

A List of Danish Aphids

9.: Thelaxidae, Pemphigidae, Adelgidae and Phylloxeridae

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The list of aphid species found in Denmark is completed with the present paper, the 9th part of the list, which comprises records of the Danish species belonging in the families Thelaxidae, Pemphigidae, Adelgidae, and Phylloxeridae, and finally some additional remarks.

The first eight parts dealing with the families Aphididae (parts 1—7), Lachnidae, Chaitophoridae, and Callaphididae (part 8) appeared in Entomologiske Meddelelser 1960 (29: 193—211), 1961 (31: 77—96), 1962 (31: 205—224), 1964 (32: 341—357), 1967 (35: 125—141), 1969 (37: 70—94, 373—385), and 1970 (38: 137—164).

I wish to thank Mr. G. Kristensen, Herlev, and Mr. J. Reitzel, Lyngby, for sending some very interesting aphid samples to me.

List of the species

Thelaxidae

291. *Anoecia corni* (Fabricius, 1775)
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293. *A. vagans* Koch, 1856
294. *Thelaxes dryophila* (Schrank, 1801)
295. *Glyphina betulae* (Linné, 1758)
296. *Mindarus abietinus* Koch, 1856
297. *M. obliquus* (Cholodkovsky, 1896)
298. *Hormaphis betulina* (Horvath, 1896)

Pemphigidae

299. *Eriosoma lanigerum* (Hausmann, 1802)
300. *Schizoneura lanuginosa* Hartig, 1841
301. *S. patchae* Börner et Blunck, 1916
302. *S. ulmi* (Linné, 1758)

303. *Kaltenbachiella pallida* (Haliday, 1838)
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305. *Asiphum tremulae* (Linné, 1761)
306. *Pachypappella tremulae* (Tullgren, 1925)
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309. *P. pini* (Burmeister, 1835)
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312. *Pemphigus bursarius* (Linné, 1758)
313. *P. filaginis* (Boyer de Fonscolombe, 1841)
314. *P. lysimachiae* (Börner, 1916)
315. *P. phenax* Börner et Blunck, 1916
316. *P. spirothecae* Passerini, 1860
317. *Forda formicaria* v. Heyden, 1837
318. *Smynthuodes betae* Westwood, 1849
319. *Geoica utricularia* (Pass., 1856) sensu Mordv., 1927

A d e l g i d a e

320. *Pineus orientalis* (Dreyfus, 1889)
321. *P. pini* (Macq., 1819)
322. *P. strobi* (Hartig, 1837)
323. *Dreyfusia nordmanniana* (Eckstein, 1890)
324. *D. piceae* (Ratz., 1844)
325. *Adelges laricis* Vallot, 1836
326. *A. tardus* (Dreyfus, 1888)
327. *Gilletteella cooleyi* (Gillette, 1907)
328. *Sacchiphantes abietis* (Linné, 1758)
329. *S. viridis* (Ratz., 1843)

P h y l l o x e r i d a e

330. *Phylloxera coccinea* (v. Heyden, 1837)
331. *Ph. glabra* (v. Heyden, 1837)

Genus ANOECIA Koch, 1856

291. *Anoecia corni* (Fabricius, 1775)
Anoecia corni: Börner 1952, p. 179, no. 707

with *A. corni*, which is the most common species in Europe, but
 Distribution: Europe, Asia, and Africa. It is known from Sweden, Norway, and Finland.

Occurrence in Denmark: Jutland: On *Cornus alba* at Skive (several years, in spring (May) and autumn (September and October)). Sealand: Lille Svenstrup near Ringsted (5-10-60). Lolland: Sophiehøj at Rødby (20-5-53, Børge Petersen coll.).

It is impossible to identify species of *Anoecia* from *Cornus* as for the spring generations. I have identified the Danish material

the following European species according to Zwölfer (1958) also have *Cornus* as the primary host plant: *A. disculigera* Börner (only four finds in Central Europe), *A. maior* Börner (has not yet been found on *Cornus*, but accepts it as a host in transfer experiments), *A. haupti* Börner (not yet found on *Cornus*), *A. nemoralis* Börner (no observations of the spring generations on *Cornus* have been published), *A. furcata* (no observations of the spring generations on *Cornus* have been published), and *A. vagans* Koch (apterous fundatrigeniae of *corni* and *vagans* cannot be separated, but the alate individuals are very distinct).

292. *Anoecia pskovica* Mordvilko, 1916

Neanoecia pskovica: Börner 1952, p. 179, no. 706

Paranoecia pskovica: Zwölfer 1958, p. 198

Distribution: USSR, Germany, England, and Denmark.

Occurrence in Denmark: Jutland: On *Carex arenaria* at Femmøller, Mols (8-9-60; E. Torp Petersen coll., D. Hille Ris Lambers det.). The find has been mentioned by Heie (1965).

