

## Materials on fauna of Oedemeridae (Hexapoda: Coleoptera) in Latvia

### 1. *Oedemera subrobusta* (Nakane, 1954) & *Oedemera lurida* (Marsham, 1802)

Arvīds Barševskis

Barševskis A. 2009. Materials on fauna of Oedemeridae (Hexapoda: Coleoptera) in Latvia. 1. *Oedemera subrobusta* (Nakane, 1954) & *Oedemera lurida* (Marsham, 1802). *Baltic J. Coleopterol.*, 9 (2): 139 – 150.

The article presents the summary of information on the occurrence and distribution of *Oedemera subrobusta* (Nakane, 1954) & *Oedemera lurida* (Marsham, 1802) (Hexapoda: Coleoptera, Oedemeridae) in Latvia. The information is based on the results of the review of the materials deposited in the beetle collection of Institute of Systematic Biology of Daugavpils University. Overall, 514 specimens of these species have been examined: (*Oe. subrobusta* (Nakane) – 62 specimens; *Oe. lurida* (Marsh.) – 452 specimens). Both species have been found in the whole territory of Latvia: *Oe. subrobusta* (Nakane) is known from 12 findings, but *Oe. lurida* (Marsh.) is known from 97 findings. *Oe. lurida* (Marsh.) can be encountered in Latvia much more frequently. In some findings in Latvia, both the species have been found living together. The article presents the key aimed at determination of both species. The article initiates the series of publications concerning the species of the Oedemeridae family in the fauna of Latvia, therefore it also includes a complete systematic list of taxons of Oedemeridae in the fauna of Latvia (15 species).

Key words: *Oedemera*, *subrobusta*, *lurida*, Oedemeridae, Coleoptera, Fauna, Latvia, DUBC

Arvīds Barševskis. Institute of Systematic Biology, Daugavpils University, Vienības Str. 13, Daugavpils, LV-5401, Latvia; arvids.barsevskis@du.lv

## INTRODUCTION

The family of Oedemeridae (Hexapoda: Coleoptera) is represented in the fauna of Latvia by 15 species. The small number of species and rather great distribution of several species have not favoured the investigation of this family in Latvia, and there is no article published that would encompass the whole family.

With this article the author initiates the series of articles devoted to the fauna of Oedemeridae in Latvia. The series of articles will summarize the data on the materials of the beetle collection of Institute of Systematic Biology of Daugavpils University, (DUBC), which have been collected in the whole territory of Latvia. The goal of this course of articles is to summarize the faunistic data on the Oedemeridae beetles deposited in

DUBC and to specify the composition of the existing species and their distribution in Latvia.

The first article presents the summary of information on 2 *Oedemera* Olivier, 1798 species of *Oe. subrobusta* (Nakane, 1954) & *Oe. lurida* (Marsham, 1802). Overall, 514 specimens of these species have been examined: (*Oe. subrobusta* (Nakane) – 62 specimens; *Oe. lurida* (Marsh.) – 452 specimens). It is known that for the first time *Oe. subrobusta* (Nakane) was specified in the fauna of Latvia in the result of our research carried out in 2008 (Barševskis 2008). In previous publications only *Oe. lurida* (Marsh.) was mentioned in connection with the territory of Latvia. Unfortunately, the previously published data on *Oe. lurida* (Marsh.) are difficult to interpret, as a part of them are surely referable also to another species. It is necessary to carry out the redetermination of *Oe. lurida* (Marsh.) specimens in all the beetle collections in Latvia.

## MATERIAL AND METHODS

In the result of the research 378 specimens of both species of *Oedemera* Oliv. genera have been examined; they were collected in the whole territory of Latvia from 1999 to 2009 and now are kept in the beetle collection of Institute of Systematic Biology of Daugavpils University (DUBC).

Males were determined by the structural peculiarities of beetles' genitalia. To determine the species the determination key presented in the monograph by X.A. Vazquez (2002) was applied. The research was done using the stereomicroscope Zeiss Stereo Discovery V12. The confocal laser scanning microscope Zeiss LSM 5 Pascal was used to investigate the special details. The photo camera AxioCam and the software AxioVision Rel. 4.4. were used to take and process the photographs.

The data concerning the deposits of both the species present the following information: place and time of collecting, the collector's surname

and the initial of his/her name, but in some cases, also the information on the biotope is included. All the deposits are grouped according to the administrative regions of Latvia. All the specimens of the collection are attached the printed labels of the species determination, which present the species' scientific name in Latin, the initial of the name and the surname of the determinator – the author of this article, and the year of determination – 2008 or 2009.

The map of the species' distribution has been prepared using the software ArcGis9 (Fig. 1 – 2).

The present article contains also the complete systematic list of the taxa of the Oedemeridae fauna in Latvia, which has been created on the basis of the work by X.A. Vazquez (2002). The species found in Latvia are numbered; the names of the species are followed by the synonyms of species in parentheses ().

