

A provisional phylogenetic check-list of the western palaearctic Nepticulidae, with data on hostplants (Lepidoptera)

ERIK J. van NIEUKERKEN

Ent. scand.



Nieukerken, E. J. van: A provisional phylogenetic check-list of the western palaearctic Nepticulidae, with data on hostplants (Lepidoptera).
Ent. Scand. 17: 1-27. Copenhagen, Denmark 23 May 1986. ISSN 0013-8711.

A checklist, containing all described Nepticulidae from the western palaearctic region, is provided. All species-group names given to western palaearctic species are listed, including those in synonymy, whether available or not. Eleven new synonymies are established at generic level, and 18 at species level; 48 new combinations are made and two lectotypes are designated. The arrangement of species reflects present phylogenetic opinion. Hostplant data are provided for each species, and a systematic catalogue concludes this paper.

E. J. van Nieukerken, Department of Animal Systematics & Zoogeography, Vrije Universiteit, Amsterdam, Netherlands. Present address: Rijksmuseum van Natuurlijke Historie, P.O. Box 9517, NL-2300 RA Leiden, Netherlands.

The leaf-mining family Nepticulidae has in recent years received increasing interest both from collectors and taxonomists, especially in northwest Europe. Our department has concentrated on taxonomic and phylogenetic studies of western palaearctic Nepticulidae. However, although they are still in progress, the absence of a modern reference work urged me to provide a provisional checklist, bringing the taxonomy and nomenclature up-to-date, and serving as a framework for future studies and reference.

No review of the European species has been presented since Rebel (1901) and Meess (1910), but many species have been described since. Hering (1957) treated all the then known mines of European and mediterranean species, but gave no systematic list. Some recent local checklists or fauna works dealing with Nepticulidae are: Johansson (1971) for Scandinavia, Borkowski (1975) for Poland, Karsholt & Nielsen (1976) for Denmark, Emmet (1976, 1979) for the British Isles, Kyrki (1978) for Finland, Leraut (1980) for France, van Nieukerken (1982a) for the Netherlands and de Prins (1983) for Belgium.

This list includes all nominal species and infrasubspecific names, including the unavailable ones, described from the western palaearctic

region, approximately as far east as longitude 70° East.

Data on hostplants are also provided, but data on distribution are omitted since European data will be published in the "Checklist of the Lepidoptera of Europe".

Taxonomy and nomenclature

The generic taxonomy follows van Nieukerken (in prep.) and will not be discussed here.

The species taxonomy is partly based on the recent revisions of parts of *Stigmella*: Johansson (1971), Schoorl, van Nieukerken & Wilkinson (1985) and Schoorl & Wilkinson (1986), for *Parafomoria* van Nieukerken (1983) and for *Ectoedemia* (partim) van Nieukerken (1985). The remaining species have either been examined by myself, or detailed data from other specialists were available to me through publications and personal communication.

The grouping of species in *Stigmella* is tentative, and a refinement of Johansson's (1971) list, in which he provided the first division into species groups. The species groups in *Stigmella* and *Ectoedemia*, although without formal taxonomic status, have been given together with their authors for

historical reasons, but strict priority has not always been observed here. When no author is given, the group has not been named previously, as far as I know.

The sequence of the species within the genera reflects modern opinion about phylogeny, although only part of it is based on a thorough cladistic analysis.

Whereas the fauna of West and North Europe is comparatively well known, and not many new species can be expected, in all probability a large number are still to be discovered in the Mediterranean region and western Asia, as partly indicated by the presence of many undescribed species in collections.

I have tried to include all available names attributed to Nepticulidae from the region, as well as the unavailable names, including those given by Skala, after 1930, to leafmines, and the infrasub-specific names, which are few. All unavailable names are indicated by a double dagger (‡) and infrasubspecific names are also followed by 'infrasubs.' I have checked almost all original references, except a few which I could not trace.

From a total of about 440 specific names, about 400 available and 47 unavailable names are attributed to 225 species. From 31 names, of which 9 are not available, the identity could not be determined; most of them are probably synonyms of existing species. They are listed at the end of the check-list.

Many synonymies were established previously, but several new synonymies are made here, and shortly commented in the taxonomic notes. Species treated in the taxonomic notes are preceded by an asterisk in the list.

Abbreviations used for collections are the same as those used by van Nieukerken (1985).

Hostplants

In Nepticulidae, hostplant data are very important indeed. It is by collecting mines, that most people start their study of this family, and many species can only be collected satisfactorily by rearing larvae. Until recently there has been a general belief that nepticulids are always monophagous, causing the proliferation of 'species' descriptions based on hostplant and mineform only, without additional morphological criteria.

It has now become clear that especially species feeding on Rosaceae are more often oligophagous

than monophagous, and some species even feed on a number of hostplant-genera. The most 'polyphagous' species in Europe are *Stigmella oxyacanthella* (Stainton) on Rosaceous trees, *S. aurella* (Fabricius) on Rosaceous herbs and shrubs and *Geranium*, and *Ectoedemia atricollis* (Stainton) on Rosaceous trees and *Staphylea*.

In the checklist, only those hostplants from which the nepticulid species is collected with certainty, are given. When a generic plant name is given, the nepticulid species can potentially feed on all native species of this genus, but is not always recorded from all. When the generic name is followed by spp., the larva only feeds on certain species of the genus and is absent from others. When the number of hostplant species is low, their complete names are given. Only native or widely cultivated species are taken into consideration, data from botanical gardens are neglected. More detailed data on hostplants are amongst others given in the revisions listed above. For reasons of space it is impossible to give here the sources of the hostplant data, but many come from unpublished information from R. Johansson, the present author and his colleagues.

In order to provide a picture of the hostplant spectrum of the family, and to know which species feed on a given plant, a systematic catalogue of hostplants with cross references to species numbers is provided as well. Taxonomy, nomenclature and sequence of plants follows Tutin et al. (1964–1976), but for non-European plants local floras have been consulted.

Taxonomic notes

1. *Simplimorpha promissa* (Staudinger)

Examination of the female holotype of *Nepticula robbiniella* Gustafsson, 1973 (in RMS), revealed that it is identical with *promissa*. The mined leaf, which had been misidentified as belonging to *Robinia* (Gustafsson 1973), belongs in fact to *Pistacia atlantica* Desf.

2. *Enteucha acetosae* (Stainton)

Shield (1853) named this species in a list of collected specimens, but since he only mentioned the name and hostplant without any description or

further indication, his name is not available, and Stainton thus remains the author.

8. **Stigmella paliurella** (Klimesch)

This species was named first by Gerasimov (1937), but since he only described the mine (after 1930), his name is not available, according to the Code (art. 1b and 13a). Therefore Klimesch (1940) is credited with the authorship, because he fully described the species.

18. **Stigmella prunetorum** (Stainton)

This species received three names in the year 1855, but Stainton's name is clearly the older, because Herrich-Schäffer (1855: 353) himself stated in the description of *perpusillella* that it is the same species as *prunetorum* under reference to its original description.

27. **Stigmella anomalella** (Göze)

This is a very variable species with many synonyms. *Phalaena grisearosae* Retzius is a name which, like *anomalella*, has been given to De Geer's (1752) earlier description of the species. For the synonymy of *penicilla* Thunberg, refer to Karsholt & Nielsen (1986) and for *aeneella* to Schoorl, van Nieuwerken & Wilkinson (1985). *N. fletcheri* is the name of the black-headed form, of which I have examined several syntypic specimens. As lectotype I select here the male labelled: U.K.: Sussex, Slindon, bred 29.4 – 21.5.1891, Rosa arvensis; E. R. Bankes Collection B. M. 1928–208; Genitalia Slide BM No. 22682; plus my lectotype and identification labels (BMNH).

Nepticula zermattensis Weber and *N. caulescens* Klimesch are names given to forms feeding on respectively *Sanguisorba* and *Potentilla caulescens*. I have examined syntypic material of both and am assured that there are no morphological differences to justify a separate specific status, nor is the biology different enough. The different hostplants in this case do not give enough grounds to regard them as different; also other species are known to feed both on *Rosa* and Rosaceous herbs, as for instance *S. centifoliella* and *E. angulifasiella*. However, the situation might be more complex, since *N. zermattensis* sensu Klimesch (1951) seems to be a different species (Johansson pers. comm.).

28. **Stigmella spinosissimae** (Waters)

By examination of the ♂ holotype and a ♀ paratype, it can be concluded that *spinosissimae* is closely related to *anomalella* but yet sufficiently different to warrant separate specific status. It is however a completely different species from *spinosissimae* sensu Klimesch (1951), which belongs to the *sanguisorbae* group.

36. see 28.

38. **Stigmella pyrivora** Gustafsson

This species might well be conspecific with *S. paradoxa* (Frey).

49. **Stigmella hybnerella** (Hübner)

Tinea ampelipennella Hübner and *T. posticella* Haworth both are unnecessary replacement names of *hybnerella*. The species is oligophagous on *Crataegus*, *Cotoneaster* and *Amelanchier*. It can possibly also be found on other Rosaceous trees. Specimens reared from *Amelanchier ovalis* are inseparable from typical *hybnerella* (= *mespilicola* sensu Klimesch 1948).

50. **Stigmella mespilicola** (Frey)

The holotype ♂ of *mespilicola* Frey, labelled: Zürich, Frey collection (BMNH) has genitalia which are similar to those from *ariella* Herrich-Schäffer (see Klimesch 1948), thus with much shorter valvae than *hybnerella*. According to Frey (1856), his specimen was reared from *Amelanchier ovalis*, but since all recent specimens reared from this plant belong to *hybnerella*, it is questionable whether his plant identification was correct. On *Cotoneaster* both this species and *hybnerella* occur, but the male genitalia of *cotoneastri* sensu Klimesch (1948) clearly belong to this species.

54. **Stigmella salicis** (Stainton)

This is a variable species, feeding on a wide range of *Salix* species, usually with hairy leaves. *S. viminella* (Frey) and *S. auritella* (Skala) appear to fall within the variability of this species and are therefore synonymised. These conclusions are partly based on work of R. Johansson (pers. comm.). *N. uniformis* Heinemann and *unicolor*

Müller-Rutz are merely uniformly coloured aberrations. The male holotype of *Stigmella libiezi* Dufrane, previously considered a synonym of *S. malella*, belongs to *salicis*. It is labelled: Frameries, 24.6.05, ex larva, Dufrane; larva bois d'Eugies, 29.9.04, Dufrane; Cerasus padus; holotype; Genitalia slide VU 1436 (coll. IRSN). Probably Dufrane mistook *Salix caprea* for *Prunus padus*, two commonly associated trees with more or less similar leaves.

56. *Stigmella zelleriella* (Snellen)

See van Nieukerken (1983a) for the synonymy. Svensson (1985) is of the opinion that *lappovimella* is a separate species, and is currently investigating its status.

57. *Stigmella benanderella* (Wolff)

A form of this species occurs in Lapland on *Salix phyllicifolia*. This form has previously been considered to be a separate species, and named *scandicella*, but has never been formally described.

60. *Stigmella trimaculella* (Haworth)

Zeller (1839) was of the opinion that *Phalena rufella* Scopoli, 1763 was the same as his *Lyonetia rufella* Zeller, a junior synonym of *trimaculella*. Later, Zeller (1848) expressed his doubts about the identity of Scopoli's species, and in his revision of the species described by Scopoli in 1763 (Zeller 1855), he completely changed his idea and considered *rufella* Scopoli as a different, though doubtful species. According to Zeller (1855), Scopoli (1763) did not illustrate this species in plate 43 (or 36), in which the figures are unnumbered. According to Werneburg (1858), however, *rufella* is illustrated on this plate, in the middle just above the Pterophorids, but also he remains in doubt about the identity of the species. In my opinion, it is impossible to ascribe the figure, or any other figure on plate 43 or the description, to *trimaculella* with its characteristic colour pattern. I am therefore in favour of rejecting the name *rufella* Scopoli, unless its identity could be firmly established.

