

Cicadina (Hemiptera: Auchenorrhyncha) of the Kola Peninsula basing mainly on the material collected in the Lapland Biosphere Nature Reserve

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Abstract

The article briefly elucidates the history of study of Cicadina on the Kola Peninsula. An annotated list of known species of this group is given. The list comprises published and new records of 108 species from 4 families, including the first records of 32 species, and 20 species known from published data only. The species are distributed among families as follows: Cixiidae – 2, Delphacidae – 18, Aphrophoridae – 3, Cicadellidae – 85.

Introduction

The knowledge of Cicadina of the Kola Peninsula has long history. In the 19. and the beginning of the 20. century, when Finland was a part of the Russian Empire, many Finnish zoologists visited the Kola Peninsula (SILFVERBERG 1988). During the summer of 1870, J. Sahlberg was on the peninsula. He visited the Chunutundra and Khibiny Mountains, several villages along the southern coast of the peninsula from Kandalaksha to Ponoy and collected large material of Hemiptera. Soon he published the results of his voyage (SAHLBERG 1871a, 1871b, 1871c), including the records of 28 species of Cicadina from the Kola Peninsula.

Essential contribution to study of Cicadina of the Kola Peninsula was made by H. Lindberg. In 1929, he visited the western part of the peninsula along the Pechenga River and published a paper with a record of 22 species of Cicadina (LINDBERG 1932). Some time later, in 1947, he published an annotated list of Cicadina of the Eastern Fennoscandia, where, basing on his own collections and the material collected by Finnish entomologists in the 19.-20. centuries, he recorded 48 species from the Kola Peninsula. This list in revised form was more recently included by F. OSSIANNILSSON (1978, 1981, 1983) in his work on the Cicadina of Fennoscandia and Denmark.

In 1994 A.A. PRZHIBORO in his graduate work recorded 9 species of Cicadina for tideland of northern seashore of the Kandalaksha Gulf from Kandalaksha to Luven'ga and some closest islands.

In July of 1998 G.A. Anufriev with his student M. Mokrousov collected insects on the Kola Peninsula. They visited the W and E Khibiny, and Lovozerskiy Mountains, and in 2000 G.A. ANUFRIEV in two papers published a checklist of insects of studied area including records of 33 species of Cicadina.

Material and Methods

In July and the early August of 2001, the author has an opportunity to work in the Lapland Biosphere Nature Reserve and to make short excursions to adjacent territories.

The following localities were visited: in the Lapland Nature Reserve: 5 km NW, 40 km SW, and 30 km S of Monchegorsk; other localities: 26 and 36 km E of Olenegorsk, Apatity, 5 km N and 3 km S of Kirovsk, 8 km SEE of Kandalaksha. About 4 500 specimens of Cicadina falling into 85 species were collected. In addition to this material some species of Cicadina from the Kola Peninsula were found in the collections of the Zoological Institute (St. Petersburg). This material was collected mostly by J. Sahlberg, H. Lindberg, V.Yu. Fridolin (Russian zoologist who worked in 1930s on the Kola Station of the Academy of Sciences of the USSR), and S. Podlipaev (who collected on the peninsula in 2001).

Results

After our investigation the list of Cicadina known from the Kola Peninsula can be enlarged to 108 species from 4 families, including the first records of 32 species and 20 species known from the published data only. In the following list, the species for the first time recorded from the peninsula are asterisked; the numbers of species known from the published data only are parenthesized. After name of each species all known literature and studied material are given.

Annotated list of Cicadina of the Kola Peninsula

Fam. Cixiidae

1. *Cixius cunicularis* (LINNAEUS 1767)

LINDBERG (1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 1♀, 16.VII.2001 (D.); Apatity, 1♀, 22.VII.2001 (D.). – On foliaceous trees and bushes.

2. *Cixius similis* KIRSCHBAUM 1868

LINDBERG (1932): as *C. stigmaticus* GERM.; LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). Kirovsk, Lake Vudyavr, 2♂♂, 1♀, 8.VII.1936 (Fridolin); 8 km S of Monchegorsk, 1♀, 10.VII.2001 (D.); 30 km S of Monchegorsk, 16♀♀, 11.-28.VII.2001 (D.). – On foliaceous bushes in bogs and marshes.

Fam. Delphacidae

3. *Stiroma bicarinata* (HERRICH-SCHÄFFER 1835)

SAHLBERG (1871a, 1871c); LINDBERG (1947); OSSIANNILSSON (1983). 40 km SW of Monchegorsk, 4♂♂, 6♀♀, 2♂♂, 1.-2.VIII.2001 (D.). – On grasses in light forest.

(4). *Stiroma affinis* FIEBER 1866

LINDBERG (1932): as *S. bicarinata* H.-S.; LINDBERG (1947); OSSIANNILSSON (1983).

5. *Achorotile albosignata* (DAHLBOM 1850)

OSSIANNILSSON (1983). Kirovsk, Lake Vudyavr, 3♂♂, 1♀, 4.VII.1931 (Fridolin); 30 km S of Monchegorsk, 1♀, 12.VII.2001 (D.).

6. * *Chloriona smaragdula* (STÅL 1853)

Apatity, 1♂, 1♀, 22.VII.2001 (D.). – On *Phragmites australis* in forest bog.

7. *Megamelus notula* (GERMAR 1830)

SAHLBERG (1871a, 1871c). 30 km S of Monchegorsk, 1♂, 4.VIII.2001 (D.). – On *Carex* sp. along bank of brook.