## CHECK-LIST OF THE OEDEMERIDAE OF LATVIAN FAUNA

Family Oedemeridae Latreille, 1810  
Subfamily Nacerdinae Mulsant, 1858  
Tribe Ditylini Mulsant, 1858

Genus *Ditylus* Fischer von Waldheim, 1817

1. *Ditylus laevis* (Fabricius, 1787)  
(Syn.: *Ditylus helopioides* Fischer von Waldheim, 1817; *Mirmetes unicolor* Eschscholtz, 1818)

Genus *Chrysanthia* W.Schmidt, 1844

2. *Chrysanthia viridissima* (Linnaeus, 1758)  
(Syn.: *Chrysanthia viridis* De Geer, 1775; *Necydalis thalassina* Fabricius, 1792; *Chrysanthia korbi* Reitter, 1894; *Chrysanthia viridissima* var. *diversipes* Pic, 1932)

3. *Chrysanthia geniculata* (Schmidt, 1846)  
(Syn.: *Chrysanthia viridis* W.Schmidt, 1846; *Asclera geniculata* W.Schmidt, 1846;

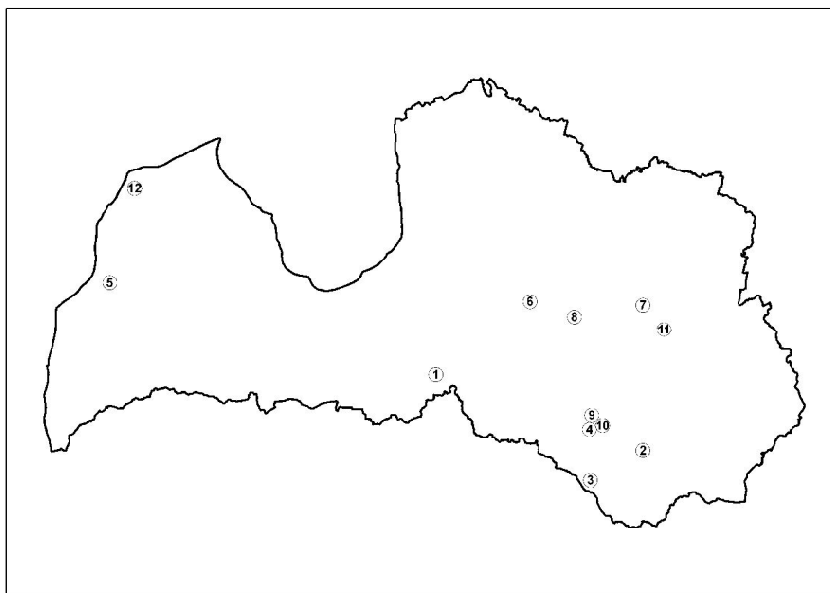


Fig. 1. Distribution of *Oedemera (Oedemera) subrobusta* (Nakane, 1954) in Latvia:  
**Aizkraukle Distr.:** Aizkraukle, Valle; (1); **Daugavpils Distr.:** Dubna (2), Šedere (3); **Jēkabpils Distr.:** Dunava (4); **Kuldīga Distr.:** Alsunga (5); **Madona Distr.:** Ērgļi (6), Ošupe (NE lake Lubāns) (7), Sauleskalns, (8); **Preiļi Distr.:** Jersika (9), Jersika, „Kurpnieki” (10); **Rēzekne Distr.:** Teirumnieki, (11); **Ventspils Distr.:** Muižnieki (12).

*Chrysanthia nigricornis* Westhof, 1881;  
*Chrysanthia cupreomicans* Westhof, 1881;  
*Chrysanthia saturata* Westhof, 1881)

Tribe Nacerdini Mulsant, 1858

Genus *Nacerdes* Dejean, 1834

Subgenus *Nacerdes* Dejean, 1834

4. *Nacerdes (Nacerdes) melanura* (Linnaeus, 1758)

(Syn.: *Cantharis nigripes* Fabricius, 1781; *Cantharis lepturoides* Thunberg, 1784; *Cantharis testacea* Geoffroy, 1785; *Necydalis notata* Fabricius, 1792; *Cantharis acuta* Marsham, 1802; *Oedemera analis* Olivier, 1811; *Necydalis erminea* Germar, 1817; *Oedemera apicalis* Say, 1835; *Nacerda rufa* Brulle, 1838; *Nacerdes sardea* W.Schmidt, 1846; *Xanthochroa italica* Chevrolat, 1877; *Nacerdes sardoa* Heiden, Reitter & Weisse, 1906; *Nacerdes melanura ab. obscurata*

Depoli, 1915; *Nacerdes melanura var. fuscipennis* Mueller, 1916; *Nacerdes melanura ab. nigricollis* Reitter, 1918; *Nacerda particularis* Pic, 1924)

Genus *Anogcodes* Dejean, 1834

5. *Anogcodes rufiventris* (Scopoli, 1763)

