New Records of Lepidoptera from the Kola Peninsula, Northwestern Russia

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We report 91 species of Lepidoptera discovered from the Kola Peninsula for the first time and confirm records of 15 species from which our earlier information was based solely on the literature. *Tinea svenssoni* Opheim, 1965, *Biselachista kebneella* Traugott-Olsen & Nielsen, 1977 and *Apotomis fraterculana* Krogerus, 1945 are reported for the first time from Russia. The Lepidopteran fauna of the Kola Peninsula now numbers 676 species.

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1. Introduction

585 species of Lepidoptera were reported from the Kola peninsula in Kozlov & Jalava (1994). Since then, several faunistic collecting trips have been made to poorly known areas and ecological samples have been collected yearly within the polluted areas near Monchegorsk. New data is included from the formerly unknown collection of the Kandalaksha Nature Reserve (SW-corner of the peninsula). Alltogether, about 20 000 specimens were identified. About 8 000 of these are preserved in collections of the Zoological Museum of Helsinki and the Kandalaksha State Reserve. In this paper we report 91 species for the first time from the Kola Peninsula and give a list of fifteen species of which our earlier information was based on literature.

We continue using numeric codes of the localities (Table 1) as in our 1994 paper, adding the new localities to the end (nos 80-86). The archipelago in Kandalaksha Bay was given a double code, a number for the archipelago and an abbreviated name for the separate island (Table 2). The nomeclature and systematics are according to Varis *et al.* 1995.

2. List of new species

Nepticulidae

Stigmella myrtillella (Stt.) 61: 1 ex. 5.7.1997.
Ectoedemia minimella (Zett.) 26: 1 ex. 9.7. 1995.

Table 1. The collecting localities in UTM grid and in biogeographical provinces

No	Locality name	UTM square	Province
9	Salmijärvi	VC2	Lps
26	Dalnije Zelentsy	DS1	Lmur
38	St.Petersburg road N of 39[1]	WA2	Lim
39	Montshegorsk	WA2	Lim
43	St.Petersburg road S of 39[1]	VA4	Lim
44a	Tshuna-tundra mt.	VA4	Lim
45	Jokostrov (15 km E Apatity)	WV1	Lim
55	Apatity	WV1	Lim
56a	15 km E Kirovsk	WV1	Lim
60	Kandalaksha	VV4	Lim
61	Luvenga	VV4	Lim
63	Zelenoborskij	VV4	Kk
66	Kovda (=Kouta)	VU3	Kk
68	Turij Pns. (20 km E Umba)	WU3	Lim
72	Salnitsa (74 km SE Umba)	XU1	Lv
74	Varzuga	CP1	Lv
80	Korchozero	VU2	Kk
81	Oleniy Archipelague	VV4	Lim
82	Luvenga Archipelague	VV4	Lim
83	Northern Archipelague	VV4	Lim
84	Porja Guba	WV2	Lim
85	Velikij Island Region	WU1	Lim
87	30 km E Kovdor	VV1	Lim
88	63 km E Kovdor	VA2	Lim

[1]Localities 38 and 43 represent two pollution gradients directed N and S (respectively) of the Monchegorsk smelter along the road St.Petersburg-Murmansk. The second figure (after hyphen) shows the distance (in kms) from the smelter.

Table 2. Basic characteristics of the collecting sites on islands of Kandalaksha reserve.

No	Abbr.	Locality	Latitude (N)	Longitude (E)	Area (ha)
81	OL	Oleniy Is.	67°05'44"	32°23'27"	875.2
82	BV	Berezhnoy Vlasov Is.	67°05'04"	32°41'33"	102.9
82	KR	Krasotka Is.	67° 04 48	32° 43 33	0.8
83	A1	Aphanaska I Luda	67°03'14"	32°33'56"	0.6
83	A2	Aphanaska II Luda	67°03'04"	32°33'58"	0.7
83	AN	Anisimov Is.	67°04'20"	32°32'35"	67.1
83	BL	Lomnishnyi Bolshoj Is.	66°58'14"	32°37'35"	44.6
83	BS	Sennuk Bol'sja Luda	66°57'26"	32°41'58"	1.6
83	GO	Gorelyi Is.	67°03'40"	32°36'23"	6.9
83	DE	Devichja Luda	66°59'20"	32°36'33"	11.3
83	LO	Lodejnyi Is.	67°02'38"	32°35'00"	97.4
83	ML	Lomnishnyi Malyi Is.	66°58'16"	32°36'27"	22.0
83	MM	Medvezhyi Malyi Is.	66°59'16"	32°40'06"	12.2
83	RJ	Rjashkov Is.	67°02'56"	32°33'37"	396.7
83	SK	Skalistaja Luda	67°03'32"	32°35'41"	0.1
83	TS	Tsentralnaja Luda	67°03'10"	32°35'52"	0.7
83	TY	Tsyp-Luda	67°02'48"	32°35'58"	0.2
83	VR	Voroniy Is.	67°01'28"	32°37'25"	96.6
84	GO	Gorelyi Is.	66°25'48"	33°46'27"	70.7
84	ST	Stolbovaja 1 Luda	66°40'54"	33°47'00"	1.3
85	VE	Velikyi Is.	66°33'57"	33°20'00"	7340.0

