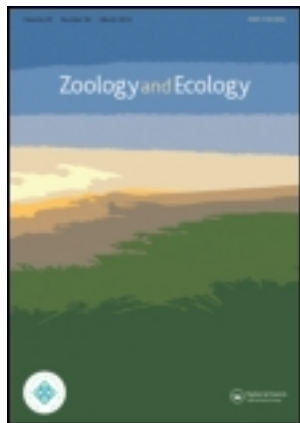


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Review of Latvian Nanophyinae (Coleoptera: Curculionoidea: Brentidae)

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Review of Latvian Nanophyinae (Coleoptera: Curculionoidea: Brentidae)

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(Received 23 June 2012; final version received 14 August 2012)

The faunal and bionomial information on Latvian Nanophyinae (Coleoptera: Brentidae) is summarised. A total of 392 specimens were reviewed. *Nanophyes globiformis* Kiesenwetter, 1864 is reported for the fauna of Latvia for the first time. The bibliographical information on nanophyins in Latvia is compiled for the first time. The annotated checklist of Latvian Nanophyinae and the illustrated key to the species of the Baltic States, Belarus and northern Europe are presented.

Patikrinus 392 individus iš kolekcijų, apibendrinta faunistinė bei bionominė informacija apie Nanophyinae (Coleoptera: Brentidae) tribai priskiriamus Latvijoje aptinkamus vabalus. Pirmą kartą susisteminta bibliografinė informacija apie šią Latvijos vabalų tribą. *Nanophyes globiformis* Kiesenwetter, 1864 rūšis anksčiau Latvijoje užregistruota nebuvo. Straipsnyje pateiktas anototas Latvijos Nanophyinae sąrašas ir iliustruotas Šiaurės Europos, Baltarusijos ir Baltijos šalių šios grupės vabalų rūšių apibūdinimo raktas.

Keywords: Coleoptera; Brentidae; Nanophyinae; Latvia; fauna; bionomy; bibliography; identification key

Introduction

The subfamily Nanophyinae Gistel, 1856 contains approximately 300 species distributed in the Palaearctic, Oriental and Afrotropical regions, but a few species are also known from the Nearctic and Australasian regions. Nanophyins pose a serious taxonomic problem as their current status varies from the tribe level (within Brentidae or Curculionidae), the subfamily (within Apionidae) to the level of a separate family (Alonso-Zarazaga 2011; Alonso-Zarazaga and Lyal 1999; Kissinger 1968; Legalov 2010; Lohse 1983; Smreczynski 1976; Wanat 2001; Wanat and Szypuła 2008; Zimmerman 1993). According to the recent classification of Coleoptera (Bouchard et al. 2011), nanophyins are considered as a subfamily of Brentidae.

The Nanophyinae fauna of the eastern Baltic region and Fennoscandia is rather poor. Only four species of this subfamily are mentioned in the 'Enumeratio renovata Coleopterorum Fennoscandiae, Daniae et Baltiae' (Silfverberg 2010).

In the second edition of the checklist of Latvian Coleoptera (Telnov 2004), two species of Nanophyinae are listed. The number of species of this group hitherto recorded in adjacent territories slightly varies: five species are known from Belarus (Alexandrovitch et al. 1996), four species from Estonia (Bukejs and Balalaikins (in press); Silfverberg 2010) and two species from Lithuania (Tamutis, Tamutė, and Ferenca 2011).

The first information on nanophyins in Latvia published at the beginning of the nineteenth century (Fleischer 1829) was extended in 12 works that appeared in Latvia subsequently.

Imagoes of Latvian nanophylin species feed only on leaves of *Lythrum salicaria* L. (Lythraceae). Their larvae develop in stem galls or in fruit bodies of host plants (Dieckmann 1963; Koch 1992).

The aim of the current study is to summarise the available data on Nanophyinae of the Latvian fauna. The bibliographical information on nanophyins is compiled for the first time. New faunal data, the annotated checklist of Latvian Nanophyinae and the illustrated key to the species of the Baltic States, Belarus and northern Europe are presented.

Material and methods

A total of 392 specimens were reviewed during our study. The examined material is deposited in the collection of the Institute of Biology, Latvian University (LUBI, Salaspils, LV), the Institute of Systematic Biology, Daugavpils University (DUBC, Daugavpils, LV), the Latvian Nature Museum (LDM, Rīga, LV) and also in Dmitry Telnov's private collection (DTC, Rīga, LV). The electronic database of the Entomological Society of Latvia (maintained by D. Telnov, Rīga, LV) was also used.

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The following identification keys were used for the identification of specimens: Alonso-Zarazaga (1989), Dieckmann (1963), Lohse (1983), Rheinheimer and Hassler (2010), Smreczynski (1976) and Zherikhin (1996).

The general distribution of species is given according to Alonso-Zarazaga (2011), Dieckmann (1963), Legalov (2010), Lohse (1983), Smreczynski (1976) and Zherikhin (1996).