293. *Anoecia vagans* Koch, 1856

Anoecia (*Subanoecia*) *vagans*: Börner 1952, p. 180, no. 714

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Jutland: Femmøller, Mols (flying specimen, 8-9-60). Sealand: On *Agropyrum repens* at Lyngby (11-9-58, 8-10-58, J. Jørgensen coll.) and on *Hordeum vulgare* at Lyngby (8-7-60, the collection of the State Exper. Station, Lyngby).

Genus **THELAXES** Westwood, 1840

294. *Thelaxes dryophila* (Schrank, 1801)

Thelaxes dryophila: Börner 1952, p. 181, no. 717

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

Occurrence in Denmark: On *Quercus* (*robur*, sp.). Jutland: Blokhush (13-8-62), Rebild (3-8-64), Grønningøre in Salting (29-6-62), Krabbesholm Forest at Skive (29-6-60), Estvadgård Plantation (18-9-58), Flyndersø (21-5-59), Hald Lake at Viborg (20-5-59), Bryrup (11-7-58), Femmøller, Mols (7-8-59, 4-7-60), Henne (1-7-58), Horslund Egekrat at Ribe (25-5-65), and Arrild at Løgumkloster (5-7-58). Funen: Svanninge Bakker (12-7-57) and Morud (10-7-58). Sealand: Tokkekøb Hegn (2-6-66). Other islands: Turø (4-7-57).

Genus **GLYPHINA** Koch, 1856295. *Glyphina betulae* (Linné, 1758)

Glyphina betulae: Börner 1952, p. 181, no. 715

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

Occurrence in Denmark: On *Betula pubescens*. Jutland: Madum Lake in Himmerland (16-6-58, 25-5-59), Krabbesholm Forest (1-7-59), and Skive (several years, from May till August). The Danish Islands: Onsbjerg on Samsø (12-8-58) and Turø (4-7-57).

Genus **MINDARUS** Koch, 1856296. *Mindarus abietinus* Koch, 1856

Mindarus abietinus: Börner 1952, p. 182, no. 722

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

Occurrence in Denmark: Jutland: On *Abies nordmanniana* at Legind Bjerge on Mors (7-6-57) and on *Abies alba* at Legind Bjerge (3-6-59) and Sødal Forest north of Viborg (16-6-57).

The species is mentioned as a pest to *Abies* in Denmark by Boas (1904, 1918, 1923) and Bejer-Petersen (1959).

297. *Mindarus obliquus* (Cholodkovsky, 1896)

Mindarus obliquus: Börner 1952, p. 182, no. 723

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

Occurrence in Denmark: On *Picea glauca* and *P. sitchensis*. Jutland: Blokhus (several finds, from June till August), Løvel in Himmerland (16-6-57), Legind Bjerge on Mors (3-6-59), Glyngøre in Salling (10-7-59), west of Viborg (16-6-57), Toftum Bjerge at Struer (22-6-57, 25-7-57), Resen at Skive (10-7-67), Krabbesholm Forest (25-6-57), Studsgård (9-7-59, 18-6-64), Juelsminde (28-6-59), and Arrild at Løgumkloster (5-7-58). Sealand: Copenhagen (8-6-18, M. Thomsen leg.).

Genus **HORMAPHIS** Ost.-Sack., 1861298. *Hormaphis betulina* (Horvath, 1896)

Mansakia betulina: Börner 1952, p. 184, no. 729

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

Occurrence in Denmark: Sealand: Dyrehavegård at Copenhagen (1 alate specimen on rape, not a host; 12-7-62, J. Reitzel coll.). *Betula* is the host.

Genus **ERIOSOMA** Leach, 1818

299. *Eriosoma lanigerum* (Hausmann, 1802)

Eriosoma lanigerum: Börner 1952, p. 186, no. 734

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

Occurrence in Denmark: Funen: On *Pyrus malus* at Anhof, East-Funen (15-9-65, J. Reitzel leg. et det.). Sealand: On *Pyrus malus* at Roskilde (25-11-62, the collection of the State Exper. Station, Lyngby). The species is mentioned as a pest to apples in Denmark by Boas (1923), Bovien & Thomsen (1945) and Gram et al. (in the annual surveys from the State Plant Pathology Institute: "Plant diseases and pests in Denmark"), e.g. in Jutland (the Århus area, Viborg, Mols, South-Jutland), Funen (Odense, Blangstedgård, Svendborg), Sealand (Copenhagen, the Holbæk area), Amager, Lolland, Falster, Langeland, Ærø, and Tåsinge. Henriksen (1944, p. 121) mentions localities in Jutland (Viborg, Holstebro), Funen (Odense), Sealand (Copenhagen, Høsterkøb, Helsingø), and Amager. Danish name: Blodlus.