Prodoxidae

Lampronia fuscatella (Tgstr.) 39: 1 ex. 29.6. 1994.

Psychidae

Dahlica charlottae (Meier) 43-65: 2 exx. 1.7. 1998; 43-35: 1 ex. 17.6.1999.

Psyche casta (Pallas) 66: 1 ex. 27.7.1996.

Psyche norvegica (Schöyen) 44a: 700 m. 1 ex. 17.7.1994, flying early (05.00 a.m.) in the morning.

Sterrhopterix standfussi (Wck.) 44a: 700 m. 1 ex. 17.7.1994.

Tineidae

Niditinea striolella (Matsum.) 38-11: 1 ex. 20. 7.1997.

Niditinea truncicolella (Tgstr.) 61: 1 ex. 19.7. 1995.

Tinea trinotella Thnbg. 83-RJ: 2 exx. 2.7.1991, 12.7.1997.

Tinea bothniella Svensson. 84-GO: 1 ex. 24.7. 1991. Described from Sweden in 1953. Zagul-jaev (1960) described two taxons (*T. unidentella* and *T. sibiriella*), which were later synonymized with *T. bothniella* (eg. Petersen, 1973; Ponomar-enko, 1998). These synonymizations enlarge the distribution area of *bothniella* eastwards to Baikal and Mongolia.

Tinea svenssoni Opheim. 83-LO: 1 ex. 1.8. 1998. This species was separated from *Tinea co-lumbariella* by Opheim in 1965 from Norway and Sweden. After that it has been recognized widely from the Nordic and the Baltic countries (Karsholt & Razowski 1996) and is most probably distrib-uted further to the east in the taiga zone. The larva lives in birds' nests (Jalava 1980). New for Russia.

Gracillariidae

Caloptilia elongella (L.) 84-GO: 1 ex. ex lar-va from *Alnus* 5.9.1993.

Phyllonorycter corylifoliellus (Hb.) 43-15: 1 ex. 30.6.1998; 82-KR: 1 ex. 11.6.1995.

Yponomeutidae

Swammerdamia compunctella (H.-S.) 61: 1 ex. 19.7.1995.

Cedestis farinatella (Dup.) 61: 4 exx. 27.8, 7.9.1997, 6.8.1998.

Argyresthiidae

Argyresthia goedartella (L.) 39-1: 1 ex. 28.6.1999.

Plutellidae

Ypsolopha parenthesella (L.) 61: light-trap, 22 exx. 23.8-10.9.1994-98.

Ypsolopha nemorella (L.) 55: light-trap 3 exx. 11.-18.8.1999.

Acrolepiopsis assectella (Zell.) 84-GO: 2 exx. 29.5.1992, 4.6.1996.

Oecophoridae

Semioscopis steinkellneriana (Den. & Schiff.) 84-GO: 1 ex. 3.6.1996.

Depressaria sordidatella Tgstr. (=*weirella* Stt.) 61: 1 ex. 19.8.1997; 84-GO: 1 ex. no date.

Exaeretia ciniflonella (Zell.) 61: 3 exx. 11.9.1995, 7.6.1998, 4.9.1998; 74: 1 ex. 22.-23.6. 1999.

Borkhausenia fuscescens (Hw.) 43-9: 1 ex. 22. 7.1994, 1 ex. 27.7.1999; 61: 4 exx. 25.6.1996, 19.7.1995, 10.8.1994, 18.7.1997.