8. * *Laodelphax striatellus* (FALLÉN 1826)

26 km E of Olenegorsk, 1♂, 20.VII.2001 (D.); 30 km S of Monchegorsk, 2♂♂, 28.VII.2001 (D.). – On grasses in forest bogs and along roadsides.

9. *Hyledelphax elegantulus* (BOHEMAN 1847)

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 1♀, 12.VII.2001 (D.); 3 km S of Kirovsk, 2♂♂, 7♀♀, 24.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 2.VIII.2001 (D.). – On grasses in light forests.

10. *Acanthodelphax denticauda* (BOHEMAN 1847)

SAHLBERG (1871a, 1871c); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 1♂, 1♀, 16.VII.2001 (D.); 26 km E of Olenegorsk, 2♂♂, 7♀♀, 20.VII.2001

(D.); 3♂♂ and 1♀ of this species, collected by J. Sahlberg, were found in the collections of the Zoological Institute (St. Petersburg). – On grasses in light forests.

(11). *Tyrphodelphax albocarinatus* (STÅL 1858)

SAHLBERG (1871a, 1871c); LINDBERG (1947).

12. *Criomorpus borealis* (J. SAHLBERG 1871)

LINDBERG (1932, 1947); OSSIANNILSSON (1983). Pechenga, 2♂♂, 1♀, 2.-8.VII.1929 (LINDBERG); 5 km S of Kirovsk, 13♂♂, 10♀♀, 23.-24.VII.2001 (D.); 40 km SW of Monchegorsk, 1♀, 2♂♂, 2.VIII.2001 (D.). – On grasses in dry forests.

13. *Javesella pellucida* (FABRICIUS 1794)

LINDBERG (1932, 1947); OSSIANNILSSON (1983); PRZHIBORO (1994); ANUFRIEV (2000a, 2000b). 5 km NW of Monchegorsk, 4♂♂, 4♀♀, 10.-21.VII.2001 (D.); 30 km S of Monchegorsk, 20♂♂, 22♀♀, 2♂♂, 11.-28.VII.2001 (D.); 26 km E of Olenegorsk, 3♂♂, 1♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 3♂♂, 2♀♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 15♂♂, 7♀♀, 23.-24.VII.2001 (D.). – Common species, on grasses in different communities.

14. *Javesella obscurella* (BOHEMAN 1847)

SAHLBERG (1871a, 1871c). 7 km N of Monchegorsk, 6♂♂, 7♀♀, 10.VII.2001 (D.); 5 km NW of Monchegorsk, 1♂, 19.VII.2001 (D.). – On grasses in swampy places and along roadsides.

(15). *Javesella forcipata* (BOHEMAN 1847)

OSSIANNILSSON (1983).

16. *Javesella discolor* (BOHEMAN 1847)

LINDBERG (1932, 1947); OSSIANNILSSON (1983); PRZHIBORO (1994); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 8♀♀, 12.-16.VII.2001 (D.); 26 km E of Olenegorsk, 4♂♂, 14♀♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 5♂♂, 23.VII.2001 (D.). – In swampy places.

(17). *Javesella alpina* (J. SAHLBERG 1871)

SAHLBERG (1871a, 1871c); LINDBERG (1932, 1947): as *Calligypona forcipata* f. *alpina*; OSSIANNILSSON (1983).

18. *Javesella stali* (METCALF 1943)

LINDBERG (1932, 1947); OSSIANNILSSON (1983). Pechenga, 2♂♂, 7.VII.2001 (LINDBERG).

19. *Ribautodelphax albostriatius* (FIEBER 1866)

SAHLBERG (1871a, 1871c); LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 5 km NW of Monchegorsk, 2♂♂, 1♀, 10.VII.2001 (D.); 30 km S of Monchegorsk, 2♂♂, 5♀♀, 16.VII.2001 (D.); Apatity, 2♂♂, 22.VII.2001 (D.). – On grasses in dry places.

**(20). *Ribautodelphax pallens*
(STÅL 1854)**

LINDBERG (1932): as *Delphax collina* BOH.; LINDBERG (1947); OSSIANNILSSON (1983).

Fam. Aphrophoridae

**21. *Philaenus spumarius*
(LINNAEUS 1758)**

OSSIANNILSSON (1983); (PRZHIBORO 1994); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 3♀♀, 21ll, 12.-16.VII.2001 (D.); 26 km E of Olenegorsk, 1♀, 20.VII.2001 (D.); 5 km NW of Monchegorsk, 1♀, 21.VII.2001 (D.); 3 km S of Kirovsk, 1♀, 23.VII.2001 (D.); 8 km SEE of Kandalaksha, 3♀♀, 25.VII.2001 (D.); 2♀♀, Umba, 7.VIII.2001 (S. Podlipaev); 1♂, 4♀♀, 23 km E of Umba, 7.VIII.2001 (S. Podlipaev). – Common species, polyphagous, on herbs in meadows and forest clearings.

**22. *Neophilaenus exclamationis*
(THUNBERG 1784)**

SAHLBERG (1871a, 1871b); LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 1♀, 6ll, 12.-16.VII.2001 (D.); 26 km E of Olenegorsk, 2♀♀, 20.VII.2001 (D.); 5 km NW of Monchegorsk, 14♂♂, 13♀♀, 21.VII.2001 (D.); Apatity, 1♀, 22.VII.2001 (D.); 3 km S of Kirovsk, 4♂♂, 4♀♀, 23.-24.VII.2001 (D.). – Common species, on grasses in dry meadows and forest glades.