64. *Stigmella lemniscella* (Zeller) comb. n.

In 1839, Zeller described two species which he caught on *Ulmus*. The first, which he incorrectly

named *Lyonetia huebnerella* Hübner, with a black head and androconial scales ("Die Oberfläche der hinterfl. ist mit langen, tiefschwarzen Haaren bestreut"), is clearly similar to the male of *marginicolella*. The second, *Lyonetia lemniscella*, he compared with his *huebnerella* and described it as having a red head and lacking the black hair-scales. This description, together with the note "an Ulmenstammen", makes it most likely that *lemniscella* is the female of *marginicolella*. Unfortunately, no syntypic material of *lemniscella* could be traced in BMNH (K. R. Tuck pers. comm.), but the evidence seems sufficient to synonymise *marginicolella* with *lemniscella*.

66. *Stigmella aurella* (Fabricius)

Through breeding experiments and analysis of allozymes, the opinion that the forms feeding on *Agrimonia*, *Fragaria* and *Geum* belong to *aurella* (see Klimesch 1981), has been corroborated (Bryan & Menken pers. comm.). Specimens reared from *Geranium versicolor* from Greece (Pinelhos mountains) are also unseparable from typical *aurella*. Contrary to earlier publications, *fragariella* Heinemann is a synonym of *aurella* (Johansson in litt.).

68. *Stigmella splendidissimella* (Herrich-Schäffer)

This species also appears to feed occasionally on *Fragaria* and *Geum*, as does *aurella* (Bryan & Menken pers. comm.).

69. *Stigmella pretiosa* (Heinemann)

There are virtually no characters which justify the separation of *pretiosa* and *bollii*.

75. *Stigmella poterii* (Stainton)

Contrary to my earlier belief (van Nieukerken 1982a), it seems that the *Potentilla*- and *Sanguisorba*-feeding forms are completely inseparable, often occurring together. Therefore, I conclude that they belong to one oligophagous species.

76, 77. *Stigmella filipendulae* (Wocke) & *ulmariae* (Wocke)

These two species are closely related, and in their genitalia almost inseparable. According to

Johansson (in litt.), there are some constant differences in Scandinavian specimens, so the species are here tentatively treated as separate taxa.

79. *Stigmella incognitella* (Herrich-Schäffer) comb. n.

Herrich-Schäffer (1855) described this species from material reared and described in litt. by Frey. Frey (1856) synonymised it immediately with *pygmaeella* Haworth and considered it as the apple feeding form of that species. Both descriptions can only apply to the species currently known as *S. pomella* (Vaughan), for which therefore the senior *incognitella* should be used. Herrich-Schäffer (1860) made a mistake when he wrote: "*N. incognitella*, später von Frey als *desperatella* beschrieben" because his description does not fit that species (colour of collar, presence of anal tufts in male and female). In the Frey collection (BMNH), there is no material labelled as *incognitella* (K. R. Tuck in litt.), but there are specimens under *N. pomella* Heinemann. Since Heinemann described *pomella* in 1862, this material must have been labelled later, so it is impossible to decide if part of it is syntypic material of *incognitella*. However, the description of *incognitella* completely justifies its present synonymy.

86. *Stigmella* sp. n.

This refers to an undescribed species from Greece, closely related to *S. suberivora*.

88. *Stigmella basiguttella* (Heinemann)

Study of allozymes of Dutch populations of this species revealed the presence of two biochemically distinct sibling species (Menken pers. comm.). Morphologically, they have not yet been separated.

103. *Acalyptis* sp. n.

This refers to an undescribed species, collected by Walsingham (1904) on *Limoniastrum* near Biskra, Algeria. It will be named and described elsewhere.

108. *Acalyptis* sp. n.

Klimesch (1978) described two completely different forms of *A. minimella*, the typical form and a

form of Rhodos. The latter will be described as a new species elsewhere.

122. *Trifurcula zollikofferiella* (Chrétien) comb. n.

I have examined male genitalia of specimens collected by us at the type locality. Clearly, they belong to the subgenus *Glaucolepis*.

123. *Trifurcula headleyella* (Stainton)

T. dubiella (Hauder) and *rodella* Svensson are here regarded as synonyms of *headleyella*. They are both insufficiently defined, and lack external diagnostic differences. *T. rodella* has been described on the base of a different tegumen but this character varies within the species, as indicated by Svensson himself (1985).

126. *Trifurcula thymi* (Szöcs)

This species was named but not described by Hering, so Borkowski (1970) described it as a new species. He mentioned the fact that Szöcs had treated and described this species, giving Hering as author, in the Fauna Hungariae (1965: 89–90), but regarded Szöcs' description as unavailable. There is, however, no nomenclatorial reason to doubt the availability of Szöcs' description; therefore he should be the author and material from his collection the type material. The following male is here selected as lectotype: HUNGARY: Budapest, Széchenyi-hegy, 1963.VII.21 e.l., Szöcs J., Thymus glabrescens, 25/63 genitalia slide VU 2506 (TMAB).

138. *Trifurcula eurema* (Tutt)

T. eurema, *dorycniella* and *gozmanyi* appear to be morphologically inseparable, and therefore probably belong to one species. *T. dorycniella* is reported to pupate inside the mine, but it appears to be variable in this habit as is the *Lotus*-feeding form.

142. *Trifurcula pallidella* (Duponchel)

See van Nieuwerkerken & Johansson (in press).

144. **Trifurcula serotinella** Herrich-Schäffer

Johansson (in litt.) examined type-material of *confertella* which confirms the synonymy with *serotinella*.

147. **Trifurcula beirnei** Puplesis

See van Nieukerken & Johansson (in press).

159. **Bohemannia auriciliella** (Joannis) comb. n.

I have examined the female holotype of this species, and found that it is identical in its externals with *E. bradfordi* Emmet, including the characteristic dark-edged scape and the colour of the forewings. *N. auriciliella* was therefore previously wrongly synonymised with *quadrivittella* by Klimesch (1975).

This remains a cryptic species of which now three specimens are known: the two holotypes and a Dutch specimen (van Nieukerken 1982a). Labels holotype: TYPE; Vannes, 23 Juin; auriciliella J. Joann. type; 1920–1932, coll. L. & J. DE JOANNIS, MUSEUM PARIS; Nepticula auriciliella Joan., Ann. Soc. ent. France 1908, vol. 77, p. 822; Scoliaula quadrivittella Boh., ♀, DET.

Dr. J. KLIMESCH; Genitalpräparat ♀ Sc. quadrimac. Boh., no. 720, J. Klimesch, Linz a.D.

160. **Ectoedemia sericopeza** (Zeller)

Joannis (1915) came to the conclusion that *Oecophora sericopezella* Duponchel is a senior synonym of *Nepticula turbidella* Zeller on the basis of material in Duponchel's collection. Indeed, Duponchel's description and figure do not fit *sericopeza* at all, but *sericopezella* must be regarded as an unjustified emendation and therefore an objective synonym of *Lyonetia sericopeza* Zeller. Therefore, material in Duponchel's collection is of no importance and must be regarded as a misidentification. Strictly following Joannis would cause great nomenclatorial confusion.

175. **Ectoedemia nowakowskii** (Toll) comb. n.

Unfortunately only females are known from this species. I examined the female genitalia and venation of a paratype (coll. IPAK), and they show that the species is not *Stigmella*, but *Ectoedemia* sensu lato. Since it lacks any of the diagnostic characteristics of other subgenera it is tentatively placed in *Fomoria*.

Check-list

Species preceded by an asterisk are dealt with in the taxonomic comments.

Familia NEPTICULIDAE Stainton, 1854

Type-genus: *Nepticula* Heyden (junior subjective synonym of *Stigmella* Schrank)
Stigmellidae Hampson, 1918

Subfamilia NEPTICULINAE Stainton

Tribus NEPTICULINI Stainton

Genus **Simplimorpha** Scoble, 1983

Type-species: *Stigmella lanceifoliella* Vári, 1955 (or. des., monot.)

*1. *S. promissa* (Staudinger, 1870) **comb. n.**
robinella (Gustafsson, 1973) **syn. n.**

Cotinus coggyria, *Pistacia*, *Rhus coriaria*

Genus **Enteucha** Meyrick, 1915

Type-species: *Enteucha cyanochlora* Meyrick, 1915 (or. des., monot.)

Johanssonia Borkowski, 1972 nec Selensky, 1914 **syn. n.**

Type-species: *Nepticula acetosae* Stainton, 1854 (or. des., monot.)

Artaversala Davis, 1978 **syn. n.**

Type-species: *Artaversala gilvafascia* Davis, 1978 (or. des., monot.)

Oligoneura Davis, 1978 nec Bigot, 1878 **syn. n.**

Type-species: *Oligoneura basidactyla* Davis, 1978 (or. des., monot.)

Manoneura Davis, 1979 **syn. n.** (replacement name for *Oligoneura* Davis)

Johanssoniella Koçak, 1981 **syn. n.** (replacement name for *Johanssonia* Borkowski)

- *2. *E. acetosae* (Stainton, 1854) **comb. n.** *Rumex acetosa*, *R. acetosella*, *R. arifolius*
acetosella (Doubleday, 1859)
arifoliella (Klimesch, 1940)
 ‡ *altvateri* (Skala, 1941) 'infrasubs.'

Genus **Stigmella** Schrank, 1802

Type-species: *Phalaena (Tinea) anomalella* Göze, 1783 (subsequent des. Walsingham 1907)

Nepticula Heyden, 1843

Type-species: *Tinea aurella* Fabricius, 1775 (subsequent des. Walsingham 1907)

Dysnepticula Börner in Brohmer, 1925

Type-species: *Phalaena (Tinea) anomalella* Göze, 1783 (or. des.)

Astigmella Puplesis, 1984 **syn. n.**

Type-species: *Astigmella dissona* Puplesis, 1984 (or. des.)

lapponica group Johansson, 1971

? *procrastinella* group Wilkinson & Scoble, 1979

3. *S. naturella* (Klimesch, 1936) *Betula*
 4. *S. lapponica* (Wocke, 1862) *Betula*
lapponicella (Porritt, 1886)
? *lusatica* (Schütze, 1904)
vossensis (Grönlien, 1932)
 5. *S. confusella* (Wood & Walsingham, 1894) *Betula*

freyella group Lempke, 1976

6. *S. freyella* (Heyden, 1858) *Calystegia*, *Convolvulus* spp.
 7. *S. diniensis* (Klimesch, 1975) *Helianthemum* sp., *Fumana procumbens*

paliurella group

- *8. *S. paliurella* (Klimesch, 1940) *Paliurus spina-christi*
 ‡ *paliurella* Gerasimov, 1937
 9. *S. zizyphi* Walsingham, 1911 *Zizyphus lotus*

tiliae group Johansson, 1971

10. *S. tiliae* (Frey, 1856) *Tilia*

betulicola group Johansson, 1971

corylifoliella group Wilkinson & Scoble,
 1979

11. *S. betulicola* (Stainton, 1856) *Betula*
betulicolella (Doubleday, 1859)
nanivora (Petersen, 1930)
 12. *S. nivenburgensis* (Preissecker, 1942) *Salix* spp.
 13. *S. discidia* Schoorl & Wilkinson, 1986 *Betula*
distinguenda sensu Klimesch 1948
 ? *sakhalinella* Puplesis, 1984
 14. *S. luteella* (Stainton, 1857) *Betula*
 ‡ *luteellina* (Skala, 1941)
 15. *S. glutinosae* (Stainton, 1858) *Alnus*
glutinosella (Doubleday, 1859)
distinguenda (Heinemann, 1862)
rubescens (Heinemann, 1871)
 ‡ *alniviridis* (Skala, 1939)
 ‡ *incanae* (Skala, 1939)
 16. *S. alnetella* (Stainton, 1856) *Alnus*
 17. *S. microtheriella* (Stainton, 1854) *Carpinus, Corylus, Ostrya*

prunetorum group Johansson, 1971

prunifoliella group Newton & Wilkinson,
 1982

- *18. *S. prunetorum* (Stainton, 1855) *Prunus* spp.
dimidiatella (Herrich-Schäffer, 1855)
perpusillella (Herrich-Schäffer, 1855)
prunetella (Doubleday, 1859)
punctella (Threlfall, 1884)
 ‡ *aviella* (Skala, 1934)

ultima group Puplesis, 1984

19. *S. aceris* (Frey, 1857) *Acer* spp.
szocsi (Klimesch, 1956)

malella group Johansson, 1971

20. *S. malella* (Stainton, 1854) *Malus, (Prunus* spp.)
 ‡ *prunicola* (Skala, 1939)
 21. *S. rhamnella* (Herrich-Schäffer, 1860) *Rhamnus* spp.
rhamnipumilae (Klimesch, 1950)
 22. *S. rhamnophila* (Amsel, 1934) *Rhamnus lycioides, R. saxatilis*
 23. *S. crenulatae* (Klimesch, 1975) **comb. n.** *Rhamnus crenulata*