(Syn.: *Leptura bipartita* Schrank, 1781; *Necydalis melanocephala* Fabricius, 1794; *Oedemera dorsalis* Olivier, 1811; *Nacerda rufiventris var. limbicollis* Reitter, 1911; *Nacerda rufiventris ab. femoralis* Magistretti, 1929; *Nacerda rufiventris ab. radnensis* Csiki, 1951; *Nacerda rufiventris ab. kapelae* Kaszab, 1956; *Nacerda rufiventris ab. comma* Kaszab, 1956; *Nacerda rufiventris ab. csikii* Kaszab, 1956; *Nacerda rufiventris ab. borberekensis* Kaszab, 1956)

6. *Anogcodes ustulatus* (Scopoli, 1763)

(Syn.: *Necydalis melanura* Fabricius, 1787; *Cantharis fasciata* Villers, 1789; *Ditylus rufus*

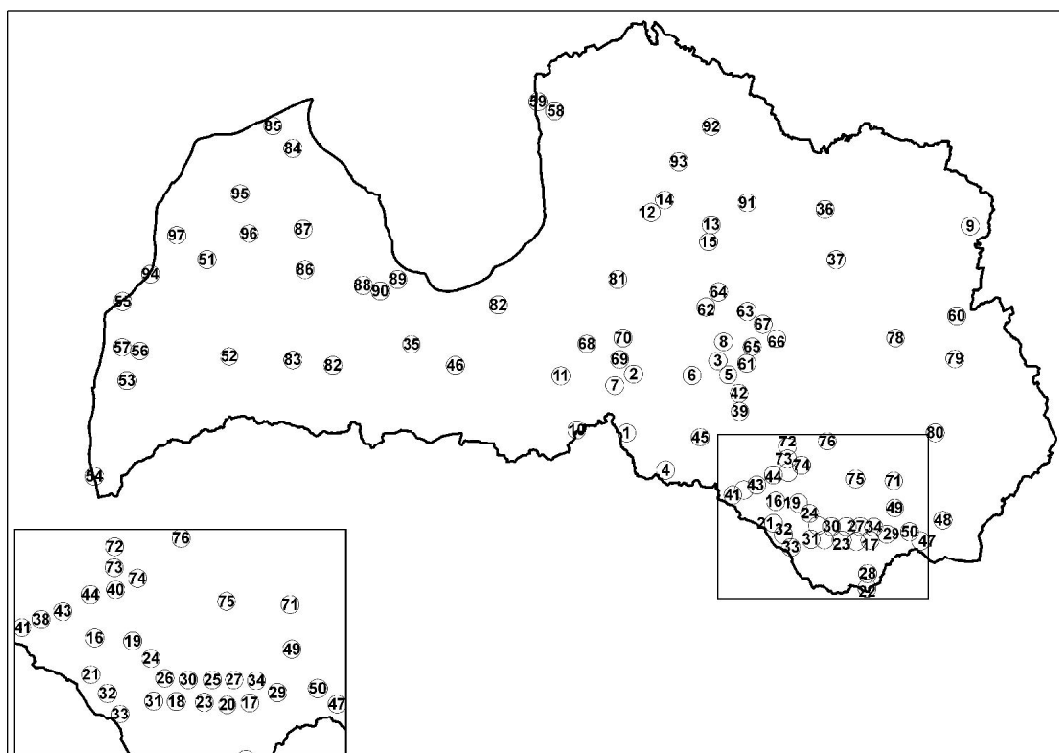


Fig. 1. Distribution of *Oedemera (Oedemera) lurida lurida* (Marshall, 1802) in Latvia:

**Aizkraukle Distr.:** Ērberģe (1), Jaunjelgava (2), Mežezers (3), Nereta (4), Pļaviņas (5), Rīteri (6), Taurkalne (7), Vietalva, (8); **Balvi Distr.:** Viļaka, (9); **Bauska Distr.:** Skaistkalne (10), Vecumnieki (Zvirgzde) (11); **Cēsis Distr.:** Cēsis (12), Dzērbene (13), Rauguļi (14), Taurene (15); **Daugavpils Distr.:** Bebrene (16), Butišķi (17), Daugavpils (18), Dviete (19), Elerne (20), Eglaine (21), Ilgas (22), Krauja (23), Līksna (24), Lociki (25), Ļubesti (26), Naujene (27), Silene (28), Slutišķi (29), Stropi (30), Svente (31), Šedere (32), Šarlote (33), Vasergelišķi (34); **Dobele Distr.:** Jaunbērze (35); **Gulbene Distr.:** Lejasciems (36), Gulbītis (Ušūrs lake) (37); **Jēkabpils Distr.:** Asare (38), Ābeļi (39), Dunava (40), Gārsene (41), Jēkabpils (42), Rubene (43), Tadenava (44), Viesīte (45); **Jelgava Distr.:** Jelgava (46); **Krāslava Distr.:** Krāslava (47), Skaista (48), Šķeltova (49), Ūdrīši (50); **Kuldīga Distr.:** Lielais Nabes lake (51), Skrunda (52); **Liepāja Distr.:** Rolava (53), Pape (54), Pāvilosta (55), Upmaļi (56), Vērgale (57); **Limbaži Distr.:** Kaiķule (58), Salacgrīva (59); **Ludza Distr.:** Bļāši (60); **Madona Distr.:** Aiviekste (61), Ērgļi (62), Gaiziņkalns (63), Jumurda (64), Kalsnava (65), Krustkalni Nature rezerve (66), Sauleskalns (67); **Ogre Distr.:** Ķegums (68), Jumprava (Velna dobe) (69), Lēdmane (70); **Preiļi Distr.:** Aglona (71), Jersika (72), Jersika „Kurpnieki” (73), Jersika “Sergunta” (74), Pelēči (75), Sutri (76); **Rēzekne Distr.:** Gaigalava (77), Bērzgale (78), Zosna (79); **Rīga Distr.:** Mālpils (80), Mārupe (81); **Saldus Distr.:** Blīdene (82), Saldus (83); **Talsi Distr.:** Kaļķi (84), Slītere (85), Sabile (86), Stende (87); **Tukums Distr.:** Jaunmokas castle (88), Lielaisciems (89), Tukums (90); **Valka Distr.:** Mežole (91), Strenči (92); **Valmiera Distr.:** Kauguri (93); **Ventspils Distr.:** Jūrkalne (94), Blāzma (95), Moricsala (96), Ziras (97).

