

JAPANESE *ELACHISTA* STUDIED BY PARENTI (1983)
(LEPIDOPTERA, ELACHISTIDAE): THE SUBGENUS
APHELOSETIA AND THE *GLEICHENELLA*-,
TETRAGONELLA-, AND *BIFASCIELLA*-GROUPS

Sugisima, K., 2005. Japanese *Elachista* studied by Parenti (1983) (Lepidoptera, Elachistidae): the subgenus *Apheloseitia* and the *gleichenella*-, *tetragonella*-, and *bifasciella*-groups. – Tijdschrift voor Entomologie 148: 225–246, figs. 1–63. [ISSN 0040-7496]. Published 1 December 2005.

The Japanese *Elachista* Treitschke, 1833 species relevant to Parenti (1983) belonging to the subgenus *Apheloseitia* Stephens, 1834 and the *gleichenella*-, *tetragonella*-, and *bifasciella*-groups of the subgenus *Elachista* are revised. A total of nine species are recognized: *E. (Apheloseitia) fasciola* Parenti, 1983, *E. (Apheloseitia) microdigitata* Parenti, 1983, in the *E. gleichenella*-group: *E. (E.) nitensella* Sinev & Sruoga, 1995, *E. (E.) similis* sp. n., *E. (E.) tengstromi* Kaila et al., 2001, in the *E. tetragonella*-group: *E. (E.) fulgens* Parenti, 1983, and in the *E. bifasciella*-group: *E. (E.) hiranoi* sp. n., *E. (E.) jupiter* sp. n., and *E. (E.) phalaridis* Parenti, 1983. *Elachista similis* and *E. hiranoi* have been previously misidentified in Japan as *E. gleichenella* (Fabricius, 1781) and *E. apicipunctella* Stainton, 1858 respectively. *Elachista jupiter* is another close relative of *E. apicipunctella*. The females of *E. microdigitata* and *E. nitensella* are described for the first time. The immature biology is illustrated for *E. similis* and *E. fulgens*.

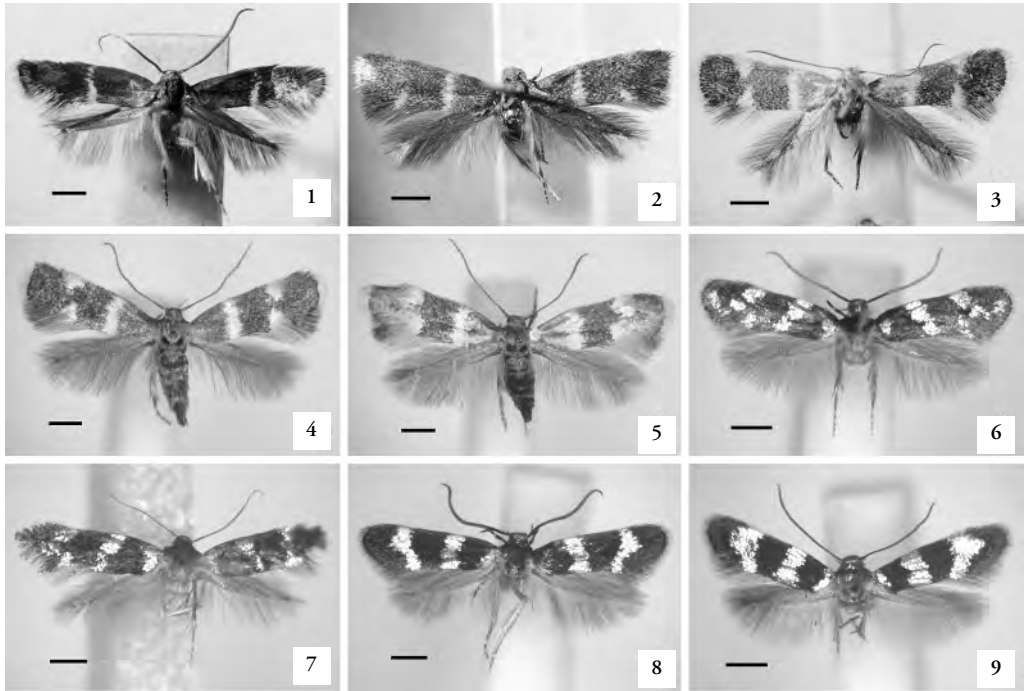
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Key words. – holotype depository; new species; immature biology; *Carex*; *Luzula*; synonymy.

Taxonomic studies of Japanese Elachistidae were started in the early 1980's. Kuroko (1982) recorded two species of *Elachista* Treitschke, 1833 and two species of *Perittia* Stainton, 1854, describing one *Perittia* species. Parenti (1983) reported three species of *Cosmiotes* Clemens, 1860, twelve species of *Elachista*, and one species of *Swezeyula* Zimmerman & Bradley, 1950, describing one *Cosmiotes* and nine *Elachista* and leaving two *Cosmiotes* unidentified. Three species were treated by both authors: *Elachista gleichenella* (Fabricius, 1781); *Elachista regificella* Sircom, 1849; *Perittia loniceræ* (Zimmerman & Bradley, 1950) (as *Swezeyula loniceræ* in Parenti (1983)). The available material and information at that time was insufficient for a thorough revision, and thus a further study was required. For example, both authors stated that the Japanese forms of *E. gleichenella* and *E. regificella* seemed to differ somewhat from the European ones. Parenti (1983) stated that his identification of *E. apicipunctella* Stainton, 1851 was tentative. Four of the ten species described by Parenti (1983) were based on males only.

Among the species treated by Kuroko (1982) and Parenti (1983), two in *Perittia* were redescribed by Traugott-Olsen (1995a, 1995b) (see also Kaila 1999a concerning nomenclature). *Elachista regificella* in the sense of Kuroko (1982) and Parenti (1983) was later described as a distinct species, *E. tengstromi* Kaila et al., 2001. *Elachista fasciola* Parenti, 1983 and *E. canis* Parenti, 1983 were redescribed by Kaila & Junnilainen (2002) and Sugisima & Kaila (in press) respectively. *Elachista amamii* Parenti, 1983, *E. caliginosa* Parenti, 1983, *E. kurokoi* Parenti, 1983, and *E. miscanthi* Parenti, 1983 have been redescribed by Sugisima (2005). The remaining species have not been re-examined. These are all referred to *Elachista* in the current taxonomic system of Elachistidae, because *Cosmiotes* is considered a junior subjective synonym of *Elachista*, forming the *freyerella*-group of the subgenus *Elachista* (Kaila 1999a, 1999b).

In the course of this study, I have been re-examining the Japanese *Elachista* species relevant to Parenti (1983) belonging to the subgenus *Apheloseitia* Stephens, 1834 and the *gleichenella*-, *tetragonella*-,



Figs. 1-9. *Elachista* species, adult moths; scale lines 1 mm. – 1, *E. fasciola*, holotype; 2-5, *E. microdigitata* (2, holotype; 3, ♀, with same data label as holotype; 4, ♀, Kosimizu-tyô; 5, ♀, costal and tornal spots of forewing blurred and fused, Kosimizu-tyô); 6-7, *E. nitensella* (6, ♂, Isikari-si; 7, ♀, Azusagawa-mura); 8-9, *E. similis* (8, holotype; 9, ♀, paratype, Ebetu-si).

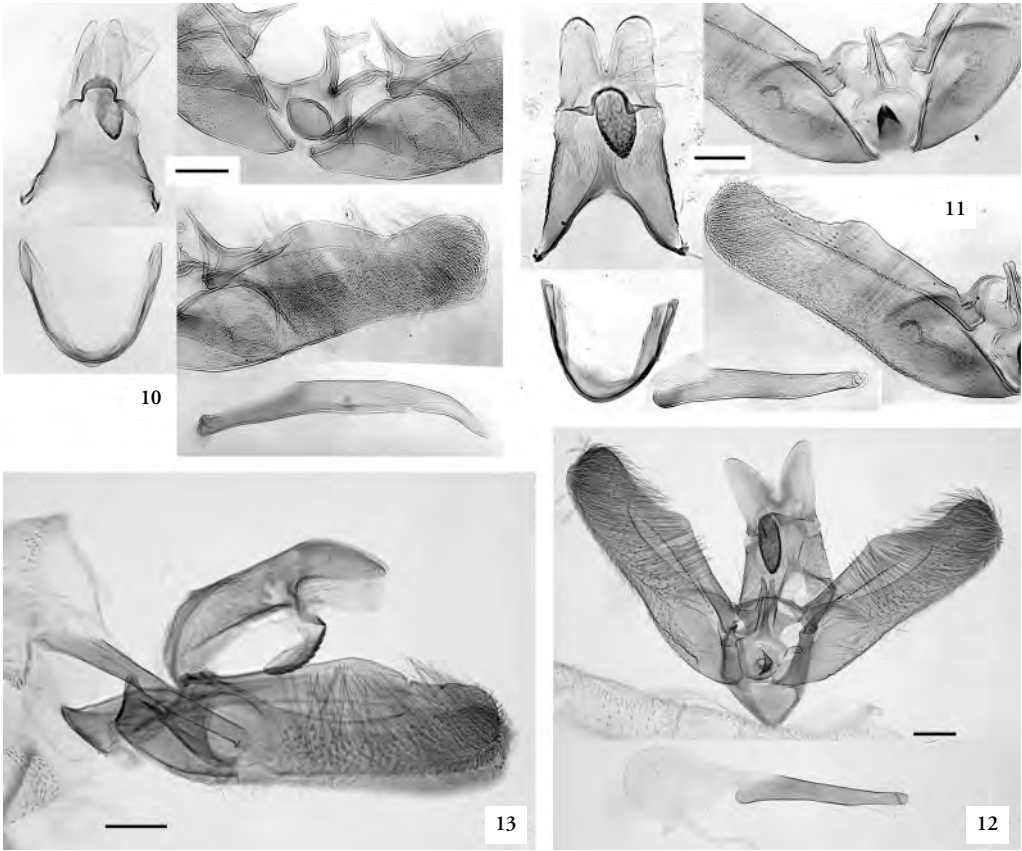
and *bifasciella*-groups of the subgenus *Elachista*. The Japanese species having been identified as *E. apicipunctella* and *E. gleichenella* proved to be two unnamed species. Another unnamed close relative of *E. apicipunctella* was discovered. Further, females of *E. microdigitata* Parenti, 1983 was discovered. In addition, two males and four females labelled 'Elachista kyushui', a manuscript name by U. Parenti, were found in the collection of the Entomological Laboratory, School of Agriculture, Osaka Prefecture University, Sakai, Ôsaka, Japan (UOPJ). They were identified as *E. nitensella* Sinev & Sruoga, 1995, the female of which had been unknown.

The present paper treats a total of nine *Elachista* species relevant to Parenti (1983) including three new species: two belong to the subgenus *Apheloseitia*; three to the *gleichennella*-group; one to the *tetragonella*-group; three to the *bifasciella*-group. As to the classification above the species rank, I follow Kaila (1996, 1997, 1999a, 1999b) generally; for the *E. gleichenella*-group I follow the concept of Traugott-Olsen & Nielsen (1977).

DEPOSITORIES OF SPECIMENS

Parenti (1983) designated the Entomological Laboratory of Kyushu University, Hukuoka, Japan (KUEC) as depository for the holotypes of the species described in his paper. He stated that the paratypes were in the Entomological Laboratory, Osaka Prefecture University, Japan (UOPJ) and in his personal collection (PCUP). Nevertheless, the holotypes designated by Parenti (1983) have actually been deposited in UOPJ together with the paratypes during these 20 years. I re-designate UOPJ as the depository of the holotypes.

For the convenience of those who will re-examine the present study in future, I deposit a large part of specimens including the holotypes designated here in UOPJ. Other specimens examined are deposited in the following collections: Systematic Entomology Laboratory, Hokkaido University, Sapporo, Japan (EIHU); Finnish Museum of Natural History, Helsinki, Finland (MZHF); National Science Museum, Tokyo, Japan (NSMT); and PCUP.



