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New Aculeata species (Insecta, Hymenoptera) for the Murmansk Oblast (NW Russia)

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Abstract. Despite increasing interest in Arctic research in recent years, the entomofauna of northern Russia remains insufficiently studied. In this context, the Murmansk Oblast is of particular interest. As part of Fennoscandia, it shares similar natural and climatic conditions with the region, as well as a common post-glacial biota formation history. However, its study over the past century has followed a somewhat different trajectory. Comparing the entomofauna of the Kola Peninsula with the well-documented insect diversity of neighboring Finland and Scandinavia is crucial for identifying new regional species and the possibility of extrapolating data to Russian Fennoscandia, where insect inventories remain incomplete. New distribution records for Aculeata species in the Murmansk Oblast were obtained through entomological surveys in the Laplandsky Biosphere Nature Reserve and the Pasvik Nature Reserve. Analysis of these original materials revealed twenty species newly recorded in the region, three species new to the European North of Russia, and one species, *Bethylus boops* (Thomson, 1862), reported for the first time in Russia. Besides, several species were found to have more extended northern range limits. The study underscores the importance of protected areas for biodiversity research.

Keywords: Aculeata, wasps, bees, Murmansk Oblast, polar region, protected areas, Russian Fennoscandia, species list

Новые виды жалящих перепончатокрылых (Insecta, Hymenoptera, Aculeata) для Мурманской области (СЗ России)

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Аннотация. Несмотря на возросший в последние годы интерес к исследованию Арктики, энтомофауна северных регионов нашей страны изучена еще недостаточно. Территория Мурманской области представляет особый интерес. Несмотря на то, что она является частью Фенноскандии и имеет сходные природно-климатические особенности, а также общую историю формирования биоты в послеледниковый период, история ее изучения за последние сто лет сильно различалась. Возможность сравнения видового состава энтомофауны Кольского полуострова с соседними, гораздо лучше изученными Финляндией и Скандинавией, имеет большое значение для поиска и выявления новых для региона видов, экстраполируя имеющиеся данные на территорию российской Фенноскандии, где инвентаризация видового состава насекомых еще далека от завершения. Новые данные о распространении видов Aculeata в Мурманской области были получены в ходе энтомологических исследований, проведенных в Лапландском биосферном заповеднике и в заповеднике «Пасвик». По результатам исследования 20 видов жалящих приводятся с этой территории впервые, три вида являются новыми для Европейского Севера России, а один вид — *Bethylus boops* (Thomson, 1862) указан как новый для фауны России. Для ряда видов были расширены северные границы их ареалов. Подчеркивается значительная ценность охраняемых территорий для изучения биоразнообразия.

Ключевые слова: Aculeata, осы, пчелы, Мурманская область, полярный регион, охраняемые территории, российская Фенноскандия, список видов

Introduction

The Kola Peninsula, or Russian Lapland, remains relatively understudied entomologically compared to other parts of Fennoscandia. Its harsh climate, short summer season, and historically low insect diversity have made it less attractive to entomologists. This lack of interest was further compounded by the near-absence of roads until the early 20th century. Before the 1917 revolution, entomological research on the peninsula was primarily conducted by scientists from Finland, then part of the Russian Empire. Beginning in 1870, they undertook several expeditions, as reviewed by Silfverberg (Silfverberg 1988). The Pechenga (Petsamo) District of the Murmansk Oblast belonged to Finland until World War II, where insects were actively collected in the 1920s–1930s; most of this material is now housed at the University of Helsinki's Natural History Museum (LUOMUS).

In contrast, the insect fauna of the Murmansk Oblast is better studied than that of many other Arctic regions of Russia. However, during the Soviet era, entomological research here was largely restricted to applied studies focused on industrial pollution monitoring and pest control. No comprehensive entomological surveys have been conducted, with the exception of works on Lepidoptera (Kozlov, Jalava 1994; Kozlov, Kullberg 2011) and selected Hemiptera groups (Dmitriev 2002; Stekolshchikov, Buga 2018), primarily within the Laplandsky Biosphere Reserve.