**23. *Neophilaenus lineatus*
(LINNAEUS 1758)**

PRZHIBORO (1994). 30 km S of Monchegorsk, 18♂♂, 10♀♀, 37ll, 13.-16.VII.2001 (D.); 5 km NW of Monchegorsk, 3♂♂, 19.-21.VII.2001 (D.); Apatity, 1♂, 1♀, 22.VII.2001 (D.); 40 km SW of Monchegorsk, ♂, 1♀, 31.VII.2001 (D.). – Common species, on grasses in moist meadows, bogs, and marshes.

Fam. Cicadellidae

**(24). *Ulopa reticulata*
(FABRICIUS 1794)**

SAHLBERG (1871a).

**25. *Oncopsis flavicollis*
(LINNAEUS 1761)**

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 4♀♀, 2ll, 12.-17.VII.2001 (D.); 5 km NW of Monchegorsk, 2♀♀, 19.VII.2001; 26 km E of Olenegorsk, 9♀♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 5♀♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 4♂♂, 2♀♀, 23.-24.VII.2001 (D.); 3 km S of Kirovsk, 1♀, 24.VII.2001 (D.). – On *Betula*.

**26. *Oncopsis tristis*
(ZETTERSTEDT 1840)**

ANUFRIEV (2000a, 2000b). 5 km NW of Monchegorsk, 16♂♂, 1♀, 5ll, 4 exuviae, 10.-19.VII.2001 (D.); 30 km S of Monchegorsk, 14♂♂, 9♀♀, 7ll, 11.VII.-4.VIII.2001 (D.); Apatity, 1♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♂, 1l,

25.VII.2001 (D.); 40 km SW of Monchegorsk, 3♀♀, 2.VIII.2001 (D.); 5 km N of Kirovsk, 3♀♀, 2♂♂, 23.-24.VII.2001 (D.); 3 km S of Kirovsk, 2♀♀, 1l, 23.-24.VII.2001 (D.). – On *Betula*.

**27. *Oncopsis planiscuta*
(THOMSON 1870)**

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 6♂♂, 8♀♀, 14.-17.VII.2001 (D.); 40 km SW of Monchegorsk, 2♀♀, 1.-2.VIII.2001 (D.). – On *Alnus incana*.

**28. * *Macropsis impura*
(BOHEMAN 1847)**

8 km SEE of Kandalaksha, 1♂, 25.VII.2001 (D.). – On *Salix* sp.

**29. * *Anaceratagallia venosa*
(FOURCROY 1785)**

3 km S of Kirovsk, 3♂♂, 24.VII.2001 (D.); 8 km SEE of Kandalaksha, 5♂♂, 25.VII.2001 (D.). – On herbaceous plants in dry forests and drier meadows of seashores.

**30. * *Metidiocerus elegans*
(FLOR 1861)**

30 km S of Monchegorsk, 9ll, 15.-16.VII.2001 (D.); 5 km NW of Monchegorsk, 11♂♂, 8♀♀, 16ll, 19.-21.VII.2001 (D.); Apatity, 1♂, 1♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 2♀♀, 2ll, 25.VII.2001 (D.); Kandalaksha, 1♂, 4♀♀, 26.VII.2001 (D.); 1♂, Umba, 7.VIII.2001 (S. Podlipaev). – On *Salix* spp., especially on *Salix caprea*.

**(31). *Populicerus populi*
(LINNAEUS 1761)**

SAHLBERG (1871a, 1871b).

**32. * *Populicerus laminatus*
(FLOR 1861)**

30 km S of Monchegorsk, 3♂♂, 9ll, 17.-28.VII.2001 (D.); 3 km S of Kirovsk, 3♂♂, 6ll, 24.VII.2001 (D.). – On *Populus tremula*.

**33. *Planaphrodes bifasciata*
(LINNAEUS 1758)**

PRZHIBORO (1994); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 1l, 16.VII.2001 (D.); 3 km S of Kirovsk, 1♂, 23.VII.2001 (D.). – In dry light forest glades.

34. * *Planaphrodes laeva* (REY 1891)

3 km S of Kirovsk, 1♂, 23.VII.2001 (D.). – In dry light forest.

**35. *Bathysmatophorus reuteri*
J. SAHLBERG 1871**

SAHLBERG (1871a, 1871b); LINDBERG (1932, 1947); OSSIANNILSSON (1983). 8 km SEE of Kandalaksha, 5♀♀, 2 exuviae, 26.VII.2001 (D.); 1♂ and 3♀♀ of *B. reuteri*, collected by J. Sahlberg, were found in the collections of the Zoological Institute (St. Petersburg). – On *Salix caprea*.

36. *Erythria aureola* (FALLÉN 1806)

SAHLBERG (1871a). 3 km S of Kirovsk, 42♂♂, 29♀♀, 15ll, 23.-24.VII.2001 (D.). – On *Caluna vulgaris* in dry light forest.

**37. *Dikraneura aridella*
(J. SAHLBERG 1871)**

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 1♂, 16.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 2♀♀, 1.-2.VIII.2001 (D.). – On grasses in dry meadows and forest glades.

**38. * *Forcipata citrinella*
(ZETTERSTEDT 1828)**

30 km S of Monchegorsk, 20♂♂, 20♀♀, 7ll, 13.-28.VII.2001 (D.); Apatity, 2♂♂, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 14♂♂, 34♀♀, 25.-26.VII.2001 (D.); 3 km S of Kirovsk, 6♂♂, 3♀♀, 24.VII.2001 (D.); 40 km SW of Monchegorsk, 11♂♂, 29♀♀, 31.VII.-2.VIII.2001 (D.). – Common species on grasses and sedges, in damp meadows, bogs, and marshes.

