

## FAUNISTICAL RECORDS OF THE AQUATIC ADEPHAGOUS BEETLES (COLEOPTERA: DYTISCIFORMIA) IN LATVIA

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Bukejs A., Balalaikins M. 2008. Faunistical records of the aquatic adepagous beetles (Coleoptera: Dytisciformia) in Latvia. *Acta Biol. Univ. Daugavp.*, 8(2): 273 - 281.

In the article the data about adepagous aquatic beetles (Dytisciformia) is presented, that was collected in the eastern part of Latvia (Balvi, Daugavpils, Jēkabpils, Ludza, Preiļi and Rēzekne districts) from 1999 to 2006. Material was collected using hydroentomological net, bottle-type traps and light traps and was collected in place of hibernation. As a result of our research 617 specimens that belong to 62 species and 22 genera of aquatic Adepaga were collected.

Key words: Coleoptera, Adepaga, Gyrinidae, Haliplidae, Noteridae, Dytiscidae, fauna, Latvia.

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### INTRODUCTION

In the fauna of Latvia 144 species of aquatic beetle from suborder of Adepaga are known (Barševskis, Kalniņš, Cibulskis 2005), that belong to four families: Gyrinidae (11 species), Haliplidae (15 species), Noteridae (2 species) and Dytiscidae (116 species).

In this article the data about adepagous aquatic beetles (Dytisciformia) is presented, that was collected in the eastern part of Latvia from 1999 to 2006. In administrative aspect this territory includes Daugavpils, Preiļi, Jēkabpils, Balvi, Rēzekne and Ludza districts. In last two decades the fauna of Coleoptera is learned intensively. Vast fauna data about beetles are published in Barševskis' monograph "The beetles of the

Eastern Latvia" (1993). Specific compound of every administrative district is shown in a summarizing publication about beetles Adepaga in Latgale (Barševskis 1993, 1999). Analyzing the data of these publications, uneven distributing of amount of species in the districts is noticeable. Firstly it is linked with biodiversity of every district. In the Eastern part of Latvia the valley of the river Daugava (from the boarder with Byelorussia till Daugavpils) and arrays of bogs near the Lubāns lake are considered as unique and the most biologically variable. Secondly, evenness of studied of concrete territory influences on the established number of species. In the Eastern part of Latvia Ludza, Balvi and Jēkabpils districts are less studied. To these territories in our research is paid the most attention.

## STUDY AREA AND METHODS

The material was collected since 1999 till 2006 in eastern part of Latvia: in Balvi, Daugavpils, Jēkabpils, Ludza, Preiļi and Rēzekne districts (Fig. 1). The various reservoirs were investigated.

Balvi district: Tilžas civil parish (lake Tilžas), Baltinavas civil parish (river Kūkovas, river Rītupe, lake Motrines, lake Obeļovas, Obeļovas water-pit, lake Svātūnes), Rugāju civil parish (river Vārnīene).

Daugavpils district: Skrundalienas civil parish (lake Sītas, lake Bedušu, lake Silas, lake Riču, ditches, small ponds and rivulets), Dvietes civil parish (small ponds).

Jēkabpils district: Dignājas civil parish (river Daugava, small ponds, ditches and rivulets).

Ludza district: Salnava civil parish (Zatišķu water-pit, Salnava pond, river Rītupe, small ponds and ditches), Kārsava (river Šņitka, school pond and small ponds), Cirsma civil parish (lake Cirsma), Pušmucova civil parish (small ponds), Pureņu civil parish (lake Dukānu), Nukšu civil parish (lake Pildas), Malnavas civil parish (water-pit), Isnaudas civil parish (small ponds).

Preiļi district: Rušonas civil parish (lake Sekstu, lake Feimaņu, river Rušonīca, river Dubna).

Rēzekne district: Kaunata civil parish (lake Rāznas, lake Kaunatas), Gaigalava civil parish (river Aiviekste, river Rēzekne, lake Lubāns, Kvāpānu ponds), Nagļu civil parish (storage lake Nagļu and small ponds), Bērzgales civil parish (lake Micānu, lake Meiranu, lake Kapineits), Verēmu civil parish (lake Adamovas), Pušas civil parish (lake Rušons), Makoņkalna civil parish (lake Solojs), Rēzekne city (lake Kovšu).