Genus **SCHIZONEURA** Hartig, 1837

300. *Schizoneura lanuginosa* Hartig, 1841

Schizoneura lanuginosa: Börner 1952, p. 185, no. 732

Distribution: Europe, Asia, North America, Australia, New Zealand, and South Africa.

Occurrence in Denmark: Recorded from Jutland (Nebsager and Sæby) and Sealand (Copenhagen) on *Ulmus* by Henriksen (1944, p. 93). Boas (1923) mentions this species, too, but he found it in Switzerland, not in Denmark.

301. *Schizoneura patchae* Börner et Blunck, 1916

Schizoneura patchae: Börner 1952, p. 185, no. 731; Heie 1969, p. 222

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

Occurrence in Denmark: On *Ulmus*. Jutland: V. Hjermitsev (1-8-69), Oddense in Salling (26-7-63, 9-9-63), Skive (24-6-59, 28-6-68), and Kolding (5-7-58).

302. *Schizoneura ulmi* (Linné, 1758)

Schizoneura ulmi: Börner 1952, p. 185, no. 730

Distribution: Europe and Asia. It is known from Finland, Sweden, Norway, the Faroes, and Iceland.

Occurrence in Denmark: On *Ulmus* in Jutland at Madum Lake in Himmerland (27-5-60), Skive (20-6-57, 24-5-59), and Skamlingsbanken (13-6-64), on Funen at Udby (6-7-58) and Hylkedam (30-5-57), and on Sealand at Rudersdal (26-5-18, M. Thomsen leg.) and Ålsgårde (22-6-18, M. Thomsen leg.). On roots of *Ribes rubrum* in Jutland at Jebjerg in Salling (autumn, 1958) and Skive (21-6-59) and on *Ribes* on Sealand at Tystofte (16-10-14, the collection of the State Exper. Station). Flying individuals caught in Jutland at Skive (30-6-60) and Kongsø near Bryrup (11-7-58). Caught in yellow Moericke-trays in Jutland at Tylstrup, Borris, Jyndevad, and Spangsbjerg at Esbjerg, on Funen at Årslev, and on Sealand at Lyngby and Ørslev near Ringsted. Empty galls on *Ulmus* observed in Jutland at Hune in Vendsyssel (30-7-69), Hammer Bakker (1-8-68), Jebjerg in Salling (26-7-58), Skive (18-5-59, 24-6-59), Krabbesholm Forest (9-5-59), Brassø near Silkeborg (12-7-60), Studsgård (9-7-59), and Snepsgårde at Ribe (25-5-65), and on Funen at Svendborg (2-7-57), Fåborg (13-7-57), and Nyborg (9-7-58).

The species is mentioned by Boas (1923). Henriksen (1944, p. 92) gives localities in Jutland (Viborg, Fanø, Vorsø), Funen (Klingstrup), Sealand (Copenhagen, Hellerup, Holte, Lyngby, Glorup, Korsør Forest), Amager, Langeland (Lohals), and Bornholm (Rønne, Almindingen, Svaneke, Listed, Randkløvegård, Helligdommen, Rø, Allinge, Hammershus, Olsker, Gudhjem). Jensen (1962) found the gall at Frederiksdal at Nakskov on Lolland. The species is mentioned as a pest to *Ribes* by Bovien & Thomsen (1945). Danish name: Ribs-rodilus.

Genus **KALTENBACHIELLA** Schout., 1906

303. *Kaltenbachiella pallida* (Haliday, 1838)

Kaltenbachiella pallida: Börner 1952, p. 187, no. 736

Distribution: Europe, West-Africa. It is known from Sweden.

Occurrence in Denmark: Jutland: On *Ulmus* at Rye (22-7-18, M. Thomsen leg. et det.).

Genus **TETRANEURA** Hartig, 1841304. *Tetraneura ulmi* (Linné, 1758)

Byrsocrypta ulmi: Börner 1952, p. 188, no. 737

Byrsocrypta personata Börner, 1950: Börner 1952, p. 188, no. 738

Tetraneura ulmi: Zwölfer 1958, p. 539; Szelegiewicz 1968, p. 30

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

Occurrence in Denmark: Jutland: On *Ulmus glabra* at Skørping in Himmerland (30-5-59), Skive (24-6-59, 1-7-59, 3-7-59), Funder (17-7-18, M. Thomsen leg. et det.), and — the gall only — at Studsgård (9-7-59), on roots of *Avena pubescens* at Pinen in Salling (29-5-58), *Holcus lanatus* at Rømø (3-7-58), *Lolium* sp. at Studsgård (13-7-60), and Gramineae at Blokhus (1-7-64) and Henne (1-7-58). The Danish Islands: On *Corynephorus canescens* at Færø on Læsø (11-8-57).