Figs. 10-13. *Elachista* species, male genitalia; scale lines 0.1 mm. – 10, *E. fasciola*, holotype; 11-13, *E. microdigitata* (11, holotype; 12, Sibetya-tyô, slide no. KS 1407; 13, lateral view, Kosimizu-tyô, slide no. KS 1395).

TAXONOMY

The subgenus *Apheloesetia* Stephens, 1834

Elachista (Apheloesetia) fasciola Parenti (figs. 1, 10)

Elachista fasciola Parenti, 1983: 6-7, pls 1, 3. Holotype ♂: JAPAN: Nobeyama, Nagano-ken, Honsyû, em. 23.v.1964, host *Achnatherum pekinense* (Hance) Ohwi [written in Japanese], H. Kuroko [leg.], Genitalia slide U. Parenti 5817 (UOPJ) [examined].

Elachista fasciola; Kaila & Junnilainen, 2002: 176-181, figs. 9-22.

Remarks

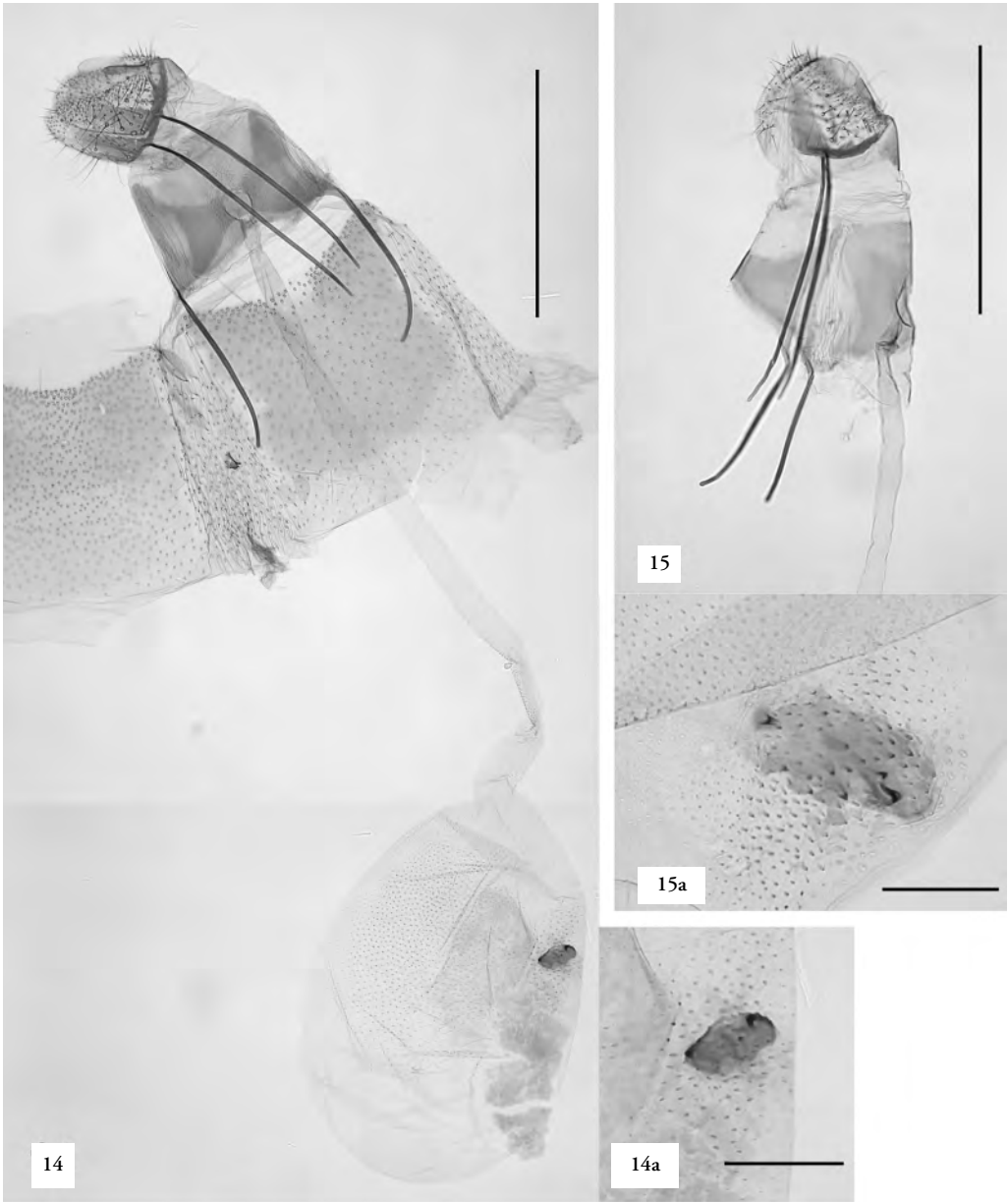
Kaila & Junnilainen (2002) redescribed *E. fasciola* on a good number of European and Japanese specimens including paratypes; they did not examine the holotype. To ascertain future identification, photos

of the holotype moth (forewing length 4.0 mm) (fig. 1) and genitalia (fig. 10) are given here. For further information on *E. fasciola*, see Kaila & Junnilainen (2002) and Parenti (1983).

Elachista (Apheloesetia) microdigitata Parenti (figs. 2-5, 11-15)

Elachista microdigitata Parenti, 1983: 8-9, pl. 2. Holotype ♂: JAPAN: Sakai-si, Ôsaka-hu, Honsyû, 10.v.1965, Y. Arita [leg.], Genitalia slide U. Parenti 3820 (UOPJ) [examined].

Material examined. – Paratype: 1♂, Ikeda-tyô, Hokkaidô, 2.vii.1958 (UOPJ). – Other specimens examined: JAPAN: HOKKAIDÔ: 1♂, Abasiri-si (Kitahama), 2.vii.2003 (EIHU); 1♀, Ebetu-si, 27.vi.1992 (EIHU); 15♂ 17♀, Kosimizu-tyô (Hamakosimizu, Hokuto, Miwa, Nogawa, or Yanbetu), from late June to mid July (3♂ 4♀ UOPJ; 9♂ 10♀ EIHU; 2♂ 2♀ MZHF; 1♂ 1♀ PCUP); 1♂



Figs. 14-15. *Elachista microdigitata*, female genitalia; scale lines 0.1 mm for signa, 0.5 mm for others. – 14, Kosimizu-tyô, slide no. KS 0992, signum magnified in 14a; 15, lateral view, Sibetya-tyô, slide no. KS 1408, signum magnified in 15a.

1 ♀, Sibetya-tyô (Tôro), 26.vi.2003 (UOPJ); 1 ♂ 1 ♀, Sikaioi-tyô (Kitaurimaku), early July (EIHU); HONSYÛ: 1 ♀, Hino-si, Tôkyô-to, 21.v.1995 (UOPJ); 1 ♂ 1 ♀, same data as holotype (UOPJ).

Identification

I identified the male specimens as *E. (A.) microdigitata* on the following characters: the dark grey-brownish forewing with a whitish transverse fascia around middle and a whitish triangular tornal spot; in the genitalia, the rudimentary digitate processes and the blunt apex of the aedeagus. I considered female specimens to be conspecific with the males, because no other *Apbelosetia* females were collected on the same date and locality as the males of *E. (A.) microdigitata*. The females are somewhat different from the males in coloration: the forewing of the female has a distinct whitish costal spot opposite to the tornal spot, while the costal spot is absent in the male. The difference in coloration observed here is similar to that observed in related species.

Redescription

Forewing length ♂ 3.4-4.0 mm (holotype 4.0 mm), ♀ 3.7-4.3 mm. Head and thorax dark grey-brownish. Forewing dark grey-brownish, mottled with paler bases of scales, with sexually dimorphic whitish markings: in male (fig. 2), markings as described in Parenti (1983); in female (figs. 3-5), markings much more distinct, composed of a broad transverse fascia on $\frac{1}{3}$, a triangular tornal spot, and a triangular costal spot opposite to the tornal one, these two spots being usually distant (figs. 3, 4) but sometimes fused (fig. 5). Cilia of forewing with cream-whitish area on apex.

Male genitalia (figs. 11-13). – Tegumen thickened along cephalic margin; thickened part throwing a point caudally. Valva widest around $\frac{3}{5}$. Juxta lobes distinctly bifurcate, medial branches being long, setose, and close to each other; central area of ventral plate of juxta concave deeply, forming a tapering pouch; digitate process rudimentary, with usually one or two, at most five setae. Aedeagus tapering, with blunt apex; vesica with a hook-like cornutus near distal opening of aedeagus.

Female genitalia (figs. 14-15). – Apophysis anterioris $\frac{2}{3}$ as long as apophysis posterioris. Eighth tergite indented on caudal margin. Ostium near cephalic margin of eighth sternite; antrum not developed; fine spines surrounding ostium. Ductus bursae almost equally wide in its whole length, with a short colliculum just cephalically of ostium. Corpus bursae lined with minute spines, with a signum of a sclerotized plate bearing a few blunt teeth.

Biology

Immature stages unknown. Around Abasiri-si, the eastern part of Hokkaidô, adults are collected from late June to mid July in grasslands; probably univoltine.

Distribution

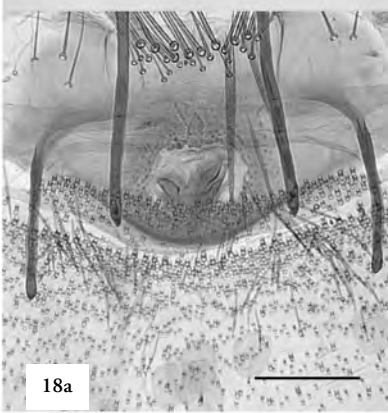
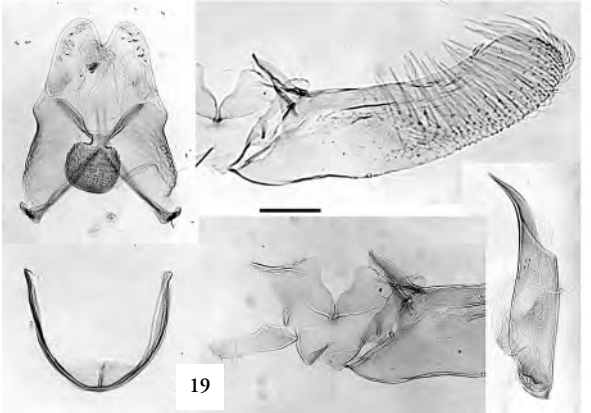
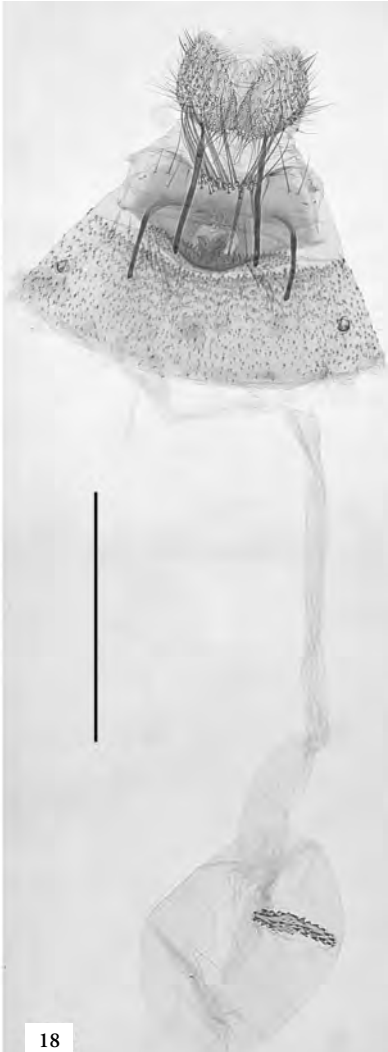
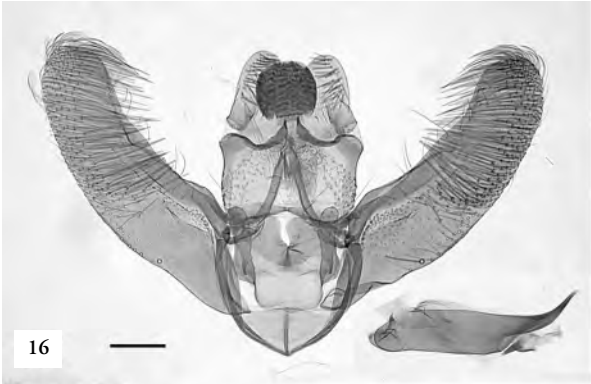
Japan: Hokkaidô, Honsyû. Far Eastern Russia: Primorsky Krai (Sruoga 1995).