A review of publications on the regional insect and spider fauna was compiled by Blinova (Blinova 2013). Despite hosting three nature reserves and a research center of the Russian Academy of Sciences, the Murmansk Oblast lacks professional entomologists. Attempts by untrained local researchers to identify insects often yield unreliable results (Kozlov 2019).

The Hymenoptera fauna of the Murmansk Oblast remains poorly documented, with only the Aculeata group receiving moderate attention. Aculeate diversity declines sharply in northern latitudes due to the thermal preferences of most species, though several are Arctic-adapted. Some records of Aculeata have been sporadically published (Fridolin 1936; Uvarova, Uvarov 1976; Polevoi, Humala 2011). While better studied than other Hymenoptera groups (e.g., parasitoid wasps), the Aculeata fauna is still incompletely known. Significant historical material resides in Finnish collections. Paukkunen and Kozlov (Paukkunen, Kozlov 2012) compiled the first comprehensive overview of Kola Peninsula Aculeata, and subsequent work (Paukkunen, Kozlov 2015) documented 123 species for the Murmansk Oblast, citing museum collections, unpublished data, and literature. They estimated that ~100 additional species may await discovery, particularly in the understudied eastern and northern parts of the region.

Recent Arctic research trends have renewed interest in the area's ecology, including entomology. Digitization efforts at LUOMUS and public data release via FinBIF (Finnish Biodiversity Information Facility 2025) have improved access to historical records. However, the Catalogue of Hymenoptera of Russia (Belokobylskij, Lelej 2017) omitted several Aculeata species for the European North of Russia, including the Murmansk Oblast. This study aims to address such gaps and present new distribution data for Aculeata on the Kola Peninsula.

Material and methods

Study area

The Murmansk Oblast lies almost entirely north of the Arctic Circle, encompassing the entire Kola Peninsula as part of Fennoscandia. Despite its high latitude, the climate is relatively mild due to maritime influences and the Gulf Stream. The region is characterized by northern taiga forests dominated by Norway spruce (*Picea abies* (L.) Karst.) and Scots pine (*Pinus sylvestris* L.), transitioning to birch (*Betula pubescens* Ehrh.) and tundra communities in northernmost and mountainous areas.

Collecting methods

Specimens were collected in both protected areas using:

1. Portable Malaise traps (Townes 1972), deployed throughout the field season ('snow-to-snow') across diverse habitats;

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2. Yellow pan traps (Moericke traps), which are particularly effective for bees and wasps (Masner 1976);
3. Traditional sweep-netting.

Material

The study primarily examined material collected by the author during long-term entomological studies in the Laplandsky State Nature Biosphere Reserve (2013–2014, 2017, 2019). Additional specimens were obtained from the Pasvik State Nature Reserve (2007–2008). Most material is deposited in the collection of the Forest Research Institute, Karelian Research Centre, Russian Academy of Sciences (Petrozavodsk).

The author conducted preliminary identifications, which were verified by taxonomic specialists. Specimens were examined using a Leica MZ9.5 stereomicroscope equipped with a LOMO MC-6.3 digital camera. Taxonomic organization follows the Catalogue of Hymenoptera of Russia (Belokobylskij, Lelej 2017), with minor updates. Collection locations are referenced using WGS84 coordinates (EPSG:4326). Biogeographical provinces and abbreviations follow Heikinheimo and Raatikainen (Heikinheimo, Raatikainen 1971).

The text uses the following abbreviations: NR — Nature Reserve; MT — Malaise trap; YPT — yellow pan trap; surr. — surroundings.

Results and discussion

Entomological surveys in two nature reserves yielded twenty species of Aculeata Hymenoptera from eight families that were not included in the most recent regional checklist (Paukkunen, Kozlov 2015). Notably, *Bethylus boops* represents a first record for the Russian fauna.

New Aculeata species records for the Murmansk Oblast

Apidae

Bombus* (*Psithyrus*) *norvegicus (Sparre-Schneider, 1918)

Material examined. *Lim*: Laplandsky NR, 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 30.05–23.06.2014, 1 ♀; *Lim*: Laplandsky NR, Krasnaya Lambina surr., 68°3′22″ N, 32°35′20″ E, mixed forest, MT-2, 22.06–20.07.2017, 1♀.