39. * *Forcipata forcipata* (FLOR 1861)

30 km S of Monchegorsk, 3♂♂, 2♀♀, 16.VII.2001 (D.); 36 km E of Olenegorsk, 1♀, 1♂, 20.VII.2001 (D.); 40 km SW of Monchegorsk, 16♂♂, 28♀♀, 31.VII.-2.VIII.2001 (D.). – On grasses and sedges, usually in drier communities than preceding species, often both species live together.

**40. *Notus flavipennis*
(ZETTERSTEDT 1828)**

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983). 5 km NW of Monchegorsk, 13♂♂, 22♀♀, 19.VII.2001 (D.); 40 km SW of Monchegorsk, 10♂♂, 36♀♀, 31.VII.2001 (D.). – On *Carex* spp. in bogs and marshes.

**(41). *Empoasca apicalis* (FLOR 1861)
LINDBERG (1947).**

42. *Kybos smaragdulus* (FALLÉN 1806)

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 1♀, 59ll, 14.-15.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♂, 1♀, 26.VII.2001 (D.); 40 km SW of Monchegorsk, 2♂♂, 8♀♀, 2.VIII.2001 (D.). – On *Alnus incana*.

43. * *Kybos lindbergi* (LINNAVUORI 1951)

30 km S of Monchegorsk, 6♂♂, 3♀♀, 22ll, 12.-16.VII.2001 (D.); 5 km NW of Monchegorsk, 10♂♂, 3♀♀, 1l, 19.VII.2001 (D.); 3 km S of Kirovsk, 3♂♂, 2♀♀, 23.-24.VII.2001 (D.); 8 km SEE of Kandalaksha, 3♂♂, 3♀♀, 25.VII.2001 (D.); 40 km SW of Monchegorsk, 2♀♀, 31.VII.2001 (D.). – On *Betula*.

44. * *Kybos virgator* (RIBAUT 1933)

Kandalaksha, 3♂♂, 12♀♀, 26.VII.2001 (D.). – On *Salix* sp.

45. *Kybos butleri* (EDWARDS 1908)

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 13♂♂, 3♀♀, 9ll, 15.VII.2001 (D.); 5 km NW of Monchegorsk, 10♂♂, 9♀♀, 19.-21.VII.2001 (D.); 26 km E of Olenegorsk, 3♂♂, 2♀♀, 20.VII.2001 (D.). – Common species on *Salix* spp.

46. * *Kybos sordidulus* (OSSIANNILSSON 1941)

30 km S of Monchegorsk, 10♂♂, 12♀♀, 1l, 16.VII.-4.VIII.2001 (D.); 5 km NW of Monchegorsk, 8♂♂, 25♀♀, 19.-21.VII.2001 (D.). – On *Salix caprea*.

**47. * *Edwardsiana menzbieri*
ZACHVATKIN 1948**

30 km S of Monchegorsk, 11♂♂, 10♀♀, 6ll, 14.-17.VII.2001 (D.); Apatity, 32♂♂, 22♀♀, 22.VII.2001 (D.); 3 km S of Kirovsk, 1♂, 23.VII.2001 (D.); 8 km SEE of Kandalaksha, 3♂♂, 2♀♀, 26.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 5♀♀, 1.-2.VIII.2001 (D.). – On *Alnus incana*.

**48. * *Edwardsiana bergmani*
(TULLGREN 1916)**

30 km S of Monchegorsk, 3♂♂, 4ll, 12.-16.VII.2001 (D.); 5 km NW of Monchegorsk, 1♂, 1♀, 19.VII.2001 (D.); 26 km E of Olenegorsk, 1♂, 20.VII.2001 (D.); 36 km E of Olenegorsk, 1♂, 20.VII.2001 (D.). – On *Betula*.

**49. * *Linnavuoriana decempunctata*
(FALLÉN 1806)**

5 km NW of Monchegorsk, 11♀♀, 10.-19.VII.2001 (D.); 30 km S of Monchegorsk, 2♂♂, 29♀♀, 60ll, 11.VII.-5.VIII.2001 (D.); 36 km E of Olenegorsk, 1♀, 20.VII.2001 (D.); 8 km SEE of Kandalaksha, 21♀♀, 25.-26.VII.2001 (D.); 40 km SW of Monchegorsk, 6♀♀, 31.VII.-2.VIII.2001 (D.). – Common species, on *Betula*.

**(50). *Linnavuoriana sexmaculata*
(HARDY 1850)**

SAHLBERG (1871a): as *Typhlocyba 10-punctata* FALL. on *Salix*; LINDBERG (1947); OSSIANNILSSON (1983).

**51. * *Eupteryx cyclops*
MATSUMURA 1906**

30 km S of Monchegorsk, 2♂♂, 16.VII.2001 (D.); Apatity, 8♂♂, 16♀♀, 22.VII.2001 (D.). – On *Urtica dioica*.

**(52). *Eupteryx vittata*
(LINNAEUS 1758)**

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983).

(53). *Eupteryx notata* CURTIS 1837

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b).

**54. * *Aguriahana germari*
(ZETTERSTEDT 1840)**

8 km SEE of Kandalaksha, 2♂♂, 2♀♀, 1l, on *Pinus sylvestris*, 26.VII.2001 (D.).

**55. *Balclutha punctata*
(FABRICIUS 1775)**

LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♀♀, 1l, 12.VII.-3.VIII.2001 (D.); 5 km N of Kirovsk, 1♀, 23.VII.2001 (D.). – On grasses in dry meadows and forest clearings.