- Fischer von Waldheim, 1820; *Anoncodes scutellaris* Walth, 1839
- Subfamily Calopodinae Costa, 1852  
Tribe Calopodini Costa, 1821
- Genus *Calopus* Fabricius, 1775
7. *Calopus serraticornis* (Linnaeus, 1758)  
(Syn.: *Calopus pretneri* G.Mueller, 1929)
- Subfamily Oedemerinae Latreille, 1810  
Tribe Asclerini Gistel, 1856
- Genus *Ischnomera* Stephens, 1832
8. *Ischnomera sanguinicollis* (Fabricius, 1787)  
(Syn.: *Necydalis flavicollis* Panzer, 1794; *Asclera sanguineicollis* Gistel, 1856)
- Tribe Oedemerini Latreille, 1810
- Genus *Oedemera* Olivier, 1798  
Subgenus *Oedemera* Olivier, 1798
9. *Oedemera (Oedemera) croceicollis* Gyllenhal, 1827  
(Syn.: *Oedemera sarmatica* Morawitz, 1861)
10. *Oedemera (Oedemera) flavipes* (Fabricius, 1792)  
(Syn.: *Aedemera aenea* Olivier, 1795; *Necydalis clavipes* Fabricius, 1801; *Oedemera pusilla* Costa, 1852; *Oedemera flavipes* var. *delagrangei* Pic, 1923)
11. *Oedemera (Oedemera) podagrariae podagrariae* (Linnaeus, 1767)  
(Syn.: *Cantharis fulva* Geoffroy in Fourcroy, 1785; *Necydalis testacea* Fabricius, 1792; *Oedemera sericans* Mulsant, 1858; *Oedemera sericans* var. *incerta* Mulsant, 1858; *Oedemera sebastiani* Pic, 1901; *Oedemera podagrariae* var. *discoidalis* Pic, 1921; *Oedemera podagrariae* var. *reducta* Pic, 1921; *Oedemera podagrariae* var. *diversipes* Pic, 1921; *Oedemera podagrariae* var. *limbaticollis* Pic, 1921; *Oedemera podagrariae* var. *inlateralis* Pic, 1921; *Oedemera podagrariae* var. *distinctipes* Pic, 1921; *Oedemera podagrariae* ab. *biobscurenotata* Kaszab, 1956)
12. *Oedemera (Oedemera) subrobusta* (Nakane, 1954)\*  
(Syn.: *Oedemera laticollis* auct.)
13. *Oedemera (Oedemera) lurida lurida* (Marsham, 1802)  
(Syn.: *Oedemera lurida* var. *plagiata* Rey, 1892; *Oedemera viridula* Seidlitz, 1899)
14. *Oedemera (Oedemera) virescens virescens* (Linnaeus, 1767)  
(Syn.: *Necydalis striata* Herbst in Fuessly, 1784; *Oedemera virescens* ab. *cupreomicans* Reitter, 1905; *Oedemera virescens* ab. *subazurescens* Reitter, 1911)
15. *Oedemera (Oedemera) femorata* (Scopoli, 1763)  
(Syn.: *Oedemera flavescens* Linnaeus, 1767; *Necydalis pratterana* Schrank, 1781; *Oedemera similis* W.Schmidt, 1846; *Oedemera flavescens* var. *fallax* Seidlitz, 1899)