Remarks

In the male genitalia of *Elachista (Apbelosetia) microdigitata*, the tegumen is thickened along the cephalic margin, and the medial area of the ventral plate of the juxta is concave and forms a tapering pouch. These characters indicate that *E. (A.) microdigitata* belongs to the *E. (A.) bedellella*-group sensu Kaila (1997: 4). In this group, a grey-brownish appearance as in *E. (A.) microdigitata* occurs in *E. (A.) bedellella* Sircom, 1848, *E. (A.) littorcola* Le Marchand, 1938, *E. (A.) pullicomella* Zeller, 1839, and *E. (A.) squamosella* (Herrich-Schäffer, 1855).

In the male, *E. microdigitata* can be distinguished from *E. littorcola*, *E. pullicomella* and *E. squamosella* by the forewing without a distinct whitish costal spot around $\frac{2}{3}$. It can be separated from *E. bedellella* in the genitalia by the rudimentary digitate processes and the vesica with only one cornutus (*E. bedellella* has the ordinarily developed digitate processes and two distinct cornuti). Parenti (1983) referred to *E. pullicomella* as a close relative of *E. microdigitata*, because these two species share the rudimentary digitate processes. In *E. microdigitata*, the digitate processes are not elongate but short, the apex of the aedeagus is not acute but bluntly truncate, and the vesica has a hook-like cornutus. In *E. pullicomella*, the digitate processes are elongate, the apex of the aedeagus is acute, and the vesica has no cornuti. According to L. Kaila (personal communication), the digitate processes are reduced somewhat variously in *E. pullicomella*, and the characters of the aedeagus will probably be more reliable in distinguishing *E. microdigitata* and *E. pullicomella*.

In the female, *E. microdigitata* can be discriminated from *E. squamosella* by the brownish head, and from *E. littorcola* by the forewing marking on $\frac{2}{3}$ recognized as two spots (in *E. littorcola*, the corresponding marking is recognized as a complete, nearly parallel-sided fascia). *Elachista microdigitata* can be separated in the genitalia from *E. pullicomella* by absence of the antrum, and from *E. bedellella* by the much shorter colliculum.



Subgenus *Elachista* Treitschke, 1833The *gleichenella*-group

Elachista (Elachista) nitensella Sinev & Sruoga (figs. 6-7, 16-19, 29, 30)

Elachista nitensella Sinev & Sruoga, 1995: 120, fig. 1. Holotype ♂: RUSSIA: Primorsky Krai, Khasan district, 3 km SE of Andreyevka; 23.VII.1985; Sinev [leg.] (ZIN) [not examined].

Material examined. – JAPAN: HOKKAIDŌ: 2♂, Isikari-si (Isikari-hama or Isikari-gawa-kakō) (1♂, em. 29.v.1994, ex *Carex microtricha*; 1♂, 11.vii.1995) (EIHU); 1♂, Sapporo-si (Misumai), 14.vii.1991; 4♂ 1♀, Tomakomai-si (2♂, 25.vii.1961; 1♂ 1♀, 29.vii.1964; 1♂, em. 26.vi.1994, ex *Carex* sp.) (1♂ UOPJ; 3♂ 1♀ EIHU); HONSHŪ: 1♂ 1♀, Asahi-tyō (Asahi-kōgen), Aiti-ken, 9.vii.1999 (EIHU); 13♂ 1♀, Azusagawa-mura (Ueno), Nagano-ken, July (4♂ 1♀ UOPJ; 6♂ EIHU; 2♂ MZHF; 1♂ PCUP); 1♂, Horikane-mati, Nagano-ken, 25-26.vii.1996 (EIHU); 1♂ 1♀, Kuzakai, Iwate-ken, host *Anaphalis margaritacea* (UOPJ); 2♂ 1♀, Minato-ku, Tōkyō-to (1♂, 28.v.1999; 1♂, 23.v.2003; 1♀, 27.v.2004) (NSMT); 2♂, Yamagata-mura (Karasugawa-dani), Nagano-ken, 18.vii.1982 (1♂ UOPJ, 1♂ EIHU); KYŪSHŪ: 1♂ 3♀, Hiko-san, Hukuoka-ken, 16.vii.1957 (UOPJ).

Identification

I identified Japanese specimens as *E. (E.) nitensella* on the forewing coloration, especially a silvery patch at the apex of wing, which protrudes over the cilia. In addition, my identification is based on the following characters of the male genitalia: the uncus cleft in a moderate depth; the apically truncate juxta lobes; the vesica with a large thorn near the apical opening of the aedeagus.

Redescription

Forewing length: ♂ 2.9-3.7 mm, ♀ 3.6-3.7 mm. Head and thorax lead-greyish, lighter-colored on face. Forewing blackish, slightly shiny, with the following gold-silvery markings: a spot at base; an outwards oblique fascia extending from $2/7$ of costal margin to $2/5$ of hind margin, often broken on fold; three spots of almost equal size, one being at $3/4$ of costa, one at tornus, one just apically of the other two spots; a small patch on the apex of wing, partly protruding over cilia.

Male genitalia (figs. 16, 17, 19). – Generally as described in Sinev & Sruoga (1995). However, what was referred to as ‘the lateral process in form of scler-

rotized spine’ on the aedeagus in Sinev & Sruoga (1995) is actually a thorn-like cornutus, arising from the vesica (fig. 16a). Aedeagus with a grater-like patch of spines near distal opening (figs. 17, 19); these spines varying in number and sometimes absent (fig. 16a).

Female genitalia (fig. 18). – Apophysis anterioris $1/2$ as long as apophysis posterioris. Eighth tergite with a group of long and stout setae. Eighth sternite with cephalic margin convex towards seventh sternite. Ostium (fig. 18a) near cephalic margin of eighth sternite; antrum not developed; ductus bursae of almost equal width in its whole length, with a sclerotized part just cephalically of ostium; ductus seminalis branching off from around the sclerotized part. Corpus bursae simply ellipsoidal, lined with minute spines, without a constriction around middle.

Biology

Elachista nitensella is found both in open places such as sand dunes and in shady places. At Ueno, Azusagawa-mura, Nagano-ken, many adults have repeatedly been collected in July for several years; probably univoltine.

I reared two males from a narrow-leaved *Carex* (probably *C. microtricha* Franchet) (Cyperaceae). In both cases, the whole plant including roots was collected in early spring, though I failed to find larval mines on the plant. The larva may feed only around the root as in the Nearctic relatives, *E. enitescens* Braun, 1921 and *E. madarella* (Clemens, 1860) (Braun 1948). The larva of *E. nitensella* pupates under a silk-sheet. The pupa (figs. 29, 30) has the abdomen with low spiracular projections and no mobile segments.

One male and one female in UOPJ have foodplant data of *Anaphalis margaritacea* (Asteraceae). According to T. Oku (personal communication), the collector of these specimens, they may actually have been associated with narrow-leaved *Carex* accidentally growing in pots where he cultivated *A. margaritacea*.

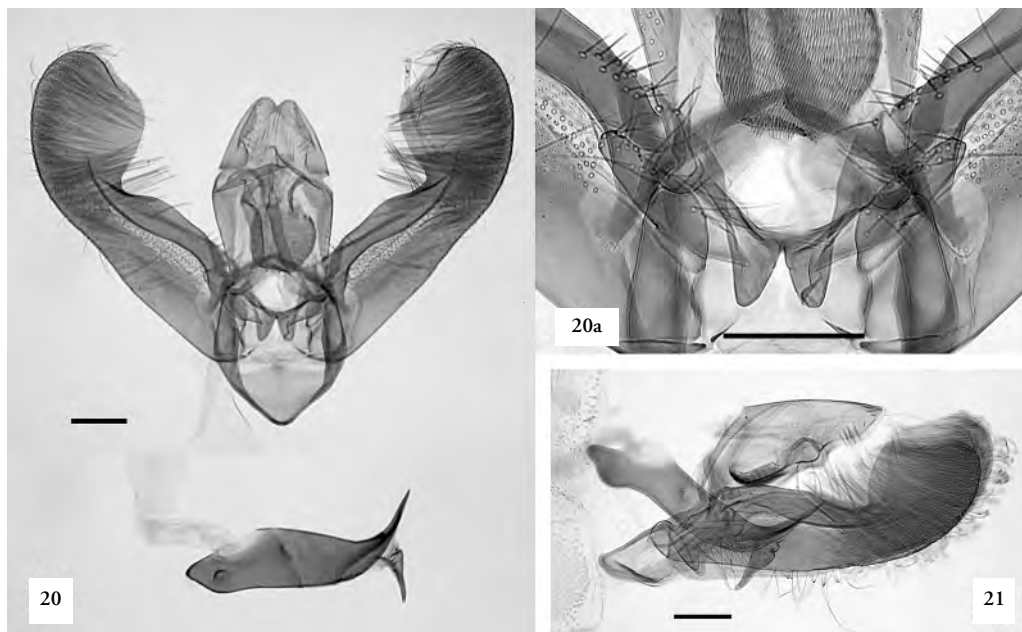
Distribution

Japan: Hokkaidō, Honshū, Kyūshū. Russia: Primorsky Krai (Sinev & Sruoga 1995).

Remarks

As Sinev & Sruoga (1995) stated, *E. (E.) nitensella* is similar to the Nearctic *E. (E.) enitescens* and

Fig. 16-19. *Elachista nitensella*, genitalia, ♂ (16, 17, 19), ♀ (18); scale lines 0.5 mm for 18, 0.1 mm for others. – 16, Azusagawa-mura, slide no. KS 0991, aedeagus magnified in 16a; 17, lateral view, Azusagawa-mura, slide KS 0984; 18, Asahi-tyō, slide no. KS 0737, area around antrum magnified in 18a; 19, Hiko-san, with label ‘Holotype *Elachista kyushui*’, slide no. U. Parenti 3823.



Figs. 20-21. – *Elachista similis*, male genitalia; scale lines 0.1 mm. – 20, holotype, juxta magnified in 20a; 21, lateral view, Ebetu-si, slide no. KS 0970.

E. (E.) madarella in coloration and male genitalia. It may be distinguished from the latter two species in forewing coloration by the apical silvery patch protruding over cilia. Differences of the male genitalia are given in Sinev & Sruoga (1995). In female genitalia, *E. nitensella* can be separated from *E. madarella* in the ductus bursae of equal width, and from *E. eniescens* in the distinctly convex cephalic margin of the eighth sternite and the larger signum.

The original description (Sinev & Sruoga 1995) stated that the aedeagus has a lateral process in form of a long spine. After careful dissection of several males (a total of eight slides), I found that the 'lateral process' in the original description is always movable independently of the aedeagus. It is actually a thorn-like sclerite arising from the right side of the vesica just near the distal opening of the aedeagus.

In the genitalia slide of a male from Hiko-san (3823 of U. Parenti: the 'holotype of *E. kyushui*'), I found that the vesica was torn from the base and the cornutus was lost together with the vesica (fig. 19).