Material was collected mainly using hydroentomological net. Other standard entomological methods also were used: bottle-type traps (volume 5 l), collecting flying beetles to light traps and collecting in place of hibernation.

The given data about aquatic adepagous beetles spreading in the eastern part of Latvia were compared with the published earlier data (Barševskis 1999; Barševskis, Kalniņš, Cibuļskis 2005; Barševskis et al. 2002; Cibuļskis 2002; Kalniņš 1999, 2003).

The systematics of adepagous aquatic beetles (Dytisciformia), which applied in monograph



Fig. 1. Location of research area: B – Balvi district, D – Daugavpils district, J – Jēkabpils district, L – Ludza district, P – Preiļi district, R – Rēzekne district.

(Barševskis, Kalniņš, Cibulskis 2005), is used in this article.

The majority of the investigated material is stored in the collection of Institute of Systematic Biology Daugavpils University (DUBC). Some single specimens are kept in the private collection of Andris Bukejs (Daugavpils, Latvia).

## RESULTS

As a result of our research 617 specimens that belong to 62 species (43,1% from all Dytisciformia known in Latvia) and 22 genera (75,9%) of aquatic Adepaga were collected: Gyrinidae – 7 species (63 specimens), Haliplidae - 5 species (17 specimens), Noteridae – 2 species (21 specimens) and Dytiscidae – 48 species (534 specimens).

In the species list after the species name general number of specimens in brackets [ ], the place where it was found and the collecting date are indicated, in the brackets ( ) are indicated the number of collected specimens, information about habitat and collector's name. When "leg." was not given for the species it means that the species was collected by Maksims Balalaikins.

Further abbreviations used: distr. – district, civ.p. – civil parish, env. – environ.

## LIST OF SPECIES

### Adepaga Schellenberg, 1806

#### Gyrinidae Latreille, 1810

1. *Gyrinus opacus* Sahlberg, 1819 – [1 ex.]: Jēkabpils distr., Dignājas civ. p., 12.X.2003 (1, forest, ditch).
2. *Gyrinus aeratus* Stephens, 1835 – [16 exx.]: Preiļi distr., Rušonas civ. p., 14.VIII.2004 (3, river Rušonīca); Ludza distr., Bļāši, 07.VIII.2004 (1, pond), 06.IX.2003 (8, river Rītupe), 06.IX.2003 (1, small pond), 06.IX.2003 (1, ditch); Ludza distr., Zatišķi,

21.IX.2003 (1, water-pit); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, river Kūkovas).

3. *Gyrinus pullatus* Zaitzev, 1908 – [11 exx.]: Ludza distr., Bļāši, 11.XI.1999 (3, ditch), 04.XI.2000 (1, ditch), 06.VII.2001 (5, river Rītupe); Ludza distr., Zatišķi, 21.IX.2003 (1, water-pit); Ludza distr., Pušmucovas civ. p., 22.VII.2004 (1, pond).
4. *Gyrinus marinus* Gyllenhal, 1808 – [2 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Obeļovas).
5. *Gyrinus natator* (Linnaeus, 1758) – [16 exx.]: Ludza distr., Kārsava, 15.III.2000 (2, river Šņitka); Ludza distr., Bļāši, 15.VII.1999 (1, ditch), 15.VIII.1999 (1, pond), 20.V.2000 (1, ditch), 04.XI.2000 (1, ditch), 06.VII.2001 (1, river Rītupe), 06.IX.2003 (1, ditch), 27.IX.2003 (1, ditch); Ludza distr., Pušmucovas civ. p., 21.VII.2004 (1, pond); Balvi distr., Rugāju civ. p., 05.IX.2002 (1, river Vārniene); Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (1, lake Rāznas); Jēkabpils distr., Dignājas civ. p., 22.VI.2000 (1, forest, pool), 12.X.2003 (1, forest, ditch); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (2, pond).
6. *Gyrinus substriatus* Stephens, 1828 – [10 exx.]: Ludza distr., Kārsava, 15.III.2000 (2, lake Šņitka); Ludza distr., Bļāši, 11.VIII.2001 (3, pool), 06.IX.2003 (1, river Rītupe); Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (2, lake Rāznas); Jēkabpils distr., Dignāja 22.VI.2000 (1, forest, pool); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, pond).
7. *Gyrinus paykulli* Ochs, 1927 – [7 exx.]: Balvi distr., Tilžas civ. p., 05.IX.2003 (1, river Tilžas); Ludza distr., Bļāši, 06.VII.2001 (1, river Rītupe); Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (1, lake Rāznas); Rēzekne distr., Mākoņkalna civ. p., 10.IX.2004 (2, lake Solojs); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Meirānu); Jēkabpils distr., Dignājas civ. p., 22.VIII.2003 (1, pond).