Elachistidae

Biselachista kebneella (Traugott-Olsen & Nielsen) 43-20: 1 ex. 24.7.1996. This species re-cently (1977) described from Swedish and Finn-ish Lapland is - to our knowledge (Falkovitsh 1981) - reported here for the first time from Rus-sia. The supposed food plant is *Luzula* sp. (Traugott-Olsen & Nielsen 1977).

Coleophoridae

Coleophora milvipennis Zell. 43-36: 1 ex. 26. 7.1995; 80: 1 ex. 26.7.1996.

Coleophora vestianella (L.) 60: 1 ex. 3.8.1992; 61: light-trap, 1 ex. 20.8.1996.

Gelechiidae

Chrysoesthia sexguttella (Thnbg.) 60, 61, 83-DE, 83-TS, 84-GO, 85-VE: common, locally abundant.

Teleiodes notatella (Hb.) 68: 1 ex. 21.6.1999.

Exoteleia dodecella (L.) 61: light trap, 1 ex. 9.8.1996.

Chionodes electella (Zell.) 61: 1 ex. 19.7.1995.

Tortricidae

Pandemis cinnamomeana (Tr.) 60: 1 ex. 23.6. 1995.

Exapate congelatella (Cl.) 61: 1 ex. 26.9. 1998.

Acleris laterana (F.) 55: 1 ex. 18.8.1999.

Acleris notana (Don.) 43-29: 1 ex. 2.7.1998.

Acleris emargana (F.) 55: light-trap, 3 exx. 18.-23.8.1999; 61: light trap, 11 exx. 23.8-6.9. 1996-98.

Cochylis nana (Hw.) 44a: 600 m. 1 ex. 16.7. 1994.

Celypha rufana (Sc.) 83-A1, 83-A2, 83-AN, 83-GO, 83-SK, 83-TS, 85-VE: fairly common.

Apotomis fraterculana Krog. 43-9: 1 ex. 14.7.1997. This species is described from Lapland in 1945 by Krogerus. Russia (Kuznetsov, 1978) is not included in its distribution, but actually two syntypes are collected in territory nowadays belonging to Russia. One of the syntypes is collected from Lps Salmijärvi (locality no 9) in Kola Pns, but was overlooked by us in 1994, because the specimen is in a kept private collection.

Ancylis apicella (Den. & Schiff.) 80: 1 ex. 26. 7.1996.

Epinotia solandriana (L.) 61: light trap, fairly common.

Epinotia brunnichana (L.) 61: light trap, 2 exx. 31.8.1996, 26.8.1997.

Epinotia maculana (F.) 61: light trap, 9 exx. 27.8-11.9.1995-97.

Epinotia demarniana (F. v. R.) 63: 1 ex. 24.6. 1995.

Epinotia nisella (Cl.) 39: 1 ex. 23.7.1998.

Eucosma hohenwartiana (Den. & Schiff.) 61: 2 exx. 3.7.1994, 23.7.1998; 83-DE: 1 ex. 13.7. 1997.

Eucosma guentheri (Tgstr.) 68: 1 ex. 21.6. 1999; 72: 1 ex. 22.6.1999.

Blastesthia turionella (L.) 38-16: 1 ex. 20. 7.1994; 83-RJ: 1 ex. 6.7.1998.

Cydia indivisa (Danil.) 43-9: 1 ex. 12.7.1998.

Pterophoridae

Stenoptilia veronicae Karv. 61, 83-A2, 83-BS, 83-DE, 83-GO, 85-VE: common.

Pyralidae

Dioryctria schuetzeella (Fuchs) 80: 1 ex. 26.7. 1996.

Phycitodes binaevellus (Hb.) 61: 1 ex. 27.7. 1992.

Ephestia kuehniella (Zeller) 60: synanthropic.

Ephestia elutella (Hbn.) 60: synanthropic.

Nymphula stagnata (Don.) 82-BV: 1 ex. 31. 7.1998.

Agriphila selasella (Hbn.) 61: 1 ex. 23.7.1998.

Eurrhypara hortulata (L.) 84-GO: 1 ex. 3.7. 1991.

Nomophila noctuella (Den. & Schiff.) 83-AN: 1 ex. 29.7.1998.

Pieridae

Aporia crataegi (L.) 84-GO: 3 exx. 1990.