According to Henriksen (1944) the galls on *Ulmus* have been found at several localities in Jutland and on Sealand, Funen, and Bornholm. The species is also mentioned by Bovien & Thomsen (1945) and Jensen (1962), who found it at Frederiksdal at Nakskov on Lolland.

Genus **ASIPHUM** Koch, 1856305. *Asiphum tremulae* (Linné, 1761)

Asiphon tremulae: Börner 1952, p. 190, no. 744

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

Occurrence in Denmark: Jutland: On *Populus tremula* at Madum Lake in Himmerland (11-6-58, 27-5-59) and Legind Bjerge on Mors (4-6-59).

Genus **PACHYPAPPELLA** Baker, 1920306. *Pachypappella tremulae* (Tullgren, 1925)

Pachypappella (*Gootiella*) *tremulae*: Börner 1952, p. 191, no. 750

Distribution: Sweden and Denmark.

Occurrence in Denmark: Sealand: On *Populus tremula* at Lyngby (21-8-40, O. Hagerup coll.). I made the slides from an alcohol sample received from the Zoological Museum, Copenhagen. Henriksen (1944, p. 58) mentions a find of *Gootiella tremulae* on *Populus tremula* from Fuglevad, Lyngby, 21-8-40,

probably the same sample, though Henriksen says that Harry Madsen is the collector.

Professor Dr. F. Ossiannilsson most kindly certified the identification.

Genus **PROCIPHILUS** Koch, 1856

307. *Prociphilus bumeliae* (Schrank, 1801)

Prociphilus bumeliae: Börner 1952, p. 193, no. 755

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

Occurrence in Denmark: Jutland: On *Fraxinus excelsior* at Skørping in Himmerland (30-5-59) and Krabbesholm Forest at Skive (9-6-59) and on *Abies alba* (*1 alata*) at Ydby, Thy (21-6-59).

308. *Prociphilus fraxini* (Geoffroy, 1762)

Prociphilus fraxini: Börner 1952, p. 193, no. 754

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

Occurrence in Denmark: Jutland: On *Fraxinus excelsior* at Krabbesholm Forest at Skive (6-7-67).

Pemphigus poschingeri Holzn., which is a synonym, is mentioned from roots of *Abies* at several localities in the country, the first time at Charlottenlund near Copenhagen, by Boas (1890 and 1923), at Trustrup in Jutland in 1921 by Gram & Rostrup (1922, p. 232) and at Svejle on Sealand in 1927 by Gram, Jørgensen & Rostrup (1928, p. 821). Henriksen (1944) gives several localities of finds on *Fraxinus*. Both Boas and Henriksen regarded *poschingeri* and *bumeliae* as synonyms, however, so the finds or some of them may belong in the preceding species.

309. *Prociphilus pini* (Burmeister, 1835)

Stagona crataegi (Tullgr., 1909): Börner 1952, p. 192, no. 752

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

Occurrence in Denmark: Jutland: On *Crataegus monogyna* at Hune in Vendsyssel (7-7-64, 10-8-64).

310. *Prociphilus xylostei* (de Geer, 1773)

Stagona xylostei: Börner 1952, p. 192, no. 751

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

Occurrence in Denmark: Jutland: On *Lonicera* at

Skive (several finds in May, June, and July), Holstebro (1-7-59), and Studsgård (9-7-59, 13-7-60). Henriksen (1944) mentions the species, referring to Gertz (1927), who found the zoocecidium on *Lonicera xylosteum* at Gudhjem on Bornholm.

Genus **THECABIUS** Koch, 1856

311. *Thecabius affinis* (Kaltenbach, 1843)

Thecabius affinis: Börner 1952, p. 193, no. 756

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

Occurrence in Denmark: Jutland: On *Populus italica* at Blokhus (6-7-65), Hune (15-8-60), Vorså in Vendsyssel (23-7-69), Vilsund (10-7-60), Tambohus in Thy (23-7-63), Skive (24-6-57, 29-6-60), and Kjellerup (31-7-59); on *Ranunculus repens* at Madum Lake in Himmerland (5-9-58) and Skive (4-8-57); one alate specimen at Flyndersø (22-7-57). Sealand: On *Populus italica* at Marienlyst (4-7-18, M. Thomsen leg. et det.) and Lammefjord (29-6-61, the collection of the State Exper. Station, Lyngby); on *Ranunculus repens* at Svinninge (14-7-64, J. Reitzel leg.) and Tikøb (17-10-65).

The species is mentioned by Boas (1923), Gram & Rostrup (1922, p. 232; on *Populus* at Svebølle on Sealand in 1921), and Henriksen (1944; localities on Bornholm, Sealand, and Fanø).

