

Contribution to the butterfly fauna of Leningrad Province and Saint-Petersburg, NW Russia (Lepidoptera: Diurna)

E.V. Tsvetkov

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Distribution of 107 species are discussed and / or illustrated. Two species, *Limenitis camilla* L. and *Everes alcetas* Hoffm., are reported as new for the region. The occurrence of five species is confirmed.

E.V. Tsvetkov. *Mechnikova pr. 3-1-30, St.Petersburg 195271, Russia. E-mail: evtsvetkov@mail333.com*

The most complete list of Macrolepidoptera of Leningrad Province (Derzhavets et al., 1986) includes 112 species of Diurna. Some of these species were included presumably (*S. orion* Pall., *C. myrmidone* Esp., *C. arcania* L., *P. nicias* Meig., *L. helle* D. & S.); others were known from single records made in XIX century (*H. alcyone* D. & S., *C. alceae* Esp., *L. coridon* Poda, *L. bellargus* Rott., *P. dorylas* D. & S.) and their occurrence was not confirmed in recent studies (Ivanov et al., 1999). So, only 98 Diurna species collected in 1960-1998 are listed in this paper. Additional investigations by the author, especially in remote and unexplored districts of the Province (Kingisepp, Slantsy, Boksitogorsk, Tikhvin and Podporozh'e Districts) have provided some new data. In 2002-2005 I worked in the Lipovye Hills, near Syabero and Samro lakes, in the Vepsovskaya Upland, Izhorskaya Upland, Luzhsko-Oredezhskaya Upland, Prinevskaya Lowland, Tikhvinskaya Ridge, and the Karelian Isthmus. Some material was also collected along railway beds of the Province. Two species are discovered as new for the region. The occurrence of five other species, known from single and old records, is confirmed.

New records

Limenitis camilla L., 1763. (Fig. 46). *Luga Distr.*: 2 M, 1 F, env. of Oblovscoe lake, 11.VII.2004, 1.VIII.2003, 3.VI.2004 (larva); 1 M, 1 F, env. of Lipovoe lake, Ognivka r., 11.VII.2004, 22.VII.2003. Imagines were observed in July in forest openings. Larva was taken from *Lonicera xylosteum*. Leningrad Province is the northern edge of *L. camilla* area.

Everes alcetas Hoffm., 1804. (Fig. 93). *Boksitogorsk Distr.*: 3 M, 4 F, env. of Strupino lake, 21.VI.2005. Local population of this species inhabits the environments of Strupino lake, situated near the border of Novgorod Province (40 km SE of Boksitogorsk). In small open meadows along the southern lake-side.

Confirmed occurrence

Nymphalis xanthomelas Esp., 1781. (Fig. 77). *Boksitogorsk Distr.*: 2 F, San'kov Bor, env. of Svyatozero lake, 1.VIII.2004; 6 M, 4 F, Rudnaya Gorka, Savino, Fomkino, Zhuravlevo, Spirovo, Podberezh'e, 22-25.VII.2004. *Luga Distr.*: Zatrubich'e, 27.VI.2004 (larvae). *Vsevolzhsk Distr.*: 1 F, Toksovo, 14.IV.2005.

Apatura ilia D. & S., 1775. (Fig. 44). *Luga Distr.*: 1 M, 4 km S of Voloshovo, 12.VII.2004; 1 M, env. of Oblovscoe lake, 14.VII.2003. *Boksitogorsk Distr.*: 8 M, Efimovskaya, Podberezh'e, Lopastino, Zhuravlevo, Berezhok, Fomkino, 22-25.VII.2004; 3 M, env. of Svyatozero lake, 1.VIII.2004.

Lycaena helle D. & S., 1775. (Fig. 87). *Luga Distr.*: 1 F, env. of Oblovscoe lake, 24.VI.2003. *Boksitogorsk Distr.*: 1 M, 3 F, 2 km N of Somino, 21.VI.2005; 2 M, 2 F, Sosnovy Bor, 23.VI.2005. Imagines were found in wet, sometimes swampy meadows with *Bistorta major*.

Pseudophilotes vicrama Moore, 1865. (Fig. 96). *Luga Distr.*: 1 F, Travyanaya Hill, 26.VI.2004.

Maculinea alcon D. & S., 1775. (Fig. 98). *Luga Distr.*: 4 M, 2 F, Tarkovichi, 17.VII.2003. *Gatchina Distr.*: 3 M, Olkhovets, 18.VII.2003. *Tosno Distr.*: 4 M, Georgievskaya, Trubnikovo, 19.VII.2003. Eggs were laid on *Hieracium*.