**Haliplidae Aube, 1836**

8. *Haliplus fulvus* (Fabricius, 1801) – [8 exx.]: Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (5, lake Rāznas); Rēzekne distr., Rēzekne city, 13.IX.2003 (1, lake Kovšu); Ludza distr., Zatiški, 29.VIII.2002 (1, water-pit); Ludza distr., Bļāši, 04.X.1999 (1, pond).
9. *Haliplus variegatus* Sturm, 1834 – [1 ex.]: Ludza distr., Bļāši, 04.X.1999 (1, pond).
10. *Haliplus confinis* Stephens, 1829 – [1 ex.]: Daugavpils distr., Silene Nature Park, 16.VII.2006 (1, lake Riču, sandy bank, leg. A. Bukejs & M. Balalainiks).
11. *Haliplus fulvicollis* Erichson, 1837 – [1 ex.]: Ludza distr., Bļāši, 29.X.2000 (1, pond).
12. *Haliplus lineolatus* Mannerheim, 1844 – [6 exx.]: Ludza distr., Bļāši, 15.VII.1999 (3, pond); Ludza distr., Zatiški, 29.VIII.2002 (3, water-pit).

**Noteridae Aube, 1836**

13. *Noterus clavicornis* (De Geer, 1774) – [1 ex.]: Preiļi distr., Rušonas civ. p., 07.VIII.2004 (1, lake Feimaņu).
14. *Noterus crassicornis* (Müller, 1776) – [20 exx.]: Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (1, lake Rāznas); Rēzeknes distr., Kaunatas civ. p., 28.VIII.2004 (1, lake Kaunatas); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Micānu), 10.IX.2003 (1, lake Meirānu); Ludza distr., Bļāši, 04.X.1999 (1, pond), 11.VIII.2001 (1, puddle), 07.IX.2003 (1, moist meadow); Ludza distr., Kārsava, 25.VIII.2000 (1, school pond); Daugavpils distr., Dviete, 05.IX.2003 (10, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (2, lake Motrīnes).

**Dytiscidae Leach, 1815**

15. *Copelatus haemorrhoidalis* (Fabricius, 1787) – [1 ex.]: Ludza distr., Bļāši, 06.V.2001 (1, pond).

16. *Laccophilus hyalinus* (De Geer, 1774) – [37 exx.]: Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (4, lake Rāznas); Ludza distr., Kārsava, 19.VIII.2001 (1, school pond); Ludza distr., Salnavas civ. p., 07.X.2000 (1, forest, pond); Ludza distr., Bļāši, 04.X.1999 (2, pond), 23.IV.2000 (2, light trap), 26.VIII.2000 (1, forest, puddle), 06.IX.2003 (1, river Rītupe), 07.IX.2003 (1, moist meadow); Balvi distr., Tilžas civ. p., 05.IX.2002 (1, river Tilžas), 05.IX.2002 (3, river Raicene); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (10, river Daugava), 11.X.2003 (6, river Daugava); Preiļi distr., Līvāni, 07.IX.2003 (2, river Dubna).
17. *Laccophilus minutus* (Linnaeus, 1758) – [5 exx.]: Balvi distr., Tilžas civ. p., 05.IX.2002 (1, river Raicene); Ludza distr., Bļāši, 15.VII.1999 (2, pond), 07.IX.2003 (1, ditch); Ludza distr., Isnaudas civ. p., 21.VII.2004 (1, pond).
18. *Hydroglyphus geminus* (Fabricius, 1787) = *pusillus* (Fabricius, 1781) – [2 exx.]: Ludza distr., Bļāši, 22.X.2000 (1, ditch), 29.X.2000 (1, pond).
19. *Hygrotus inaequalis* (Fabricius, 1777) – [5 exx.]: Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Micānu); Rēzekne distr., Kaunatas civ. p., 28.VIII.2004 (1, lake Kaunatas); Ludza distr., Bļāši, 06.IX.2003 (1, ditch); Ludza distr., Isnaudas civ. p., 21.07.2004 (1, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes).
20. *Hygrotus versicolor* (Schaller, 1783) – [2 exx.]: Balvi distr., Tilžas civ. p., 05.IX.2002 (1, river Tilžas); Jēkabpils distr., Dignājas civ. p., 11.X.2003. (1, river Daugava).
21. *Hygrotus impressopunctatus* (Schall, 1783) – [16 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond), 15.VII.2001 (2, puddle in forest), 06.IX.2003 (5, ditch), 07.IX.2003. (4, moist meadow), 07.VIII.2004 (3, pond), 07.IX.2004 (1, river Rītupe).