Genus **PEMPHIGUS** Hartig, 1837

312. *Pemphigus bursarius* (Linné, 1758)

Pemphigus bursarius: Börner 1952, p. 194, no. 762

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

Occurrence in Denmark: Jutland: On *Populus italica* at Skive (6-6-60, 29-6-60), Rodskov at Løgten (11-7-60), and — empty galls only — Kjellerup (31-7-59, 30-6-60); on roots of *Lactuca sativa* at Resen at Skive (22-9-68), on root of *Tussilago farfara* at Skive (16-5-58), and on roots of unknown plant at Nr. Bjært (12-10-62, the collection of the State Exper. Station, Lyngby).

The species is mentioned by Boas (1923) and Bovien & Thomsen (1945). Henriksen (1944) gives several localities on Bornholm and Sealand. It is recorded from *Populus italica* at Valby in Copenhagen in 1921 by Gram & Rostrup (1922, p. 232).

313. *Pemphigus filaginis* (Boyer de Fonscolombe, 1841)

Pemphigus populi-nigrae (Schrk.): Börner 1952, p. 195, no. 765

Pemphigus filaginis: Börner & Heinze 1957, p. 307

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

Occurrence in Denmark: Jutland: On *Populus italica* at Skive (31-5-59, 29-6-60) and — empty galls only — at Gjerrild in Djursland (19-10-69); on *Gnaphalium* at Kandestederne in Vendsyssel (1-8-66) and Kjellerup (2-8-59). Funen: On *Gnaphalium silvaticum* at Svanninge Bakker (12-7-57). Other islands: On *Gnaphalium* at Hventgård on Læsø (7-8-57).

This is what Boas (1923) called *Pemphigus ovato-oblongus*. Finds on *Populus italica* are recorded from Bornholm and Sealand and finds on *Filago* and *Gnaphalium* are recorded from Steensgård on Lolland by Henriksen (1944).

314. *Pemphigus lysimachiae* (Börner, 1916)

Parathecabius lysimachiae: Börner 1952, p. 193, no. 757; Zwölfer 1958, p. 560

Distribution: Germany, Austria, France, Great Britain, Sweden, and Denmark.

Occurrence in Denmark: Sealand: On *Lysimachia nummularia* at Herlev in Copenhagen (autumn, 1963, G. Kristensen coll.). Nursery-man cand. hort. G. Kristensen, Herlev, most kindly sent me material and told me that it was a well-known pest to *Lysimachia nummularia* in nurseries in the Copenhagen area (Herlev, Gladsaxe, Rødovre).

315. *Pemphigus phenax* Börner et Blunck, 1916

Pemphigus dauci: Börner 1952, p. 195, no. 766

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Sealand: On *Daucus carota* at Lammefjord (17-9-59, the collection of the State Exper. Station, Lyngby).

316. *Pemphigus spirothecae* Passerini, 1860

Pemphigus spirothecae: Börner 1952, p. 194, no. 760

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

Occurrence in Denmark: On *Populus italica* (*pyramidalis*) in Jutland at Skive (12-9-56, 31-5-59, 3-7-59), Gjerrild in Djursland (19-10-69), and Ebeltoft (6-8-59), on Sealand at Gad-

strup near Roskilde (Nov. 1958) and Copenhagen (21-8-18, M. Thomsen leg., and Oct. 1940), and on Strynø south of Funen (7-7-57).

The species is mentioned by Boas (1923), Bovien & Thomsen (1945), Henriksen (1944), and Jensen (1962). Henriksen gives several localities on Bornholm, Sealand, Lolland, and Ærø. Jensen's find is from Frederiksdal at Nakskov on Lolland.

Genus **FORDA** v. Heyden, 1837

317. *Forda formicaria* v. Heyden, 1837

Forda formicaria: Börner 1952, p. 198, no. 780

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

Occurrence in Denmark: On roots of Gramineae in Jutland at Pinen in Salling (29-5-58, on *Festuca rubra* a. o.), Brunshåb near Viborg (12-7-59), and Mellerup at Randers Fjord (13-7-59), on Sealand at Skoven in Horns Herred (21-4-51, in nest of *Lasius flavus*) and at Lyngby (27-7-66, J. Reitzel leg., on *Elymus arenarius*).

Genus **SMYNTHURODES** Westwood, 1849

318. *Smynturoides betae* Westwood, 1849

Trifidaphis phaseoli (Pass.): Theobald 1929, p. 208

Smynturoides betae: Börner 1952, p. 200, no. 789

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

Occurrence in Denmark: Sofie Rostrup (1900) mentioned the occurrence of *Tychea phaseoli* on potato in Denmark. Bovien (1939) gave a record of *Geoica phaseoli* from Nr. Åby on Funen, where it was found feeding on the roots and subterranean stems of potato in 1938. These names are synonyms. I have not yet seen this aphid species myself.