The classification of chorotypes is made according to Vigna-Taglianti et al. (1999) and Gorodkov (1984). The chorotype codes used in the article stand for: AMP – Amphipalaeartic, PAL – Palaeartic and TEA-AD – Trans-Euroasiatic Asiatic-disjunct.

The following information is given for each species: scientific name and author, bibliographical sources for Latvia, faunal data (sampling locality and date, number of collected specimens, information on the habitat and collector's name in parentheses), host plants, phenology (Latvian data only; V, VI, VII, VIII, IX – months from May to September; in parentheses – one of three 10-day periods when appropriate), the general distribution of the species and the chorotype code.

Used abbreviations are: d. – administrative district (system of administrative districts used in Latvia from 1991 to 2009), env. – environs, Isl. – island, NP – National Park, PNT – protected nature territory, vill. – village or little settlement, C – Central, E – East, N – North, S – South and W – West. Some of the abbreviations used in this article do not correspond to standard English abbreviations.

The photos were taken with a stereomicroscope Nikon SMZ 745T and a digital sight camera Nikon DS-F11.

Results and discussion

During the current research, the occurrence of three species of Nanophyinae was confirmed in Latvia. One species – *Nanophyes globiformis* Kiesenwetter, 1864 – was recorded in the local fauna for the first time.

Nanophyinae of the Latvian fauna are represented by three chorotypes: Amphipalaeartic – one species (*Nanophyes globiformis*), Palaeartic – one species (*Nanophyes marmoratus*) and Trans-Euroasiatic Asiatic-disjunct – one species (*Nanomimus circumscriptus*).

List of species of the Latvian fauna

Curculionoidea Latreille, 1802

Brentidae Billberg, 1820

Nanophyinae Gistel, 1848

Nanophyes Schönherr, 1838

= *Nanodes* Schönherr, 1825

N. globiformis Kiesenwetter, 1864

= *gallicus* Bedel, 1887

Material examined: seven specimens: Jēkabpils d.: Dunava, 13 August 1996 (1, leg. A. Barševskis); Ogre d.: Jumprava, 10 July 2008 (1, leg. A. Barševskis); Rēzekne d.: Nagļi env., bank of Lake Lubāns near Īdeņa

vill., 8 September 2007 (1, leg. A. Bukejs, M. Balalajkins); Valmiera d.: Vecate, 17 August 1992 (1, leg. F. Savičs); Ventspils d.: Moricsala Isl., Moricsala Nature Reserve, 15 July 2008 (1, leg. A. Barševskis), 15 July 2008 (1, leg. V. Alekseev, A. Pavlova), 1 June 2011 (1, meadow, leg. R. Cibulskis).

Host plants: *Lythrum* (Lythraceae).

Phenology: VI, VII, VIII, IX (1).

General distribution: Europe (excluding N), N Africa (Morocco), Russian Far East. [AMP]

Note: A new species for the Latvian fauna.

N. marmoratus marmoratus (Goeze, 1777)

= *angustipennis* Bach, 1854

= *lythri* (Fabricius, 1787)

= *rufipes* Tournier, 1867

= *salicariae* (Fabricius, 1781)

= *transversus* (Olivier, 1790)

= *vittatus* (Geoffroy, 1785)

References: Fleischer (1829) (*Orobitis lythri* F.), Seidlitz (1872–1875) (*lythri* Fbr.), (1887–1891) (*lythri* Fbr.), Rathlef (1905), Lackschewitz and Mikutowicz (1939), Rūtenberga (1992), Barševskis (1993), (*Nanodes*), (2002), Telnov et al. (1997), Telnov (2004), Kalniņš et al. (2007) and Bukejs (2011).