22. *Hyphydrus ovatus* (Linnaeus, 1761) – [16 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond), 15.VIII.1999 (2), 01.IX.2001 (3, ditch), 06.IX.2003 (2, ditch), 06.IX.2003 (3, river Rītupe); Ludza distr., Zatiški, 21.IX.2003 (1, water-pit); Balvi distr., Lūbenka, 29.VIII.2002 (1, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Micānu); Rēzekne city, 13.IX.2003 (1, lake Kovšu). 29.IV.2001 (1, moist meadow), 06.V.2001 (2, pond), 01.IX.2001 (3, ditch), 07.VIII.2004 (1, pond); Ludza distr., Pureņu civ. p., 08.VII.2004 (1, lake Dūkanu); Ludza distr., Isnaudas civ. p., 21.VII.2004 (1, pond); Ludza distr., Kārsava, 15.III.2000 (2, river Šņitka), 25.VIII.2000 (2, school pond); Jēkabpils distr., Dignāja, 22.VI.2000 (3, puddle in forest); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (2, pond).
23. *Hydroporus nigrita* (Fabricius, 1792) – [6 exx.]: Ludzas distr., Bļāši, 26.VIII.2000 (1, puddle in forest), 07.X.2000 (1, pond in forest), 15.VII.2001 (1, puddle on meadow), 07.VIII.2004 (1, pond); Ludza distr., Rogi, 31.VIII.2003 (1, puddle in forest); Ludza distr., Kārsava, 25.VIII.2000 (1, school pond).
24. *Hydroporus planus* (Fabricius, 1781). – [7 exx.]: Ludza distr., Bļāši, 04.X.1999 (1, pond), 26.VIII.2000 (2, puddle in forest), 29.X.2000 (2, pond), 29.IV.2001 (1, moist meadow); Ludza distr., Rogi, 31.VIII.2003 (1, puddle in forest).
25. *Hydroporus obscurus* Sturm, 1835 – [8 exx.]: Ludza distr., Kārsava, 25.VIII.2000 (2, school pond); Ludza distr., Bļāši, 26.VIII.2000 (3, puddle in forest), 07.X.2000 (3, pond in forest).
26. *Hydroporus melanarius* Sturm, 1835 – [6 exx.]: Ludza distr., Bļāši, 04.X.1999 (1, pond), 26.VIII.2000 (3, puddle in forest), 11.VIII.2001 (1, puddle); Jēkabpils distr., Dignāja, 22.VI.2000 (1, puddle in forest).
27. *Hydroporus tristis* (Paykull, 1798) – [1 ex.]: Ludza distr., Bļāši, 06.IX.2003 (1, ditch).
28. *Hydroporus umbrosus* (Gyllenhal, 1808) – [1 ex.]: Ludza distr., Bļāši, 06.IX.2003 (1, ditch).
29. *Hydroporus palustris* (Linnaeus, 1761) – [40 exx.]: Ludza distr., Bļāši, 15.VII.1999 (4, pond), 23.IV.2000 (1, light trap), 20.V.2000 (2, ditch), 26.VIII.2000 (7, puddle in forest), 07.X.2000 (3, pond in forest), 11.VIII.2001 (5, puddle), 30. *Porhydrus lineatus* (Fabricius, 1775) – [36 exx.]: Ludza distr., Kārsava, 19.VIII.2001 (2, school pond); Ludza distr., Zatiški, 29.VIII.2002 (4, water-pit); Ludza distr., Bļāši, 15.VII.1999 (1, pond), 04.X.1999 (1, pond), 11.XI.1999 (1, ditch), 20.V.2000 (3, ditch), 26.VIII.2000 (1, puddle in forest), 29.X.2000 (3, pond), 29.IV.2001 (4, moist meadow), 01.IX.2001 (1, ditch), 06.IX.2003 (10, ditch), 06.IX.2003 (3, river Rītupe); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, pond); Rēzekne distr., Rēzekne city, 13.IX.2003 (1, lake Kovšu).
31. *Suphrodytes dorsalis* (Fabricius, 1787) – [8 exx.]: Ludza distr., Bļāši, 11.XI.1999 (1, ditch), 20.V.2000 (2, ditch), 15.VII.2001 (3, puddle on meadow), 06.IX.2003 (1, ditch); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (1, river Daugava).
32. *Scarodytes halensis* (Fabricius, 1787) – [1 ex.]: Ludza distr., Bļāši, 11.VIII.2001 (1, puddle).
33. *Nebrioporus assimilis* (Paykull, 1798) – [1 ex.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond).
34. *Nebrioporus depressus* (Fabricius, 1775) – [1 ex.]: Daugavpils distr., Silene Nature Park, 06.VII.2006 (1, lake Riču, sandy bank, leg. A. Bukejs & M. Balalajkins).
35. *Platambus maculatus* (Linnaeus, 1758) – [19 exx.]: Ludza distr., Bļāši, 15.VII.1999 (3, pond), 22.X.2000 (1, ditch), 29.X.2000 (1, pond), 25.VII.2001 (2, river Rītupe), 07.VIII.2004 (1, pond); Rēzekne distr.,

