgaard Nielsen: **Tovinger III Minérfluier, Agromyzidae.** — Danmarks Fauna bd. 68, 222 pp. København 1963.

Agromyziderne eller minérfluierne er små, 1—4 mm lange, temmelig uanselige fluier, og det er derfor ikke sandsynligt, at fremkomsten af denne bog — tredje bind i Danmarks Fauna behandlende tovinger — vil udløse en større samlerdyst, selv om bestemmelsesarbejdet nu skulle være lettet betydeligt; bogen er nok skrevet for de få. En og anden vil dog uden tvivl med interesse benytte den til at hjælpe sig på sporet af nogle af ophavs-mændene til de udgnavede partier (miner), som ofte ses i blade og stængler på mange planter og som ofte vækker opmærksomhed. Agromyzidernes larver er nemlig alle minerende. Kendskab til værtplante, minens form og farve, larve, puppe og puparium er af betydning for en sikker bestemmelse af mange arter, men er ikke gjort til genstand for nærmere behandling i bogen, og der vides vel også for lidt på disse punkter endnu. Et navne-register over værtplanter giver mulighed for straks at komme i den rigtige retning, ligesom tre indledende afsnit af Boy Overgaard Nielsen om larver, pupper og miner er til hjælp. Manuskriptet til agromyzide-bindet forelå allerede for nogle år siden, udarbejdet af nu afdøde overlærer Nils Rydén, Hålsingborg, på grundlag af en gennemgang af Zoologisk Museums samling, og arbejdet med den danske agromyzide-fauna er et af denne svenske kenders sidste. Rydéns død forsinkede udgivelsen, sådan at bogen først nu foreligger, oversat og på flere punkter bearbejdet og beriget, bl. a. med flere biologiske og faunistiske oplysninger, af Leif Lyneborg.