**56. *Macrosteles variatus*
(FALLÉN 1806)**

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 23♂♂, 8♀♀, 11ll, 12.VII.-4.VIII.2001 (D.); Apatity, 1♂, 3♀♀, 22.VII.2001 (D.); 5 km N of

Kirovsk, 4♂♂, 23.-24.VII.2001 (D.); 3 km S of Kirovsk, 1♀, 24.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 31.VII.2001 (D.). – Common species, on *Vaccinium myrtillus*, especially in dry communities. It is interesting to note, that in the southern and middle parts of European Russia, this species lives on *Urtica*; on the Kola Peninsula, only 1♂ and 3♀ were collected on *U. dioica* in Apatity.

**57. *Macrosteles sexnotatus*
(FALLÉN 1806)**

LINDBERG (1932, 1947); OSSIANNILSSON (1983). 36 km E of Olenegorsk, 3♂♂, 5♀♀, 1♀, 20.VII.2001 (D.). – On grasses in roadside.

**58. *Macrosteles alpinus*
(ZETTERSTEDT 1828)**

LINDBERG (1947); OSSIANNILSSON (1983). 5 km NW of Monchegorsk, 9♂♂, 6♀♀, 5♂♂, 10.VII.2001 (D.); 2♂♂, 1♀♀, Polyarny, 10.VIII.2001 (S. Podli-paev). – On grasses in damp meadow.

**59. * *Macrosteles fascifrons*
(STÅL 1858)**

30 km S of Monchegorsk, 28♂♂, 25♀♀, 6♀, 11.-28.VII.2001 (D.); 40 km SW of Monchegorsk, 5♂♂, 2♀♀, 10♀, 19.VII.2001 (D.). – On grasses in bogs and marshes, especially in forests.

60. *Macrosteles laevis* (RIBAUT 1927)

LINDBERG (1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 26♂♂, 16♀♀, 18♀, 12.VII.-3.VIII.2001 (D.); 5 km NW of Monchegorsk, 1♂, 2♀♀, 2♀, 19.VII.2001 (D.); 26 km E of Olenegorsk, 9♂♂, 5♀♀, 5♀, 20.VII.2001 (D.); Apatity, 6♂♂, 2♀♀, 2♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 6♂♂, 7♀♀, 25.VII.2001 (D.). – Common species, on grasses in dry meadows and forest glades.

**61. * *Macrosteles fieberi*
(EDWARDS 1889)**

8 km SEE of Kandalaksha, 6♂♂, 1♀, 25.VII.2001 (D.); 40 km SW of Monchegorsk, 10♂♂, 9♀♀, 31.VII.2001 (D.). – On grasses and sedges in seashores, beaches of lakes.

**(62). *Macrosteles lividus*
(EDWARDS 1894)**

PRZHIBORO (1994).

**(63). *Macrosteles viridigriseus*
(EDWARDS 1924)**

PRZHIBORO (1994).

**64. * *Macrosteles empetri*
(OSSIANNILSSON 1935)**

30 km S of Monchegorsk, 6♂♂, 12♀♀, 12.VII.2001 (D.); 26 km E of Olenegorsk, 2♂♂, 6♀♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 1♂, 6♀♀, 1♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 5♂♂, 2♀♀, 23.-24.VII.2001 (D.). – In associations with *Empetrum nigrum*.

**65. *Macrosteles frontalis*
(SCOTT 1875)**

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 4♂♂, 1♀, 16.VII.-4.VIII.2001 (D.); 5 km NW of Monchegorsk, 50♂♂, 40♀♀, 20♀, 19.-

21.VII.2001 (D.); 26 km E of Olenegorsk, 6♂♂, 7♀♀, 4♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 13♂♂, 15♀♀, 20.VII.2001 (D.). – Common species, on *Equisetum* in different communities.

**66. *Macrosteles nubilus*
(OSSIANNILSSON 1936)**

PRZHIBORO (1994). Apatity, 16♂♂, 35♀♀, 4♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 10♂♂, 42♀♀, 25.VII.2001 (D.). – On *Juncus* sp. in damp meadows of seashores and other swampy communities.

**67. *Sonronius dahlbomi*
(ZETTERSTEDT 1838)**

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 6♂♂, 2♀♀, 16.VII.2001 (D.); 5 km NW of Monchegorsk, 9♂♂, 2♀♀, 37♀, 10.-21.VII.2001 (D.); 26 km E of Olenegorsk, 1♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 1♂, 20.VII.2001 (D.); 1♂ of *S. dahlbomi*, collected by J. Sahlberg, was found in the collections of the Zoological Institute (St. Petersburg). – On *Chamaenerion angustifolium* in meadows and forest clearings.

**68. * *Sonronius binotatus*
(J. SAHLBERG 1871)**

26 km E of Olenegorsk, 1♂, 1♀, 20.VII.2001 (D.); 3 km S of Kirovsk, 3♂♂, 3♀♀, 24.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♂, 25.VII.2001 (D.); 30 km S of Monchegorsk, 2♂♂, 3♀♀, 1♀, 3.-4.VIII.2001 (D.). – On *Calamagrostis* sp. and other grasses, in dry meadows and forest glades.

**(69). *Sonronius anderi*
(OSSIANNILSSON 1948)**

ANUFRIEV (2000a, 2000b).

**70. *Deltocephalus pulicaris*
(FALLÉN 1806)**

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 18♂♂, 4♀♀, 6♀, 12.VII.-4.VIII.2001 (D.); 5 km NW of Monchegorsk, 7♂♂, 2♀♀, 2♀, 10.-21.VII.2001 (D.); 26 km E of Olenegorsk, 3♂♂, 1♀, 20.VII.2001 (D.); 3 km S of Kirovsk, 4♂♂, 2♀♀, 23.-24.VII.2001 (D.); 8 km SEE of Kandalaksha, 4♂♂, 1♀, 25.VII.2001 (D.). – On grasses in dry meadows and forest glades.