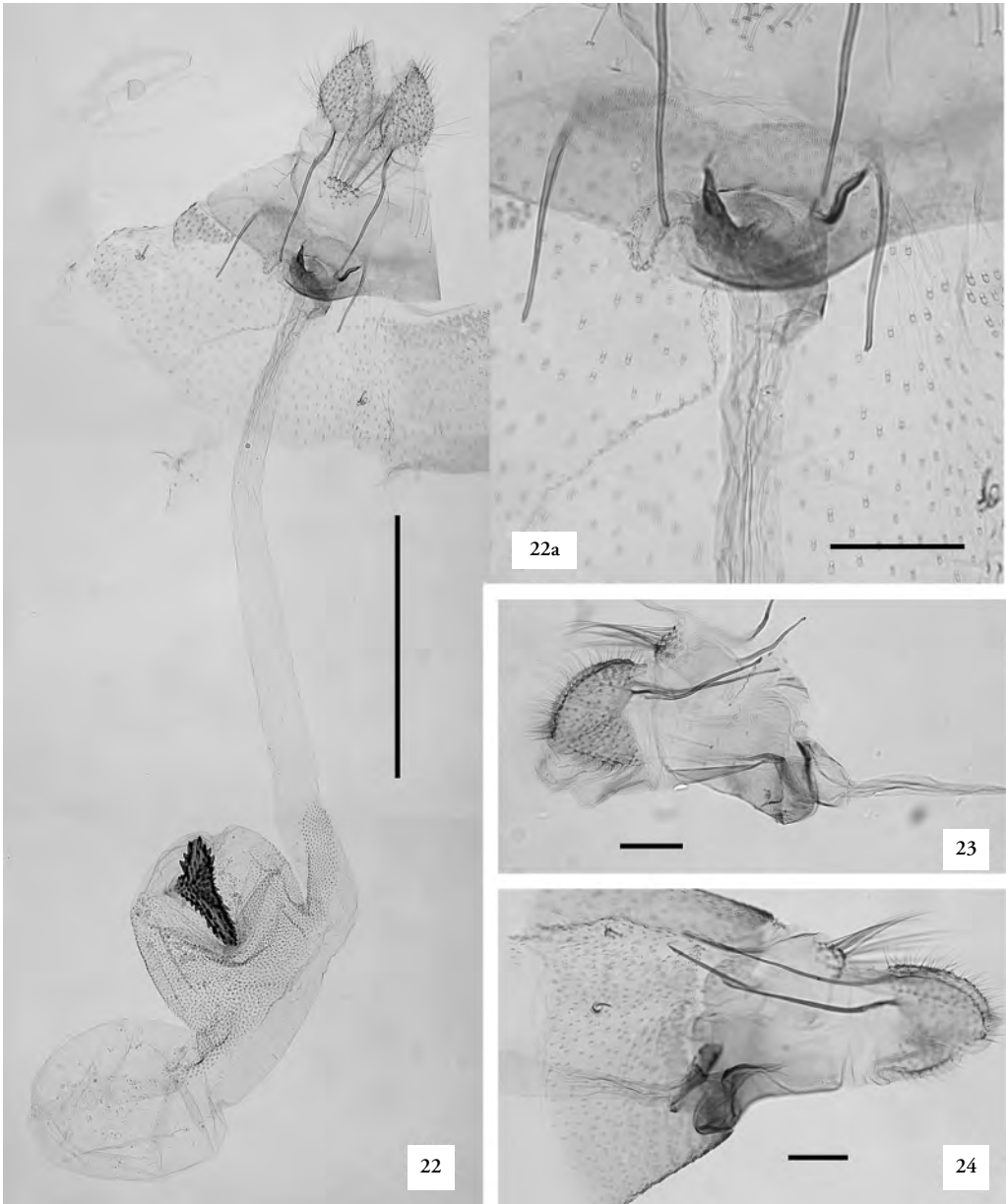
Elachista (Elachista) similis sp. n.
(figs. 8, 9, 20-28)

Elachista gleichenella: Kuroko, 1982: 260, pls 274(2), 275(3); Parenti, 1983: 3-4, fig. 1. [Misidentification]

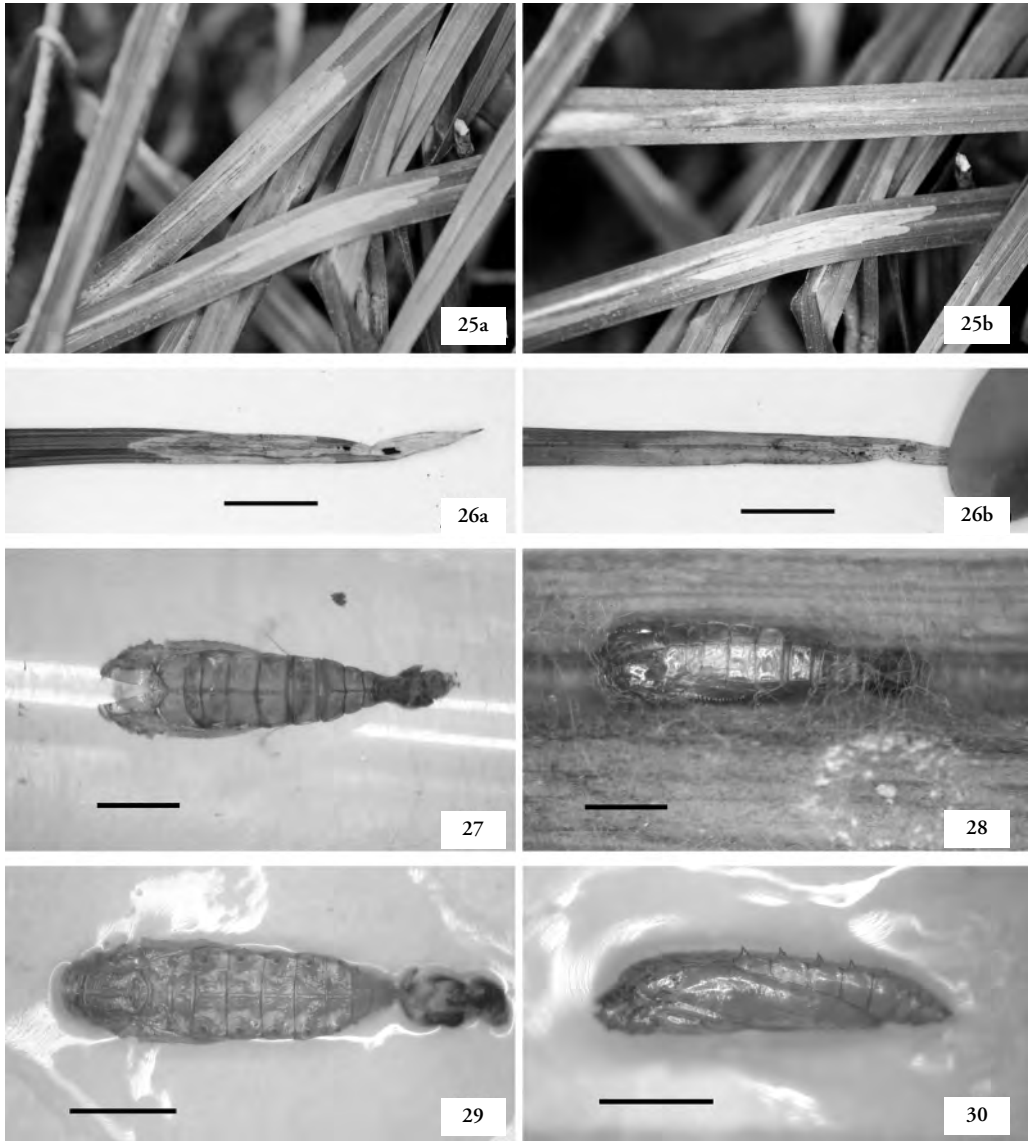
Type material. – Holotype ♂: JAPAN: Ebetu-si (Nopporo), Hokkaidō, 5.vii.1995, K. Sugisima leg., Genitalia slide K. Sugisima 0937 (UOPJ). – Paratypes: JAPAN: HOKKAIÐŌ: 19♂ 10♀, Ebetu-si (Nopporo) (1♂, 7.vii.1992; 10♂ 7♀, em. 18.v.-2.vi.1994, host *Carex foliosissima* (00008-1 & 00012-1); 1♀, em. 3.vi.1995, host *Carex* sp.; 3♂, 5.vii.1995; 4♂ 1♀, em. 5-11.v. 1996, host *Carex foliosissima* (00197); 1♂ 1♀, em. 12-19.v.2002, host ?*Carex insanae* (00557)) (6♂ 4♀ UOPJ; 10♂ 5♀ EIHU; 1♂ 1♀ MZHF; 2♂ PCUP); 1♂ 1♀, Nemuro-si (Habomai), 28.vii.2003 (EIHU); HONSYŪ: 2♂, Kitasidara-gun, (Uradani, 900 m), Aiti-ken, 25.vi.1977 (UOPJ); 1♂ 3♀, Kyōto-si (Kibune), Kyōto-hu, em. 5-8.v.1996, host *Carex morrowii* (00185) (1♂ 2♀ EIHU; 1♀ PCUP); KYŪSYŪ: 9♂ 8♀, Hiko-san, Hukuoka-ken (*3♂ 4♀, [em.] 11-21.v.1958, host *Luzula plumosa* [written in Japanese common name] (UOPJ); *1♂, [em.] 13.v.1958, ex *Carex morrowii* [written in Japanese common name] (UOPJ); 2♂ 4♀, em. 2-7.v.1996, ex *Carex morrowii* (00179) (1♂ 3♀ EIHU; 1♂ 1♀ MZHF); 3♂, em. 2-4.v.1996, ex *Carex nakiri* (00181) (EIHU)). The specimens with asterisks were examined by Kuroko (1982) and Parenti (1983).

Diagnosis

Forewing blackish, with three silvery markings: a spot at base; a transverse fascia on 1/3; another fascia



Figs. 22-24. *Elachista similis*, female genitalia, paratype, Ebetu-si; scale lines 0.5 mm for 22, 0.1 mm for others. – 22, slide no. KS 0971, area around antrum magnified in 22a; 23, lateral view from right side, slide no. KS 1391; 24, lateral view from left side, slide no. KS 0974.



Figs. 25-30. *Elachista* species, immature biology; scale lines 1 cm for 26, 1 mm for others. – 25-28, *E. similis*, Ebetu-si, rearing no. KS 00557 (25-26, larval mines, view from upperside of leaf (a), view from underside (b)); 27, pupal exuvia in cocoon on corner of rearing cage; 28, pupal exuvia in cocoon between leaves, leaf above pupa removed); 29-30, *E. nitensella*, pupal exuvia (29, dorsal view, Tomakomai-si; 30; lateral view, Isikari-si).

beyond $\frac{3}{4}$, generally outwards bent. In male genitalia, valva with dorsal margin of cucullus distinctly bent. Aedeagus with its apical part acute and dorsally curving; cornutus as long as dorsally curving part of aedeagus. In female genitalia, ostium on cephalic part of eighth sternite, where the eighth sternite is medially

convex towards the seventh sternite. Ductus bursae sclerotized just cephalically of ostium; the sclerotized part forming a sclerotized tube continuing into ductus seminalis. Corpus bursae divided by a constriction around middle into caudal part and smaller cephalic part; signum on caudal part.

Description

Except for a few features, *E. (E.) similis* is very similar to *E. (E.) gleichenella*. The latter species has been studied very well, and many good characterizations and illustrations are available in literature (e.g. Traugott-Olsen & Nielsen 1977; Steuer 1980; Kaila & Biesenbaum 1995; Sruoga 2000). Therefore, in the description below, I omitted most characters shared with *E. gleichenella*.