Genus **GEOICA** Hartig, 1894

319. *Geoica utricularia* (Passerini, 1856) Mordvilko, 1927

Geoica discreta Börner, 1952, p. 203, no. 794

Geoica utricularia sensu Mordvilko: Zwölfer 1958, p. 140; Szelegiewicz 1968, p. 90

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Jutland: On roots probably of grass under *Salix repens* at Blokhuis (24-7-68).

Genus **PINEUS** Shim., 1869320. *Pineus orientalis* (Dreyfus, 1889)

Pineus orientalis: Börner 1952, p. 204, no. 798; Börner & Heinze 1957, p. 326; Heinze 1962, p. 205

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: Several finds of galls on *Picea orientalis* have been referred to *Pineus pini* by Henriksen (1944). Previously this specific name covered both *P. pini* and *P. orientalis*, but eventually the latter was recognized as an independent species, having a gall-making fundatrix-generation on *Picea orientalis*, which *P. pini* s.str. does not have.

The finds on *Picea orientalis* are all made by M. Thomsen on the Danish Islands: Charlottenlund on Sealand (9-10-36) and Knuthenborg Park on Lolland (4-9-36).

321. *Pineus pini* (Macq., 1819)

Pineus pini: Börner 1952, p. 204, no. 797; Börner & Heinze 1957, p. 327; Heinze 1962, p. 203

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

Occurrence in Denmark: On *Pinus mugo* and *P. silvestris*. Jutland: Blokhus (18-6-60), Skive (several finds), Strandkjær at Femmøller (6-7-60), Henne (1-7-58), and Rømø (5-7-58). Sealand: Holte (May, 1959). Other islands: Turø (2-7-57).

The species is mentioned as a pest to *Pinus silvestris* and *P. mugo* by Boas (1923), Bovien & Thomsen (1945), and Bejer-Petersen (1965).

322. *Pineus strobi* (Hartig, 1837)

Pineus strobi: Börner 1952, p. 204, no. 800; Börner & Heinze 1957, p. 329; Heinze 1962, p. 205

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

Occurrence in Denmark: Boas (1923) says that this species is common on *Pinus strobus* in Denmark.

Genus **DREYFUSIA** Börner, 1908323. *Dreyfusia nordmanniana* (Eckstein, 1890)

Dreyfusia nordmanniana: Börner 1952, p. 205, no. 802; Börner & Heinze 1957, p. 332; Heinze 1962, p. 208

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

Occurrence in Denmark: It is mentioned as a common pest to *Abies* in Denmark by Bovien & Thomsen (1945) and Bejer-Petersen (1959, 1962, 1965, 1967). Boas (1923) regarded it as a variety of *D. piceae* (see below). According to Bejer-Petersen (1962). *D. nordmanniana* is by far the more predominant of the two species. My own records are: Jutland: Blokhus (several finds), Dronninglund Great Forest (5-5-57), Rold Forest (7-5-57), Madum Lake in Himmerland (28-5-59), Vejerslev on Mors (29-5-58), Legind Bjerge on Mors (several finds), Skive (6-5-59), Fly south of Skive (several finds), west of Viborg (2-5-57), Brassø at Silkeborg (12-7-60), and Bryrup (11-7-58); Funen: Hylkedam (28-5-57) and Hofmansgave (28-5-65); all on *Abies*.

Finds of its galls on *Picea orientalis*, which is the primary host, are recorded by Henriksen (1944) from localities on Sealand (Charlottenlund, Ordrup, Teglstrup Hegn, Lyngby, Hæsedede) and Lolland (Knuthenborg).

324. *Dreyfusia piceae* (Ratz., 1844)

Dreyfusia piceae: Börner 1952, p. 205, no. 803; Börner & Heinze 1957, p. 336; Heinze 1962, p. 208

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

Occurrence in Denmark: Most Danish records of *D. piceae* refer to *D. nordmanniana* (Boas 1904, 1918, 1923), though not all of them. *D. piceae* occurs sporadically on young *Abies*-trees (Bejer-Petersen 1962). It is more than *D. nordmanniana* attached to the very trunk of *Abies*. Opposite to *D. nordmanniana* it is anholocyclic and does not migrate to *Picea orientalis*. Boas drew attention to its spreading nearly exclusively by man's planting of infested young trees. Henriksen (1944) mentions a find from Hellerup on Sealand (27-5-40, A. F. Bruun leg.) on *Abies* sp.

Genus **ADELGES** Vallot, 1836

325—326. *Adelges laricis* Vallot, 1836, s. lat.