24. *S. alaternella* (Le Marchand, 1937)
 25. *S. catharticella* (Stainton, 1853)
 26. *S. pyrellicola* (Klimesch, 1978)

anomalella group Johansson, 1971

rosaefoliella group Wilkinson & Scoble,
 1979 partim

- *27. *S. anomalella* (Göze, 1783)
grisearosae (Retzius, 1783)
penicilla (Thunberg, 1794)
rosella (Schrank, 1802)
aeneella (Heinemann, 1862)
fletcheri (Tutt, 1899)
? *laticuniculella* (Sauber, 1904)
zermattensis (Weber, 1937) **syn. n.**
? *helbigi* (Hartig, 1941)
caulescentella Klimesch, 1946 **syn. n.**
- *28. *S. spinosissimae* (Waters, 1928)
 29. *S. centifoliella* (Zeller, 1848)
hodgkinsoni (Stainton, 1884)

ulmivora group Johansson, 1971

30. *S. ulmivora* (Folgone, 1860)
ulmifoliae (Hering, 1931)
ulmicola (Hering, 1932)
31. *S. ulmiphaga* (Preissecker, 1942)
32. *S. viscerella* (Stainton, 1853)
tauromeniella (Groschke, 1944)

- Rhamnus alaternus*
Rhamnus catharticus
Rhamnus pyrellus

Rosa, Sanguisorba, Potentilla caulescens

- Rosa pimpinellifolia*
Rosa, Sanguisorba

sanguisorbae group

33. *S. sanguisorbae* (Wocke, 1865)
 34. *S. muricatella* (Klimesch, 1978) **comb. n.**
 35. *S. thuringiaca* (Petry, 1904)
nickerli (Rebel, 1908)
- *36. *S. spinosissimae* sensu Klimesch 1951

- Sanguisorba officinalis*
Sanguisorba minor
Potentilla spp., *Filipendula, Agrimonia,*
Fragaria, Sanguisorba
Rosa pimpinellifolia

paradoxa group Emmet, 1976

- nitidella* group Johansson, 1971
crataegifoliella group Wilkinson & Scoble,
 1979, partim
37. *S. paradoxa* (Frey, 1858)
nitidella (Heinemann, 1862)
- *38. *S. pyrivora* Gustafsson, 1981

Crataegus

Pyrus syriaca

oxyacanthella group Johansson, 1971

- crataegifoliella* group Wilkinson & Scoble,
 1979 partim
39. *S. torminalis* (Wood, 1890)
 40. *S. regiella* (Herrich-Schäffer, 1855)
‡ *corvimontana* (Hering, 1935)

- Sorbus torminalis*
Crataegus, Mespilus germanica

41. *S. crataegella* (Klimesch, 1936)
gratiosella sensu Wood 1894
 42. *S. hahniella* (Wörz, 1937)
 43. *S. magdalena* (Klimesch, 1950)
nylandriella auctt.
 44. *S. nylandriella* (Tengström, 1848)
aucupariae (Frey, 1857)
aucupariella (Porritt, 1883)
 45. *S. oxyacanthella* (Stainton, 1854)
aeneella auctt.
oxyacanthaecolella (Doubleday, 1859)
cotoneastri (Sorhagen, 1922)
 \ddagger *oxysorbi* (Skala, 1933)
 \ddagger *oxymalella* (Skala, 1933)
? \ddagger *chaenomelis* (Skala, 1936)
? \ddagger *mespili* (Skala, 1940)
 46. *S. pyri* (Glitz, 1865) *Pyrus*
 47. *S. minusculella* (Herrich-Schäffer, 1855)
? *stettinensis* (Heinemann, 1871)
chalybeia (Braun, 1914)
embonella (Klimesch, 1978)
 48. *S. desperatella* (Frey, 1856)
pyricola (Wocke, 1877) *Malus, Pyrus*

hybnerella group Johansson, 1971

- *49. *S. hybnerella* (Hübner, 1796)
ampelipennella (Hübner, [1825])
posticella (Haworth, 1828)
gratiosella (Duponchel, [1843])
ignobilella (Stainton, 1849)
latifasciella (Herrich-Schäffer, 1855)
mespilicola sensu Klimesch 1948
*50. *S. mespilicola* (Frey, 1856)
ariella (Herrich-Schäffer, 1860)
cotoneastri sensu Klimesch 1948 *Sorbus spp., Amelanchier ?, Cotoneaster*

floslactella group Johansson, 1971

51. *S. floslactella* (Haworth, 1828)
 \ddagger *interrupta* Dufrane, 1949 'infrasubs.'
 52. *S. carpinella* (Heinemann, 1862)
 53. *S. tityrella* (Stainton, 1854)
hemargyrella sensu Zeller 1848
turicella (Herrich-Schäffer, 1855)
turicensis (Frey, 1856) *Corylus, Ostrya, (Carpinus)*

salicis group Johansson, 1971

fuscotibiella group Newton & Wilkinson,
1982

- *54. *S. salicis* (Stainton, 1854)
salicella (Herrich-Schäffer, 1855) *Salix spp.*

- vimineticola* (Frey, 1856) **syn. n.**
salicivorella (Doubleday, 1859)
uniformis (Heinemann, 1871)
 ‡ *semipictella* (Steudel, 1882) ‘infrasubs.’
 ? *dewitziella* (Sorhagen, 1885)
 ‡ *februella* (Crombrugghe, 1907) ‘infrasubs.’
unicolor (Müller-Rutz, 1932)
 ‡ *crombruggheella* (Dufrane, 1930) ‘infrasubs.’
 ‡ *interrupta* (Skala, 1933) ‘infrasubs.’
auritella (Skala, 1939) **syn. n.**
libiezi Dufrane, 1949 **syn. n.**
arbusculae (Klimesch, 1951)
55. *S. myrtillella* (Stainton, 1857) *Vaccinium myrtillus, V. uliginosum*
 ‡ *uliginosi* (Skala, 1941)
- *56. *S. zelleriella* (Snellen, 1875) *Salix repens, S. lapponum*
repentilla (Wolff, 1955)
lappovimella (Svensson, 1976)
- *57. *S. benanderella* (Wolff, 1955) *Salix repens, S. phylicifolia*
 ‡ *scandicella* (Jonasson in Krogerus et al., 1971)
58. *S. obliquella* (Heinemann, 1862)
vimineticola auctt.
 ? *wockeella* (Heinemann, 1871)
diversa (Glitz, 1872)
babylonicae (Hartig, 1949)
59. *S. pallidiciliella* Klimesch, 1946 *Salix purpurea*
 ‡ *purpureae* (Skala, 1948)
- *60. *S. trimaculella* (Haworth, 1828) *Populus spp.*
rufella (Zeller, 1839)
populella (Herrich-Schäffer, 1855)
albicornella (Kollar, 1860)
populicola (Sorhagen, 1922)
subtrimaculella Dufrane, 1949
61. *S. assimilella* (Zeller, 1848) *Populus spp.*
 ‡ *nigricornella* (Mann, in litt.)
 ? *tremulaefoliella* (Sorhagen, 1922)
- sorbi** group Johansson, 1971
rosaefoliella group Wilkinson & Scoble, 1979 partim
62. *S. sorbi* (Stainton, 1861) *Sorbus aucuparia, Cotoneaster, Malus, Amelanchier*
sorbiella (Porritt, 1883)
cotoneastrella (Weber, 1936)
63. *S. plagicolella* (Stainton, 1854) *Prunus spp., (Malus?)*
 ‡ *avianella* (Skala, 1934)
 ‡ *malicola* (Skala, 1939)
- marginicolella** group Johansson, 1971
- *64. *S. lemniscella* (Zeller, 1839) **comb. n.** *Ulmus*
huebnerella sensu Zeller 1839

- aurella* sensu Zeller 1848
marginicolella (Stainton, 1853) **syn. n.**
suberosella (Toll, 1934) **syn. n.**
 ‡ *fulvomacula* (Skala, 1936) **syn. n.**
65. *S. continua* (Stainton, 1856) *Betula*
- aurella** group Johansson, 1971
- *66. *S. aurella* (Fabricius, 1775) *Rubus, Fragaria, Geum, Agrimonia, Geranium versicolor* (Greece)
nitens (Foligne, 1862)
fragariella (Heinemann, 1862)
gei (Wocke, 1871)
 ? *albicomella* (Heinemann & Wocke, 1876)
 ‡ *semicolorella* (Eppelsheim, 1891) 'infra-subs.'
fruticosella (Müller-Rutz, 1914)
 ‡ *geirubi* (Skala, 1940)
dulcella auctt. partim
67. *S. auromarginella* (Richardson, 1890) *Rubus, Agrimonia*
- *68. *S. splendidissimella* (Herrich-Schäffer, 1855) *Rubus, Fragaria, Geum*
splendidissima (Frey, 1856)
dulcella (Heinemann, 1862)
 ? *inaequalis* (Heinemann, 1862)
saxatilella (Grönlien, 1932)
 ‡ ? *peterseniella* (Skala, 1941)
fragarivora (Carolsfeld-Krause, 1944)
fragariella auctt. partim
gei auctt. partim
- *69. *S. pretiosa* (Heinemann, 1862) *Geum* spp., *Rubus*
bollii (Frey, 1873) **syn. n.**
gei auctt. partim
geimontani auctt. partim
tatrensis Borkowski, 1969
70. *S. geimontani* (Klimesch, 1940) *Geum montanum*
71. *S. aeneofasciella* (Herrich-Schäffer, 1855) *Agrimonia, Potentilla, Fragaria*
aeneofasciata (Frey, 1856)
72. *S. tormentillella* (Herrich-Schäffer, 1860) *Potentilla* spp.
crantziella sensu Klimesch 1948
73. *S. stelviana* (Weber, 1938) *Potentilla* spp.
 ‡ *stelviana* (Wocke, 1881)
crantziella (Weber, 1945)
74. *S. dryadella* (Hofmann, 1868) *Dryas octopetala*
- *75. *S. poterii* (Stainton, 1857) *Sanguisorba, Potentilla* spp., *Rubus chamaemorus*
poteriella (Doubleday, 1859)
comari (Wocke, 1862)
geminella (Frey, 1870)
palustrella (Frey, 1870)
tengstroemi (Nolcken, 1871)
occultella (Heinemann, 1871)
diffinis (Wocke, 1874)
 ? *angustella* (Heinemann & Wocke, 1876)
serella (Stainton, 1888)
 ? *elisabethella* (Szöcs, 1957)

- *76. *S. filipendulae* (Wocke, 1871)
 *77. *S. ulmariae* (Wocke, 1879)
 78. *S. lediella* (Schleich, 1867)
 ‡ *auromarginata* (Petersen, 1930) 'infrasubs.'

pomella group Johansson, 1971

- *79. *S. incognitella* (Herrich-Schäffer, 1855)
comb. n.
pomella (Vaughan, 1858) **syn. n.**
malli (Hering, 1932) **syn. n.**
 80. *S. perpygmaeella* (Doubleday, 1859)
pygmaeella (Haworth, 1828) nec Denis &
 Schiffermüller, 1775
 81. *S. azaroli* (Klimesch, 1978) **comb. n.**

amygdali group

82. *S. amygdali* (Klimesch, 1978) **comb. n.**

hemargyrella group Johansson, 1971

83. *S. hemargyrella* (Kollar, 1832)
basalella (Herrich-Schäffer, 1855)
fulgens (Stainton, 1888)
 84. *S. speciosa* (Frey, 1857)
 ‡ *pseudoplatanella* (Skala, 1933)
pseudoplatanella (Weber, 1937)
 ‡ *monspessulanii* (Skala, 1939)
 85. *S. suberivora* (Stainton, 1869)
ilicivora (Peyerimhoff, 1871)
nigra Dufrane, 1955
 *86. *S. sp. n.*
 87. *S. lonicerarum* (Frey, 1856)
 ‡ *teutonica* (Skala, 1939)
 ‡ *lenticensis* (Skala, 1939)
 ‡ *livonica* (Skala, 1939)

ruficapitella group Johansson, 1971

- *88. *S. basiguttella* (Heinemann, 1862)
cerricolella Klimesch, 1946
 89. *S. svenssoni* (Johansson, 1971)
 90. *S. zangherii* (Klimesch, 1951)
 91. *S. szoeysiella* (Borkowski, 1972) **comb. n.**
 92. *S. macrolepidella* (Klimesch, 1978) **comb. n.**
 93. *S. dorsiguttella* (Johansson, 1971)
 94. *S. ruficapitella* (Haworth, 1828)
 ? *violacella* (Haworth, 1828)
 ‡ *lamprotornella* (Heyden, in litt.)
 95. *S. atricapitella* (Haworth, 1828)
 96. *S. samiatella* (Zeller, 1839)
 97. *S. roborella* (Johansson, 1971)
ruficapitella auctt.