(71). *Doratura stylata* (BOHEMAN 1847)

LINDBERG (1947); OSSIANNILSSON (1983).

**72. *Idiodonus cruentatus*
(PANZER 1779)**

ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 8♂♂, 4♀♀, 36♀, 13.VII.-5.VIII.2001 (D.); 3 km S of Kirovsk, 11♂♂, 2♀♀, 41♀, 23.-24.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♀, 25.VII.2001 (D.); 40 km SW of Monchegorsk, 2♂♂, 31.VII.2001 (D.). – In different forest communities: dry forests with *Calluna vulgaris*, forest bogs with *Betula nana*, *Ledum palustre*, *Rubus chamaemorus*, *Sphagnum*, and *Salix*.

**73. *Colladonus torneellus*
(ZETTERSTEDT 1828)**

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 4♂♂, 29♀♀, 11.VII.-5.VIII.2001 (D.); 26 km E of

Olenegorsk, 4♂♂, 20.VII.2001 (D.); 40 km SW of Monchegorsk, 2♂♂, 31.VII.2001 (D.). – On *Betula*.

74. * *Paluda flaveola* (BOHEMAN 1845)

3 km S of Kirovsk, 9♂♂, 5♀♀, 3ll, 24.VII.2001 (D.). – On grasses in dry light forest.

75. * *Elymana sulphurella* (ZETTERSTEDT 1828)

8 km SEE of Kandalaksha, 37♂♂, 17♀♀, 2ll, 25.VII.2001 (D.). – On grasses in dry forest glades and in seashore.

76. * *Cicadula quadrinotata* (FABRICIUS 1794)

Kirovsk, Lake Vudyavr, 4♂♂, 24.VIII.1931 (Fridolin); 30 km S of Monchegorsk, 8♂♂, 2♀♀, 28.VII.-4.VIII.2001 (D.); 40 km SW of Monchegorsk, 10♂♂, 5♀♀, 3ll, 2.VIII.2001 (D.). – On *Carex* sp. in swampy places, along brooks and rivers.

77. *Cicadula intermedia* (BOHEMAN 1845)

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983). Khibiny, Lake Vudyavr, 11♂♂, 10♀♀, 27.VIII.-15.IX.1928-1931 (Fridolin, Cheburova); 30 km S of Monchegorsk, 7♂♂, 33♀♀, 46ll, 11.VII.-4.VIII.2001 (D.); 5 km N of Monchegorsk, 40♂♂, 11♀♀, 47ll, 19.-21.VII.2001 (D.); 26 km E of Olenegorsk, 1♂, 27ll, 20.VII.2001 (D.); Apatity, 1♂, 1♀, 1l, 22.VII.2001 (D.); 40 km SW of Monchegorsk, 12♂♂, 11♀♀, 1l, 31.VII.-2.VIII.2001 (D.). – Common species, on *Carex* spp. in different communities.

78. *Speudotettix subfuscus* (FALLÉN 1806)

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 7♂♂, 3♀♀, 11.-16.VII.2001 (D.); 26 km E of Olenegorsk, 2♀♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 5♂♂, 5♀♀, 20.VII.2001 (D.); Apatity, 1♂, 22.VII.2001 (D.); 5 km N of Kirovsk, 1♂, 1♀, 26.VII.-21.VIII.1931 (Rudolf, Belyakova); the same locality, 4♂♂, 1♀, 23.-24.VII.2001 (D.); 3 km S of Kirovsk, 1♂, 24.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♀, 26.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 31.VII.2001 (D.). – Common species in forests, polyphagous, on herbs and bushes.

79. *Thamnotettix confinis* ZETTERSTEDT 1828

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). Pechenga, 1♂, 21.VII.1929 (Lindberg); 30 km S of Monchegorsk, 5♂♂, 6♀♀, 1l, 11.-17.VII.2001 (D.); 26 km E of Olenegorsk, 6♂♂, 7♀♀, 20.VII.2001 (D.); 36 km E of Olenegorsk, 5♂♂, 7♀♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 4♂♂, 23.-24.VII.2001 (D.); 3 km S of Kirovsk, 1♀, 24.VII.2001 (D.); 40 km SW of Monchegorsk, 3♂♂, 1♀, 2.VIII.2001 (D.). – In dry and moist grass-herb forests.

80. *Pithytettix abietinus* (FALLÉN 1806)

LINDBERG (1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 2♂♂, 7♀♀, 4ll, 1 exuviae, 11.-28.VII.2001 (D.); 40 km SW of Monchegorsk, 1♀, 31.VII.2001 (D.). – On *Picea abies*.

81. *Macustus grisescens* (ZETTERSTEDT 1828)

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). Khibiny, Lake Vudyavr, 9♂♂, 3♀♀, 14.-30.VII.1931 (Fridolin, Rudolf); 30 km S of Monchegorsk, 5♂♂, 10♀♀, 11.VII.-4.VIII.2001 (D.); 5 km NW of Monchegorsk, 1♂, 3♀♀, 19.-21.VII.2001 (D.); 26 km E of Olenegorsk, 1♀, 20.VII.2001 (D.); Apatity, 2♂♂, 1♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 2♂♂, 1♀, 25.-26.VII.2001 (D.); 40 km SW of Monchegorsk, 2♂♂, 31.VII.-2.VIII.2001 (D.). – On *Carex* spp. in forest and treeless bogs.