A. ilia was known for the region from the single record made in 1975 (Derzhavets et al., 1986) and it was considered an occasional migrant. Data on localities of *L. helle* and *M. alcon* in Leningrad Province and Saint-Petersburg were not published earlier. *P. vicrama* and *N. xanthomelas* were known from few records made almost a century ago.

Noteworthy records

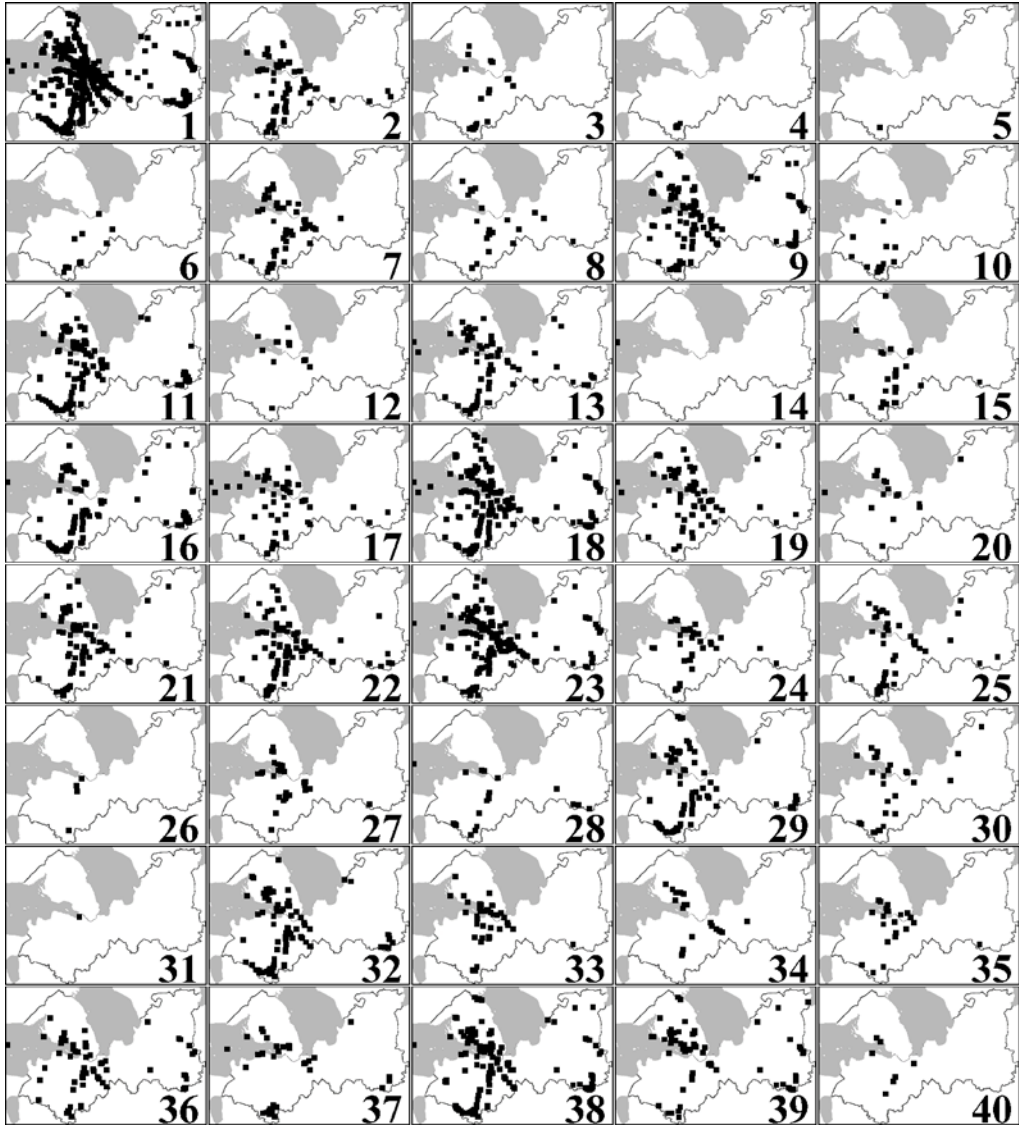
Hesperia comma L., 1758. (Fig. 12). *Vsevolzhsk Distr.*: 1 F, 1 M, Verkhnee Kuzmolovo, 20.VII.2005. *Priozersk Distr.*: 4 F, 6 M, Peski, 24.VII.2005. In dry meadows with *Poa*.