## FAUNISTICS

***Oedemera (Oedemera) subrobusta* (Nakane, 1954) – Aizkraukle Distr.:** Aizkraukle bog, Nature protection area „Aizkraukles purvs”, 01.07.2008., (3M, A.Pankjāns leg.), Valle, 12.08.2008., (2M, 6F, A.Barševskis leg.); **Daugavpils Distr.:** Dubna, „Lielie Stradišķi”, 08.07.2006., (2M, 3F, A.Pankjāns leg.), Šedere, „Straumēni”, 29.07.2007., (4M, 6F, M.Murd leg.); **Jēkabpils Distr.:** Dunava, 03.06.2007., (1M, A.Barševskis leg.), 10.-19.06.2007., (1M, K.Barševska leg.); **Kuldīga Distr.:** Alsunga, Augšužava Nature protection area, 28.08.2005., (8M, 6F, A.Barševskis, A.Bukejs, U.Valainis leg.) **Madona Distr.:** Ērgļi, old forest clearing, 19.07.2008., (4M, 5F, A.Barševskis leg.), Ošupe, wet meadow & bank of river Aiviekste, ~ 2,5 km NE lake Lubāns, 06.07.2008., (2M, 1F, M.Balalaikin & A.Bukejs leg.), Sauleskalns, 07.07.2006., (1M, A.Pankjāns, E.Rudāns, A.Barševskis leg.); **Preiļi Distr.:** Jersika, „Kurpnieki”, 23.-24.06.2008. (2M, A.Barševskis leg.), 18.-20.07.2009., (1M, A.Barševskis leg.); **Rēzekne Distr.:** Teirumnieki, clearing, 15.07.2009., (1M, 1F, M.Balalaikins leg.); **Ventspils Distr.:** Muižnieki, 29.07.2005., (1M, 1F, A.Barševskis, A.Bukejs, U.Valainis leg.).

Materials: 62 specimens. New species for fauna of Latvia (Barševskis 2008).

**Oedemera (Oedemera) lurida lurida (Marsham, 1802)** – **Aizkraukle Distr.:** Ērberģe, 06.08.2009., (1F, A.Barševskis leg.), Jaunjelgava, 11.08.2006., (1F, E.Rudāns & A.Barševskis leg.), Mežezers, 18.07.2008., (1M, 1F, A.Barševskis leg.), Nereta, 16.06.2005., (1F, A.Barševskis leg.), Pļaviņas, „Gostiņi”, 26.08.2007. (1F, A.Barševskis leg.), Rīteri, 20.06.2006. (3M, 10F, A.Barševskis leg.), Taurkalne, 16.06.2007., (1F, J.Donis leg.), Vietalva, 19.07.2008. (1M, 1F, A.Barševskis leg.); **Balvi Distr.:** Viļaka, 27.07.1992. (1F, A.Barševskis leg.); **Bauska Distr.:** Skaistkalne, 30.07.2008. (3F, A.Barševskis leg.), Vecumnieki municipality, Zvirgzde, 06.08.2009., (1M, 2F, A.Barševskis leg.); **Cēsis Distr.:** Cēsis, „Katrīnkalns”, 26.07.2007. (3M, 2F, A.Barševskis leg.), Dzērbene, 01.07.2006., (2F, A.Barševskis, U.Valainis, A.Pankjāns leg.), Rauguļi, Rauna river, 21.08.2006., (1F, A.Pankjāns leg.), Taurene, Brežģa kalns, 03.07.2006., (3M, 1F, A.Barševskis, U.Valainis, A.Pankjāns leg.); **Daugavpils Distr.:** Bebrene, 15.06.2007., (1M, 2F, E.Rudāns leg.), 17.06.2006. (1M, 2F, E.Rudāns leg.), Butišķi, Daugava river valley, 01.07.2009., (1M, 2F, A.Bukejs & M.Balalaikins leg.), Daugavpils, (between Kandavas & Maizes Str.), 01.-08.08.2007., (1M, K.Aksjuta & M.Murd leg.), Daugavpils, (Vienības Str., 13, DU), 10.07.2008. (1M, P.Evarts Bunders leg.), Daugavpils, Daugavpils fortress, bank of Daugava river, 25.06.2009., (2M, A.Bukejs leg.); Daugavpils, Mežciems, 26.06.1992., (1F, A.Barševskis leg.), 19.07.1992. (1F, A.Barševskis leg.), 28.05.1993., (1M, A.Barševskis leg.), 16.06.2005., (2M, 2F, A.Bukejs leg.), Daugavpils, Mežciems (Jaunciema Str.) 19.07.2007., (3M, 1F, K.Aksjuta & M.Murd leg.), Daugavpils, Mežciems (near Daugava river), 01.06.2008., (7M, 1F, A.Bukejs leg.), 29.06.2009., (1M, 1F, A.Bukejs leg.), Dviete, 03.06.2007., (1M, A.Barševskis leg.), 01.07.2007., (2M, A.Barševskis leg.), 03.07.2007., (1F, A.Barševskis leg.), 4 km N, meadows, 06.07.2007. (1F, A.Ozoliņa leg.), 20.07.2008., forest between Dviete & Tadenava, (1F, A.Barševskis leg.), 10.08.2008., (1F, A.Barševskis leg.), Elerne, 16.06.2002., (1M, 1F, A.Barševskis leg.), 19.06.2009. (2F, M.Nitcis leg.), Eglaine, 27.06.2008.,