Forewing length: ♂ 3.2-3.7 mm (holotype 3.7 mm), ♀ 3.4-4.0 mm. Forewing blackish, with three silvery markings: a spot at base, widened towards hind margin; a transverse fascia on 1/3, almost straight; another fascia extending from commencement of cilia to tornus, outwards sending a point along wing axis, and distant from margin of wing disk. Fasciae on forewing broader in female.

Male genitalia (figs. 20, 21). – Cucullus of valva large, with dorsal margin distinctly bent. Juxta lobe bifurcate; medial branch tongue-shaped, apically round, and 3/2 as long as wide. Aedeagus acute and curving dorsally in apical part, with a grater-like patch of a various number of small spines near distal opening; vesica with a rod-like cornutus, which is as long as curving part of aedeagus and accompanied by a less sclerotized sinuate plate.

Female genitalia (figs. 22-24). – Eighth sternite with cephalic margin medially convex towards seventh sternite; ostium near cephalic margin of eighth sternite, strongly sclerotized along lateral margins. Ductus bursae sclerotized just cephalically of ostium; this sclerotized part relatively smooth, with its left side forming a short sclerotized tube continuing ductus seminalis.

Foodplants

Cyperaceae: species of *Carex* with overwintering leaves (*C. foliosissima* Fr. Schm, *C. insanae* Koidz., *C. morrowii* Boott, and *C. nakiri* Ohwi). Juncaceae: *Luzula plumosa* E. Meyer.

Biology (figs. 25-28)

The larva mines a overwintering leaf of the food-plant from autumn to late spring. The mine (figs. 25, 26) is linear or elongate blotch-like, and tends to extend towards the leaf-base. The larva pupates in a rough cocoon. The cocoon is constructed usually between leaves (fig. 28) and sometimes in corners of the rearing cage. In the pupal abdomen (figs. 27, 28), the fourth and fifth segments are mobile, and no spiracular projections are recognized. Probably *E. similis* is univoltine all over Japan.

Distribution

Japan: Hokkaidô, Honsyû, Kyûsyû.

Remarks

Kuroko (1982) and Parenti (1983) considered *Elachista similis* to be the Japanese population of *E. gleichenella*. After comparing this form with *E. gleichenella* from Europe, Siberia, and Far Eastern Russia, I found a constant and distinct difference in the male genitalia between the two forms (information on the Siberian population was obtained from L. Kaila (personal communication) and that on the Far Eastern Russian one is from Sinev & Sruoga 1997). As noted in Parenti (1983), the dorsal margin of the cucullus is always distinctly bent in the Japanese form, while it is always smoothly round in the continental one. In addition, the Japanese males have a thin cornutus and a long medial branch of the juxta lobe. The continental males have a distinctly thick cornutus and a distinctly short medial branch of the juxta lobe in comparison with those of the Japanese males. Therefore, I conclude that the Japanese form is distinct from the continental *E. gleichenella*. In the females, no clear differences have been found between *E. similis* and the *E. gleichenella*, though the sclerotized part of the ductus bursae is always smooth in *E. similis* and usually dentate to a various extent in *E. gleichenella*.

Etymology. – The species name, *similis* (Latin, adjective), is after its considerable resemblance to *E. gleichenella*.

Elachista (Elachista) tengstromi Kaila et al.

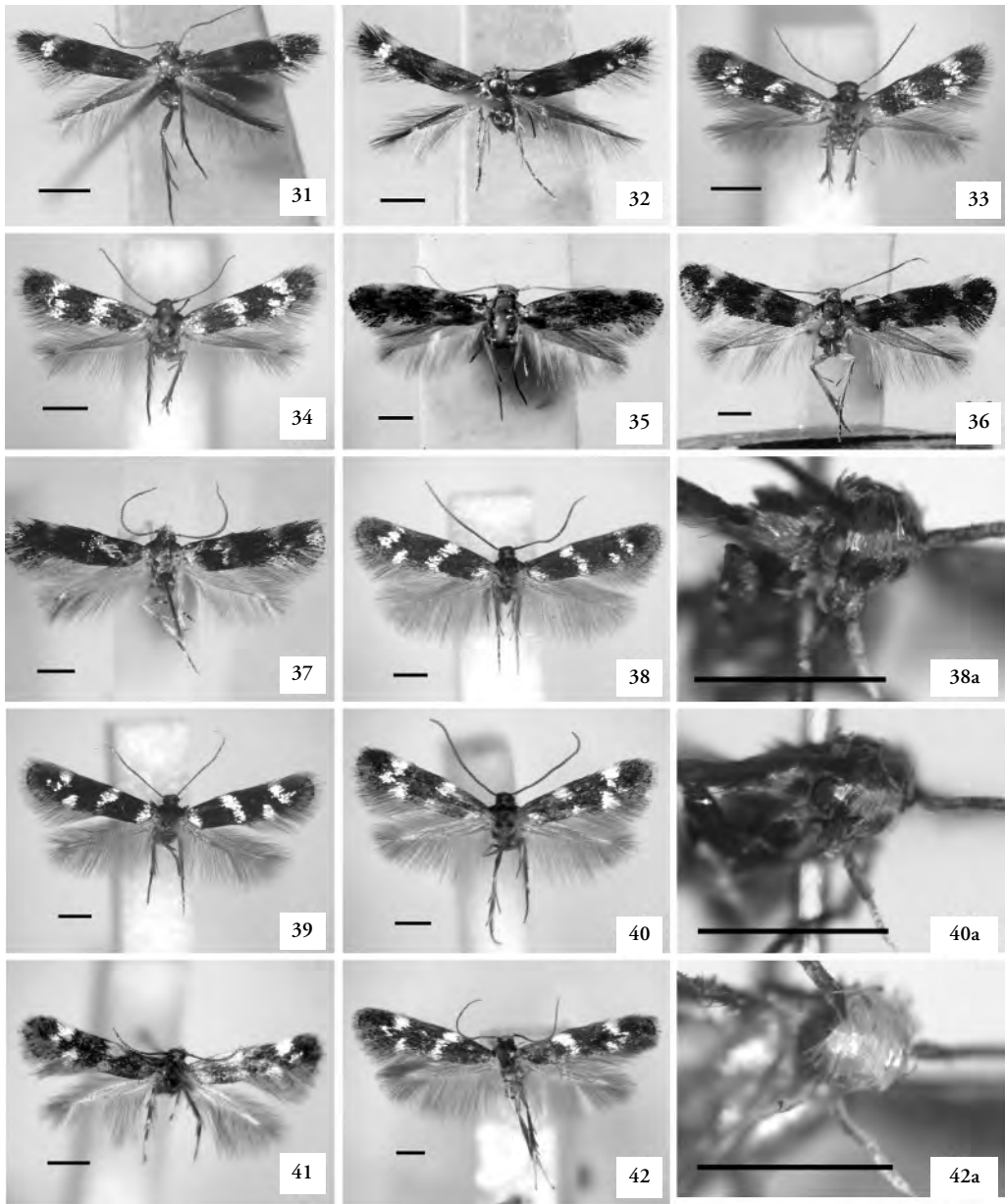
Elachista regificella: Kuroko, 1982: 260, pl. 11; Parenti, 1983: 4. [Misidentification]

Elachista tengstromi Kaila et al., 2001: 164-167, figs. 1, 11-14.

Material examined. – JAPAN: HOKKAIDÔ: 5♂ 1♀, Erimo-tyô (Syoya), from late June to early July (2♂ UOPJ; 3♂ 1♀ EIHU); 7♂ 1♀, Kosimizu-tyô (Hamakosimizu or Yanbetu), July and September (2♂ UOPJ; 5♂ 1♀ EIHU); 1♂, Sibetu-tyô, 10.viii.1993; 3♂ 5♀, Tomakomai-si (Uenae), host *Luzula capitata* (1♀ UOPJ; 2♂ 3♀ EIHU; 1♂ 1♀ MZHF); HONSYÛ: 3♂ 5♀, Tino-si (Yatugatake), Nagano-ken (examined by Kuroko (1982) and Parenti (1983); UOPJ).

Remarks

Elachista (E.) tengstromi may possibly be bivoltine at least locally, because three moths were collected in September (in 2001 and 2002) and two in July (in 2002) at sand dunes at Yanbetu. For further information of *E. tengstromi* including diagnoses, see Kaila et al. (2001).



Figs. 31-42. *Elachista* species, adult moths; scale lines 1 mm. – 31-34, *E. fulgens* (31, holotype; 32, ♀, paratype, Hiko-san; 33, ♂, Iriomote-zima; 34, ♀, Iriomote-zima); 35-36, *E. phalaridis* (35, holotype; 36, ♀, paratype); 37-39, *E. biranoi* (37, ♂, paratype, Tokugô-tôge, examined by Parenti (1983); 38, holotype, face magnified in 38a; 39, ♀, paratype, Kamitakamura); 40-41, *E. jupiter* (40, holotype, face magnified in 40a; 41, ♀, paratype, Abasiri-si); 42, *E. apicipunctella*, ♂, Finland, face magnified in 42a.

The *tetragonella*-group

Elachista (Elachista) fulgens Parenti
(figs. 31-34, 43-46, 60-63)

Elachista fulgens Parenti, 1983: 5-6, pls 1, 3. Holotype ♂:
JAPAN: Hiko-san, Kyūsyū, [em.] 14.viii.1957, H. Kuroko
leg., host *Carex*, Genitalia slide U. Parenti 3807 (UOPJ).
Biselachista arnoldi Koster, 1993: 61-66, figs. 1-9. Holotype
♂: NETHERLANDS: Vlodrop Station (RMNH) [not exam-
ined].
Biselachista fulgens: Parenti & Varalda, 1994: 98.

Material examined. – Paratypes: 5♂ 4♀, all from the
same locality as the holotype (1♂ 1♀, em. 21-23.v.1957,
host *Carex*; 4♂ 3♀, em. 12-17.viii.1957) (UOPJ). – Other
specimens examined: JAPAN: RYŪKYŪ: 10♂ 6♀, Hunaura-
wan, Iriomote-zima, em. 9.x-10.xi.2001, host *Carex*
oahuensis (3♂ 2♀ UOPJ; 5♂ 3♀ EIHU; 2♂ 1♀ MZHF).

Identification

I identified the specimens from Ryūkyū (figs. 33,
34, 45, 46) as *E. (E.) fulgens* on the following charac-
ters: the forewing with a silvery spot just basally of the
tornal spot; the male genitalia with spatulate uncus
lobes, the gnathos knob being incompletely divided
into two parts, and the costal hump of the valva situ-
ated on rather basal position; the female genitalia
with the papillae anales round, the colliculum widely
apart from the bowl-shaped antrum.

Body size. – Forewing length: ♂ 2.4-2.7 mm
(holotype 2.7 mm), ♀ 2.6-3.5 mm.

Foodplants

Cyperaceae: *Carex oahuensis* CA. Mey (Cyper-
aceae); the type series were reared from an unidenti-
fied species of *Carex*. Also in Europe, this species
feeds on *Carex* (Koster 1993; Parenti & Varalda
1994).

Biology (figs. 60-63)

Specimens from Iriomote-zima, Ryūkyū, were col-
lected on a sandy floor of mangrove bushes. The lar-
va makes a full-depth and straight linear mine, which
extends towards the leaf-base, or sometimes towards
the leaf-tip (figs. 60, 61). It pupates in a cocoon of
double-layered covering of silk on the V-valley of the
food-leaf (fig. 62). The upper layer of the cocoon is
composed of rather sparse transverse silk-filaments
and distant from the pupa; the lower one is very dense
and touches the dorsal surface of the pupa tightly; the
silk-girdle surrounding the pupal abdomen is absent.
The pupal abdomen (fig. 63) has extremely low
spiracular projections and no mobile segments.

According to the data of the type series, *E. fulgens*
has two generations a year at the type locality, with
flight periods of adults in May and August.

Distribution

Japan: Kyūsyū, Ryūkyū; Honsyū (Iwate-ken (Oku
2003)). Europe: Germany, the Netherlands, and Italy
(Parenti 1996).