Material examined: 361 specimens: Aizkraukle d.: Jaunjelgava, 56°36'28"N 25°02'44"E, 11 August 2006 (8, the Daugava riverside, leg. E. Rudāns, A. Barševskis); Rīteri, 21 June 2001 (1, valley of the Daugava River, quarry, leg. D. Telnov); Vērene, 24 May 2003 (7, the Ogre riverside, on *Lythrum*, leg. D. Telnov); Bauska d.: Bauska, bank of the Mēmele River near the Bauska castle, 15 June 2003 (9, riverbank, on *Lythrum*, leg. D. Telnov); between Ērgli and Budberga, Straumēņu forest, Panemunes meži (forests) PNT, 28 June 2003 (4, moist forest, on *Lythrum salicaria*, leg. D. Telnov); Jumprava, Bauska PNT, 25 June 2006 (11, also in copula, valley of the Lielupe River, D. Telnov); Kalēju moorland, Kalēju tīreļa (moorland) PNT, 3 June 2002 (1, ox-bow, leg. D. Telnov); Cēsis d.: Āraiši, Gauja NP, 13 June 2003 (5, bank of Lake Āraišu, leg. D. Telnov); Jaunpiebalga N env., valley of the Mostene River near Lake Mosteņu, 21 June 2003 (7, wet meadow, on *Lythrum*, leg. D. Telnov); Līgatne, Gauja NP, 26 August 2001 (2, glen forest, leg. M. Kalniņš); between Rempi and Kanāži, valley of the Labā Vilaune River, 21 June 2003 (2, forest edge, leg. D. Telnov); Daugavpils d.: Butiški, Daugavas loki PNT, 12 August 2006 (2, the Daugava riverside, leg. A. Bukejs and M. Balalajkins), 9 September 2007 (1, valley of the Daugava River, leg. A. Bukejs, M. Balalajkins), 1 July 2009 (1, valley of the Daugava River, leg. A. Bukejs, M. Balalajkins); Daugavpils, Cietoksnis, 7 August 2008 (3, the Daugava riverside, leg. A. Bukejs, M. Balalajkins), 25 June 2009 (1, the Daugava riverside, leg. A. Bukejs); Ilgas, Silene PNT, 3 July 1995 (5, leg. A. Barševskis), 28 June 1996 (1, leg. A. Barševskis); Kalnišķi, 55°52'54"N 26°44'03"E, 21 August 2009 (1, the Daugava riverside,

leg. A. Bukejs, M. Balalaikins); Jaunkļaviņi, Laucese parish, 26 September 2008 (1, leg. V. Vaņkov); Ļubesti, 5 July 2010 (1, swampy bank of Lake Pjatačok, on *Lythrum*, leg. A. Bukejs, M. Balalaikins); Naujene S env., Daugavas Loki (precipices) Nature Park, 11–12 June 2002 (1, valley of the Daugava River, leg. D. Telnov); Slutišķi, 1 July 1995 (4, valley of the Daugava River, leg. A. Barševskis); Višķi, 1 May 1990 (1, leg. A. Barševskis), 15 August 1990 (1, leg. A. Barševskis); Gulbene d.: Silinieki env., Pededzes lejtece PNT, 11 May 2002 (1, the right riverside of the Pededze River, meadow, leg. D. Telnov); Jēkabpils d.: Dunava, 16 July 1995 (5, leg. A. Barševskis), 13 August 1996 (1, leg. A. Barševskis), 11–12 August 1998 (5, leg. A. Barševskis), 6 September 1998 (1, agrocenosis, leg. A. Barševskis), 15–23 August 2008 (1, leg. K. Barševska); Jelgava d.: Eleja 3 km W, 19 July 2003 (1, glen, leg. D. Telnov); Pakuļi, Stūri house, 19 July 2003 (1, meadow, leg. D. Telnov); Krāslava d.: Auleja, 7 August 2007 (1, Auleja lakeside, leg. M. Murd); Krāslava, 12 July 1994 (1, city park, leg. D. Telnov); Kuldīga d.: Alsunga, Augšzūava PNT, 28 August 2005 (10, leg. A. Barševskis, A. Bukejs, U. Valainis); Lake Lielais Nabes, 57°04'04"N 21°48'26"E, 28 July 2005 (6, bank of lake, leg. A. Bukejs, A. Barševskis); mouth of the Riežupe River, Ventas ieleja (valley) PNT, 26 July 2001 (4, riverbank, leg. D. Telnov); Rudbārži, 9 August 2004 (1, leg. A. Barševskis); Skrunda 2 km W, 26 July 2003 (5, forested fen, leg. D. Telnov); Liepāja d.: Embūte PNT, pond of Embūtes pils (castle), 6 June 2009 (2, leg. D. Telnov); Pape, 23–25 June 1994 (1, leg. N. Savenkovs); Lake Papes N env., Lake Papes PNT, 17 June 2005 (3, meadow, D. Telnov); Limbaži d.: between Ainaži and Kuiviži, Randu pļavas (meadows) PNT, 21 July 2000 (1, coastal meadow, leg. A. Karpa), 30 May 2002 (1, coastal meadow, leg. A. Karpa), 26 June 2002 (1, coastal meadow, leg. A. Karpa), 18 July 2002 (2, coastal meadow, leg. A. Karpa), 26 June 2004 (2, coastal meadow, leg. A. Karpa), 27 June 2006 (1, coastal meadows, leg. A. Karpa), 25 July 2006 (2, coastal meadows, leg. A. Karpa), 27 July 2007 (2, coastal meadow, leg. A. Karpa), 25 June 2008 (1, coastal meadow, leg. A. Karpa), 12 August 2008 (1, coastal meadow, leg. A. Karpa); Karateri, Karateri PNT, 15 June 2002 (8, ox-bow, on *Lythrum*, leg. D. Telnov); Kuiviži, 22 July 1969 (2, meadow, leg. anonymous); Mērnīeku swamp forest, ~150 m from Estonian border, Mērnīeku dumbrāji (swamp forests) PNT, 15 June 2002 (1, forest edge, leg. D. Telnov); Rozēni, Salacas ieleja (valley) PNT, 15 June 2002 (2, Salaca riverside, leg. D. Telnov); Zvejniekciems env., between Lauči and Kursiši, 17 July 2005 (1, seashore, leg. D. Telnov); Madona d.: Barkava E env., 23 May 2005 (1, deciduous forest, leg. C. Fägerström); Ogre d.: Jumprava, 10 July 2008 (1, leg. A. Barševskis); Madliena, 30 July 2005 (5, valley of the Abze River, on *Lythrum*, leg. D. Telnov); Preiļi d.: Jersika, Kurpnieki house, 18 August 2006 (2, leg. A. Barševskis), 4–5