82. *Doliotettix lunulatus* (ZETTERSTEDT 1838)

LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 26 km E of Olenegorsk, 5♂♂, 8♀♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 4♂♂, 14.VII.-13.VIII.1931 (Fridolin); the same locality, 44♂♂, 13♀♀, 23.-24.VII.2001 (D.). – On grasses in dry forests.

83. *Ophiola cornicula* (MARSHALL 1866)

SAHLBERG (1871a): as *Limotettix striatula* FALL.; LINDBERG (1947): as *O. striatula* FALL.; OSSIANNILSSON (1983). Apatity, 1♂, 22.VII.2001 (D.).

84. * *Ophiola russeola* (FALLÉN 1826)

30 km S of Monchegorsk, 21♂♂, 9♀♀, 8ll, 12.VII.-4.VIII.2001 (D.); 5 km N of Kirovsk, 1♂, 24.VII.2001 (D.); 3 km S of Kirovsk, 24♂♂, 14♀♀, 2ll, 23.-24.VII.2001 (D.). – Common species, on *Vaccinium myrtillus* in light forests and glades.

(85). *Limotettix striola* (FALLÉN 1806)

SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983).

86. * *Streptanus sordidus* (ZETTERSTEDT 1828)

Apatity, 4♂♂, 3♀♀, 1l, 22.VII.2001 (D.); 3 km S of Kirovsk, 1♂, 4♀♀, 1l, 24.VII.2001 (D.). – In light forests.

87. *Streptanus okaensis* (ZACHVATKIN 1948)

LINDBERG (1947): as *S. sordidus* ZETT.; OSSIANNILSSON (1983); PRZHIBORO (1994). Railway station Khibiny, 1♂, 2.VIII.1974 (Ermolaenko); 30 km S of Monchegorsk, 1♀, 9ll, 12.-16.VII.2001 (D.); 5 km NW of Monchegorsk, 7♂♂, 7♀♀, 6ll, 21.VII.2001 (D.); 2♂♂, Tuloma, 13.-16.VIII.2001 (S. Podlipaev). – On *Calamagrostis* sp. in dry and damp meadows.

88. *Streptanus marginatus* (KIRSCHBAUM 1858)

SAHLBERG (1871a); LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). Pechenga, 2♀♀, 12.VII.1929 (LINDBERG); 30 km S of Monchegorsk, 5♂♂, 2♀♀, 12.VII.-4.VIII.2001 (D.); 26 km E of Olenegorsk, 2♂♂, 1♀, 1l, 20.VII.2001 (D.); 36 km E of Olenegorsk, 27♂♂, 8♀♀, 2ll, 20.VII.2001 (D.); 40 km SW of Monchegorsk, 1♂, 2.VIII.2001 (D.). – On grasses in different types of forests.