Filipendula vulgaris
Filipendula ulmaria
Ledum palustre

Malus

Crataegus

Crataegus azarolus

Prunus spp.

Fagus

Acer pseudoplatanus, *A monspessulanum*

Quercus spp. (evergreen)

Quercus coccifera (Greece)
Lonicera xylosteum, *L. nigra*

Quercus spp. (deciduous), *Castanea*

Quercus spp. (deciduous)
Quercus cerris
Quercus cerris
Quercus macrolepis
Quercus spp. (deciduous)
Quercus spp. (deciduous)

Quercus spp. (deciduous)
Quercus spp. (deciduous), *Castanea*
Quercus spp. (deciduous)

98. *S. eberhardi* (Johansson, 1971)
 99. *S. tristis* (Wocke, 1862)

Quercus spp. (deciduous, evergreen)
Betula nana

not assigned to species group:

100. *S. styracicolella* (Klimesch, 1978) **comb. n.**
 101. *S. abaiella* Klimesch, 1979

Styrax officinalis
Pyrus

Tribus TRIFURCULINI Scoble, 1983

Genus **Acalyptis** Meyrick, 1921

Type-species: *Acalyptis psammophrica*

Meyrick, 1921 (or. des., monot.)

Microacalyptis Braun, 1925 **syn. n.**

Type-species: *Microacalyptis scirpi* Braun, 1925 (or. des., monot.)

Weberia Müller-Rutz, 1934 nec Robineau-Desvoidy, 1830 **syn. n.**

Type-species: *Weberia platani* Müller-Rutz, 1934 (or. des., monot.)

Niepeltia Strand, 1934 **syn. n.** (replacement name for *Weberia* Müller-Rutz)

Weberina Müller-Rutz, 1934 **syn. n.** (replacement name for *Weberia* Müller-Rutz)

102. *A. staticis* (Walsingham, 1907) **comb. n.**

Limonium pectinatum

- *103. *A. sp. n.*

Limoniastrum guyonianum

104. *A. psammophrica* Meyrick, 1921

Loranthus europaeus

105. *A. loranthella* (Klimesch, 1937) **comb. n.**

Platanus

106. *A. platani* (Müller-Rutz, 1934) **comb. n.**

Pistacia

107. *A. minimella* (Rebel, 1924) **comb. n.**

Pistacia

lenitiscella (Groschke, 1944)

- *108. *A. sp. n.*

minimella sensu Klimesch 1978 partim

109. *A. shafirkanus* (Puplesis, 1984) **comb. n.**

Pistacia

110. *A. desertellus* (Puplesis, 1984) **comb. n.**

111. *A. repeteki* (Puplesis, 1984) **comb. n.**

112. *A. lvovskyi* (Puplesis, 1984) **comb. n.**

113. *A. turanicus* (Puplesis, 1984) **comb. n.**

114. *A. falkovitshi* (Puplesis, 1984) **comb. n.**

115. *A. turcomanicus* (Puplesis, 1984) **comb. n.**

116. *A. vittatus* (Puplesis, 1984) **comb. n.**

117. *A. pallens* (Puplesis, 1984) **comb. n.**

118. *A. galinae* (Puplesis, 1984) **comb. n.**

mesasiaticus (Puplesis, 1984)

Genus **Trifurcula** Zeller, 1848

Type-species: *Trifurcula pallidella* Zeller, 1848 (subsequent des. Beirne 1945)

Subgenus **Glaucolepis** Braun, 1917

Type-species: *Nepticula saccharella* Braun, 1912 (or. des., monot.)

Fedalmia Birne, 1945 **syn. n.**

Type-species: *Nepticula headleyella* Stainton, 1854 (or. des., monot.)

- | | |
|---|---|
| 119. <i>T. alypella</i> Klimesch, 1975 | <i>Globularia alypum</i> |
| 120. <i>T. globulariae</i> Klimesch, 1975 | <i>Globularia meridionalis</i> |
| 121. <i>T. salicinae</i> Klimesch, 1975 | <i>Globularia salicina</i> |
| *122. <i>T. zollikofferiella</i> (Chrétien, 1914) comb. n. | <i>Launaea nudicaulis</i> |
| *123. <i>T. headleyella</i> (Stainton, 1854)
<i>argyrostigma</i> (Frey, 1856)
<i>dubiella</i> (Hauder, 1912)
<i>rodella</i> Svensson, 1982 syn.n. | <i>Prunella</i> |
| 124. <i>T. saturejae</i> (Parenti, 1963) comb. n. | <i>Calamintha</i> |
| 125. <i>T. albiflorella</i> Klimesch, 1978 | <i>Nepeta nuda</i> |
| *126. <i>T. thymi</i> (Szöcs, 1965) comb. n. | <i>Thymus</i> spp. |
| 127. <i>T. teucriella</i> (Chrétien, 1914) comb. n. | <i>Teucrium chamaedrys</i> |
| 128. <i>T. micromeriae</i> (Walsingham, 1907) | <i>Micromeria</i> spp. |
| 129. <i>T. sanctaecrucis</i> (Walsingham, 1907) | <i>Lavandula abrotanoides</i> |
| 130. <i>T. hamirella</i> (Chrétien, 1915) comb. n. | <i>Lavandula stoechas</i> |
| 131. <i>T. stoechadella</i> Klimesch, 1975 | <i>Rosmarinus officinalis</i> |
| 132. <i>T. rosmarinella</i> (Chrétien, 1914) | <i>Salvia triloba</i> |
| 133. <i>T. trilobella</i> Klimesch, 1978 | <i>Bupleurum fruticosens, B. spinosum</i> |
| 134. <i>T. sanctibenedicti</i> Klimesch, 1979 | <i>Bupleurum fruticosum, B. rigidum</i> |
| 135. <i>T. bupleurella</i> (Chrétien, 1907) comb. n. | <i>Linum narbonense</i> |
| 136. <i>T. bleonella</i> (Chrétien, 1904) comb. n. | |

Subgenus *Levarchama* Birne, 1945

Type-species: *Nepticula cryptella* Stainton, 1856 (or. des.)

- | | |
|---|---|
| 137. <i>T. cryptella</i> (Stainton, 1856)
? <i>trifolii</i> (Sorhagen, 1885) | <i>Lotus</i> spp., <i>Coronilla</i> spp., <i>Hippocrepis</i> |
| *138. <i>T. eureka</i> (Tutt, 1899)
<i>dorycnella</i> (Suire, 1928) syn. n.
<i>gozmanyi</i> (Szöcs, 1959) syn. n. | <i>Lotus</i> spp., <i>Dorycnium</i> , <i>Tetragonolobus maritimus</i> |
| 139. <i>T. ortneri</i> (Klimesch, 1951) comb. n. | <i>Coronilla</i> spp. |
| 140. <i>T. ridiculosa</i> (Walsingham, 1907) | <i>Lotus</i> spp. |
| 141. <i>T. anthyllidella</i> Klimesch, 1975 | <i>Anthyllis cytisoides</i> |

Subgenus *Trifurcula* s. str.

- | | |
|---|---|
| *142. <i>T. pallidella</i> (Duponchel, [1843])
<i>pallidella</i> Zeller, 1848
‡ <i>pallidulella</i> (Herrich-Schäffer, [1853])
<i>incognitella</i> Toll, 1936 syn. n. | <i>Lembotropis nigricans</i> |
| 143. <i>T. immundella</i> (Zeller, 1839)
<i>squamatella</i> Stainton, 1849 | <i>Cytisus scoparius</i> , <i>Chamaecytisus</i> sp. |
| *144. <i>T. serotinella</i> Herrich-Schäffer, 1855
<i>confertella</i> Fuchs, 1895 syn. n. | <i>Chamaespartium sagittale</i> |
| 145. <i>T. orientella</i> Klimesch, 1953 | |
| 146. <i>T. aurella</i> Rebel, 1933 | |
| *147. <i>T. beirnei</i> Puplesis, 1984
<i>pallidella</i> sensu Birne 1945 | <i>Genista</i> spp. |

148. *T. maxima* Klimesch, 1953 ? *Cytisus scoparius*
 149. *T. griseella* Wolff, 1957 ? *Lotus*

Genus **Parafomoria** van Nieukerken, 1983

- Type-species *Nepticula helianthemella*
 Herrich-Schäffer, 1860 (or. des.)
 ‡ *Parafomoria* Borkowski, 1975
- | | |
|--|--------------------------|
| 150. <i>P. cistivora</i> (Peyerimhoff, 1871) | <i>Cistus</i> spp. |
| 151. <i>P. pseudocistivora</i> van Nieukerken, 1983 | <i>Cistus</i> spp. |
| <i>cistivora</i> auctt. partim | |
| 152. <i>P. helianthemella</i> (Herrich-Schäffer, 1860) | <i>Helianthemum</i> spp. |
| 153. <i>P. halimivora</i> van Nieukerken, 1985 | <i>Halimium</i> spp. |
| 154. <i>P. liguricella</i> (Klimesch, 1946) | <i>Cistus albidus</i> |
| 155. <i>P. ladaniphila</i> (Mendes, 1910) | <i>Cistus ladanifer</i> |
| 156. <i>P. tingitella</i> (Walsingham, 1904) | <i>Tuberaria lignosa</i> |

Genus **Bohemannia** Stainton, 1859

- Type-species: *Nepticula quadrimaculella*
 Boheman, 1853 (monot.)
Scoliaula Meyrick, 1895 (replacement name
 for *Bohemannia* Stainton)
- | | |
|--|------------------------|
| 157. <i>B. pulverosella</i> (Stainton, 1849) | <i>Malus</i> |
| ‡ <i>cineretella</i> (Frey, in litt.) | |
| 158. <i>B. quadrimaculella</i> (Boheman, 1853) | <i>Alnus glutinosa</i> |
| *159. <i>B. auriciliella</i> (Joannis, 1908) comb. n. | |
| <i>bradfordi</i> (Emmet, 1974) syn. n. | |

Genus **Ectoedemia** Busck, 1907

Type-species: *Ectoedemia populella* Busck,
 1907 (or. des., monot.)