- Kaunatas civ. p., 29.VIII.2001 (6, lake Rāzns); Rēzekne distr., Nagļu civ. p., 31.VIII.2004 (3, storage lake Nagļi); Rēzekne distr., Pušas civ. p., Kirkiliški env., 22.VI.2006 (1, lake Rušons, leg. A. Bukejs & M. Balalaikins); Balvi distr., Tilžas civ. p., 05.IX.2002 (1, river Tilžas); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes).
36. *Agabus paludosus* (Fabricius, 1801) – [23 exx.]: Ludza distr., Kārsava, 15.III.2000 (3, river Šņitka); Ludza distr., Bļāši, 15.VII.1999 (1, pond), 04.X.1999 (6, pond), 22.X.2000 (4, ditch), 04.XI.2000 (1, ditch), 25.VII.2001 (1, river Rītupe), 06.IX.2003 (1, ditch); Ludzas distr., Salnavas civ. p., 07.X.2000 (1, pond in forest); Jēkabpils distr., Dignāja, 22.VI.2000 (2, puddle in forest); Jēkabpils distr., Dignājas civ. p., 06.IX.2004 (3, pond); Rēzekne distr., Nagļi, 31.VIII.2004. (1, storage lake Nagļi).
37. *Agabus bipustulatus* (Linnaeus, 1767) – [5 exx.]: Jēkabpils distr., Dignājas civ. p., 12.X.2003 (1, ditch in forest), 06.IX.2004 (1, pond); Ludza distr., Bļāši, 27.IX.2003 (1, ditch), Ludza distr., Isnaudas civ. p., 21.VII.2004 (1, pond); Rēzekne distr., Nagļu civ. p., 31.VIII.2004 (3, storage lake Nagļi).
38. *Agabus congener* (Thunberg, 1794) – [11 exx.]: Ludza distr., Bļāši, 22.X.2000 (6, ditch), 15.VII.2001 (1, puddle on meadow), 06.IX.2003 (1, ditch); Rēzekne distr., Nagļi, 31.VIII.2004 (1, storage lake Nagļi).
39. *Agabus undulatus* (Schränk, 1776) – [3 exx.]: Jēkabpils distr., Dignāja, 22.VI.2000 (1, puddle in forest); Ludza distr., Bļāši, 15.VIII.1999 (1, pond); Daugavpils distr., Silene Nature park, Ilgas, 16.VI.1999 (1, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes).
40. *Ilybius subaeneus* Erichson, 1837 – [4 exx.]: Ludza distr., Bļāši, 22.X.2000 (1, ditch), 04.XI.2000 (1, ditch), 29.IV.2001 (1, moist meadow); Rēzekne distr., Kaunatas civ. p., 29.VIII.2001 (1, lake Rāzns).