August 2007 (2, leg. A. Barševskis), 6 August 2008 (1, leg. K. Barševska); Rēzekne d.: Puša, 25 May 2002 (1, leg. A. Barševskis); Rīga: Jugla, bank of Lake Juglas near Strazdu muižas (manor) park, 1 August 2006 (1, leg. D. Telnov); Vecdaugava, 1 July 1974 (1, leg. anonymous); Rīga d.: Carnikava, 20 June 1969 (1, leg. anonymous); Carnikava NW env., mouth of the Gauja River, Piejūras PNT, 18 June 2003 (1, forested fen, leg. I. Salmāne); Cekule, 26 June 1991 (1, leg. F. Kovaļevskis), 25 June 1994 (2, the Mazā Jugla riverside, leg. D. Telnov), 12 July 2002 (1, riverbank, leg. D. Telnov), 24 June 2003 (1, firebreak in mixed forest, leg. D. Telnov); Inčupe, mouth of the Inčupe River, Piejūras PNT, 6 July 2003 (2, seashore, on *Lythrum*, leg. D. Telnov), 9 July 2005 (1, valley of the river, leg. K. Greķe); Jaunķemeri, Lake Slokas NW env., Ķemeri NP, 3 June 2007 (1, bushes, leg. D. Telnov); Ķemeri, 7 August 1948 (1, leg. M. Stiprais); Priežuciems, 8 June 1997 (1, mixed forest, leg. F. Kovaļevskis); Ropaži, 6 July 1969 (10, leg. anonymous); Saulkrasti, 15 August 1975 (2, the Ķīšupe riverside, on *Lythrum*, leg. anonymous); Sigulda, Gauja NP, 29 May 1969 (3, leg. anonymous), 7 June 1971 (1, the Gauja riverside, leg. anonymous), 13 June 2003 (2, bank of pond, leg. D. Telnov); Spuņciems, 6 August 2009 (2, leg. A. Barševskis); Jūrmala, Asari, 15 July 1987 (1, valley of the Lielupe River, leg. D. Telnov); Jūrmala, Bulduri, 13 August 1987 (1, seashore, leg. D. Telnov); Jūrmala, Kauguri, 1994 (13, seashore, dunes, leg. A. Barševskis); Lake Lielais Baltezers, Lielā Baltezers salas (islands) PNT, 30 June 1990 (1, bank of lake, leg. D. Telnov); Lake Ziemeļu Garezers env., Piejūras PNT, 28 May 2005 (2, edge of mixed forest, on *Lythrum*, leg. I. Salmāne); Upesciems, 8 August 1989 (1, bank of Lake Mašeņu, leg. F. Kovaļevskis), 23 May 2003 (1, leg. D. Telnov); Talsi d.: Ances meži un purvi (forests and bogs) PNT, 27 June 2006 (1, leg. U. Valainis); Kolka, Slītere National Park, 10 July 1993 (3, bank of pond, leg. D. Telnov); Mazirbe, 5 August 2002 (4, leg. A. Barševskis); Sabile, 4 August 1998 (3, meadow near the Atmata River, leg. A. Barševskis); Tukums d.: Abrogciems, Engures ezera (lake) Nature Park, 26 August 1991 (16, coastal meadow, on *Lythrum*, leg. D. Telnov); between Antīnciems and Lapmežciems, Ķemeri NP, 12 June 2005 (4, bank of Lake Kaņieris, leg. D. Telnov); Bērzciems env., Lake Engurs PNT, 22 June 1995 (1, meadow, leg. A. Karpa), 16 August 1995 (1, meadow, leg. A. Karpa), 20 June 2000 (2, leg. A. Karpa), 5 July 2000 (10, leg. A. Karpa), 10 July 2001 (1, ox-bow, leg. A. Karpa), 1 August 2001 (10, meadow, leg. A. Karpa), 8 July 2002 (1, bog, leg. A. Karpa), 14 August 2002 (10, meadow, leg. A. Karpa), 2 July 2003 (1, meadow, leg. A. Karpa), 5 August 2003 (1, meadow, leg. A. Karpa), 20 July 2004 (4, meadow, leg. K. Vilks), 11 August 2004 (11, meadow, leg. K. Vilks), 20 July 2005 (1, bank of Lake Engurs, K. Vilks), 19 June 2007 (3, wet meadow, leg. K. Vilks), 20 July 2007 (3, wet meadow near lake, leg. K. Vilks), 13 August 2007 (10, wet meadow, leg. K. Vilks); Engure, 22 July 1975 (4, on