Distribution. Holarctic. Fairly common in Fennoscandia.

Bethylidae

Bethylus boops (Thomson, 1862)

Material examined. *Lim*: Laplandsky NR, 67°39′32″ N, 32°38′31″ E, El'yavr Lake, spruce forest, MT-1, 23.06–28.07, 26.08–22.09.2014, 2♀♀; 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 30.05–23.06.2014, 1♀.

Distribution. Holarctic. Rare in Fennoscandia.

Remark. First record for Russia.

Chrysididae

Trichrysis cyanea (Linnaeus, 1758)

Material examined. *Lim*: Laplandsky NR, 67°39′32″ N, 32°38′31″ E, El'yavr Lake, spruce forest, MT-1, 28.07–26.08.2014, 1 ♂.

Distribution. Palaearctic. Fairly common in Fennoscandia.

Remark. First record north of the Arctic Circle.

Crabronidae

Crossocerus* (*Blepharipus*) *walkeri (Shuckard, 1837)

Material examined. *Lim*: Laplandsky NR, Krasnaya Lambina surr., 68°3′22″ N, 32°35′20″ E, mixed forest, MT-2, 20.07–20.08.2017, 1♀.

Distribution. Palaearctic. Rare in Fennoscandia.

Remarks. Represents the northernmost known locality for this species, which is listed as Near Threatened in the Finnish Red Data Book (Paukkunen et al. 2019). All previous records from Sweden, Finland, and Russian Karelia (GBIF… 2025) occur south of Arctic Circle. The species was omitted from European North (N) in Catalogue of Hymenoptera of Russia (Belokobylskij, Lelej 2017).

Gorytes quadrifasciatus (Fabricius, 1804)

Material examined. *Lim*: Laplandsky NR, El'yavr Lake, spruce forest *Myrtillus* type, 67°40′36″ N, 32°38′30″ E, MT-2, 24.07–01.08.2013, 1♀; Chunozero settlement, 67°39′4″ N, 32°38′42″ E, YPT, 24.07–02.08.2013, 1♀.

Distribution. Palaearctic. Fairly common in Fennoscandia.

Nysson niger niger Chevrier, 1868
Material examined. *Lim*: Laplandsky NR, El'yavr Lake, spruce forest *Myrtillus* type, 67°40′36″ N, 32°38′30″ E, MT-2, 24.07–01.08.2013, 1♀; Chunozero settlement, 67°39′4″ N, 32°39′8″ E, YPT, 24.07–02.08.2013, 1♀.
Distribution. Palaearctic. Fairly common in Fennoscandia and Baltic countries, but not reported from Norway.
Remark. Represents the northernmost known occurrence of the species.

Passaloecus taigaensis Johansson, Paukkunen et Hellqvist, 2021
Material examined. *Lim*: Laplandsky NR, Chunozero surr., 67°39′ N, 32°39′ E, 25.07.2013, 1♂.
Distribution. Fennoscandia and Baltic countries.
Remarks. Represents the northernmost known locality for this recently described, predominantly Fennoscandian species. The only previous Russian record comes from Petrozavodsk, Republic of Karelia (Johansson et al. 2021). Morphologically similar to *Passaloecus insignis* (Vander Linden, 1829), with which it has been historically confused, *P. taigaensis* differs in both morphology and more northerly distribution. These findings suggest the need for re-examination of all northern records attributed to *P. insignis.*

Ceratophorus morio (Vander Linden, 1829)
Material examined. *Lim*: Laplandsky NR, 67°39′32″ N, 32°38′31″ E, El'yavr Lake, spruce forest, MT-1, 23.06–28.07.2014, 1♀.
Distribution. Holarctic. Fairly common in Fennoscandia.

Rhopalum (***Corynopus***) ***coarctatum*** (Scopoli, 1763)
Material examined. *Lim*: Laplandsky NR, 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 23.06–28.07–26.08.2014, 2♀♀.
Distribution. Holarctic. Fairly common in Fennoscandia.