Cnaphalodes strobilobius (Kaltenbach, 1843)

Two species of this species-complex occur in Denmark, viz. *A. laricis* s. str. and *A. tardus* (Dreyfus). Galls on *Picea abies* with aphids identifiable with *A. laricis* s. lat., only, have been seen on Funen at Hylkendam (29-5-57). Jensen (1962) recorded it from Frederiksdal at Nakskov on Lolland. Henriksen (1944) mentions

finds of the gall on *Picea* from Jutland (Fanø), Funen (Lundeborg, Langesø Plantation), and on Sealand (Hareskov, Tisvilde, Geel Forest). The species is also mentioned by Boas (1923), Bovien & Thomsen (1945), and Bejer-Petersen (1968).

It is known from Sweden, Norway, and Finland. Danish name: Jordbærgallebladlus.

325. *Adelges laricis* Vallot, 1836, s. str.

Adelges laricis: Börner 1952, p. 207, no. 809; Börner & Heinze 1957, p. 343; Heinze 1962, p. 213

Distribution: Europe.

Occurrence in Denmark: In Jutland collected on *Larix* (*decidua* and sp.) at Kjellerup (1-8-59) and Femmøller, Mols (3-8-59), on Funen on *Larix* at Hylkedam (6-7-58). Henriksen (1944) gives several localities on Sealand (Jægersborg Dyrehave, Geel Forest, Rørvig, Asnæs), all on *Larix*.

The primary host is *Picea*. The gall opens in the first part of the summer, and then the alate migrants go to *Larix*.

326. *Adelges tardus* (Dreyfus, 1888)

Adelges tardus: Börner 1952, p. 207, no. 811; Börner & Heinze 1957, p. 344; Heinze 1962, p. 212

Distribution: Europe, Asia.

Occurrence in Denmark: The galls on *Picea abies* found in Jutland at Estvadgård Plantation at Flyndersø (22-8-60), Brassø at Silkeborg (12-7-60), and Femmøller, Mols (7-8-59, 6-7-60). The gall opens in the end of the summer, and migration to *Larix* does not take place.

Genus **GILLETTEELLA** Börner, 1930

327. *Gilletteella cooleyi* (Gillette, 1907)

Gilletteella cooleyi: Börner 1952, p. 208, no. 813; Börner & Heinze 1957, p. 347; Heinze 1962, p. 213

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

Occurrence in Denmark: Jutland: The gall on *Picea sitchensis* found at Blokhus (29-7-60), Rolf Forest (14-4-57), Madum Lake in Himmerland (20-6-58), Great Blåkilde (20-5-57), Brårup Plantation at Skive (3-9-69), Fly Plantation at Skive (17-4-69), Addit Forest (12-5-59), and Juelsminde (28-6-59), colonies on *Pseudotsuga taxifolia* found at Rold Forest (27-5-59, Nørreskov at Rebild (25-5-57), and Brårup Plantation at Skive (3-9-69).

Funen: At Hylkedam both on *Picea sitchensis* (20-5-57) and on *Pseudotsuga taxifolia* (29-5-57). Other islands: On *Picea sitchensis* at Rødby Fjord on Lolland (16-8-57).

Thomsen (1940) gave the first records of this species in Denmark. Danish name: Douglasgranbladlus. It has since been mentioned by Bovien & Thomsen (1945), Bejer-Petersen & Søegaard (1958), and Bejer-Petersen (1965). It is widely distributed in Denmark today. Henriksen (1944) recorded finds of galls (*M. Thomsen* leg.) from Funen (Langesø at Odense) and Lolland (Knuthenborg and Roden Forest). Jensen (1962) tells about finds of the gall at Frederiksdal at Nakskov on Lolland.

Genus **SACCHIPHANTES** Curtis, 1844

328—329. *Sacchiphantes abietis* (Linné, 1758), s. lat.

Chermes abietis Linné, 1758

Two species of this species-complex occur in Denmark, viz. *S. abietis* s. str. and *S. viridis* (Ratz.). Galls on *Picea* (*abies*, *glauca*) with aphids identifiable with *S. abietis* s. lat., only, have been found in Jutland north of Hals in Vendsyssel (5-5-57), at Madum Lake in Himmerland (several finds), Legind Bjerger on Mors (7-6-57), Fur (22-8-57), Fly at Skive (7-4-57), Hvidemose at Flyndersø (18-9-58), Skive (24-11-58, 6-5-59), and west of Viborg (4-5-58), on Sealand at Holte (17-10-57). Jensen (1962) recorded the gall from Frederiksdal at Nakskov on Lolland. Henriksen (1944) mentions finds of the gall on *Picea* from Jutland, Sealand, Møen, and Bornholm. The species is also mentioned by Boas (1923), Bovien & Thomsen (1945), and Bejer-Petersen (1968).

It is known from Sweden, Norway, and Finland. Danish name: Ananasgallebladlus or granbladlus.