Subgenus **Etainia** Beirne, 1945 **stat. n.**

- Type-species: *Lyonetia sericopeza* Zeller,
 1839 (or. des.)
Obrussa Braun, 1915 nec *Saalmüller*, 1891
 Type-species: *Nepticula ochrefasciella*
 Chambers, 1873
- | | |
|---|---|
| *160. <i>E. sericopeza</i> (Zeller, 1839) comb. n. | <i>Acer platanoides</i> |
| <i>sericopezella</i> (Duponchel, [1843]) | |
| <i>maryella</i> (Duponchel, [1843]) | |
| <i>acerella</i> (Goureau, 1860) | |
| 161. <i>E. louisella</i> (Sircom, 1849) comb. n. | <i>Acer campestre</i> |
| <i>sphendamni</i> (Hering, 1937) | |
| 162. <i>E. decentella</i> (Herrich-Schäffer, 1855) | <i>Acer pseudoplatanus, A. monspessulanum</i> |
| comb. n. | |
| <i>monspessulanella</i> (Jäckh, 1951) | |
| 163. <i>E. albimaculella</i> (Larsen, 1927) comb. n. | <i>Arctostaphylos uva-ursi</i> |

Subgenus **Laqueus** Scoble, 1983

Type-species: *Nepticula grandinosa*
 Meyrick, 1911 (or. des.)

164. *E. nigrafasciata* (Walsingham, 1907)
comb. n.
165. *E. vincamajorella* (Hartig, 1964) **comb. n.**
166. *E. euphorbiella* (Stainton, 1869) **comb. n.**
167. *E. tergestina* (Klimesch, 1940) **comb. n.**
168. *E. jubae* (Walsingham, 1907) **comb. n.**

- Periploca laevigata*
Vinca major
Euphorbia dendroides
Euphorbia fragifera
Euphorbia spp.

Subgenus **Fomoria** Beirne, 1945

Type-species: *Nepticula weaveri* Stainton, 1855 (or. des.)

169. *E. weaveri* (Stainton, 1855)
weaverella (Doubleday, 1859)
‡ *fuliginella* (Vári, 1947) 'infrasubs.'
170. *E. septembrella* (Stainton, 1849)
171. *E. deschkai* (Klimesch, 1978) **comb. n.**
172. *E. luisae* (Klimesch, 1978) **comb. n.**
173. *E. variicapitella* (Chrétien, 1908) **comb. n.**
174. *E. groschkei* (Skala, 1943) **comb. n.**
*175. *E. nowakowskii* (Toll, 1957) **comb. n.**

- Vaccinium vitis-idaea*
Hypericum spp.
Hypericum spp.
Hypericum calycinum
Hypericum spp.
Vitex agnus-castus
Peucedanum cervaria

Subgenus **Zimmermannia** Hering, 1940

Type-species: *Ectoedemia liebwerdella* Zimmermann, 1940 (or. des., monot.)

176. *E. atrifrontella* (Stainton, 1851)
heringiella (Doets, 1947)
177. *E. liebwerdella* Zimmermann, 1940
178. *E. longicaudella* Klimesch, 1953
peiuii (Nemeş, 1972)
179. *E. hispanica* van Nieukerken, 1985
180. *E. monemvasiae* van Nieukerken, 1985
181. *E. amani* Svensson, 1966
182. *E. nuristanica* van Nieukerken, 1985
183. *E. liguricella* Klimesch, 1953

- Quercus* spp.
Fagus sylvatica
Quercus spp.

Ulmus
? *Quercus* sp.

Subgenus **Ectoedemia** s. str.

Dechiria Beirne, 1945

Type-species: *Tinea subbimaculella* Haworth, 1828 (or. des.)

populella group Wilkinson & Scoble, 1979

184. *E. intimella* (Zeller, 1848)
185. *E. hannoverella* (Glitz, 1872)
186. *E. turbidella* (Zeller, 1848)
argyopezella (Herrich-Schäffer, 1855)
populialbae (Hering, 1935)
marionella (Ford, 1950)
187. *E. klimeschi* (Skala, 1933)
niculescui (Nemeş, 1970)
188. *E. argyopeza* (Zeller, 1839)
apicella (Stainton, 1854)
turbidella sensu Herrich-Schäffer 1855

- Salix* spp.
Populus nigra, hybrids
Populus alba, *P. canescens*

Populus alba
Populus tremula

- argyropezella* (Doubleday, 1859)
turbulentella (Wocke, 1861)
simplicella (Heinemann, 1862)
‡ *morosella* (Steudel & Hofmann, 1882)
‘infrasubs.’
‡ *houzeaui* (Dufrane, 1942) ‘infrasubs.’

preisseckeri group van Nieukerken, 1985

189. *E. preisseckeri* (Klimesch, 1941) *Ulmus*

suberis group van Nieukerken, 1985

190. *E. caradjai* (Groschke, 1944) *Quercus* spp.
191. *E. sp.* (specimen 1843) van Nieukerken
1985
192. *E. suberis* (Stainton, 1869) *Quercus* spp. (evergreen)
viridella (Mendes, 1910)
193. *E. andalusiae* van Nieukerken, 1985 *Quercus coccifera*
194. *E. aegilopidella* (Klimesch, 1978) *Quercus macrolepis*

subbimaculella group van Nieukerken, 1985

195. *E. quinquella* (Bedell, 1848) *Quercus* spp. (deciduous)
196. *E. algeriensis* van Nieukerken, 1985 *Quercus rotundifolia*
197. *E. gilvipennella* (Klimesch, 1946) *Quercus cerris*
198. *E. leucothorax* van Nieukerken, 1985
199. *E. haraldi* (Soffner, 1942) *Quercus* spp. (evergreen)
prinophyllella (Le Marchand, 1946)
‡ *ilicella* (Constant [no year])
200. *E. ilicis* (Mendes, 1910) *Quercus* spp. (evergreen)
201. *E. heringella* (Mariani, 1939) *Quercus* spp. (evergreen)
‡ *alliatae* (Mariani, 1939) ‘infrasubs.’
202. *E. alnifoliae* van Nieukerken, 1985 *Quercus alnifolia*
203. *E. nigrosparsella* (Klimesch, 1940) *Quercus* spp. (deciduous)
204. *E. albifasciella* (Heinemann, 1871) *Quercus* spp. (deciduous)
argyropeza sensu Stainton 1854
subapicella (Stainton, 1886)
205. *E. cerris* (Zimmermann, 1944) *Quercus cerris*
montissancti (Skala, 1948)
206. *E. pubescivora* (Weber, 1937) *Quercus pubescens*
207. *E. contorta* van Nieukerken, 1985 *Quercus* spp. (deciduous)
208. *E. subbimaculella* (Haworth, 1828) *Quercus* spp. (deciduous)
nigrociliella (Stephens, 1834)
cursoriella (Zeller, 1848)
209. *E. heringi* (Toll, 1934) *Quercus* spp. (deciduous), *Castanea*
quercifoliae (Toll, 1943)
sativella (Klimesch, 1936)
zimmermanni (Hering, 1942)
210. *E. liechtensteini* (Zimmermann, 1944) *Quercus cerris*
211. *E. phyllotomella* (Klimesch, 1946) *Quercus cerris*
212. *E. sp.* (specimen 1375) van Nieukerken 1985

terebinthivora group van Nieukerken, 1985213. *E. terebinthivora* (Klimesch, 1975)**angulifasciella** group Wilkinson et al., 1983

214. *E. erythrogenella* (Joannis, 1908)
 ‡ *juncta* (Dufrane, 1949) 'infrasubs.'
215. *E. spiraeae* Gregor & Povolný, 1983
 ‡ *spireae* (Gregor & Povolný, 1955)
216. *E. agrimoniae* (Frey, 1858)
 agrimoniella (Herrich-Schäffer, 1860)
217. *E. hexapetalae* (Szöcs, 1957)
218. *E. angulifasciella* (Stainton, 1849)
 schleichiella (Frey, 1870)
 ? *brunniella* (Sauber, 1904)
 utensis (Weber, 1937)
 minorella (Zimmermann, 1944)
219. *E. atricollis* (Stainton, 1857)
 atricolella (Doubleday, 1859)
 aterrima (Wocke, 1865)
 ‡ *malivora* (Toll, 1936)
 ‡ *aterrimoides* (Skala, 1940)
 ‡ *prunivora* (Skala, 1941)
 staphyleae (Zimmermann, 1944)
220. *E. arcuatella* (Herrich-Schäffer, 1855)
 arcuata (Frey, 1856)
 arcuosella (Doubleday, 1859)
221. *E. rubivora* (Wocke, 1860)
222. *E. spinosella* (Joannis, 1908)
223. *E. mahalebella* (Klimesch, 1936)

occultella group van Nieukerken, 1985

224. *E. occultella* (Linnaeus, 1767)
 strigilella (Thunberg, 1794)
 ? *mucidella* (Hübner, [1817])
 mediofasciella (Haworth, 1828)
 argentipedella (Zeller, 1839)
225. *E. minimella* (Zetterstedt, 1839)
 mediofasciella sensu Bradley 1972
 woolhopiella (Stainton, 1887)
 viridicola (Weber, 1937)

*Pistacia terebinthus**Rubus* spp.*Spiraea media**Agrimonia, Aremonia**Filipendula vulgaris**Rosa, Sanguisorba, Filipendula vulgaris*Rosaceae: Maloideae, *Prunus* spp., *Staphylea pinnata**Fragaria, Potentilla* spp.*Rubus* spp.*Prunus* spp.*Prunus* spp.*Betula, (Salix pentandra)**Betula, Alnus viridis, (Corylus)*

Species-group names within Nepticulidae of unknown or doubtful status

The names are given in alphabetical order and are followed by author, year and genus of original combination.

A. Nomenclaturally available names

- arbarella* Chrétien, 1922, *Nepticula*
- aureocapitella* Millière, 1870, *Nepticula* (probably *S. ruficapitella* group)
- bistrimaculella* Heyden, 1861, *Nepticula* (probably *E. subbimaculella* or *heringi*)
- castanella* Stainton, 1859, *Nepticula* (probably *S. ruficapitella* group)
- commatella* Schrank, 1802, *Tinea* (cf. Stainton 1855: 264)
- concolorella* Tengström, 1848, *Lyonetia*
- discrepans* Sorhagen, 1922, *Nepticula* (unidentifiable species of *S. ruficapitella* group)
- fagella* Herrich-Schäffer, 1855, *Nepticula*
- fagi* Frey, 1856, *Nepticula*
- flexuosella* Fologne, 1861, *Nepticula*
- fossilis* Heyden, 1862, *Nepticula* (fossil mine on *Juglans acuminata*)
- gilvella* Rössler, 1866, *Nepticula* (probably *Ectoedemia subbimaculella* group)
- ligustrella* Rössler, 1866, *Nepticula*
- minimella costa*, 1836, *Tinea* (preoccupied) (cf. Tremewan 1977: 224)
- nigrobrunella* Groschke, 1939, *Nepticula*
- nobilella* Heinemann & Wocke, 1876, *Nepticula*
- penicillata* Heinemann & Wocke, 1876, *Nepticula*
- rosarum* Sorhagen, 1922, *Nepticula* (= *anomalella* or *centifoliella*)
- rubicurrens* Walsingham, 1907, *Stigmella* (? = *aurella*)
- rufifrontella* Caradja, 1920, *Trifurcula*
- subnitidella* Duponchel, [1843], *Elachista* (= *subnitidella* Zeller, 1848)
- viridissimella* Caradja, 1920, *Nepticula*

B. Nomenclaturally unavailable names

- apocynella* Gerasimov, 1937, *Nepticula* (mines on *Apocynum sibiricum*)
- amseli* Skala, 1941, *Nepticula* (mines on *Zizyphus*)
- brunensis* Skala, 1939, *Nepticula* (mines on *Fagus*)
- buhri* Skala, 1938, *Nepticula* (mines on *Rosa*)

gracilivora Skala, 1942, *Nepticula* (mines on *Ulmus*)

ruficastaneae Skala, in litt., *Nepticula* (mines on *Castanea*)

sorbifoliella Skala, 1939, *Nepticula* (mines on *Sorbus*)

tentationis Hoffmann, 1893, *Nepticula* (fantasy name of non-existing species)

ulmi Skala, 1934, *Nepticula* (mines on *Ulmus*)

Systematic catalogue of hostplants of Western Palaearctic Nepticulidae

The plants are listed in the same order as Tutin et al. (1964 – 1976), the Nepticulidae species, feeding on it, by their number.