(1F, T.Vasiļjeva leg.), Elerne, „Muravki”, 26.06.2005., (4M, 3F, A.Barševskis & K.Barševska leg.), Ilgas, Silene Nature park, 07.07.1992., (2M, 1F, A.Barševskis leg.), 02.09.1994., (1F, A.Barševskis leg.), 15.06.1996., (2M, 3F., A.Barševskis leg.), 16.06.1996., (3M, 1F, A.Barševskis leg.), 17.06.1996., (4M, 3F, A.Barševskis leg.), 06.-15.06.2004., (1F, A.Barševskis leg.), 30.06.2005., (1M, A.Barševskis leg.), 05.-09.06.2009., (1M, O.Drožina leg.), 01.-05.07.2006., (2F, A.Barševskis leg.), 25.-27.06.2007., (1F, J.Staskeviča leg.), 25.-29.06.2007., (1M, V.Krone leg.), 27.06.2007., (1M, A.Čuļina & J.Daņilova leg.), 09.06.2008. (4M, 3F, A.Barševskis & A.Soldāns leg.), 01.-03.07.2008., (2M, 6F, J.Kundziņš, N.Mihailova, T.Vasiļjeva, R.Cibuļskis leg.), 27.06.2009., (1M, 3F, A.Barševskis leg.), 12.08.2009., (1F, A.Barševskis leg.), Krauja, Nature park „Daugavas loki”, 19.06.2009., (1F, R.Cibuļskis leg.), 15.07.2009., (1F, .Balalaikins & A.Bukejs leg.), Līksna, 16.06.2005., (3M, 2F, A.Barševskis leg.), 02.06.2007., (1F, A.Barševskis leg.), 16.06.2008., inland dunes near Daugavpils beltway, (4M, 1F, A.Barševskis leg.), 22.07.2008., inland dunes near Daugavpils beltway, (3M, 2F, A.Barševskis leg.), 05.07.2009., (2M, A.Barševskis leg.), 12.07.2009., (2M, A.Barševskis leg.), Lociki, 31.07.2008., (1M, A.Barševskis leg.), Ļubesti, 16.06.2005., (2M, 2F, U.Valainis leg.), 02.06.2007., (1M, A.Barševskis leg.), Naujene, Nature park „Daugavas loki”, forest clearing, 25.06.2008., (2M, 3F, K.Aksjuta leg.), Silene, Silene Nature park, 03.07.1992., (1F, A.Barševskis leg.), Slutišķi, Daugava river valley, 01.07.1995., (1F, A.Barševskis leg.), Stropi, forest clearing, 02.07.2008., (1F, A.Bukejs leg.), Svente, 21.07.2003., (1M, N.Strode leg.), Šedere, „Straumēni”, 29.07.2007., (5M, 6F, M.Janovska (Murd) leg.), 05.07.2008., (1F, M.Janovska leg.), 03.-05.07.2009., (3M, M.Janovska leg.), Šedere, Šarlote, 12.07.2008., (1M, 2F, K.Aksjuta leg.), Vasergelišķi, Nature Park „Daugavas loki”, 11.07.2008., (1F, V.Alekseev leg.), (2M, A.Barševskis leg.); **Dobele Distr.:** Jaunbērze, „Mežinieki”, 12.08.2008., (1M, 1F, A.Barševskis leg.); **Gulbene Distr.:** Lejasciems, burned pine forest, 07.2005. (1F, A.Barševskis, A.Bukejs, R.Cibuļskis leg.), Gulbītis, Ušūrs lake, 11.08.2005., (1M, A.Barševskis leg.); **Jēkabpils Distr.:** Asare, 05.07.2000., (3M, I.Leiskina leg.), 06.07.2000., (1M,