41. *Ilybius ater* (De Geer, 1774) – [25 exx.]: Ludza distr., Bļāši, 15.VII.1999 (3, pond), 29.X.2000 (1, pond), 25.VII.2001 (1, river Rītupe), 11.VIII.2001 (1, puddle), 01.IX.2001 (1, ditch), 06.IX.2003 (3, ditch), 07.09.2003 (2, moist meadow), 07.VIII.2004 (3, pond); Ludza distr., Isnaudas civ. p., 21.VII.2004 (2, pond); Ludza distr., Pureņu civ. p., 08.VII.2004 (1, lake Dūkanu); Ludza distr., Ņukšu civ. p., 08.VII.2004 (1, lake Pildas); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (2, pond); Daugavpils distr., Dviete, 05.IX.2003 (2, pond); Jēkabpils distr., Dignājas civ. p., 22.VIII.2003 (1, pond); Preiļi distr., Rušonas civ. p., 07.VIII.2004 (1, lake Feimaņu); Rēzekne distr., Verēmu civ. p., 31.VIII.2004 (1, lake Adamovas).
42. *Ilybius fuliginosus* (Fabricius, 1792) – [32 exx.]: Ludza distr., Bļāši, 15.VII.1999 (7, pond), 04.X.1999 (1, pond), 29.IV.2001 (3, moist meadow), 07.VIII.2004 (1, pond), 07.IX.2004 (2, river Rītupe); Ludza distr., Pureņu civ. p., 08.VII.2004 (1, lake Dūkanu); Rēzekne distr., Pušas civ. p., Kirkiliški env., 22.VI.2006 (1, lake Rušonas, sandy bank, leg. A. Bukejs & M. Balalaikins); Jēkabpils distr., Dignāja, 22.VI.2001 (1, river Daugava), 06.IX.2004 (8, pond); Balvi distr., Tilžas civ. p., 05.IX.2002 (4, river Tilžas), 05.IX.2002 (2, river Raicene); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (2, pond).
43. *Ilybius fenestratus* (Fabricius, 1781) – [4 exx.]: Ludza distr., Zatišķi, 29.VIII.2002 (1, water-pit); Ludza distr., Pureņu civ. p., 08.VII.2004 (1, lake Dūkanu); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Micānu), 10.IX.2003 (1, lake Meirānu); Rēzekne distr., Verēmu civ. p., 31.VIII.2004 (1, lake Adamovas).
44. *Rhantus grapii* (Gyllenhal, 1808) – [4 exx.]: Balvi distr., Lūbenka, 29.VIII.2002 (1, pond); Ludza distr., Bļāši, 29.IV.2001 (1, moist meadow), 06.V.2001 (1, pond); Ludza distr., Isnaudas civ. p., 21.07.2004 (1, pond).
45. *Rhantus frontalis* (Marsham, 1802) – [8 exx.]: Ludza distr., Bļāši, 15.VII.1999 (3, pond),