- (89). *Arocephalus languidus*
(FLOR, 1861)
LINDBERG (1947); OSSIANNILSSON (1983).
90. *Psammotettix confinis*
(DAHLBOM, 1850)
ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 15♂♂, 9♀♀, 12ll, 16.-17.VII.2001 (D.); 5 km NW of Monchegorsk, 12♂♂, 12♀♀, 10ll, 21.VII.2001 (D.); Apatity, 3♂♂, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 19♂♂, 18♀♀, 25.VII.2001 (D.); 3 km S of Kirovsk, 60♂♂, 53♀♀, 45ll, 23.-24.VII.2001 (D.). – Common species, on grasses in meadows, forest glades, seashores.
- (91). *Psammotettix sabulicola*
(CURTIS 1837)
SAHLBERG (1871a); LINDBERG (1947); OSSIANNILSSON (1983).
92. *Psammotettix nodosus*
(RIBAUT 1925)
LINDBERG (1932): as *Deltocephalus striatus* L.; LINDBERG (1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 17♂♂, 13♀♀, 1l, 12.VII.-4.VIII.2001 (D.); 5 km NW of Monchegorsk, 1♂, 4♀♀, 21.VII.2001 (D.); 36 km E of Olenegorsk, 2♂♂, 4♀♀, 20.VII.2001 (D.); Apatity, 2♂♂, 1♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 2♂♂, 1♀, 25.VII.2001 (D.). – On grasses in drier meadows and forest glades.
93. *Psammotettix pallidinervis*
(DAHLBOM 1851)
SAHLBERG (1871a); OSSIANNILSSON (1983). 3 km S of Kirovsk, 19♂♂, 19♀♀, 23.-24.VII.2001 (D.); 1♂ of *P. pallidinervis*, collected by J. Sahlberg, was found in the collections of the Zoological Institute (St. Petersburg). – On grasses in dry light forest.
94. *Psammotettix frigidus*
(BOHEMAN 1845)
SAHLBERG (1871a): as *Deltocephalus lividellus* ZETT.; LINDBERG (1947); OSSIANNILSSON (1983). 36 km E of Olenegorsk, 1♂, 1♀, 20.VII.2001 (D.); 5 km N of Kirovsk, 4♂♂, 13♀♀, 23.-24.VII.2001 (D.). – On grasses in dry forests.
95. * *Psammotettix lapponicus*
(OSSIANNILSSON 1938)
Kirovsk, 1♂, 2♀♀, 30.VII.1974 (Ermolenko).
96. *Ebarrius cognatus* (FIEBER 1869)
SAHLBERG (1871a); LINDBERG (1947): boss as *Deltocephalus interstinctus* FIEB.; OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 1♂, 3♀♀, 11.-28.VII.2001 (D.); 5 km NW of Monchegorsk, 4♂♂, 2♀♀, 3ll, 19.-21.VII.2001 (D.); 26 km E of Olenegorsk, 2♂♂, 20.VII.2001 (D.); 36 km E of Olenegorsk, 5♂♂, 2♀♀, 20.VII.2001 (D.); 8 km SEE of Kandalaksha, 1♂, 1♀, 25.VII.2001 (D.); 3 km S of Kirovsk, 13♂♂, 6♀♀, 8ll, 23.-24.VII.2001 (D.). – On grasses in dry meadows and forest glades.
97. *Errastunus ocellaris*
(FALLÉN 1806)
LINDBERG (1932, 1947); OSSIANNILSSON (1983). 30 km S of Monchegorsk, 5♂♂, 3♀♀, 3ll, 16.VII.2001 (D.); 8 km SEE of Kandalaksha, 3♂♂, 10♀♀, 25.VII.2001 (D.); 40 km SW of Monchegorsk, 2♂♂, 3♀♀, 1.-2.VIII.2001 (D.). – On grasses in dry meadows and forest glades.
98. * *Jassargus sursumflexus*
(THEN 1902)
30 km S of Monchegorsk, 10♂♂, 12♀♀, 4.-5.VIII.2001 (D.). – On *Molinia* sp. along beach of brook.
- (99). *Jassargus flori* (FIEBER 1869)
LINDBERG (1947); OSSIANNILSSON (1983).
100. * *Jassargus alpinus neglectus*
(THEN 1896)
1♂, Polyarnyy, 10.VIII.2001 (S. Podlipaev).
101. *Diplocolenus abdominalis*
(FABRICIUS 1803)
LINDBERG (1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 3♂♂, 2♀♀, 11.-12.VII.2001 (D.); 5 km NW of Monchegorsk, 56♂♂, 47♀♀, 28ll, 10.-21.VII.2001 (D.); 26 km E of Olenegorsk, 3♂♂, 1w, 20.VII.2001 (D.); 36 km E of Olenegorsk, 4♂♂, 5♀♀, 3ll, 20.VII.2001 (D.); Apatity, 1♂, 22.VII.2001 (D.); 3 km S of Kirovsk, 12♂♂, 14♀♀, 2ll, 23.-24.VII.2001 (D.); 8 km SEE of Kandalaksha, 5♂♂, 3♀♀, 25.VII.2001 (D.). – On grasses in dry communities.
102. *Diplocolenus limbatellus*
(ZETTERSTEDT 1828)
SAHLBERG (1871a); LINDBERG (1932, 1947); OSSIANNILSSON (1983); ANUFRIEV (2000a, 2000b). Pechenga, 3♂♂, 1♀, 16.-23.VII.1929 (LINDBERG); 30 km S of Monchegorsk, 2♂♂, 1♀, 12.VII.2001 (D.); 5 km N of Kirovsk, 27♂♂, 10♀♀, 23.-24.VII.2001 (D.). – On grasses in dry light forests and in glades.
103. *Arthaldeus pascuellus*
(FALLÉN 1826)
ANUFRIEV (2000a, 2000b). 30 km S of Monchegorsk, 2♂♂, 4.VIII.2001 (D.); 5 km NW of Monchegorsk, 8♂♂, 2♀♀, 21.VII.2001 (D.); Apatity, 4♂♂, 1♀, 22.VII.2001 (D.); 8 km SEE of Kandalaksha, 6♂♂, 8♀♀, 25.VII.2001 (D.); 3 km S of Kirovsk, 3♂♂, 4♀♀, 24.VII.2001 (D.). – On grasses in bogs, marshes, moist meadows, and seashores.
104. *Sorhoanus xanthoneurus*
(FIEBER 1869)
SAHLBERG (1871a): as *Deltocephalus assimilis* Fall. 8 km SEE of Kandalaksha, 42♂♂, 8♀♀, 8ll, 25.-26.VII.2001 (D.); 30 km S of Monchegorsk, 4♂♂, 1♀, 4.-5.VIII.2001 (D.). – In bogs and marshes.
105. * *Lebradea flavovirens*
(GILLETTE & BAKER 1895)
30 km S of Monchegorsk, 5♂♂, 2♀♀, 13.VII.-5.VIII.2001 (D.). – On *Calamagrostis* sp., in swampy communities.
106. * *Cosmotettix panzeri* (FLOR 1861)
30 km S of Monchegorsk, 2♂♂, 4.-5.VIII.2001 (D.); 5 km NW of Monchegorsk, 3♂♂, 21.VII.2001 (D.); 26 km E of Olenegorsk, 1♂, 20.VII.2001 (D.); 36 km E of Olenegorsk, 2♂♂, 20.VII.2001 (D.); 8 km SEE

of Kandalaksha, 1♂, 25.VII.2001 (D.). – On *Eriophorum vaginatum* in bogs and marshes.

107. * *Cosmotettix costalis*
(FALLÉN 1826)

8 km SEE of Kandalaksha, 1♀, 25.VII.2001 (D.). – Among *Carex* sp. and *Eriophorum vaginatum* in forest bog.

(108). *Erzaleus metrius* (FLOR 1861)

SAHLBERG (1871a).

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Zusammenfassung

Die Erforschungsgeschichte der Zikaden der Halbinsel Kola im Norden Rußlands wird zusammengefasst und ein kommentiertes Verzeichnis der nachgewiesenen Arten erstellt. Im Zuge eigener Aufsammlungen wurden 85 Arten nachgewiesen, 32 davon stellen Erstnachweise für die Halbinsel Kola dar. Insgesamt sind 108 Arten aus 4 Familien (Cixiidae - 2 Arten, Delphacidae - 18 Arten, Aphrophoridae - 3 Arten, Cicadellidae - 85 Arten) nachgewiesen, für 20 liegen nur Literaturdaten vor.

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