SALICACEAE

Salix spp.: 12, 54, 58, 184

S. pentandra L.: 184, (224)

S. phylicifolia L.: 57, 184

S. repens L., s. l.: 56, 57

S. lapponum L.: 56

S. purpurea L.: 59

S. amplexicaulis Bory: ?59

Populus spp.: 60, 61

P. alba L.: ?61, 186, 187

P. canescens (Aiton) Sm.: ?61, 186

P. tremula L.: 61, 188

P. nigra L.: 60, 185

P. x canadensis Moench: 60, 185

MYRICACEAE

Myrica gale L.: ?54

BETULACEAE

Betula spp.: 3, 4, 5, 11, 13, 14, 65, 224, 225

B. nana L.: 4, 5, 11, 14, 99, 224, 225

Alnus spp.: 15, 16

A. viridis (Chaix) DC. in Lam. & DC.: 15, 225

A. glutinosa (L.) Gaertner: 15, 16, 158

Carpinus spp.: 17, 51, 52

Ostrya carpinifolia Scop.: 17, 51, 52

Corylus spp.: 17, 51, (225)

FAGACEAE

Fagus spp.: 53, 83, 177

Castanea sativa Miller: 88, 96, 204, 209

Quercus spp. (deciduous): 88, 89, 93, 94, 95, 96, 97, 98, 176, 178, 190, 195, 203, 204, 206, 207, 208, 209

Quercus spp. (evergreen): 85, 86, 98, ?183, ?190, 192, 193, 196, ?198, 199, 200, 201

- Q. alnifolia* Poech: 201, 202
Q. macrolepis Kotschy: 92, 194
Q. cerris L.: 88, 90, 91, ?190, 197, 205, ?208, 210, 211
- ULMACEAE**
Ulmus spp.: 30, 31, 32, 64, 181, 189
Zelkova crenata Spach (= *carpinifolia* Dippel):
Stigmella sp., Kaukasus (Skala 1941)
- LORANTHACEAE**
Loranthus europaeus Jacq.: 105
- POLYGONACEAE**
Rumex acetosella L.: 2
R. acetosa L.: 2
R. arifolius All.: 2
- PLATANACEAE**
Platanus spp.: 106
- ROSACEAE**
Spiraea media F. Schmidt: 35, 215
Filipendula vulgaris Moench: 35, 76, 217, 218
F. ulmaria L.: 77
Rubus spp.: 66, 67, 68, 69, 214, 221
R. chamaemorus L.: 75, 221
Rosa spp.: 27, 28, 29, 36, 218
Agrimonia eupatoria L.: 35, 66, 67, 71, 216
Aremonia agrimonoides (L.) DC.: 66, 216
Sanguisorba spp.: 27, 29, 33, 34, 35, 75, 216
Dryas octopetala L.: 74
Geum spp.: 66, 68, 69
G. montanum L.: 69, 70
Potentilla spp.: 35, 71, 72, 73, 75, 220
P. caulescens L.: 27
Fragaria spp.: 35, 66, 68, 71, 220
Chaenomeles speciosa (Sweet) Nakai: ?45
Pyrus spp.: 38, 45, 46, 47, 101, 219
Malus spp.: 20, 45, 48, 62, ?63, 79, 157, 219
Sorbus spp.: 43, 45, 50, ?219
S. aucuparia L.: 43, 44, 45, 62
S. torminalis (L.) Crantz.: 39, 42, 50
Amelanchier ovalis Med.: 49, ?50
Amelanchier sp.: 62
Cotoneaster spp.: 43, 44, 45, 49, 50, 62, ?78
Mespilus germanica L.: 40, 45, ?49, 219
Crataegus spp.: 37, 40, 41, 45, 49, 80, 219
C. azarolus L.: 81
Prunus spp.: 18, (20), 45, 63, 82, 219, 222, 223
P. dulcis (Miller): 82, 222
- LEGUMINOSAE**
Lembotropis nigricans (L.) Griseb.: ?142
Cytisus scoparius (L.) Link: 143, ?148
- Chamaecytisus* sp.: 143
Genista spp.: 147
Chamaespartium sagittale (L.) P. Gibbs: 144
Lygos sphaerocarpica (L.) Heywood: *Trifurcula* (s.str.) sp. (Spain)
Dorycnium spp.: 138
Lotus spp.: 137, 138, 140, ?149
Tetragonolobus maritimus (L.) Roth.: 138
Anthyllis cytisoides L.: 141
A. hermanniae L.: *Trifurcula (Levarchama)* sp. (Corsica, Greece)
Coronilla emerus L.: 137
C. vaginalis Lam.: 139
C. juncea L.: *Trifurcula* (s. str.) sp. (Spain, stem mines)
C. coronata L.: 139
C. varia L.: 137
Hippocrepis comosa L.: 137
- GERANIACEAE**
Geranium versicolor L.: 66
- LINACEAE**
Linum narbonense L.: 136
- EUPHORBIACEAE**
Euphorbia spp.: 168
E. dendroides L.: 166
E. palustris L.: *Ectoedemia (Laqueus)* sp. (Romania)
E. fragifera Jan.: 167
E. acanthothamnos Heldr. & Sart. ex Boiss.: *E. (Laqueus)* sp. (Greece)
E. rigida Bieb.: *E. (Laqueus)* sp. (Sicily)
E. characias L.: *E. (Laqueus)* sp. (Sicily)
- ANACARDIACEAE**
Rhus coriaria L.: 1
Cotinus coggyria Scop.: 1
Pistacia terebinthus L.: 1, 107, 108, 213
P. atlantica Desf.: 1
P. lentiscus L.: 1, 107, 108
- ACERACEAE**
Acer platanoides L.: 19, 160
Acer campestre L.: 19, 161
A. tataricum L.: 19
A. pseudoplatanus L.: 84, 162
A. opalus Miller: 84
A. monspessulanum L.: 84, 162
- STAPHYLEACEAE**
Staphylea pinnata L.: 219

RHAMNACEAE

- Paliurus spina-christi* Miller: 8
Zizyphus lotus (L.) Lam.: 9
Rhamnus spp.: 21
R. alaternus L.: 24
R. lycioides L.: 22
R. saxatilis Jacq.: 21, 22
R. catharticus L.: 21, 25
R. pyrenellus O. Schwartz: 26
R. crenulata Ait.: 23

TILIACEAE

- Tilia* spp.: 10

GUTTIFERAE

- Hypericum* spp.: 170, 171, 173
H. calycinum L.: 172

CISTACEAE

- Cistus* spp.: 150, 151
C. albidus L.: 154
C. ladanifer L.: 150, 155
Halimium spp.: 153
Tuberaria lignosa (Sweet) Samp.: 156
Helianthemum spp.: 7, 152
Fumana procumbens (Dunal) Gren. & Godron: 7

UMBELLIFERAE

- Bupleurum fruticosens* L.: 134
B. spinosum Gouan: 134
B. fruticosum L.: 135
B. rigidum L.: 135
Peucedanum cervaria (L.) Lapeyr.: 175

ERICACEAE

- Ledum palustre* L.: 78
Arctostaphylos uva-ursi (L.) Sprengel: 163
Vaccinium vitis-idaea L.: 169
V. uliginosum L.: 55
V. myrtillus L.: 55

PLUMBAGINACEAE

- Limonium pectinatum* (Aiton) O. Kuntze: 102
Limoniastrum guyonianum Dur.: 103

STYRACACEAE

- Styrax officinalis* L.: 100

APOCYNACEAE

- Trachomitum venetum* (L.) Woodson (= *Apocynum sibiricum* Pall.): *S. apocynella*
Vinca major L.: 165

ASCLEPIADACEAE

- Periploca laevigata* Aiton: 164

CONVOLVULACEAE

- Calystegia sepium* (L.) R. Br.: 6
Convolvulus spp.: 6

VERBENACEAE

- Vitex agnus-castus* L.: 174

LABIATAE

- Teucrium chamaedrys* L.: 127
Nepeta nuda L.: 125
Prunella spp.: 123
Calamintha spp.: 124
Micromeria spp.: 128
Origanum vulgare L.: *Trifurcula* (*Glaucolepis*) sp. (Greece)
Thymus spp.: 126
T. vulgaris L.: *Trifurcula* (*Glaucolepis*) sp. (Spain)
Mentha rotundifolia (L.) Hudson: *T. (Glaucolepis)* sp. (Corsica)
Rosmarinus officinalis L.: 132
Lavandula stoechas L.: 131
L. abrotanoides Lam.: 129
Salvia triloba L. fil.: 133

GLOBULARIACEAE

- Globularia alypum* L.: 119
G. meridionalis (Podp.) O. Schwartz: 120
G. salicina Lam.: 121

CAPRIFOLIACEAE

- Lonicera xylosteum* L.: 87
L. nigra L.: 87

COMPOSITAE

- Launaea nudicaulis* (L.) Hooker fil.: 122

Acknowledgements. This paper could never have been finished without the invaluable help and information received from Dr. J.J. Boomsma (Amsterdam, The Netherlands), Dr. G. Bryan (Amsterdam, The Netherlands), Prof. Dr. Buvat (Marseille, France), Dr. J. Buszko (Torún, Poland), Mr. J.W. van Driel (Amsterdam, The Netherlands), Mr. B. Gustafsson (Stockholm, Sweden), Mr. R. Johansson (Växjö, Sweden), Mr. O. Karsholt (København, Denmark), Dr. J. Klimesch (Linz, Austria), Dr. J. Kyri (Oulu, Finland), Dr. S.B.J. Menken (Amsterdam, The Netherlands), Mr. J.W. Schoorl (Amsterdam, The Netherlands), Dr. M.J. Scoble (Oxford, U.K.), Mr. K.R. Tuck (London, U.K.), and Dr. S.E. Whitebread (Magden, Switzerland). I am especially grateful for the continuous stream of information received from Roland Johansson. For the loan of material, referred to in this paper I wish to acknowledge Dr. Ph. Georges (Bruxelles, Belgium), Dr. L. Gozmány (Budapest, Hungary), Dr. G. Luquet (Paris, France), Prof. Dr. J. Razowski (Krakow, Poland), Dr. G. Robinson (London, U.K.) and Prof. Dr. W. Sauter (Zürich).

Prof. Dr. C. Wilkinson (Amsterdam, The Netherlands) and Dr. E.S. Nielsen (Canberra, Australia) are acknowledged for their critical remarks on the manuscript.