Spilomena curruca (Dahlbom, 1843)
Material examined. *Lim*: Laplandsky NR, 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 23.06–28.07.2014, 1♀; 67°39′32″ N, 32°38′31″ E, El'yavr Lake, spruce forest, MT-1, 23.06–28.07.2014, 28.07–26.08.2014, 2♀♀.
Distribution. Palaearctic. Comparatively rare in Fennoscandia.
Remark. Represents the northernmost known occurrence of the species.

Trypoxylon (***Trypoxylon***) ***attenuatum*** F. Smith, 1851
Material examined. *Lim*: Laplandsky NR, Chunozero settlement, 67°39′4″ N, 32°39′8″ E, YPT, 24.07–02.08.2013, 1♀.
Distribution. Holarctic. Fairly common in Fennoscandia.
Remark. Represents the northernmost known occurrence of the species.

Trypoxylon (***Trypoxylon***) ***minus*** de Beaumont, 1945
Material examined. *Lim*: Laplandsky NR, Chunozero settlement, 67°39′4″ N, 32°39′8″ E, YPT, 24.07–02.08.2013, 2♂♂; El'yavr Lake, spruce forest, 67°39′32″ N, 32°38′31″ E, MT-1, 23.06–28.07.2014, 1♂.
Distribution. Palaearctic. Fairly common in Fennoscandia.
Remark. First record for the Russian European North (N) as defined in the Catalogue of Hymenoptera of Russia (Belokobylskij, Lelej 2017).

Dryinidae

Anteon exiguum (Haupt, 1941)
Material examined. *Lps*: Pasvik NR, Kalkupya Mt., 69°16′59″ N, 29°23′17″ E, mountain tundra, MT, 4–30.07.2007, 2♀♀.
Distribution. Palaearctic. Rare in Fennoscandia.
Remark. First record for the European part of Russia.

Aphelopus melaleucus (Dalman, 1818)
Material examined. *Lim*: Laplandsky NR, 67°39′32″ N, 32°38′31″ E, El'yavr Lake, spruce forest, MT-1, 23.06–28.07.2014, 2♀♀; 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 23.06–28.07.2014, 1♀ and 1♂; Krasnaya Lambina surr., 68°3′22″ N, 32°35′20″ E, mixed forest, MT-2, 20.07–20.08.2017, 1♀.
Distribution. Palaearctic. Rare in Fennoscandia.

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Megachilidae

Osmia* (*Melanosmia*) *uncinata Gerstaecker, 1869

Material examined. *Lim*: Laplandsky NR, Chunozero settlement, 67°39′4″ N, 32°39′8″ E, YPT, 24.07–02.08.2013, 1♀.

Distribution. Holarctic. Fairly common in Fennoscandia.

Pompilidae

Agenioideus* (*Agenioideus*) *cinctellus (Spinola, 1807)

Material examined. *Lim*: Laplandsky NR, 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 28.07–26.08.2014, 1♂.

Distribution. Holarctic. Fairly common in Fennoscandia.

Arachnospila* (*Ammosphex*) *hedickei (Haupt, 1929)

Material examined. *Lim*: Laplandsky NR, El'yavr lake, 67°40′36″ N, 32°38′30″ E, spruce forest *Myrtillus* type, MT-2, 24.07–01.08.2013, 1♀; 67°39′32″ N, 32°38′31″ E, spruce forest, MT-1, 23.06–28.07.2014, 1♂.

Distribution. Palaearctic. Comparatively common in Fennoscandia.

Remark. This is the northernmost known finding of the species.

Priocnemis* (*Priocnemis*) *exaltata (Fabricius, 1775)

Material examined. *Lim*: Laplandsky NR, El'yavr Lake, 67°40′36″ N, 32°38′30″ E, spruce forest *Myrtillus* type, MT-2, 24.07–01.08.2013, 3♀♀; Chunozero settlement, 67°39′4″ N, 32°38′42″ E, 18.09.2017, 1♀.

Distribution. Palaearctic. Fairly common in Fennoscandia.

Remark. Represents the northernmost known occurrence of the species.