Clossiana titania Esp., 1793. (Fig. 59). *Luga Distr.*: 5 M, 1 F, env. of Lipovoe lake, Ognivka r., 11.VII.2004. *Boksitogorsk Distr.*: 4 M, 1 F, Podberezh'e, env. of Strupino lake, Spirovo, Berezhok, 22-23.VII.2004; 1 M, Korvala, 2.VIII.2004. *Tikhvin Distr.*: 1 M, Nyurgovichi, 3.VIII.2004.

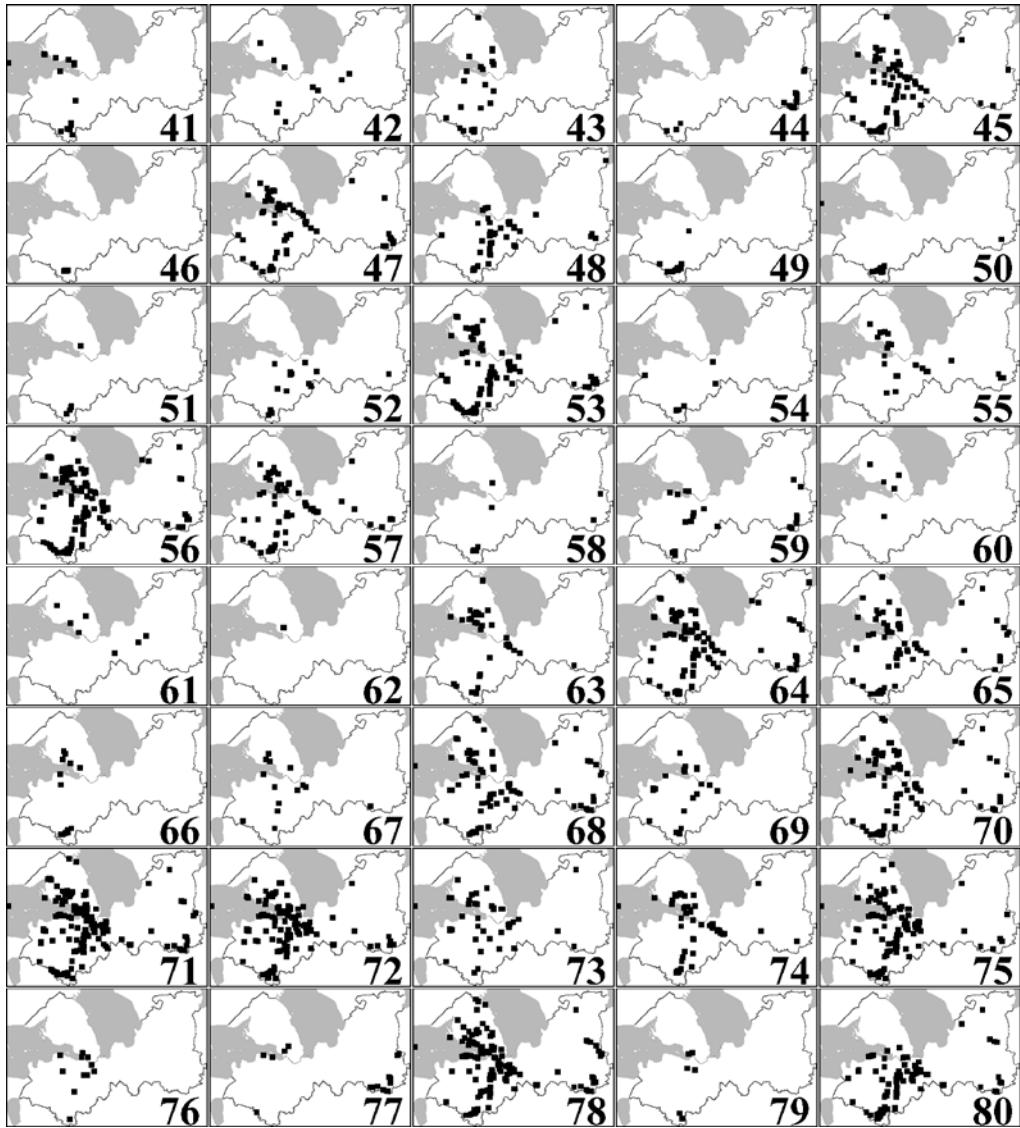
Clossiana dia L., 1767. (Fig. 58). *Luga Distr.*: 1 M, Fugasnaya mt., 23.V.2004; 1 F, env. of Oblovscoe lake, 22.VII.2003. *Boksitogorsk Distr.*: 1 M, 2 km E of Zhuravlevo, 23.VII.2004; 1 M, Sidorovo, 1.VIII.2004. *Vsevolzhsk Distr.*: 1 M, env. of Kavgolovskoe lake, VI.1992.