Nymphalidae

Polygonia c-album (L.) 84-GO: 1 ex. 12.9. 1992.

Thyatiridae

Thyatira batis (L.) 84-GO: 1 ex. 16.6.1991.

Geometridae

Scotopteryx chenopodiata (L.) 60, 84-GO, 85-VE: common.

Coenocalpe lapidata (Hbn.) 61: 1 ex. 20.9.1998.

Horisme tersata (Den. & Schiff.) 84-GO: 1 ex. 27.6.1991.

Operophtera brumata (L.) 60, 61, 83-LO: common. Reared on *Vaccinium uliginosum.*

Operopthera fagata (Scharfenb.) 83-DE: 1 ex. 23.9.1989.

Plagodis pulveraria (L.) 61, 82-BV, 83-AN, 83-BL, 83-ML, 83-MM, 83-RJ: common.

Epione repandaria (Hufn.) 61: 3 exx. 24.-27.8.1994; 84-GO: 1 ex. 31.8.1991.

Lycia hirtaria (Cl.) 84-GO: 1 ex. 13.6.1994.

Arichanna melanaria (L.) 61, 81-OL, 83-RJ, 84-GO: 7 exx.

Lasiocampidae

Lasiocampa quercus (L.) 66: 1 ex. 24.6.1995; 83-RJ: 1 ex. VII.1953; 84-GO: 1 ex. 1990.

Notodontidae

Pheosia tremula (Cl.) 84-GO: ex larva on *Populus tremula* 5.8.1993.

Pterostoma palpinum (Cl.) 61: 2 exx. 28.6. 1992, 13.6.1994.

Lymantriidae

Orgyia antiqua (L.) 84-GO: 1 ex. 24.8.1991.

Noctuidae

Catocala adultera Mén. 55: light-trap, 1 ex. 18.8.1999.

Callistege mi (Cl.) 84-GO: 1 ex. 1990.

Agrochola helvola (L.) 61: light trap, 3 exx. 5-7.9.1997.

Xanthia togata (Esp.) 61: light trap, common; 84-GO: 1ex VIII.1990.

Brachylomia viminalis (F.) 61: light trap, 11 exx. 27.8-6.9.1994-97.

Apamea furva (Den. & Schiff.) 61: light trap, 1 ex. 1.-2.8.1998.

Celaena haworthi (Curt.) 61: 2 exx. 26.8.1981, 5.9.1997.

Xestia brunneopicta (Matsum.) 87: 1 ex. 10.7. 1999. This Central- and East-Siberian species was surprisingly found in 1983 in Northern Finland, province Ks (Mikkola *et al.* 1989). This locality is about a hundred kms southwest of our place no 87. So far not recorded from Sweden or Norway.

Amphipoea fucosa (Frr.) 61: light trap, 11 exx. 24-28.8.1994-97.

Hydraecia micacea (Esp.) 61: light trap, 4 exx. 25.8-10.9.1997, 1 ex. 13.9.1998.

Orthosia gothica (L.) 60: 1 ex. 13.5.1991; 61: 2 exx. 4-14.6.1992; 84-GO: 1 ex. 29.5.1991.

Graphiphora augur (F.) 60: 3 exx. 16.6.1996, 15.8.1997.

Diarsia rubi (View.) 61: 2 exx. 16.7.1992, 7.7.1997.

Lycophotia porphyrea (Den. & Schiff.) 43-41: 1 ex. 22.7.1996.

Chersotis cuprea (Den. & Schiff.) 84-GO: 1 ex. 1991.

Cerastis rubricosa (Den. & Schiff.) 84-GO: 1 ex. 1991.

3. Confirmed occurence

From the species listed below our information in the 1994 list was based on the literature only. Recent findings confirm the occurrence of these species in the region.

Nematopogon magnus (Z.) 63: 1 ex. 24.6. 1995.

Taleporia borealis (Wck.) 44a: 700 m, 1 ex., 17.7.1994.

Agonopterix heracliana (L.) 60, 61, 85: common.

Cydia coniferana (Saxesen) 83-RJ: 1 ex. ex larva 12.6.1992.

Leptidea sinapis (L.) 61: 2 exx. 30.6-3.7.1991; 84-GO: 2 exx. 1.-9.7.1992.

Polyommatus eumedon (Esp.) 61, 83-BL, 84-GO: common but not numerous.