328. *Sacchiphantes abietis* (Linné, 1758), s. str.

Sacchiphantes abietis: Börner 1952, p. 209, no. 815; Börner & Heinze 1957, p. 352; Heinze 1962, p. 215

Distribution: Europe, Asia.

Occurrence in Denmark: On *Picea* (*abies*, *glauca*, *sitchensis*). Jutland: Blokhus (25-7-60), Øland west of Ålborg (31-7-60), Vejerslev on Mors (29-5-58), Højris on Mors (10-7-60), Krabbesholm Forest at Skive (22-4-59), south of Skive (28-8-57), Flyndersø (22-7-57), Bryrup (11-7-58), Funder (12-7-60), Femmøller (5-8-59), and Ebeltoft (6-8-59). Sealand: Holte (15-8-57). Other islands: Dyret on Samsø (9-8-58).

329. *Sacchiphantes viridis* (Ratz., 1843)

Sacchiphantes viridis: Börner 1952, p. 208, no. 814; Börner & Heinze 1957, p. 350; Heinze 1962, p. 215

Distribution: Europe.

Occurrence in Denmark: Jutland: On *Picea abies* on Fur (22-8-57) and on *P. sitchensis* at Fly Plantation south of Skive (29-8-60).

Genus **PHYLLOXERA** Boyer de Fonscolombe, 1834330. *Phylloxera coccinea* (v. Heyden, 1837)

Phylloxera coccinea: Börner 1952, p. 210, no. 821; Börner & Heinze 1957, p. 357; Heinze 1962, p. 222

Distribution: Europe. It is known from Sweden.

Occurrence in Denmark: *Ph. coccinea* is mentioned by Boas (1923). The Danish records of *Ph. quercus* given by Henriksen (1944) and Jensen (1962) may refer either to this species or *glabra* or perhaps *foaae* Börner. The appearance of oak leaves attacked by *glabra* is exactly like that caused by *coccinea*. *Ph. quercus* B.d. Fonsc. is a mediterranean species.

331. *Phylloxera glabra* (v. Heyden, 1837)

Phylloxera glabra: Börner 1952, p. 210, no. 820; Börner & Heinze 1957, p. 357; Heinze 1962, p. 222

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

Occurrence in Denmark: Collected on *Quercus robur* at Femmøller in Jutland (5-8-59, 6-7-60).

Additional remarks to previous parts of the list

Part 2:

No. 30. *Macrosiphum silenium* (p. 83)

Macrosiphum montanum H.R.I. and *M. hartigi* H.R.L. are not synonyms of this species. The Danish specimens are more like the *euphorbiae-gei*-complex. The identification with *silenium* Theobald may be correct or not, as the interpretation of Theobald's name is uncertain.

No. 31. *Macrosiphum stellariae* (p. 84)

It is doubtful if the Danish material is different from *M. euphorbiae*. If this really be the case then the use of the name *stellariae* Theobald is dubious because more than one kind of *Macrosiphums* occur on *Stellaria*. At least the *Macrosiphum* on *Stellaria* in Nether-

lands is different from the *Macrosiphum* on *Stellaria* in Denmark. Dr. D. Hille Ris Lambers wrote to me (1961, in litt.): "What you describe as *stellariae* differs incredibly from the aphid infesting *Stellaria holostea* in this country. We find here an extremely slender, small *Macrosiphum* on strongly shadowed plants with few caudal hairs, while you find a real giant with many caudal hairs. Species of this group have been found also on *Sanicula*, *Eryngium*, *Dianthus*, *Caryophyllus*, and other plants. I utterly failed to find consistent differences in studies after 1939".

No. 43. *Acyrtosiphon spartii* (p. 90)

This is only a synonym of *A. pisum* Harris (no. 42).

Part 3:

No. 73. *Pleotrichophorus filaginis* (p. 219)

The finds at Femmøller from 1960 differed from *P. filaginis* Schouteden — as mentioned — in several respects. The *Pleotrichophorus* on *Gnaphalium* (*Helichrysum*) *arenarium* has since been described as a new species in U.S.S.R., *P. helichrysi* Bozhko, 1963.

Part 5:

Nos. 108—109. *Holcaphis frequens* and *H. holci* (p. 127)

Holcaphis H.R.L. shall be regarded as a subgenus within the genus *Diuraphis* Aizenberg, 1935.

No. 138. *Ceruraphis eriophori* (p. 139)

The find from Lyngby belongs to no. 187 (vide part 6, p. 93).

Part 7:

Nos. 192—193. *Longiunguis elisabethae* and *L. luzulellus* (p. 377—378).

Longiunguis van der Goot, 1917, has been sunk as a synonym of *Melanaphis* van der Goot, 1916.

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(continued from Entom. Medd. 38, 1970, p. 164)

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