- 06.VII.2001 (1, river Rītupe), 06.IX.2003 (1, ditch), 07.IX.2003 (3, moist meadow); Ludza distr., Zatišķi, 29.VIII.2002 (2, water-pit).
46. *Rhantus notaticollis* (Aube, 1837) – [7 exx.]: Ludza distr., Bļāši, 29.IV.2001 (1, moist meadow), 01.IX.2001 (2, ditch); Ludza distr., Kārsava, 15.VII.1999 (1, pond), 22.IV.2000 (1, puddle); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (2, pond).
47. *Rhantus exsoletus* (Forster, 1771) – [14 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond), 20.V.2000 (2, ditch), 06.V.2001 (2, pond), 06.IX.2003 (2, ditch), 07.IX.2003 (1, moist meadow); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, pond); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (3, river Daugava); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Motrīnes).
48. *Rhantus latitans* Scharp, 1882 – [9 exx.]: Ludzas distr., Bļāši, 15.VII.1999 (3, pond), 20.V.2000 (1, ditch), 15.V.2003 (1, pond); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (3, river Daugava); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Micānu).
49. *Colymbetes fuscus* (Linnaeus, 1758) – [2 exx.]: Ludza distr., Salnava, 29.VIII.2002 (1, pond); Ludza distr., Bļāši, 15.VII.1999 (1, pond); Jēkabpils distr., Dignājas civ. p., 06.IX.2004 (1, pond).
50. *Colymbetes paykulli* Erichson, 1837 – [9 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond), 11.XI.1999 (2, diyeh), 29.04.2001 (1, moist meadow), 01.IX.2001 (1, ditch), 27.IX.2003 (1, ditch); Ludza distr., Salnavas civ. p., 07.X.2000 (1, pool in forest); Jēkabpils distr., Dignājas civ. p., 20.VII.2003 (1, pond), 06.IX.2004 (1, pond).
51. *Colymbetes striatus* (Linnaeus, 1758) – [10 exx.]: Ludza distr., Kārsava, 25.VIII.2000 (1, school pond); Ludza distr., Bļāši, 15.VIII.1999 (1, pond), 02.IV.2000 (2, pond), 29.X.2000 (2, pond), 27.IX.2003 (2, ditch); Ludza distr., Grebņeva, 29.VIII.2002 (1, water-pit); Balvi distr., Balvi, 05.IX.2002 (1, pond).
52. *Hydaticus seminiger* (De Geer, 1774) – [13 exx.]: Ludza distr., Zatišķi, 29.VIII.2002 (1, water-pit); Ludza distr., Bļāši, 15.VI.1999 (2, pond), 15.VIII.1999 (2, pond), 22.IV.2000 (1, pond), 06.IX.2003 (5, ditch); Jēkabpils distr., Dignājas civ. p., 17.VII.2003 (1, pond), 12.X.2003 (1, pool in forest).
53. *Hydaticus transversalis transversalis* (Pontoppidan, 1763) – [8 exx.]: Ludza distr., Zatišķi, 29.VIII.2002 (2, water-pit); Ludza distr., Bļāši, 06.IX.2003 (5, ditch), 06.IX.2003 (1, river Rītupe).
54. *Hydaticus continentalis* Balfour-Browne, 1944 – [3 exx.]: Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (3, pond); Ludza distr., Bļāši, 07.IX.2003 (1, wet meadow).
55. *Graphoderus zonatus zonatus* (Hoppe, 1795) – [3 exx.]: Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (3, pond); Preiļi distr., Rušonas civ. p., 14.VIII.2004 (1, lake Sekstu).
56. *Acilius sulcatus* (Linnaeus, 1758) – [17 exx.]: Ludza distr., Zatišķi, 29.VIII.2002 (1, water-pit); Ludza distr., Bļāši, 15.VII.1999 (4, pond), 07.IX.2003 (1, pond); Daugavpils distr., Silenes Nature Park, Ilgas, VI.1999 (1, leg. A. Bukejs), 16.VI.1999 (4, pond); Daugavpils distr., Dviete, 05.IX.2003 (1, pond); Jēkabpils distr., Dignājas civ. p., 06.IX.2004 (3, pond); Balvi distr., Baltinavas civ. p., 21.IX.2003 (2, lake Svātūnes).
57. *Acilius canaliculatus* (Nicolai, 1822) – [52 exx.]: Ludza distr., Bļāši, 15.VII.1999 (3, pond), 11.XI.1999 (3, ditch), 11.VIII.2001 (2, puddle), 06.IX.2003 (5, river Rītupe), 06.IX.2003 (4, ditch), 07.IX.2003 (1, ditch); Ludza distr., Rogi, 31.VIII.2003 (5, puddle in forest); Ludza distr., Zatišķi, 29.VIII.2002 (1, water-pit), 21.IX.2003 (1, water-pit); Ludza distr., Kārsava, 22.IV.2000 (4, puddle), 25.VIII.2000 (1, school pond); Ludza distr., Isnaudas civ. p., 21.VII.2004 (1, pond); Balvi distr., Balvi, 05.IX.2002 (1, pond); Balvi distr., Lūbenka, 29.VIII.2002 (2, pond); Balvi distr., Baltinavas