Remarks

Koster (1993) described *Biselachista arnoldi* as
distinct from *E. fulgens*. Biesenbaum (1995)
synonymized *Biselachista arnoldi* with *Biselachista*
fulgens. On the other hand, L. Kaila (personal com-
munication) told that these two taxa can be distinct
and their relationships should be studied. I have not
examined the specimens of the species. Here I tenta-
tively follow Biesenbaum (1995)'s treatment. A criti-
cal study is required with regard to the relation
between these two taxa, though it is out of scope of
my present study.

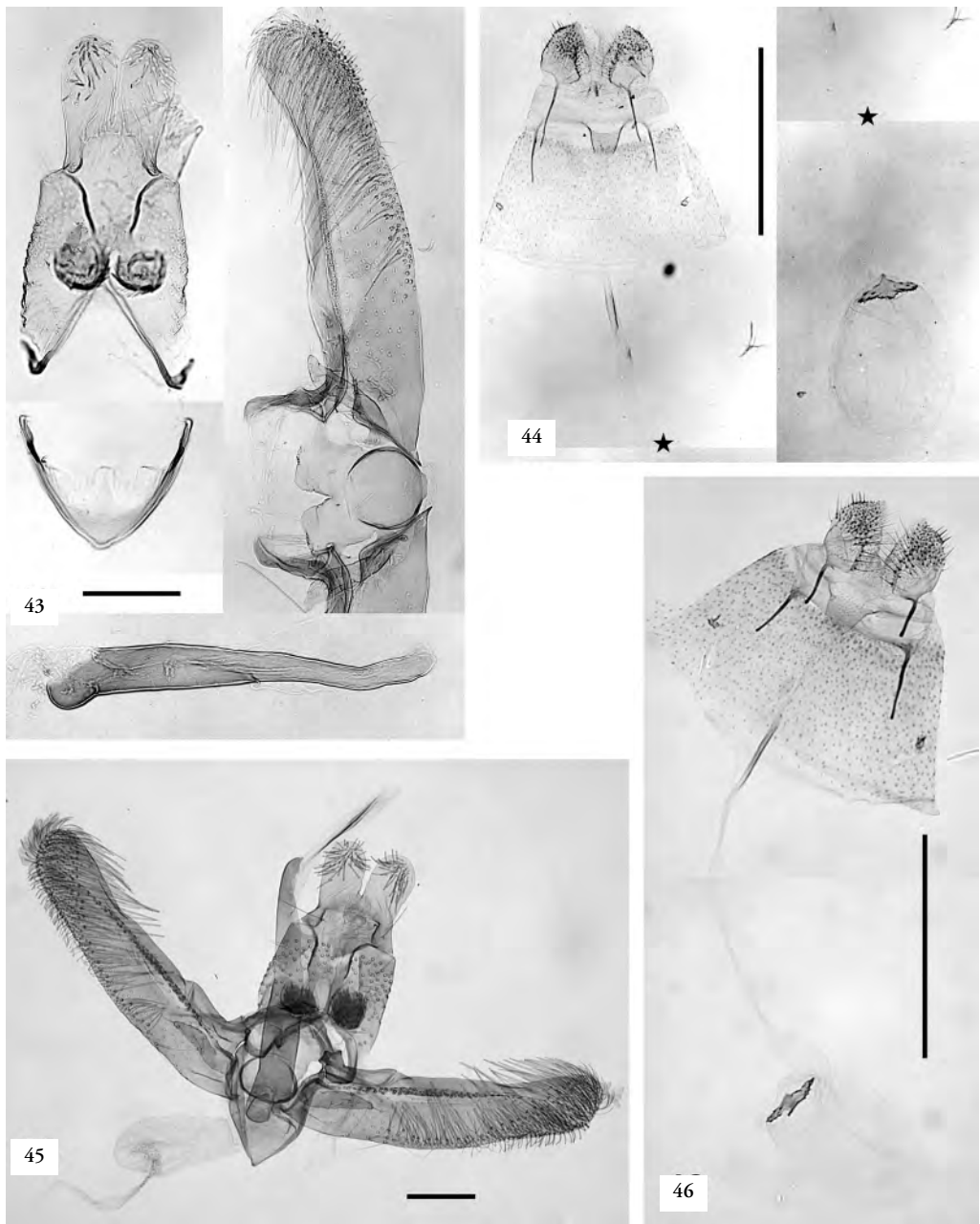
The *bifasciella*-group

This paper treats three species of this species-
group, including two new species, *E. hiranoi* and
E. jupiter. Both of the new species have a sub-
apical silvery spot on the blackish forewing. Within
the species-group, three species were previously
reported to have such a spot: *E. apicipunctella*,
E. fuscofrontella Sruoga, 1990 and *E. nobilella* Zeller,
1839. Albrecht & Kaila (1994) gave criteria in sep-
arating these three species, but their criteria are insuffi-
cient when the present two new species are considered.
Therefore, revised criteria for identification of the
species with the sub-apical spot are given here.

Among the five species, *E. apicipunctella* is separ-
ated from the others by its whitish face (the face of the
others is dark brownish or greyish). The remaining
four species are hardly distinguished from each other
in the appearance, and generally distinguished by the
following key on the genital features.

Key to the male genitalia

1. Indentation between the uncus lobes V-shaped,
i.e. the inner margins of the lobes gradually be-
coming closer to each other *E. fuscofrontella*
- Indentation between the uncus lobes U-shaped,
i.e. the inner margins of the lobes almost parallel
to each other 2
2. Gnathos knob twice as wide as long *E. nobilella*
- Gnathos knob almost as long as wide 3
3. Aedeagus longer than $\frac{3}{4}$ length of valva, giving
the impression that it is rather slender
..... *E. hiranoi* sp. n.
- Aedeagus shorter than $\frac{3}{4}$ length of valva, giving
the impression that it is rather thick and short
..... *E. jupiter* sp. n.



Figs. 43-46. *Elachista fulgens*, genitalia, ♂ (43, 45), ♀ (44, 46); scale lines 0.1 mm for 43, 45, 0.5 mm for 44, 46. – 43, holotype; 44, paratype, Hiko-san, slide no. U. Parenti 5837; 45, Iriomote-zima, slide no. KS 0900; 46, Iriomote-zima, slide no. KS 0920.

Key to the female genitalia

1. Papillae anales composed of a pair of very large leaf-like plate, strongly sclerotized, with dense short hairs *E. nobilella*
 - Papillae anales conical, moderately sclerotized, with sparse setae 2
2. Apophyses anterioris never longer than $\frac{3}{4}$ length of apophysis posterioris *E. jupiter* sp. n.
 - Apophyses of almost equal length 3
3. Ostium with ventral margin almost straight; broader area of antrum-colliculum-complex occupying caudal $\frac{1}{4}$ *E. hiranoi* sp. n.
 - Ostium with ventral margin evenly curving; broader area of antrum-colliculum complex occupying at most caudal $\frac{1}{5}$ *E. fuscofrontella*

In the male genitalia, the difference between *E. hiranoi* and *E. jupiter* is sometimes rather subtle, even though a gap does exist between the two species. Therefore, safe identification can be achieved only in combination with the external appearance: the silvery fascia on $\frac{1}{3}$ of the forewing is generally vivid and non-interrupted in *E. hiranoi*, while the same marking is generally blurred and interrupted around the fold in *E. jupiter*.

In the female genitalia, discrimination between *E. hiranoi* and *E. apicipunctella* is rather difficult. The most reliable feature is probably the size of the wider part of the antrum-colliculum-complex in relation to the whole complex: the wider part of *E. hiranoi* is wider and deeper than in *E. apicipunctella*. Discrimination between *E. hiranoi* and *E. fuscofrontella* may be difficult only on the condition of the ventral margin of the ostium. As a supplementary diagnosis, density of the spines on the dorsal wall of the antrum will be useful: those are denser in *E. hiranoi* than in *E. fuscofrontella*.

Elachista (Elachista) hiranoi sp. n.
(figs. 37–39, 47, 48, 55)

Elachista apicipunctella: Parenti, 1983: 3. [Misidentification]

Type material. – Holotype ♂: JAPAN: Kamitakaramura (Abô-daira), Gihu-ken, Honsyû, 29.vi.2002, N. Hirano leg., Genitalia slide K. Sugisima 1447 (UOPJ). – Paratypes: JAPAN: HONSYÛ: 1 ♀, Azumimura (Abô-tôge), Nagano-ken, 12.vii.2003 (UOPJ); 16 ♂ 4 ♀, Kamitakara-mura (Abô-daira), Gihu-ken (11 ♂, 29.vi.2002; 1 ♂, 29.vi.2003; 4 ♂ 4 ♀, 5.vii.2003) (6 ♂ 2 ♀ UOPJ; 7 ♂ 2 ♀ EIHU; 3 ♂ MZHF; 1 ♂ PCUP); 1 ♂, Karasugawa-dani, Nagano-ken, 12.vi.1982 (UOPJ); 1 ♂, Tokugô-tôge, Nagano-ken, 9.vii.1979 (examined by Parenti (1983); UOPJ); KYÛSYÛ: 1 ♀, Kuro-dake, Ôita-ken, 20.v.1993 (EIHU).

Diagnosis

Head and thorax lead-greyish. Forewing blackish, with following fairly vivid silvery markings: a small spot on basal angle; an outwards oblique fascia on $\frac{1}{3}$, sometimes blurred around fold; three spots beyond $\frac{2}{3}$, one on tornus, one on costa distally of the tornal one, and one on wing axis beyond the costal one. In male genitalia, aedeagus slender, with a tooth near pointed apex. In female genitalia, apophyses almost equal in length.

Description

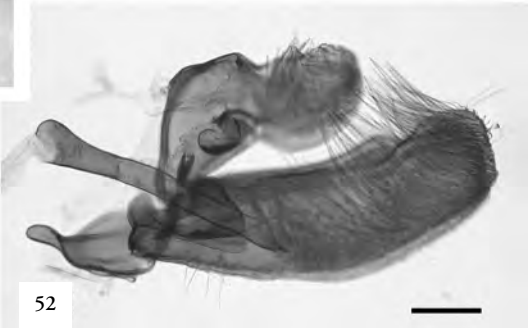
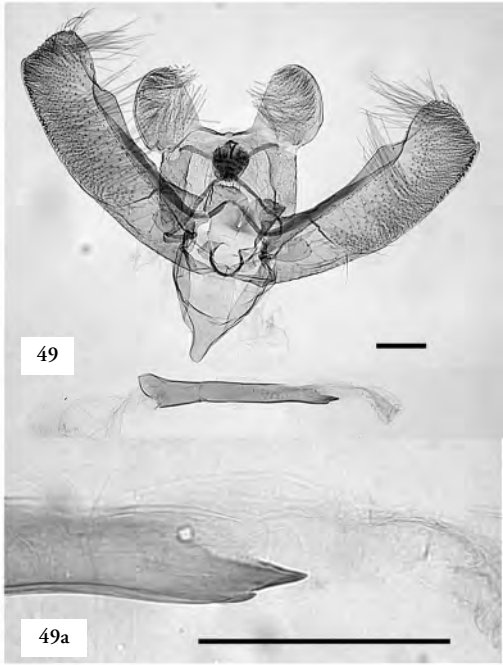
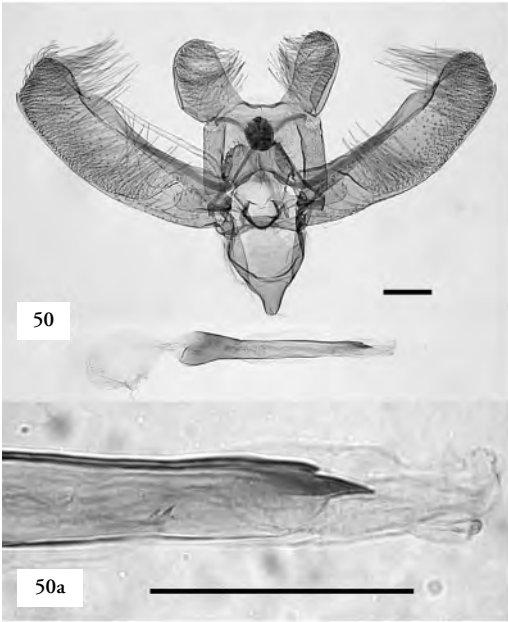
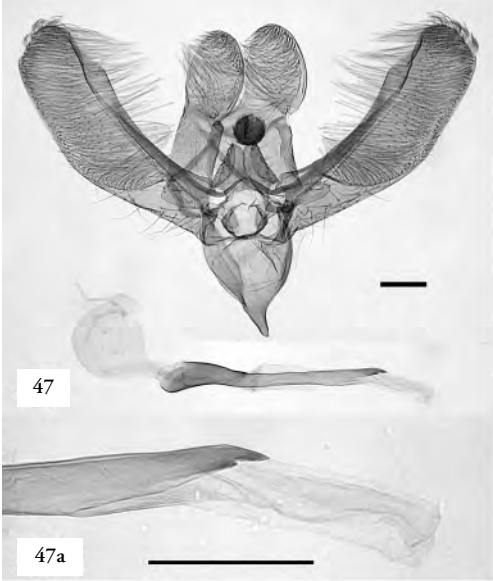
Forewing length: ♂ 3.5–4.3 mm (holotype 4.3 mm), ♀ 3.4–4.1 mm. Head and thorax lead-greyish, with face (fig. 38a) of almost same color. Antenna moderately serrate in distal $\frac{2}{3}$ in male, smooth in female; lighter-colored annulations present in female. Forewing blackish, with following fairly vivid silvery markings: a small spot on basal angle, sometimes reaching costa; an outwards oblique fascia from costal $\frac{1}{3}$ to end of cilia on hind margin, sometimes blurred around fold; three spots between $\frac{2}{3}$ and $\frac{5}{6}$, one on tornus, one on costa beyond the tornal one, and one on wing axis beyond the costal one. The most apical one of the silvery spots sometimes fused with the costal one and distinct from tornal one.