Melitaea cinxia L., 1758. (Fig. 50). *Boksitogorsk Distr.*: 2 F, near Loshevo lake, 21.VI.2005.

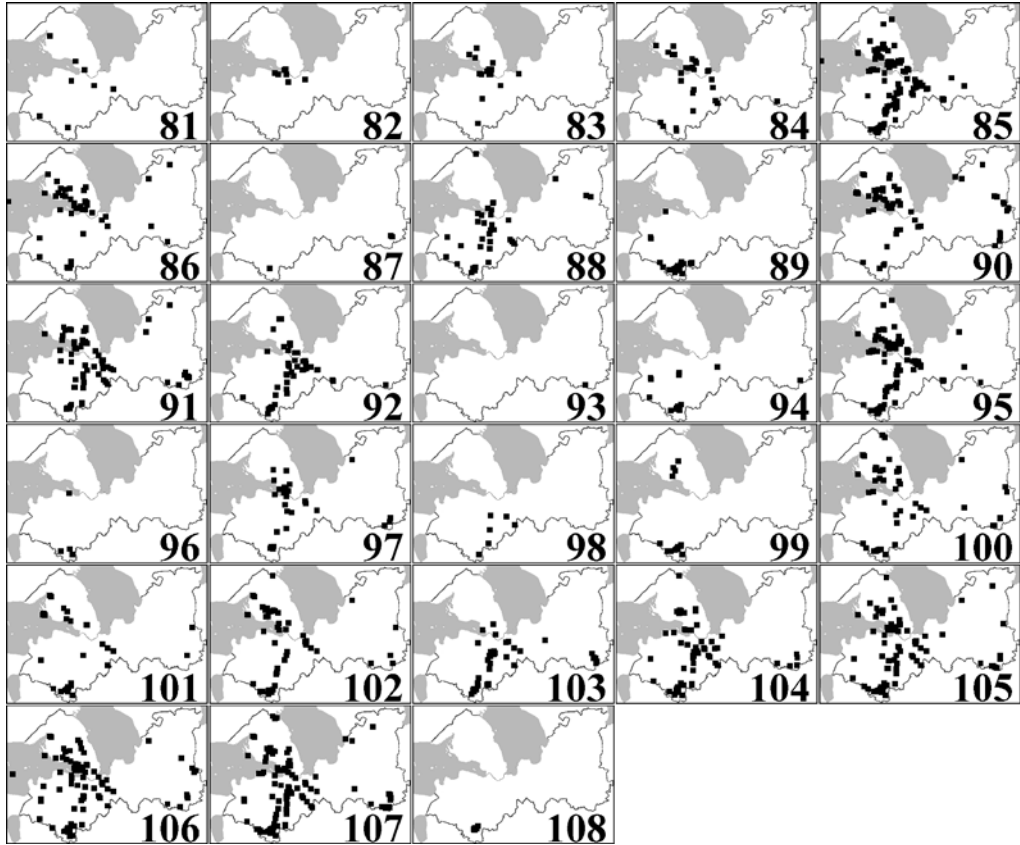
Lopinga achine Scop., 1763. (Fig. 28). *Luga Distr.*: 6 M, env. of Loshka lake, 28.VI.2004. *Boksitogorsk Distr.*: 2 F, Turandino, Bely Bor, 24.VII.2004; 1 M, 1 F, Kalinetskoe, Rudnaya Gorka, 25.VII.2004.



Figs 1-40. Distribution of Lepidoptera Diurna in Leningrad Province. Hesperiiidae (13-12), Papilionidae (13-15), Pieridae (16-26), Satyridae (27-40). 1, Lepidoptera Diurna (all localities); 2, *Pyrgus malvae* L.; 3, *P. alveus* Hb.; 4, *P. serratulae* Ramb.; 5, *Erynnis tages* L.; 6, *Heteropterus morpheus* Pall.; 7, *Carterocephalus silvicolus* Meig.; 8, *C. palaemon* Pall.; 9, *Thymelicus lineola* Ochs.; 10, *T. sylvestris* Poda; 11, *Ochlodes faunus* Tur.; 12, *Hesperia comma* L.; 13, *Papilio machaon* L.; 14, *Parnassius apollo* L.; 15, *Driopa mnemosyne* L.; 16, *Aporia crataegi* L.; 17, *Pieris brassicae* L.; 18, *P. napi* L.; 19, *P. rapae* L.; 20, *Pontia edusa* F.; 21, *Anthocharis cardamines* L.; 22, *Leptidea sinapis* L.; 23, *Gonepteryx rhamni* L.; 24, *Colias hyale* L.; 25, *C. palaeno* L.; 26, *C. crocea* Geoffr.; 27, *Pararge aegeria* L.; 28, *Lopinga achine* Scop.; 29, *Lasiommata maera* L.; 30, *L. petropolitana* F.; 31, *L. megera* L.; 32, *Coenonympha glycerion* Bkh.; 33, *C. pamphilus* L.; 34, *C. tullia* Mull.; 35, *C. hero* L.; 36, *Maniola jurtina* L.; 37, *Hyponephele lycaon* Rott.; 38, *Aphantopus hyperantus* L.; 39, *Erebia ligea* L.; 40, *E. embla* Thnb.