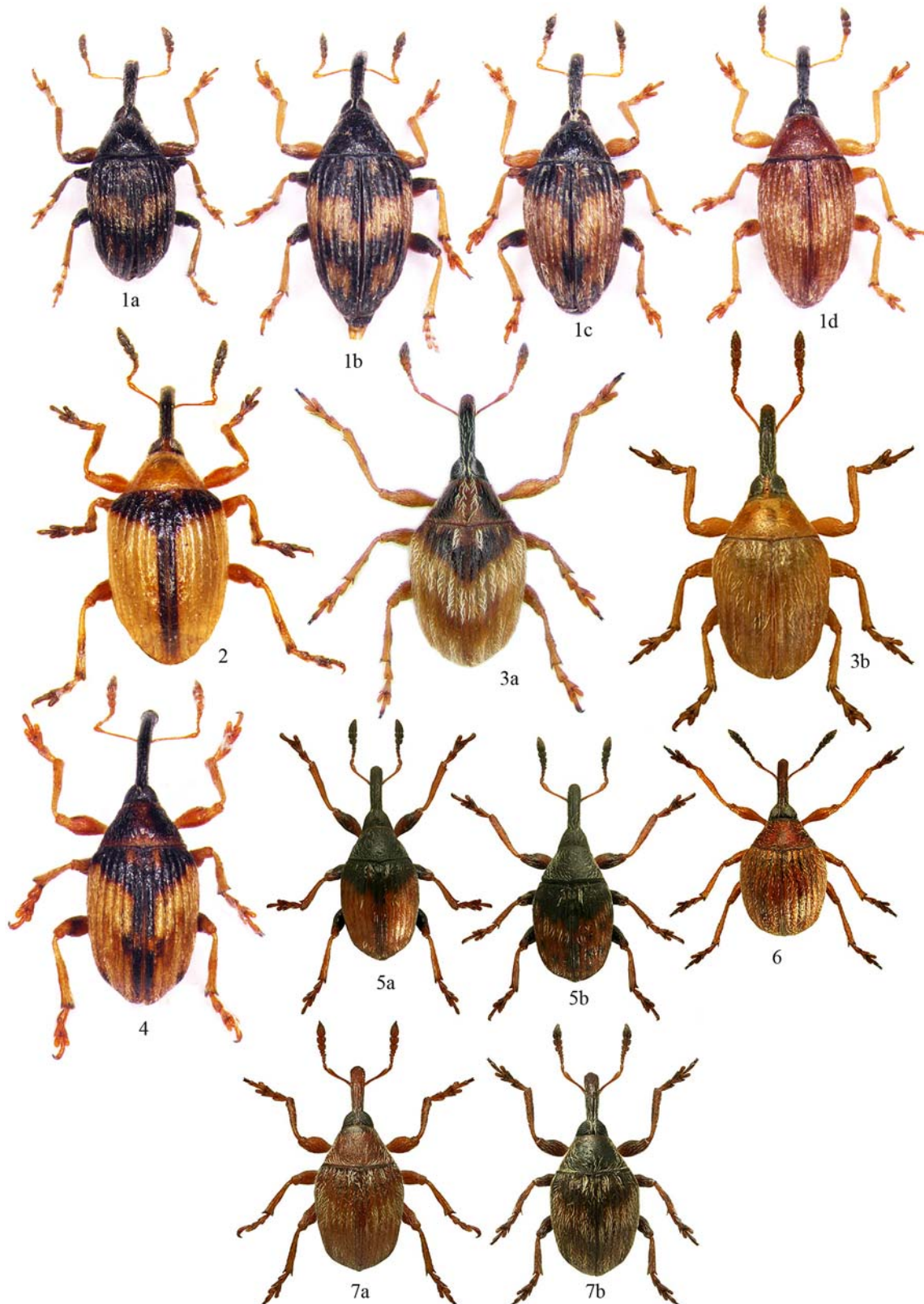


Figure 1–7. Nanophyinae habitus, dorsal view: 1 – *Nanophyes marmoratus*, 2 – *Nanomimus circumscriptus*, 3 – *Nanomimus hemisphaericus*, 4 – *Nanophyes globiformis*, 5 – *Nanophyes globulus*, 6 – *Microon sahlbergi* and 7 – *Nanophyes brevis* (Figure 3a from www.zin.ru/Animalia/Coleoptera, © K.V. Makarov; Figures 3b, 5a, 5b, 6, 7a, 7b – after Borowiec 2007; other photos by A. Bukejs).