REFERENCES

- Borkowski, A. 1970. Studien an Stigmelliden (Lepidoptera) Teil II. *Fedalmia thymi* sp. n. — eine neue Art aus Mitteleuropa. — Polskie Pismo ent. 40: 69–78.
- 1975. Studien an Nepticuliden (Lepidoptera) Teil VI. Die Verbreitung der Nepticuliden in Polen. — Ibidem 45: 487–535.
- De Geer, C. 1752. Mémoires pour servir à l'histoire des insectes. 1. — Pp. 440–458, pls. 29–31. Stockholm.
- Emmet, A.M. 1976. Nepticulidae. — Pp. 171–267, in: Heath, The moths and butterflies of Great Britain and Ireland. 1.
- 1979 (ed.). A field guide to the smaller British Lepidoptera. — London.
- Frey, H. 1856. Die Tineen und Pterophoren der Schweiz. — Zürich.
- Gerasimov, A.M. 1937. Minierende Motten V. Neue *Stigmella* (*Nepticula*) und *Tischeria*-Arten (Lepid. Stigmell. und Tischer.). — Mitt. zool. Mus. Berlin 22: 282–285.
- Gustafsson, B. 1973. A new species of *Nepticula* v. Heyden from Rhodes (Lep. Nepticulidae). — Ent. Tidskr. 94: 197–198.
- Hering, E.M. 1957. Bestimmungstabellen der Blattminen von Europa. 1–3. — 's-Gravenhage.
- Herrich-Schäffer, G.A.W. 1853–1855. Systematische Bearbeitung der Schmetterlinge von Europa, zu gleich als Text, Revision und Supplement zu Jakob Hübner's Sammlung europäischer Schmetterlinge, 5. — Regensburg.
- 1860. Revision der europäischen Schmetterlingsfauna. — KorrespBl. Sammler Ins. 1: 59–61.
- Joannis, J. de. 1915. Étude synonymique des espèces de Microlépidoptères décrites comme nouvelles par Duponchel. — Annls ent. Soc. Fr. 84: 62–164.
- Johansson, R. 1971. Notes on the Nepticulidae (Lepidoptera). I. A revision of the *Nepticula ruficapitella* group. — Ent. scand. 2: 241–262.
- Karsholt, O. & Nielsen, E.S. 1976. Systematisk fortegnelse over Danmarks sommerfugle. — Klampenborg.
- 1986. The Lepidoptera described by C.P. Thunberg. — Ent Scand. 16: 433–463.
- Klimesch, J. 1940. Über eine Nepticuliden-Ausbeute von Triest, sowie Beschreibung der Mine von *Leucospilapteryx cupediella* H.S. (Lep. Nepticulidae et Gracillariidae). — Z. wien. EntVer. 25: 176–179.
- 1948. Zur Frage der verwandtschaftlichen Beziehungen einiger *Stigmella*-Arten auf Grund des Baues des Männl. Kopulationsapparates (Lep., Stigmellidae). — Z. wien. ent. Ges. 33: 49–82.
- 1951. Zur Kenntnis der Genitalmorphologie einiger Nepticuliden-Arten (Lep., Nepticulidae). — Ibidem 36: 4–9.
- 1975. Ergebnisse von Untersuchungen einiger Nepticuliden-Typen der Sammlung des Muséum national d'histoire naturelle, Paris (Lep., Nepti- culidae). — Bull. Mus. natn. Hist. nat. Paris (3e sér.) 314 (Zool. 221): 861–866.
- 1978. Beitrag zur Kenntnis der Nepticulidenfauna von Anatolien und der Insel Rhodos (Lepidoptera, Nepticulidae). — Tijdschr. Ent. 121: 239–278.
- 1981. Beiträge zur Kenntnis der Nepticulidae (Lep., Monotrysia) 1. Die Futterpflanzen der Nahrungsrasen der *Stigmella aurella* (F.) in Oberösterreich. 2. *Stigmella tormentillella* (H.S.) und verwandte Arten in den Ostalpen. — Z. ArbGem. öst. Ent. 32: 113–128.
- Kyrki, J. 1978. Suomen pikkuperhosten levinneisyys. I. Luonnontieteellisten maakuntien lajisto (Lepidoptera: Micropterigidae-Pterophoridae). — Notul. Ent. 58: 37–67.
- Leraut, P. 1980. Liste systématique et synonymique des Lépidoptères de France, Belgique et Corse. — Alexanor, Bull. Soc. ent. Fr., Suppl.: 334pp.
- Nieuwerken, E.J. van 1982a. New and rare Nepticulidae in the Netherlands (Lepidoptera). — Ent. Ber., Amst. 42: 104–112.
- 1982b. A revised checklist of the Nepticulidae occurring in the Netherlands (Lepidoptera). — Ibidem 42: 174–176.
- 1983a. The identity of *Stigmella zelleriella* (Snellen, 1875), a senior synonym of *S. repentiella* (Wolff, 1955) (Lepidoptera, Nepticulidae). — Zool. meded., Leiden 57: 59–65.
- 1983b. The Cistaceae-feeding Nepticulidae (Lepidoptera) of the western Palaearctic region. — Syst. Ent. 8: 452–478.
- 1985. A taxonomic revision of the subgenera *Zimmermannia* Hering and *Ectoedemia* Busck s. str. (Lepidoptera, Nepticulidae) with notes on their phylogeny. — Tijdschr. Ent. 128: 1–164.
- Nieuwerken, E. J. van & Johansson, R. in press. *Trifurcula pallidella* (Duponchel) and *T. beirnei* Puplesis (Lepidoptera: Nepticulidae): nomenclature, taxonomy and distribution. — Ent. scand.
- Meess, A. 1910. Nepticulidae. — Pp. 472–482, in: Spuler, Die Schmetterlinge Europas. 2. — Stuttgart.
- Prins, W. O. de 1983. Systematische naamlijst van de Belgische Lepidoptera. — Entomobrochure 4: 1–57.
- Rebel, H. 1901. In: Staudinger & Rebel, Catalog der Lepidopteren des Palaearktischen Faunengebietes. — Berlin.
- Schoorl, J.W., Nieuwerken, E.J. van & Wilkinson, C. 1985. The *Stigmella oxyacanthella* species-group in Europe (Nepticulidae: Lepidoptera). — Syst. Ent. 10: 65–103.
- Schoorl, J.W. & Wilkinson, C. 1986. The *Stigmella betulicola* species-group in Europe (Nepticulidae: Lepidoptera). — J. nat. Hist. 20: 225–244.
- Scopoli, J.A. 1763. Entomologia carniolica, exhibens Insecta carnioliae indigena et distributa in ordines, genera, species, varietates. Methodo Linnaeana. — 420 pp., Vindobonae.
- Shield, R. 1853. List of Micro-Lepidoptera taken in the vicinity of Dublin during the year 1853. — Zoolologist 11: 4152–4153.
- Skala, H. 1941. Neuess über Miner. — Z. wien. Ent Ver. 26: 55–57, 77–80, 123–125, pls. ii–iv.
- Stainton, H.T. 1855. The natural history of Tineina, 1. — London.
- Svensson, I. 1985. Anmärkningsvärda fynd av Micro-

- lepidoptera i Sverige 1984. — Ent. Tidskr. 106: 71–82.
 Szöcs, J. 1965. Molylepkék I. Nepticulidae – Törpemolyok. — Fauna Hung. 76: 48–104.
 Tremewan, W.G. 1977. The publications on Lepidoptera by O.G. and A. Costa and the nominal taxa described therein. — Bull. Br. Mus. nat. Hist., Hist. Ser. 5: 211–232.
 Tutin, T.G. et al. (eds.) 1964–1976. Flora Europaea. 1–4. — Cambridge.
 Walsingham, L. 1904. Algerian Microlepidoptera. — Entomologist's mon. Mag. 40: 214–223, 265–273.
 Werneburg, 1858. Bemerkungen über die Lepidopteren in Scopoli's Entomologia Carniolica. — Stett. ent. Ztg 19: 148–162.
 Zeller, P.C. 1839. Versuch einer naturgemässen Eintheilung der Schaben. — Isis, Jena 1839: 167–220.
 — 1848. Die Gattungen der mit Augendeckeln versehenen blattminirenden Schaben. — Linn. ent. 3: 248–344.
 — 1855. Die Lepidopteren in Scopoli's Entomologica Carniolica. — Stett. ent. Ztg. 16: 233–257.

Index to specific names

A and B refer to the list doubtful names, at the end of the checklist.

<i>abaiella</i>	101	A
<i>acerella</i>	160	
<i>aceris</i>	19	
<i>acetosae</i>	2	
<i>acetosella</i>	2	
<i>aegilopidella</i>	194	
<i>aeneella Heinemann</i>	27	
<i>aeneella auctt.</i>	45	
<i>aeneofasciata</i>	71	
<i>aeneofasciella</i>	71	
<i>agrimoniae</i>	216	
<i>agrimoniella</i>	216	
<i>alaternella</i>	24	
<i>albibimaculella</i>	163	
<i>albicornella</i>	66	
<i>albicornella</i>	60	
<i>albifasciella</i>	204	
<i>albiflorella</i>	125	
<i>algeriensis</i>	196	
<i>allatae</i>	201	
<i>alnetella</i>	16	
<i>alnifoliae</i>	202	
<i>alniviridis</i>	15	
<i>altvateri</i>	2	
<i>alyppella</i>	119	
<i>amani</i>	181	
<i>ampelipennella</i>	49	
<i>amseli</i>	B	
<i>amygdali</i>	82	
<i>andalusiae</i>	193	
<i>angulifasciella</i>	218	
<i>angustella</i>	75	
<i>anomalella</i>	27	
<i>anthyllidella</i>	141	
<i>apicella</i>	188	
<i>apocynella</i>	B	
<i>arbarella</i>		A
<i>arbusculae</i>		54
<i>arcuata</i>		220
<i>arcuatella</i>		220
<i>arcuosella</i>		220
<i>argentipedella</i>		224
<i>argyropeza sensu Stanton</i>		204
<i>argyropeza Zeller</i>		188
<i>argyropeza Doubleday</i>		188
<i>argyropezella Herrich-Schäffer</i>		186
<i>argyrostigma</i>		123
<i>ariella</i>		50
<i>arifoliella</i>		2
<i>assimilella</i>		61
<i>aterrima</i>		219
<i>aterrimoides</i>		219
<i>atricapitella</i>		95
<i>atricolella</i>		219
<i>atricollis</i>		219
<i>atrifrontella</i>		176
<i>aucupariae</i>		44
<i>aucupariella</i>		44
<i>aurella Fabricius</i>		66
<i>aurella Rebel</i>		146
<i>aurella sensu Zeller</i>		64
<i>aureocapitella</i>		A
<i>auriciliella</i>		159
<i>auritella</i>		54
<i>auromarginata</i>		78
<i>auromarginella</i>		67
<i>avianella</i>		63
<i>aviella</i>		18
<i>azaroli</i>		81
<i>babylonicae</i>		58
<i>basalella</i>		83
<i>basiguttella</i>		88
<i>beirnei</i>		147
<i>benanderella</i>		57
<i>betulicola</i>		11
<i>betulicolella</i>		11
<i>bistrimaculella</i>		A
<i>bleonella</i>		136
<i>bollii</i>		69
<i>bradfordi</i>		159
<i>brunensis</i>		B
<i>brunniella</i>		218
<i>buhri</i>		B
<i>bupleurella</i>		135
<i>caradjai</i>		190
<i>carpinella</i>		52
<i>castanella</i>		A
<i>catharticella</i>		25
<i>caulescentella</i>		27
<i>centifoliella</i>		29
<i>cerricolella</i>		88
<i>cerris</i>		205
<i>chaenomelis</i>		45
<i>chalybeia</i>		47
<i>cineritella</i>		157
<i>cistivora auctt.</i>		151
<i>cistivora Peyerimhoff</i>		150
<i>comari</i>		75
<i>commatella</i>		A
<i>concolorella</i>		A