- civ. p., 21.IX.2003 (3, lake Obeļovas), 21.IX.2003 (1, river Kūkovas), 21.IX.2003 (2, lake Motrīnes); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, pond); Daugavpils distr., Dviete, 05.IX.2003 (1, pond); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (2, lake Micānu); Rēzekne distr., Rēzekne, 13.IX.2003 (3, lake Kovšu); Jēkabpils distr., Dignājas civ. p., 22.VIII.2003 (1, pond), 06.IX.2004 (3, pond); Preiļi distr., Rušonas civ. p., 07.VIII.2004 (1, lake Feimaņu).
58. *Dytiscus latissimus* Linnaeus, 1758 – [1 ex.]: Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, lake Bedušu). About this record was informed earlier (Barševskis 2001). Protected species in Latvia.
59. *Dytiscus dimidiatus* Bergsträsser, 1778 – [3 exx.]: Ludza distr., Bļāši, 15.VII.1999 (1, pond), 01.IX.2001 (1, ditch); Rēzekne distr., Nagļi, 31.VIII.2004 (1, storage lake Nagļi).
60. *Dytiscus marginalis marginalis* Linnaeus, 1758 – [21 exx.]: Balvi distr., Rugāju civ. p., 05.IX.2002 (1, river Vārniene); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Obeļovas), 21.IX.2003 (1, Obeļovas water-pit); Ludza distr., Kārsava, 25.VIII.2000 (1, school pond); Ludza distr., Bļāši, 15.VII.1999 (7, pond), 29.IV.2001 (1, moist meadow), 06.IX.2003 (1, river Rītupe), 06.IX.2003 (2, ditch), 06.IX.2003 (1, pond); Ludza distr., Zatiški, 29.VIII.2002 (1, water-pit); Ludza distr., Pureņu civ. p., 08.VII.2004 (1, lake Dūkanu); Ludza distr., Isnaudas civ. p., 21.07.2004 (1, pond); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (1, pond); Jēkabpils distr., Dignājas civ. p., 06.IX.2003 (1, river Daugava).
61. *Dytiscus circumcinctus* Ahrens, 1811 – [16 exx.]: Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (3, pond), 16.VI.2000 (1, pond), VI.1999 (1, leg. A. Bukejs); Ludza distr., Bļāši, 15.VII.1999 (5, pond), 29.IV.2001 (2, moist meadow); Ludza distr., Zatiški, 29.VIII.2002 (1, water-pit); Ludza distr., Isnaudas civ. p., 21.VII.2004 (1, pond); Jēkabpils distr., Dignāja, 29.IV.2003 (1, in flight); Rēzekne distr., Rēzekne, 15.IV.2005 (1, in flight).
62. *Cybister lateralimarginalis* (De Geer, 1774) – [8 exx.]: Ludza distr., Bļāši, 26.VIII.2000 (1, water-pit), 29.IX.2001 (1, water-pit); Ludza distr., Zatiški, 19.IX.2002 (1, Zatišku water-pit); Daugavpils distr., Silene Nature Park, Ilgas, 16.VI.1999 (2, lake Bedušu); Preiļi distr., Rušonas civ. p., 14.VIII.2004 (1, river Rušonīca); Rēzekne distr., Bērzgales civ. p., 10.IX.2003 (1, lake Meirānu); Balvi distr., Baltinavas civ. p., 21.IX.2003 (1, lake Obeļovas), 21.IX.2003 (1, lake Motrīnes). In Silene Nature Park (Daugavpils distr.) species *Haliphus confinis* Stephens, 1829 was indicated firstly.
63. *Hydroporus palustris* (Linnaeus, 1761), *Ilybius ater* (De Geer, 1774), *Ilybius fuliginosus* (Fabricius, 1792) (the species that are typical as for standing water as for flowing water), *Acilius sulcatus* (Linnaeus, 1758) and *Acilius canaliculatus* (Nicolai, 1822) (typical for standing water) are noticed as the most widespread and often occurred species from Dytisciformia in the Eastern Latvia.

The records published in the article will complete the information on Coleoptera species distribution in Latvia.

#### ACKNOWLEDGEMENTS

We warmly thank Prof. Dr. Arvīds Barševskis for checking the identifications of material.

The study by Andris Bukejs was supported by VPDI/ESF/PIAA/04/NP/3.2.3.1./0003/065 project.

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