Lythrum, leg. anonymous); Raganu bog, Kemeru NW env., Kemeru NP, 12 June 2005 (3, margin of raised bog,

on *Lythrum*, leg. D. Telnov); Valka d.: Burgas plavas (meadows) PNT, 29 July 2006 (1, floodland, D. Telnov);

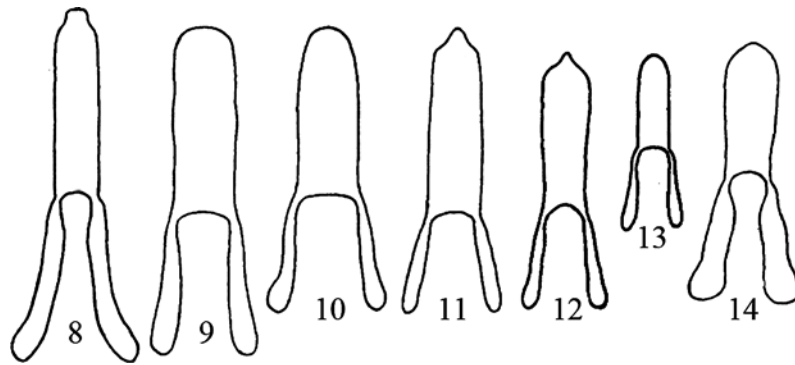


Figure 8–14. Nanophyinae aedeagi (after Dieckmann 1963): 8 – *Nanophyes marmoratus*, 9 – *Nanomimus circumscriptus*, 10 – *Nanomimus hemisphaericus*, 11 – *Nanophyes globiformis*, 12 – *Nanophyes globulus*, 13 – *Microon sahlbergi* and 14 – *Nanophyes brevis*.

Sedas tīrelis (moorland), 7 June 2001 (1, mixed forest, leg. M. Kalniņš); Trikāta, Rūtiņi house, 29 July – 29 August 1992 (2, wet meadow, leg. M. Kalniņš); Ventspils d.: Moricsala Isl., Moricsala Nature Reserve, July 2003 (1, window trap, leg. U. Valainis); Muižnieki, 57°28'20"N 21°43'19"E, 29 July 2005 (11, leg. A. Barševskis, A. Bukejs, U. Valainis); Usma, 6 May 2006 (4, bank of Lake Usma, leg. D. Telnov), 57°12'37"N

22°09'23"E, 19 July 2007 (6, bank of Lake Usma, leg. A. Barševskis, A. Pankjāns, U. Valainis, A. Soldāns).

Host plants: *Lythrum* (Lythraceae).

Phenology: V, VI, VII, VIII, IX (2).

General distribution: Nominotypical subspecies is distributed in Europe, N Africa, Near East, Kazakhstan, western and central Siberia, South Korea; ssp. *miguelangeli* Zherikhin, 1996 distributed in Russian Far East and Japan. [PAL]

Note: The most common and widespread nanophylin species in Latvia.

Nanomimus Alonso-Zarazaga, 1989

N. circumscriptus (Aubé, 1864)

References: Varzinska and Milenders (1981) (*Nanophyes*), Telnov et al. (1997) (*Nanophyes*), (2006, 2010), Telnov (2004) and Kalniņš et al. (2007).

Material examined: 24 specimens: Alūksne d.: Strautiņi, 28 July 2005 (1, bank of pond, leg. A. Napolov); Cēsis d.: Straupe S env., Klāmaņi house, at the pond Milmeņū, Gauja NP, 11 June 2005 (1, wet meadow, leg. D. Telnov), 11 June 2005 (1, marsh, leg. C. Fägerström); Krāslava d.: Asūne SE env., 30 June 2006 (2, bank of Lake Mazais Asūnes, on *Lythrum*, leg. D. Telnov); Liepāja d.: Lake Papes N env., 17 June 2005 (7, wet meadow, on *Lythrum salicaria*, leg. D. Telnov); Limbaži d.: between Aināži and Kuiviži, Randu pļavas (meadows) PNT, 12 August 2008 (1, coastal meadows, leg. A. Karpā); Madona d.: Barkava env., Barkavas ozolu audze (oak forest) PNT, 10 June 2006 (4, the left bank of the Lisiņa River, wet meadow, on *Lythrum*, leg. D. Telnov); Rīga: Spilves meadows, 5 June 1989 (1, wet meadow, leg. D. Telnov); Rīga d.: Dzidriņas, 9 June 2006 (1, wet meadow, on *Lythrum*, leg. D. Telnov); Jūrmala, Sloka,

Spilves meadows near Lake Slokas, Ķemeri NP, 6 June 1974 (1, wet meadow, leg. Z. Spuris); Talsi d.: Roja 1 km NW, 1 June 2003 (1 dry specimen, Rīga Gulf shore, leg. D. Telnov); Valka d.: Vijciems env., 29 May 2005 (2, the Gauja riverside, on *Lythrum*, leg. D. Telnov); Ventspils d.: Moricsala Isl., Moricsala Nature Reserve, September 2003 (1, window trap, leg. U. Valainis).