Figs 41-80. Distribution of Lepidoptera Diurna in Leningrad Province. Satyridae (41-42), Nymphalidae (43-80). 41, *Hipparchia semele* L.; 42, *Oeneis jutta* L.; 43, *Apatura iris* L.; 44, *A. ilia* D. & S.; 45, *Limenitis populi* L.; 46, *L. camilla* L.; 47, *Euphydryas maturna* L.; 48, *E. aurinia* Rott.; 49, *Melitaea didyma* Esp.; 50, *M. cinxia* L.; 51, *M. phoebe* Goeze; 52, *M. diamina* Lang; 53, *Mellicta athalia* Rott.; 54, *M. aurelia* Nick.; 55, *Proclissiana eunomia* Esp.; 56, *Clossiana selene* D. & S.; 57, *C. euphrosyne* L.; 58, *C. dia* L.; 59, *C. titania* Esp.; 60, *C. freija* Thnb.; 61, *C. frigga* Thnb.; 62, *C. thore* Hb.; 63, *Boloria aquilonaris* Stich.; 64, *Brenthis ino* Rott.; 65, *Fabriciana adippe* L.; 66, *F. niobe* L.; 67, *Issoria lathonia* L.; 68, *Argynnis paphia* L.; 69, *Argyronome laodice* Pall.; 70, *Mesoacidalia aglaja* L.; 71, *Aglais urticae* L.; 72, *Inachis io* L.; 73, *Vanessa atalanta* L.; 74, *V. cardui* L.; 75, *Nymphalis antiopa* L.; 76, *N. polychloros* L.; 77, *N. xanthomelas* Esp.; 78, *Polygona c-album* L.; 79, *Roddia l-album* Esp.; 80, *Araschnia levana* L.



Figs 81-108. Distribution of Lepidoptera Diurna in Leningrad Province. Lycaenidae. **81**, *Thecla betulae* L.; **82**, *Quercusia quercus* L.; **83**, *Nordmannia w-album* Knoch; **84**, *Fixsenia pruni* L.; **85**, *Callophrys rubi* L.; **86**, *Lycaena phlaeas* L.; **87**, *Lycaena helle* D. & S.; **88**, *Thersamonolycaena dispar* Haw.; **89**, *T. alciphron* Rott.; **90**, *Heodes virgaureae* L.; **91**, *H. hippothoe* L.; **92**, *Everes argiades* Pall.; **93**, *E. alcetas* Hoffm.; **94**, *Cupido minimus* Fuessly; **95**, *Celastrina argiolus* L.; **96**, *Pseudophilotes vicrama* Moore; **97**, *Glaucopsyche alexis* Poda; **98**, *Maculineaalcon* D. & S.; **99**, *M. arion* L.; **100**, *Plebeius argus* L.; **101**, *P. idas* L.; **102**, *Vacciniina optilete* Knoch; **103**, *Eumedonia eumedon* Esp.; **104**, *Aricia allous* Hb.; **105**, *Cyaniris semiargus* Rott.; **106**, *Polyommatus icarus* Rott.; **107**, *Plebicula amanda* Schn.; **108**, *Agrodiaetus damon* D. & S.

Maculinea arion L., 1758. (Fig. 99). *Luga Distr.*: 3 M, Travyanaya Hill, Gryaduchaya Hill, env. of Losha lake, 12-13.VII.2004. 4 M, Van'kin Bugor, Fugasnaya Hill, env. of Oblovscoe lake, Smerdi, 15-23.VII.2003. *Prizorsk Distr.*: 1 M, 3 km N of Krasnoe lake, VII.2001, personal report of A. Yu. Matov.

Cupido minimus Fuessly, 1775. (Fig. 94). *Volosovo Distr.*: 3 M, 3 F, Pyataya Gora, 18.VI. 2005. *Kingisepp Distr.*: 5 M, 3 F, 4 km S of Kingisepp, 7.VII.2004. *Boksitogorsk Distr.*: 2 M, Zabel'e, 22.VI.2005. In places with *Anthyllis* spp.

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