- 3F, I.Leiskina leg.), 06.07.2001., (1F, I.Leiskina leg.), Ābeļi, Jesperpurvs bog, 10.07.2009., (1M, 1F, M.Balalaikins leg.), Dunava, 01.06.2002., (1M, 1F, A.Barševskis leg.), 10.-18.06.2006. (2F, K.Barševska leg.), 01.-08.08.2006., (1F, A.Barševskis & K.Barševska leg.), 02.-05.06.2007. (1F, K.Barševska leg.), 03.06.2007. (2F, A.Barševskis leg.), 10.-19.06.2007., (1M, 2F, K.Barševska leg.), 16.-21.06.2007., (1M, 2F, K.Barševska leg.), 15.07.2007., (2F, A.Barševskis leg.), 25.06.2008., (3M, 1F, A.Barševskis leg.); 29.06.2008. (5M, 2F, A.Barševskis leg.), 20.07.2008., (2F, A.Barševskis leg.), Gārsene, 11.08.2000., (1F, I.Leiskina leg.), 25.06.2005., (1F, A.Barševskis leg.), Jēkabpils, City border near Nereta road, 08.08.2008. (1M, 1F, A.Barševskis leg.), Rubene, 17.06.1999., (1M, I.Leiskina leg.), 28.06.2000., (1M, I.Leiskina leg.), Tadenava, 01.06.2002., (1M, 1F, A.Barševskis leg.), 21.05.1994., (1F, A.Barševskis leg.), 22.07.2002., (4M, 1F, A.Barševskis leg.), 16.06.2006., (1M, A.Barševskis leg.), 29.06.2008., (2M, A.Barševskis leg.), Viesīte, forest clearing, 08.08.2008., (2M, 3F, A.Barševskis leg.); **Jelgava Distr.:** Jelgava, near Rīga – Šauļi road, 15.06.2008. (1M, 2F, A.Barševskis & R.Orlovskis leg.); **Krāslava Distr.:** Krāslava, dry meadows, 21.07.2008., (1M, 1F, A.Barševskis leg.), Skaista, „Jadlovci”, Nature park „Dridža ezers”, 16.07.2008., (2M, R.Cibuļskis leg.), Skaista, „Grundāni”, Nature park „Dridža ezers”, 15.07.2008., (1M, R.Cibuļskis leg.), Skaista, „Zukulišķi”, Nature park „Dridža ezers”, 14.07.2008., (3M, 4F, R.Cibuļskis leg.), Šķeltova, „Barševski”, 14.08.2006. (1M, 1F, A.Barševskis leg.), 28.06.2008., (6M, 2F, A.Barševskis leg.), 17.07.2008., (1M, A.Barševskis leg.), 11.08.2009., (7M, 1F, A.Barševskis leg.), Ūdrīši, „Zapoļņiki”, 10.-12.07.2009., (2F, M.Janovska leg.); **Kuldīga Distr.:** Lielais Nabes lake, 28.07.2005., (1M, 1F, A.Bukejs & A.Barševskis leg.), Skruna, Venta river valley, 05.09.2008., (1F, A.Barševskis & R.Orlovskis leg.); **Liepāja Distr.:** Rolava, in park, 11.07.2006., (1M, A.Barševskis leg.), Pape, Baltic Sea dunes, 23.-25.06.1994., (1M, A.Barševskis leg.), Pāvilsta, Baltic sea coast, dunes, 13.08.2008., (13M, 3F, A.Barševskis leg.), Upmaļi, Baltic sea coast, 12.08.2008., (2F, A.Barševskis leg.), Vērgale, 12.08.2008., (1M, 1F, A.Barševskis leg.); **Limbazi Distr.:** Kaikule, near Lībiešu upurāla, 27.07.2007., (1M, 2F, A.Barševskis leg.), Salacgrīva, 16.08.2008. (1M, 3F, A.Barševskis leg.); **Ludza Distr.:** Bļāši, 10.08.2008., (1F, M.Balalaikin leg.) **Madona Distr.:** Aiviekste, 22.08.2006. (1M, 1F, A.Barševskis leg.), Ērgļi, meadows, 19.07.2008., (2M, A.Barševskis leg.), Gaiziņkalns, Gaiziņkalns Nature park, 07.07.2006., (4F, A.Pankjāns, A.Barševskis, E.Rudāns leg.), Jumurda, 19.07.2008., (1F, A.Barševskis leg.), Jumurda, near lake Lācišu, 19.07.2008., (1F, A.Barševskis leg.), Kalsnava, 03.07.2006., (3M, 4F, A.Barševskis, U.Valainis, A.Pankjāns leg.), Krustkalni Nature reserve, 07.07.2006. (1M, 1F, A.Pankjāns, A.Barševskis, E.Rudāns leg.), Sauleskalns, 07.07.2006., (2M, 2F, A.Pankjāns, E.Rudāns, A.Barševskis leg.); **Ogre Distr.:** Ķegums, near Daugava river, 13.06.2006. (1M, 1F, A.Barševskis & K.Barševska leg.), Jumprava, Velna dobe, near Daugava river, 10.07.2008., (3M, A.Barševskis leg.); **Lēdmane, 17.08.2008. (1M, 1F, A.Barševskis leg.); Preiļi Distr.:** Aglona, near Tartaka river, 14.08.2006., (2F, A.Barševskis leg.), Aglona, Šņepsti, 14.08.2008. (1M, A.Barševskis leg.), Jersika, 20.07.1993., (1F, A.Barševskis leg.), Jersika, „Kurpnieki”, 09.-10.06.2007., (1M, 1F, A.Barševskis & K.Barševska leg.), 23.-24.06.2007. (3M, A.Barševskis & K.Barševska leg.), 04.-05.08.2007. (1F, A.Barševskis leg.), 13.06.2008., (2M, 1F, A.Barševskis leg.), 23.-24.06.2008. (3M, 4F, A.Barševskis leg.), 01.07.2008., (1F, A.Barševskis leg.), 24.05.2009., (3F, A.Barševskis & K.Barševska leg.), 22.-24.06.2009., (1M, A.Barševskis leg.), Jersika, „Sergunta”, 18.06.2006., (1F, A.Barševskis leg.), Pelēči, 18.08.1997. (1F, I.Jurkjāne leg.), Sutri, 14.08.2008, (1M, A.Barševskis leg.); **Rēzekne Distr.:** Gaigalava, old clearing, 15.07.2009., (1F, A.Bukejs & M.Balalaikins leg.), Bērzgale, 08.07.2008., (1M, M.Balalaikins leg.), Zosna, 02.08.1992., (1M, A.Barševskis leg.); **Rīga Distr.:** Mālpils, 16.08.2008., (5M, 6F, A.Barševskis leg.), Mārupe, 07.07.2009., (1F, K.Barševska & A.Barševskis leg.); **Saldus Distr.:** Blīdene, 11.07.2007. (2F, A.Barševskis & K.Barševska leg.), Saldus, Ciecere river, 13.07.2007., (1M, A.Barševskis & K.Barševska leg.); **Talsi Distr.:** Kaļķi, nature protection area „Kaļķupes ieleja” (Kaļķupe river valley), 13.07.2009., (1F, J.Ivanova leg.), Slītere National park, „Zilie kalni”, 27.06.2006., (1M, 1F,