Host plants: *Lythrum* (Lythraceae).

Phenology: V (3), VI, VII, VIII, IX.

General distribution: Europe, Caucasus, W Siberia, Kazakhstan, Russian Far East. [TEA-AD]

Note: A rather infrequent species in Latvia, previously known only from three localities.

An illustrated key to Nanophyinae of the Baltic States, Belarus and Northern Europe

1. Elytra elongated-oval (Fig. 1) or broadly oval (Figs. 2, 3, 4, 5, 7), elytral vestiture fasciate. Erect specialised setae present on tibiae, pronotum and odd elytral intervals..... 2
- Elytra subglobular (Fig. 6), strongly rounded laterally, elytral vestiture not fasciate. Erect setae present only on the 9th elytral interval. Coloration of the upper surface reddish-brown, rarely, the discal part of elytra darkened. Body length 1.3–1.5 mm. Habitus (Fig. 6). Rostrum = (Fig. 20). Aedeagus (Fig. 13). Feeds on *Peplis portula* L. Known from N Belarus, Estonia, Karelia, Finland, and Sweden..... *Microon sahlbergi* (Sahlberg, 1835)
2. Body elongated-oval. Lateral sides of meso- and metathorax with spots of dense white scales. Coloration of dorsum variable from yellowish to maculate or almost uniformly black. Larger, body length 1.4–2.1 mm. Habitus (Fig. 1). Rostrum (Fig. 15). Aedeagus (Fig. 8). Feeds on *Lythrum* spp. Known from Belarus, Finland, Estonia, Latvia, Lithuania, Karelia, Norway, and Sweden. *Nanophyes marmoratus marmoratus* (Goeze, 1777)
 - Body broadly oval. Lateral sides of meso- and metathorax without spots of white dense scales 3
 - 3. Body length > 2 mm..... 4
 - Body length < 1.8 mm..... 6