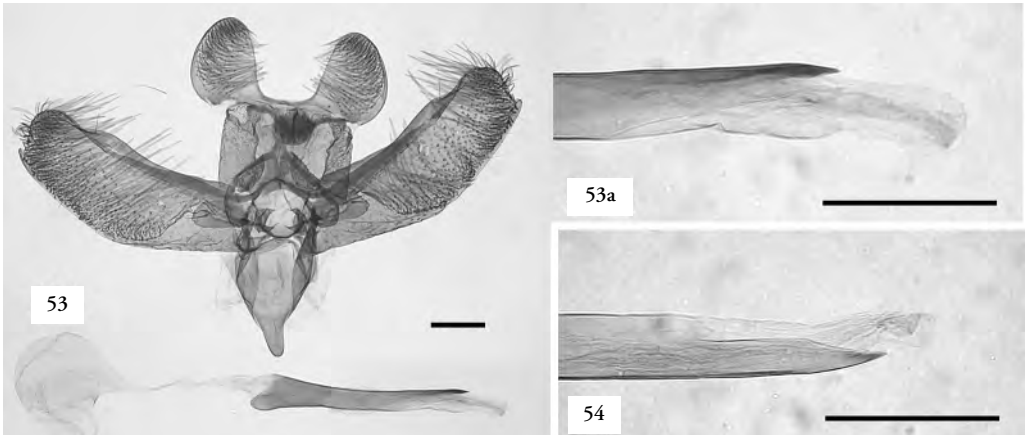
Male genitalia (figs. 47, 48). – Uncus lobe moderate-sized for *bifasciella*-group, convex outwards, with centre of gravity basally rather than medially; distance between lobes as wide as base of lobe. Valva with distinct costal hump; apical spine of ventral margin indistinct for *bifasciella*-group. Digitate process thick, clavate. Vinculum with short saccus, without median ridge. Aedeagus slender, somewhat swollen basally, tapering towards pointed apex, with a tooth on distal opening near apex (fig. 47a); vesica often with cornuti of at most a few small teeth.

Female genitalia (fig. 55). – Apophysis anterioris only faintly shorter than apophysis posterioris. Antrum-colliculum complex round funnel-shaped, narrowed around $\frac{1}{4}$ – $\frac{1}{3}$ from caudal end, with ventral margin of antrum almost straight; wider part nearly twice as wide as narrower part; dorsal surface of antrum lined with coarse spines; membranous part of ductus bursae 1.5 times as long as antrum-colliculum complex, pouched just cephalically of end of colliculum, and moderately widening towards corpus bursae. Corpus bursae oval, with well-developed signum of a dentate plate.

Biology

Immature stages unknown. At Abô-daira (1600 m in altitude), adult moths were collected in late June and early July in grasslands; probably univoltine.





Figs. 53-54. *Elachista apicipunctella*, ♂ genitalia, Finland; scale lines 0.1 mm. – 53, slide no. KS 1014, apical part of aedeagus magnified in 53a; 54, apical part of aedeagus, slide no. KS 1484.

Distribution

Japan: Honsyū (Gihu-ken, Nagano-ken), Kyūsyū (Ōita-ken).

Remarks

Elachista hiranoi has been considered the Japanese population of *E. apicipunctella* Stainton, 1858, originally described from Europe, since Parenti (1983) tentatively identified a male from Tokugō-tōge, Nagano-ken, as *E. apicipunctella*. The specimens examined here including those from a few localities near Tokugō-tōge are, however, constantly different from the true *E. apicipunctella* (figs. 42, 53, 54, 57) in coloration of the face and shape of the apical part of the aedeagus. Consequently, I conclude that these specimens represent a new species, *E. hiranoi*.

The fact that *E. apicipunctella* has not been discovered in the vast area between Europe and Japan may support my conclusion that *E. hiranoi* is distinct from *E. apicipunctella*. In the Russian Far East, the fauna of Elachistidae is studied relatively well. According to L. Kaila (personal communication), there are no specimens similar to *E. apicipunctella* among the thousands of *Elachista* specimens from Siberia.

For distinction from similar species, see above.

Etymology

The species name honors Mr Nagao Hirano, who provided me with many beautiful specimens of this species.

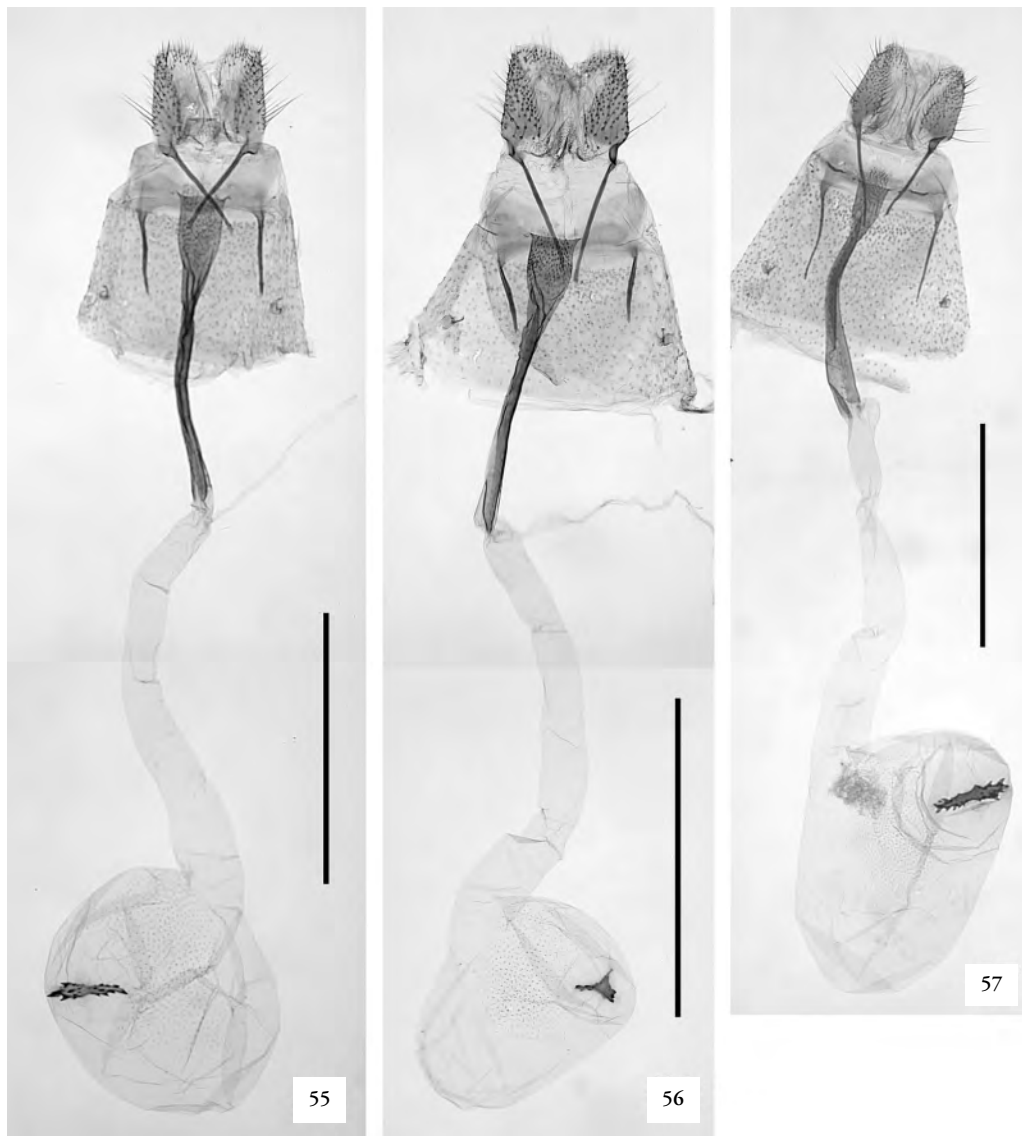
Elachista (Elachista) jupiter sp. n. (figs. 40, 41, 49-52, 56)

Type material. – Holotype ♂: JAPAN: Kosimizu-tyō (Miwa), Hokkaidō, 29.v.2002, K. Sugisima leg., Genitalia slide K. Sugisima 1504 (UOPJ). – Paratypes: JAPAN: HOKKAIDŌ: 1♂, Syari-tyō (Yamabe-basi), 19.vi.2003 (EIHU); 12♂ 1♀, Kosimizu-tyō (Hamakosimizu, Hokuto, Miwa, or Sōei) (1♂, 12.vi.1990; 2♂, 2-3.vi.1992; 2♂, 5-9.vi.1999; 2♂, 28.v.2002; 1♂, 3.vi.2002; 7♂, 29.v.2002; 1♂, 6.vi.2003; 1♀, 10.vi.2003) (4♂ 1♀ UOPJ; 9♂ EIHU; 2♂ MZHF; 1♂ PCUP); 6♂ 2♀, Abasiri-si (Kitahama, On'nenai, or Urasibetu), early June (3♂ 1♀ UOPJ; 3♂ 1♀ EIHU).

Diagnosis

Very similar to preceding species, but different as follows: in forewing, markings comparatively blurred and fascia on $\frac{1}{3}$ always interrupted around fold; in male genitalia, aedeagus comparatively short and

Figs. 47-52. *Elachista* species, ♂ genitalia; scale lines 0.1 mm. – 47-48, *E. hiranoi* (47, holotype, apical part of aedeagus magnified in 47a; 48, paratype, Tokugō-tōge, Nagano-ken, examined by Parenti (1983), slide no. U. Parenti 3822); 49-52, *E. jupiter* (49, holotype, apical part of aedeagus magnified in 49a; 50, paratype, Abasiri-si, apical part of aedeagus and cornuti magnified in 50a, slide no. KS 1443; 51, apical part of aedeagus and cornuti, paratype, Kosimizu-tyō, slide no. KS 1136; 52, lateral view, paratype, Kosimizu-tyō, slide no. KS 1132).