Vanessa atalanta (L.) 60, 61, 83-TY, 84-GO, 84-ST: occasional migrant.

Eupithecia indigata (Hbn.) 83-RJ, 82-BV.

Semiothisa liturata (Cl.) 83-RJ, 84-GO.

Semiothisa clathrata (L.) 84-GO, 85-VE: common.

Acherontia atropos (L.) 60: 2 exx VII.1954; 83-VR: 1 ex 27.6.1990.

Ptilodon capucina (L.) 84-GO: 1 ex VI.1990.

Scoliopteryx libatrix (L.) 84-GO: 1 ex 1988.

Autographa gamma (L.) 60, 61, 84-GO: oc-

casional migrant.

Hada plebeja (L.) (=*nana* Hfn.) 61, 84-GO.

4. Discussion

Nearly all of the newly discovered species are common and widespread in Northern Fennoscandia and their occurence on the Kola Peninsula was more or less predictable. *Biselachista kebneella* (Traugott-Olsen & Nielsen 1977) and *Apotomis fraterculana* Krogerus, 1945 are boreal species, described in the 20th century from Lapland, so they were expected as well. *Tinea svenssoni* Opheim, 1965 is described from Norway and Sweden and is fairly common in Finland. These three above mentioned species are reported here for the first time officially from Russia.

The lepidopteran fauna of the Kola Peninsula now numbers 676 species. Koponen & Linnaluoto (1980) give a total of 602 species of Lepidoptera for northernmost Europe. The higher species number from Kola is due to the southern situation of the southernmost parts of the peninsula.

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References

Falkovitsh, M. I. 1981: Elachistidae in Medvedev, G. S. (ed.) Identification keys to the Insects of the European part of the USSR vol. 4, part 2. (In Russian). — Leningrad 787 pp.

Jalava, J. 1980: Tineidae (Lepidoptera) from nests of the Ural owl (*Strix uralensis* Pall.). — Notulae Entomologicae 60: 96–100.

Karsholt, O. & Razowski, J. (eds.) 1996: The Lepidoptera of Europe (A Distributional Checklist). — Apollo Books, Stenstrup 380 pp.

Kozlov, M. V. & Jalava, J. 1994: The Lepidoptera of Kola Peninsula, Northwestern Russia. — Entomol. Fennica 5: 65–85.

Krogerus, H. 1945: Die Finnischen *Apotomis*- Arten. (Lep. Tortricidae). — Notulae Entomologicae XXV: 137–152.

Kuznetsov, V. I. 1978: Tortricidae in Medvedev, G. S. (ed.): Identification keys to the Insects of the European part of the USSR vol. 4, part . (In Russian). — Leningrad 711 pp.

Linnaluoto, E. T. & Koponen, S. 1980: Lepidoptera of Utsjoki, northernmost Finland. — Kevo notes 5, 68 pp.

Mikkola, K., Sinervirta, M. & Vaalamo, K 1989: *Xestia brunneopicta* (Matsumura) new to Europe (Lepidoptera, Noctuidae). — Notulae Entomologicae 69: 33–36.

Opheim, M. 1965: The Norwegian species of *Niditinea* Petersen, 1957 and *Tinea* Linnaeus, 1758 (Lep., Tineidae). — Norsk Entomol. Tidskr. 13,1: 52–60.

Petersen, G. 1973: Tineidae II. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. — Reichenbachia 14: 89–94.

Ponomarenko, M. G. 1997: Tineidae in Kononenko, V. S. (ed.): Identification Keys to the Insects of Russian Far East. (In Russian). — Vladivostok 539 pp.

Svensson, I. 1953: Eine Neue Art der Gattung *Tinea* Zeller (Lepidoptera). — Opuscula Entomologica 18: 225–227.

Traugott-Olsen, E. & Nielsen, E. S. 1977: The Elachistidae (Lepidoptera) of Fennoscandia and Denmark. — Fauna Entomologica Scandinavica 6: 299 pp.

Varis, V. (ed.) 1995: Checklist of the Finnish Lepidoptera. — Sahlbergia 2, 1: 80 pp.

Zaguljaev, A. K. 1960: Tineidae, part 3 subfam. Tineinae. — Fauna SSSR, Insecta Lepidoptera IV.3. - Moskva, Leningrad 267 pp.