Priocnemis* (*Umbripennis*) *perturbator (Harris, 1779)

Material examined. *Lps*: Pasvik NR, Varlam Is., river bank, 69°7′55″ N, 29°14′49″ E, 29.07.2008, 1♀.

Distribution. Palaearctic. Fairly common in Fennoscandia.

Vespidae

Dolichovespula saxonica (Fabricius, 1793)

Material examined. *Lim*: Laplandsky NR, 67°38′31″ N, 32°40′52″ E, 4 km SE Chunozero settlement, pine forest, MT-3, 23.06–28.07.2014, 1♀ (worker).

Distribution. Palaearctic. Fairly common in Fennoscandia.

Conclusion

The present study confirms that the Aculeata fauna of the Kola Peninsula remains incompletely documented and underscores the crucial role of protected areas in biodiversity research. Our investigation of this relatively well-studied insect group has revealed multiple species new to the region, including one new record for Russia. However, these findings should not be considered comprehensive, as we estimate that approximately 80 % of potential aculeate species remain unrecorded in Murmansk Oblast. Notably, all reported species were represented by single specimens in collections, with several being uncommon in adjacent regions or possessing threatened conservation status. These results suggest that further studies, particularly of less-explored Hymenoptera groups such as parasitoid wasps, will likely yield additional significant discoveries.

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References

Belokobylskij, S. A., Lelej, A. S. (eds.). (2017) Annotirovannyj katalog pereponchatokrylykh nasekomykh Rossii. T. 1. Sidyachebryukhie (Symphyta) i zhalonosnye (Apocrita: Aculeata) [Annotated catalogue of the Hymenoptera of Russia. Vol. 1. Symphyta and Apocrita: Aculeata]. *Trudy Zoologicheskogo instituta Rossijskoj akademii nauk — Proceedings of the Zoological Institute of the Russian Academy of Sciences*, vol. 321, suppl. 6, 475 p. https://doi.org/10.31610/trudyzin/2017.supl.6.5 (In English)

Blinova, I. V. (2013) Kratkij obzor issledovanij po faune nasekomykh i paukoobraznykh Murmanskoj oblasti v XX–XXI stoletiyakh [A brief review of studies of insects and spiders in Murmansk region since 1900]. *Vestnik Kol'skogo nauchnogo tsentra RAN — Transactions of the Kola Science Centre of RAS*, vol. 1 (12), pp. 58–65. (In Russian)

Dmitriev, D. A. (2002) Cicadina (Hemiptera: Auchenorrhyncha) of the Kola Peninsula basing mainly on the material collected in the Lapland Biosphere Nature Reserve. *Denisia*, vol. 4, no. 176, pp. 339–348. (In English)

Finnish Biodiversity Information Facility. (2025) [Online]. Available at: https://laji.fi/en (accessed 30.01.2025). (In English)

Fridolin, V. Yu. (1936) *Zhivotno-rastitel'noe soobshchestvo gornoj strany Khibin. Biotsenoticheskie issledovaniya v 1930–1935 gg. [Animal and plant community of the Khibiny mountains. Biocenotic research in 1930–1935]*. Moscow; Leningrad: Academy of Sciences of the USSR Publ., 295 p. (Trudy Kol'skoj bazy Akademii nauk SSSR [Proceedings of the Kola branch of the Academy of Sciences of the USSR]. Iss. 3). (In Russian)

GBIF occurrence download. (2025) *Global Biodiversity Information Facility*. [Online]. Available at: https://doi.org/10.15468/dl.w8zstb (accessed 28.01.2025). (In English)

Heikinheimo, O., Raatikainen, M. (1971) The recording of locations of biological finds in Finland. *Annales Entomologici Fennici*, vol. 37, no. 1a, pp. 1–27. (In English)

Johansson, N., Paukkunen, J., Hellqvist, S. (2021) *Passaloecus taigaensis* sp. nov., a northern sibling of *Passaloecus insignis* (Vander Linden, 1829). *Entomologisk Tidskrift*, vol. 142, no. 4, pp. 233–244. (In English)