<i>confertella</i>	144	<i>gilvella</i>	A
<i>confusella</i>	5	<i>gilvipennella</i>	197
<i>continuella</i>	65	<i>globulariae</i>	120
<i>contorta</i>	207	<i>glutinosae</i>	15
<i>corvimontana</i>	40	<i>glutinosella</i>	15
<i>cotoneastrella</i>	62	<i>gozmanyi</i>	138
<i>cotoneastri</i> Sorhagen	45	<i>gracilivora</i>	B
<i>cotoneastri</i> sensu Klimesch	50	<i>gratiosella</i> Duponchel	49
<i>crantziella</i> sensu Klimesch	72	<i>gratiosella</i> sensu Wood	41
<i>crantziella</i> Weber	73	<i>grisearosae</i>	27
<i>crataegella</i>	41	<i>griseella</i>	149
<i>crenulatae</i>	23	<i>groschkei</i>	174
<i>crombruggheella</i>	54	<i>hahniella</i>	42
<i>cryptella</i>	137	<i>halimivora</i>	153
<i>cursoriella</i>	208	<i>hamirella</i>	130
<i>decentella</i>	162	<i>hannoverella</i>	185
<i>deschkai</i>	171	<i>haraldi</i>	199
<i>desertellus</i>	110	<i>headleyella</i>	123
<i>desperatella</i>	48	<i>helbigi</i>	27
<i>dewitziella</i>	54	<i>helianthemella</i>	152
<i>diffinis</i>	75	<i>hemargyrella</i> Kollar	83
<i>dimidiatella</i>	18	<i>hemargyrella</i> sensu Zeller	53
<i>diniensis</i>	7	<i>heringella</i>	201
<i>discidia</i>	13	<i>heringi</i>	209
<i>discrepans</i>	A	<i>heringiella</i>	176
<i>distinguenda</i> Heinemann	15	<i>hexapetalae</i>	217
<i>distinguenda</i>	15	<i>hispanica</i>	179
<i>diversa</i>	13	<i>hodgkinsoni</i>	29
<i>dorsiguttella</i>	58	<i>houzeaui</i>	188
<i>dorycnella</i>	93	<i>huebnerella</i> sensu Zeller	64
<i>dryadella</i>	138	<i>hybnerella</i>	49
<i>dubiella</i>	74	<i>ignobilella</i>	49
<i>dulcella</i> auctt.	123	<i>ilicella</i>	199
<i>dulcella</i> Heinemann	66	<i>ilicis</i>	200
<i>eberhardi</i>	68	<i>ilicivora</i>	85
<i>elisabethella</i>	98	<i>immundella</i>	143
<i>embonella</i>	75	<i>inaequalis</i>	68
<i>erythrogenella</i>	47	<i>incanae</i>	15
<i>euphorbiella</i>	214	<i>incognitella</i> Herrich-Schäffer	79
<i>eurema</i>	166	<i>incognitella</i> Toll	142
<i>fagella</i>	138	<i>interrupta</i>	51, 54
<i>fagi</i>	A	<i>intimella</i>	184
<i>falkovitshi</i>	114	<i>jubae</i>	168
<i>februella</i>	54, 184	<i>juncta</i>	214
<i>filipendulae</i>	76	<i>kimeschi</i>	187
<i>fletcheri</i>	27	<i>ladaniphila</i>	155
<i>flexuosella</i>	A	<i>lamprotornella</i>	94
<i>floslactella</i>	51	<i>lapponica</i>	4
<i>fossilis</i>	A	<i>lapponicella</i>	4
<i>fragariella</i> auctt.	68	<i>lappovimella</i>	56
<i>fragariella</i> Heinemann	66	<i>laticuniculella</i>	27
<i>fragarivora</i>	68	<i>latifasciella</i>	49
<i>freyella</i>	6	<i>lediella</i>	78
<i>fruticosella</i>	66	<i>lemniscella</i>	64
<i>fulgens</i>	83	<i>lentinensis</i>	87
<i>fuliginella</i>	69	<i>lentiscella</i>	107
<i>fulvomacula</i>	64	<i>leucothorax</i>	198
<i>galinae</i>	118	<i>libiezi</i>	54
<i>gei</i> auctt.	68, 69	<i>liebwerdella</i>	177
<i>gei</i> Wocke	66	<i>liechtensteini</i>	210
<i>geimontani</i> Klimesch	70	<i>liguricella, Ectoedemia</i>	183
<i>geirubi</i>	66	<i>liguricella, Parafomoria</i>	154
<i>geminella</i>	75		

<i>ligustrella</i>	A	<i>occultella</i> Linnaeus	224
<i>livonica</i>	87	<i>orientella</i>	145
<i>longicaudella</i>	178	<i>ortneri</i>	139
<i>lonicerarum</i>	87	<i>oxyacanthaecolella</i>	45
<i>loranthella</i>	105	<i>oxyacanthella</i>	45
<i>louisella</i>	161	<i>oxymalella</i>	45
<i>luisae</i>	172	<i>oxysorbi</i>	45
<i>lusatica</i>	4	<i>paliurella</i>	8
<i>luteella</i>	14	<i>pallens</i>	117
<i>luteellina</i>	14	<i>pallidella</i> sensu Beirne	147
<i>lvovskyi</i>	112	<i>pallidiciliella</i>	142
<i>macrolepidella</i>	92	<i>palustrella</i>	59
<i>magdalena</i>	43	<i>paradoxa</i>	75
<i>mahalebella</i>	223	<i>peiuui</i>	37
<i>malella</i>	20	<i>peniciliata</i>	178
<i>mali</i>	79	<i>penicilla</i>	A
<i>malicola</i>	63	<i>perpusillella</i>	27
<i>malivora</i>	219	<i>perpygmaeella</i>	18
<i>marginicolella</i>	64	<i>peterseniella</i>	80
<i>marionella</i>	186	<i>phyllotomella</i>	68
<i>maryella</i>	160	<i>plagicolella</i>	211
<i>maxima</i>	148	<i>platani</i>	63
<i>mediofasciella</i> auctt.	225	<i>pomella</i>	106
<i>mediofasciella</i> Haworth	224	<i>populella</i> Herrich-Schäffer	79
<i>mesasiaticus</i>	118	<i>populialbae</i>	60
<i>mespili</i>	45	<i>populicola</i>	186
<i>mespilicola</i> sensu Klimesch	49	<i>posticella</i>	60
<i>mespilicola</i> Frey	50	<i>potentillae</i>	49
<i>micromeriae</i>	128	<i>poteriella</i>	75
<i>microtheriella</i>	17	<i>poterii</i>	75
<i>minimella</i> Costa	A	<i>preisseckeri</i>	189
<i>minimella</i> Rebel	107	<i>pretiosa</i>	69
<i>minimella</i> sensu Klimesch	108	<i>prinophyllella</i>	199
<i>minimella</i> Zetterstedt	225	<i>promissa</i>	1
<i>minorella</i>	218	<i>prunetella</i>	18
<i>minusculella</i>	47	<i>prunetorum</i>	18
<i>monemvasiae</i>	180	<i>prunicola</i>	20
<i>monspeßulanella</i>	162	<i>prunivora</i>	219
<i>monspeßulanii</i>	84	<i>psammophrica</i>	104
<i>montissanci</i>	205	<i>pseudocistivora</i>	151
<i>morosella</i>	188	<i>pseudoplatanella</i>	84
<i>mucidella</i>	224	<i>pubescivora</i>	206
<i>muricatella</i>	34	<i>pulverosella</i>	157
<i>myrtillella</i>	55	<i>punctella</i>	18
<i>nanivora</i>	11	<i>purpureae</i>	59
<i>naturnella</i>	3	<i>pygmaeella</i>	80
<i>nickerli</i>	35	<i>pyrellicola</i>	26
<i>niculescui</i>	187	<i>pyni</i>	46
<i>nigra</i>	85	<i>pyricola</i>	48
<i>nigrifasciata</i>	164	<i>pyrivora</i>	38
<i>nigrobrunella</i>	A	<i>quadrimaculella</i>	158
<i>nigrociliella</i>	208	<i>quercifoliae</i>	209
<i>nigrosparsella</i>	203	<i>quinquella</i>	195
<i>nitens</i>	66	<i>regiella</i>	40
<i>nitidella</i>	37	<i>repentiella</i>	56
<i>nivenburgensis</i>	12	<i>repeteki</i>	111
<i>nobilella</i>	A	<i>rhamnella</i>	21
<i>nowakowskii</i>	175	<i>rhamnipumila</i>	21
<i>nuristanica</i>	182	<i>rhamnophila</i>	22
<i>nylandriella</i> auctt.	43	<i>ridiculosa</i>	140
<i>nylandriella</i> Tengström	44	<i>robiniella</i>	1
<i>obliquella</i>	58	<i>roborella</i>	97
<i>occultella</i> Heinemann	75	<i>rodella</i>	123

<i>rosarum</i>	A	<i>szocsi</i>	19
<i>rosella</i>	27	<i>szoecsiella</i>	91
<i>rosmarinella</i>	132	<i>tatrensis</i>	69
<i>rubescens</i>	15	<i>tauromeniella</i>	32
<i>rubicurrens</i>	A	<i>tengstroemi</i>	75
<i>rubivora</i>	221	<i>tentationis</i>	B
<i>rufella</i>	60	<i>terebinthivora</i>	213
<i>ruficapitella</i> auctt.	97	<i>tergestina</i>	167
<i>ruficapitella</i> Haworth	94	<i>teuciella</i>	127
<i>ruficastaneae</i>	B	<i>teutonica</i>	87
<i>rufifrontella</i>	A	<i>thuringiaca</i>	35
<i>sakhalinella</i>	13	<i>thymi</i>	126
<i>salicella</i>	54	<i>tiliae</i>	10
<i>salicinae</i>	121	<i>tingitella</i>	156
<i>salicis</i>	54	<i>tityrella</i>	53
<i>salicivorella</i>	54	<i>tomentillella</i>	72
<i>samiatella</i>	96	<i>torminalis</i>	39
<i>sanctaeruicis</i>	129	<i>tremulaefoliella</i>	61
<i>sanctibenedicti</i>	134	<i>trifolii</i>	137
<i>sanguisorbae</i>	33	<i>trilobella</i>	133
<i>sativella</i>	209	<i>trimaculella</i>	60
<i>saturejae</i>	124	<i>tristis</i>	99
<i>saxatilella</i>	68	<i>turanicus</i>	113
<i>scandicella</i>	57	<i>turbidella</i> Herrich-Schäffer	188
<i>schleichiella</i>	218	<i>turbidella</i> Zeller	186
<i>semicolorella</i>	66	<i>turbulentella</i>	188
<i>semipictella</i>	54	<i>turcomanicus</i>	115
<i>septembrella</i>	170	<i>turicella</i>	53
<i>serella</i>	75	<i>turicensis</i>	53
<i>sericepeza</i>	160	<i>uliginosi</i>	55
<i>sericepezella</i>	160	<i>ulmariae</i>	77
<i>serotinella</i>	144	<i>ulmi</i>	B
<i>shafirkanus</i>	109	<i>ulmicola</i>	30
<i>simplicella</i>	188	<i>ulmifoliae</i>	30
<i>sorbi</i>	62	<i>ulmiphaga</i>	31
<i>sorbiella</i>	62	<i>ulmivora</i>	30
<i>sorbfoliella</i>	B	<i>unicolor</i>	54
<i>speciosa</i>	84	<i>uniformis</i>	54
<i>sphendamni</i>	161	<i>utenisis</i>	218
<i>spinosella</i>	222	<i>variicapitella</i>	173
<i>spinossissimae</i> sensu Klimesch	36	<i>vimineticola</i> auctt.	58
<i>spinossissimae</i> Waters	28	<i>vimineticola</i> Frey	54
<i>spiraeae</i>	215	<i>vincamajorella</i>	165
<i>spireae</i>	215	<i>violacella</i>	94
<i>splendidissima</i>	68	<i>viridella</i>	192
<i>splendidissimella</i>	68	<i>viridicola</i>	225
<i>squamatella</i>	143	<i>viridissimella</i>	A
<i>staphyleae</i>	219	<i>viscerella</i>	32
<i>staticis</i>	102	<i>vittatus</i>	116
<i>stelviana</i>	73	<i>vossensis</i>	4
<i>stettensis</i>	47	<i>weaverella</i>	169
<i>stoechadella</i>	131	<i>weaveri</i>	169
<i>strigilella</i>	224	<i>wockeella</i>	58
<i>styracicolella</i>	100	<i>woolhoepiella</i>	225
<i>subapicella</i>	204	<i>zangherii</i>	90
<i>subbimaculella</i>	208	<i>zelleriella</i>	56
<i>suberis</i>	192	<i>zermattensis</i>	27
<i>suberivora</i>	85	<i>zimmermanni</i>	209
<i>suberosella</i>	64	<i>zizyphi</i>	9
<i>subnitidella</i>	A	<i>zollikofferiella</i>	122
<i>subtrimaculella</i>	60		
<i>svenssoni</i>	89		

Manuscript accepted July 1985.

Journal and subscription to reprints of particular groups to be ordered from:
 Publishing House of the Swedish Research Councils,
 P.O. Box 6710, S-113 85 Stockholm, Sweden.