Figs. 55-57. *Elachista* species, ♀ genitalia; scale lines 0.5 mm. – 55, *E. hiranoi*, paratype, Kamitakara-mura, slide no. KS 1448; 56, *E. jupiter*, paratype, Abasiri-si, slide no. KS 1444; 57, *E. apicipunctella*, Finland, slide no. KS 1015.

thick; in female genitalia, apophysis anterioris $\frac{3}{5}$ - $\frac{2}{3}$ as long as apophysis posterioris.

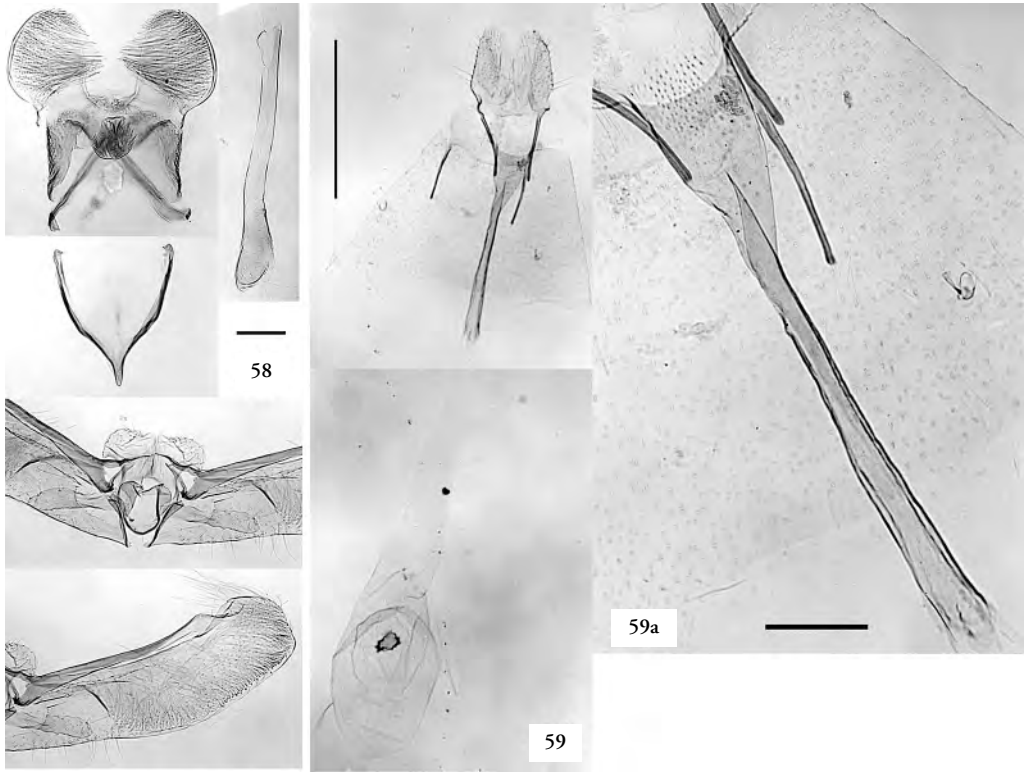
Description

Forewing length: ♂ 3.3-3.9 mm (holotype 3.9 mm), ♀ 3.3-3.5 mm. Very similar to preceding species, but different in coloration of forewing as fol-

lows: markings comparatively blurred; fascia on $\frac{1}{3}$ always interrupted around fold, fairly indistinct caudally of fold.

Male genitalia (figs. 49-52). Very similar to preceding species, except for aedeagus rather short and thick.

Female genitalia (fig. 56). Very similar to preceding species, except for apophysis anterioris $\frac{3}{5}$ - $\frac{2}{3}$ as



Figs. 58-59. *Elachista phalaridis*, genitalia; scale lines 0.5 mm for 59, 0.1 mm for others. – 58, holotype; 59, ♀, paratype, Sakai-si, slide no. U. Parenti 5811, antrum-colliculum-complex magnified in 59a).

long as apophysis posterioris; signum sometimes reduced moderately.

Biology

Immature stages unknown. Around Abasiri-si, the eastern part of Hokkaidô, adults occur from late May to early June and fly over grasslands in evening; probably univoltine.

Distribution

Hokkaidô (recorded only in eastern part).

Remarks

For distinction from similar species, see above.

Etymology

The species name, *jupiter* (Latin, noun), is after the fact that I found *E. jupiter* is distinct from *E. hiranoi* when listening to the classic music, Jupiter.

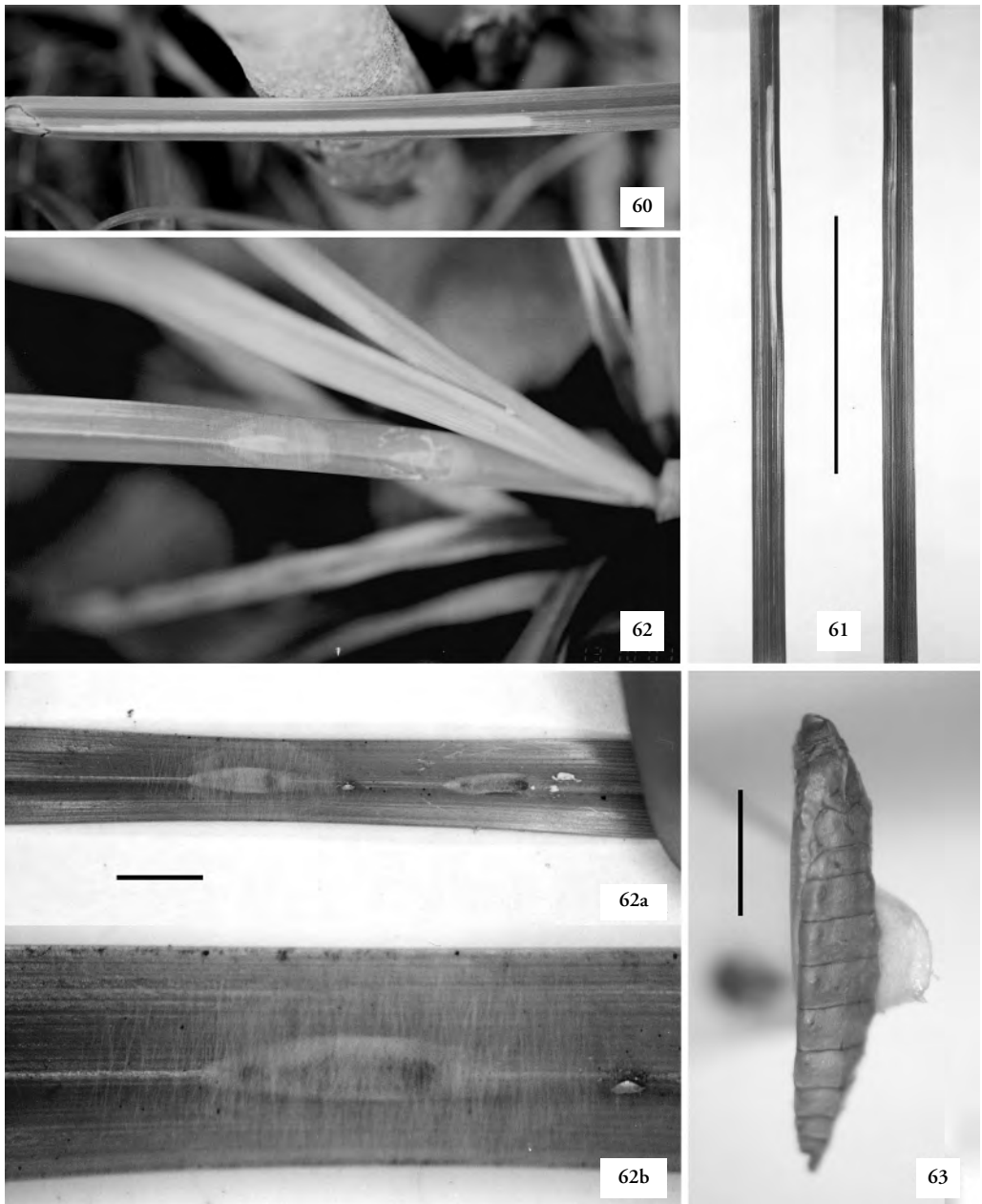
Elachista (Elachista) phalaridis Parenti (figs. 35, 36, 58, 59)

Elachista phalaridis Parenti, 1983: 7-8, pls 1, 3. Holotype ♂: JAPAN: Sakai-si (Mozu), Ôsaka-hu, [col.] 18.v.[19]66, [em.] 6.vi.1966, H. Kuroko [leg.], Genitalia slide U. Parenti 5814 (UOPJ) [examined].

Material examined. – Paratypes: 1 ♂ 5 ♀, the same data as the holotype, with foodplant name (*Phalaris arundinacea*; written in Japanese characters) specified (UOPJ).

Redescription

Forewing length: ♂ 3.6-3.8 mm (holotype 3.8 mm), ♀ 3.8-4.2 mm. Head and thorax grey-brownish, with face of almost same color. Forewing black-brownish, with following silver-whitish markings: a large patch at base, always reaching hind margin and usually slightly distant from costal margin, a transverse fascia beyond $\frac{1}{3}$, zigzagged and sometimes interrupted around middle, a triangular spot at $\frac{3}{4}$ of



Figs. 60-63. *Elachista fulgens*, immature biology, Iriomote-zima, rearing no. KS 00514; scale lines 5 cm for 61, 5 mm for 62a, 1 mm for 63. – 60-61, larval mines (60, vacant mine after larva left it, leaf-base on right-side; 61, mine of nearly full-grown larva, upperside on left hand, underside on right hand); 62, proximal part of *Carex oahuensis* stock with two cocoons constructed near base of mined leaf, the leaf with cocoons magnified in 62a, one of two cocoons magnified in 62b; 63, pupal exuvia, dorso-lateral view.

costa, a triangular tornal spot slightly before costal one; top of costal and tornal spots pointing towards apex of wing, so that they often form an outwards bent and medially narrowed fascia.

Male genitalia (fig. 58). – Uncus lobe moderate-sized for *bifasciella*-group, convex outwards, with centre of gravity basally rather than medially; indentation between uncus lobes concave towards tegumen rather than flat. Valva with distinct costal hump just before distal end of costa; cucullus very small; apical spine of ventral margin almost absent. Digitate process slightly clavate. Vinculum with short saccus, without medial ridge. Aedeagus slender, somewhat swollen basally, tapering towards bluntly truncate apex; cornuti absent.

Female genitalia (fig. 59). – Apophysis anterioris slightly shorter than apophysis posterioris. Antrum-colliculum complex funnel-shaped, narrowest around $\frac{1}{3}$ from caudal end, faintly widening in cephalic $\frac{2}{3}$, with ventral margin of antrum smoothly concave; dorsal surface of antrum lined with small spines; membranous part of ductus bursae 1.4 times as long as antrum-colliculum complex, indistinctly pouched just cephalically of end of colliculum, and widening towards corpus bursae. Corpus bursae oval, with signum of a dentate plate.

Biology

See Parenti (1983).

Distribution

Japan: Honsyū (Ōsaka-hu (Parenti 1983), Iwateken (Oku 2003)).

Remarks

Parenti (1983) stated that *E. phalaridis* has a remarkable affinity in the male genitalia with a European species, *E. luticomella* Zeller, 1839. As a close relative of this European species, *E. baikalica* Kaila, 1992 was described from Siberia. In the male genitalia, the aedeagus of the *E. phalaridis* has no cornuti, while that of *E. luticomella* and *E. baikalica* has a thorn-like cornutus. In both sexes, *E. phalaridis* can be distinguished from the latter two species by the grey-brownish head: the head is beige in *E. luticomella* and whitish in *E. baikalica*.

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