Kozlov, M. V. (2019) Insects identified by unqualified scientists: Multiple "new" records from the Murmansk oblast of Russia are dismissed as false. *Arctic Environmental Research*, vol. 19, no. 4, pp. 153–158. https://doi.org/10.3897/issn2541-8416.2019.19.4.153 (In English)

Kozlov, M. V., Jalava, J. (1994) Lepidoptera of Kola Peninsula, northwestern Russia. *Entomologica Fennica*, vol. 5, no. 2, pp. 65–85. https://doi.org/10.33338/ef.83797 (In English)

Kozlov, M. V., Kullberg, J. (2011) New and interesting records of Lepidoptera from the Kola Peninsula, Northwestern Russia, in 2000–2009. *Entomologica Fennica*, vol. 21, no. 4, pp. 254–272. https://doi.org/10.33338/ef.3933 (In English)

Masner, L. (1976) Yellow pan traps (Moreicke traps, Assiettes jaunes). *Proctos*, vol. 2, no. 2, p. 2. (In English)

Paukkunen, J., Kozlov, M. V. (2012) Kuolan niemimaan myrkkypistiäiset [Aculeata of the Kola Peninsula]. In: A. Vanhatalo, P. Niemelä, T. Kuuluvainen, H. Vasander (eds.). *Turjan vuonoilta Vienanmerelle: Matka Kuolan niemimaan luontoon ja kulttuuriin [From the fjords of Turja to the White Sea: A journey into the nature and culture of the Kola Peninsula]*. Helsinki: Helsingin yliopiston metsätieteiden laitos Publ., pp. 189–200. (Helsingin yliopiston metsätieteiden laitoksen julkaisuja [University of Helsinki Department of Forest sciences publications]. Vol. 4). (In Finnish)

Paukkunen, J., Kozlov, M. V. (2015) Stinging wasps, ants and bees (Hymenoptera: Aculeata) of the Murmansk region, Northwest Russia. *Entomologica Fennica*, vol. 26, no. 2, pp. 53–73. https://doi.org/10.33338/ef.51282 (In English)

Paukkunen, J., Paappanen, J., Leinonen, R. et al. (2019) Stinging wasps, bees and ants. In: E. Hyvärinen, A. Juslén, E. Kemppainen et al. (eds.). *Suomen lajien uhanalaisuus 2019 — Punainen kirja [The 2019 Red List of Finnish species]*. Helsinki: Ympäristöministeriö & Suomen ympäristökeskus Publ., pp. 451–465. (In Finnish)

Polevoi, A. V., Humala, A. E. (2011) Nasekomye [Insects]. In: N. V. Polikarpova (ed.). *Letopis' prirody zapovednika "Pasvik" [Nature chronicles of Pasvik Nature Reserve]. Vol. 15 (2008)*. Apatity: Kola Research Centre RAS Publ., pp. 153–156. (In Russian)

Silfverberg, H. (1988) Finnish entomologists on the Kola Peninsula. *Notulae Entomologicae*, vol. 68, no. 3, pp. 115–120. (In English)

Stekolshchikov, A. V., Buga, S. V. (2018) The aphid fauna (Hemiptera, Sternorrhyncha, Aphidomorpha) of Murmansk province (Russia), with description of *Aphis khrulevi* sp. nov. and *Dysaphis karyakini* sp. nov. and males of *Chaitophorus nigricantis Pintera*, 1987. *Zootaxa*, vol. 4527, no. 4, pp. 451–493. https://doi.org/10.11646/zootaxa.4527.4.1 (In English)

Townes, H. (1972) A light-weight Malaise trap. *Entomological News*, vol. 83, pp. 239–247. (In English)
Uvarova, L. A., Uvarov, A. V. (1976) Materialy k issledovaniyu fauny murav'ev на ostrovakh severnogo arkhipelaga Kandalakshskogo zaliva [Materials to the study of the ant fauna of the northern archipelago of Kandalaksha bay]. In: M. S. Gilyarov (ed.). *Fauna i ekologiya bespozvonochnykh zhivotnykh [Fauna and ecology of invertebrates]*. Moscow: Moscow State V. I. Lenin Pedagogical Institute Publ. pp. 112–114. (In Russian)

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