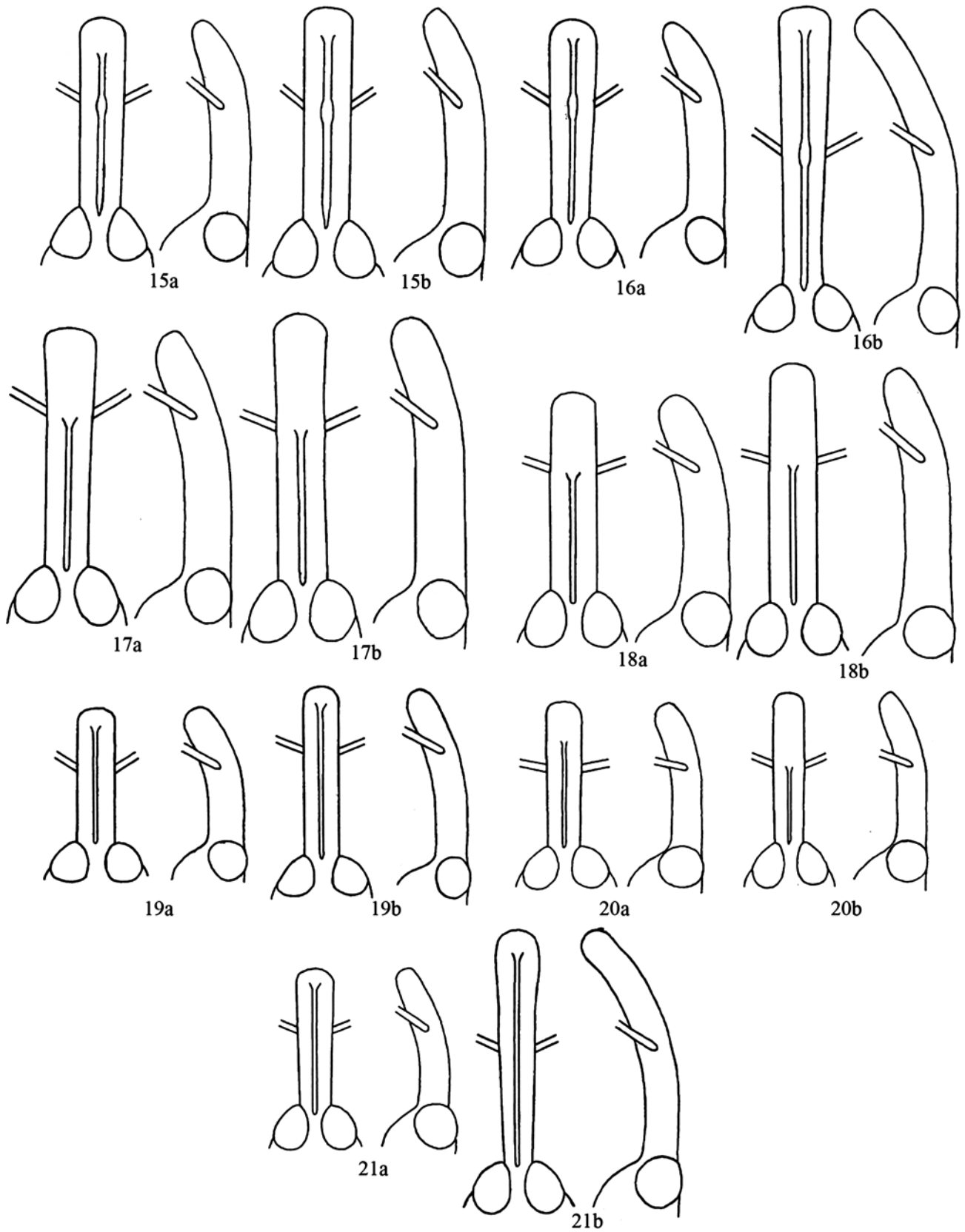


Figure 15–21. Nanophyinae rostrums, dorsal and lateral views (after Dieckmann 1963): 15a – *Nanophyes marmoratus* ♂, 15b – *N. marmoratus* ♀; 16a – *Nanophyes globiformis* ♂, 16b – *N. globiformis* ♀; 17a – *Nanomimus circumscriptus* ♂, 17b – *N. circumscriptus* ♀; 18a – *Nanomimus hemisphaericus* ♂, 18b – *N. hemisphaericus* ♀; 19a – *Nanophyes globulus* ♂, 19b – *N. globulus* ♀; 20a – *Microon sahlbergi* ♂, 20b – *M. sahlbergi* ♀; and 21a – *Nanophyes brevis* ♂, 21b – *Nanophyes brevis* ♀.

4. Rostrum with carina stretching from the base almost to the anterior margin. Profemur without spine. Body length 1.6–2.2 mm *Nanophyes globiformis* (see also thesis 6).
- Rostrum with carina stretching from the base to the insertion of antennae. Profemur usually with minute spine..... 5
5. Elytra distinctly narrowed in apical part. In dorsal view, apical part of rostrum usually slightly expanded (Fig. 17). Coloration of elytra yellowish, base, suture and lateral margins completely dark. Body length 2.0–2.5 mm. Habitus (Fig. 2). Aedeagus (Fig. 9). Feeds on *Lythrum* spp. Known from NW Belarus, Estonia, Finland, Latvia, and Sweden *Nanomimus circumscriptus* (Aubé, 1864)
- Elytra narrowed from basal third toward the apex. In dorsal view, apical part of rostrum usually slightly tapered (Fig. 18). Coloration of elytra yellowish, only base black (black coloration can be partly or completely reduced in certain specimens), suture always light and concolorous with elytra. Body length 2.0–2.5 mm. Habitus (Fig. 3). Aedeagus (Fig. 10). Feeds on *Lythrum* spp. Known from Belarus *Nanomimus hemisphaericus* (Olivier, 1807)
6. Rostrum shorter, in lateral view, almost straight to slightly curved (Fig. 19). Smaller, body length 1.2–1.5 mm. Coloration of elytra varies from yellow to reddish brown, basal part of elytra and pronotum always black; elytral suture and disc with black irregular pattern, which can be more or less reduced in certain specimens. Habitus (Fig. 6). Aedeagus (Fig. 12). Feeds on *Peplis portula* L. Known from NW Belarus, Lithuania, and Sweden *Nanophyes globulus* (Germar, 1821)
- Rostrum longer, in lateral view, distinctly curved and arc-shaped (especially in females) (Figs. 16, 21). Larger, body length not less than 1.6 mm..... 6
7. Elytral pattern distinct and contrasting, basal triangular spot and suture darkened, suture often interrupted by a median pale spot. Median funicular antennomeres slightly elongate. Rostrum slightly longer (ratio length/width in dorsal view: 4.4–4.7 in male, 5.6–6.0 in female) (Fig. 16). Larger, body length 1.6–2.2 mm. Habitus (Fig. 4). Aedeagus (Fig. 11). Feeds on *Lythrum* spp. Known from Estonia and Latvia *Nanophyes globiformis* Kiesenwetter, 1864
- Elytral pattern indistinct, more uniformly colored, suture always concolorous with other inner intervals, basal dark triangular spot absent or indistinct. Median funicular antennomeres slightly transverse. Rostrum slightly shorter (ratio length/width in dorsal view: 3.8–4.0 in male, 4.7–5.0 in female) (Fig. 21). Smaller, body length 1.6–1.8 mm. Habitus (Fig. 7). Aedeagus (Fig. 14). Feeds on *Lythrum* spp. Known from Poland (Wanat and Szypuła 2008; Wanat and Borowski (in press)) where it is widespread and also recorded near (ca. 20 km) the border of Belarus (M. Wanat, pers. comm. 2012) *Nanophyes brevis* Boheman, 1845

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