A.Barševskis, U.Valainis, A.Pankjāns leg.), Sabile, Abava river, „Abavas rumba”, 06.06.2002., (1M, A.Barševskis leg.), Stende, pine forest clearing, 19.07.2007. (7M, 3F, A.Barševskis, U.Valainis, A.Pankjāns, A.Soldāns leg.); **Tukums Distr.:** Jaunmokas castle, 16.07.2008. (5M, 3F, A.Barševskis leg.), Lielaisciems, Ķemeri National park, 26.06.2006., (1M, A.Pankjāns leg.), Tukums, Rīga – Ventspils road near the railway bridge, 19.07.2007., (1F, A.Barševskis leg.); **Valka Distr.:** Mežole, 17.06.2007., (1F, A.Barševskis leg.), Strenci, 03.07.2006., (1M, 1F, A.Barševskis, U.Valainis, A.Pankjāns leg.); **Valmiera Distr.:** Kauguri municipality, forest near Gauja river, 03.07.2006. (1F, A.Barševskis, U.Valainis, A.Pankjāns leg.); **Ventspils Distr.:** Blāzma, pine forest clearing, 22.08.2008. (1M, U.Valainis, K.Aksjuta, A.Barševskis leg.), Jūrkalne, 13.08.2008., (1F, A.Barševskis leg.), Moricsala Isl., Moricsala Nature reserve, 26.06.2006., (1M, A.Barševskis leg.), 13.06.2008., (2M, 1F, A.Barševskis leg.), Ziru vill., Venta river valley, 25.07.2005., (3M, 2F, A.Barševskis, A.Bukejs, U.Valainis leg.). Materials: 452 specimens.

## RESULTS AND DISCUSSION

Treating the materials of Oedemeridae deposited in the beetle collection of Institute of Systematic Biology of Daugavpils University (DUBC) 452 specimens of *Oe. lurida* (Marsh.) (Fig. 3) and 62 specimens of *Oe. subrobusta* (Nakane) (Fig. 4) were determined. All the males were determined by the peculiarities of the *aedeagus* structure (Figs. 5 – 6).

Both the species have been found in the whole territory of Latvia: *Oe. subrobusta* (Nakane) is known from 10 deposits, but *Oe. lurida* (Marsh.) is known from 81 deposits. *Oe. lurida* (Marsh.) has been encountered in larger quantities and is many times more frequent in Latvia (see Figs. 1 – 2). *Oe. lurida* (Marsh.) is more widely distributed than *Oe. subrobusta* (Nakane) also in Palearctica (Lobl, Smetana (eds.) 2008). *Oe. lurida* (Marsh.) is represented in the region of Palearctica by two subspecies: nominative *Oe. lurida lurida* (Marsh.) that is distributed in the majority of European territories. as well as in Svria. Turkev.



Fig. 3. *Oedemera lurida* (Marsh.)



Fig. 4. *Oedemera subrobusta* (Nakane)





Fig. 5. *Aedeagus* of *Oedemera lurida* (Marsh.): hooks of penis remote from knob-like apex



Fig. 6. *Aedeagus* of *Oedemera subrobusta* (Nakane): hooks of penis close to rounded apex

Iran and Turkmenistan, but another subspecies – *Oe. lurida sinica* Švihla is known from Sichuan province in China. *Oe. subrobusta* (Nakane) (Lobl, Smetana (eds.) 2008) is widely distributed in Eastern Palearctica from Japan to the Central European countries. It has been indicated for Sweden (Hojer 2008). This species was not known in the Baltic countries until now (Silfverberg, 2004).

Both the species can be encountered in Latvia in summer: *Oe. subrobusta* (Nakane) – from June to August, but *Oe. lurida* (Marsh.) – from May to the beginning of September. The phenology of this species is illustrated in Figure 11. 9 specimens of *Oe. lurida* (Marsh.) were collected in May. 7 specimens of *Oe. subrobusta* (Nakane) and 181 specimens of *Oe. lurida* (Marsh.) were collected in June. In July 32 specimens of *Oe. subrobusta* (Nakane), and 176 specimens of *Oe. lurida* (Marsh.) were collected. In August 23 specimens of *Oe. subrobusta* (Nakane) and 84 specimens of *Oe. lurida* (Marsh.) were collected. In September only 2 specimens of *Oe. lurida* (Marsh.) were collected. Most probably the phenology of both species is similar and *Oe. subrobusta* (Nakane) can be encountered in Latvia from May to September.

Considering the division of the specimens of both species by sex (Figures 12 and 13), in the materials

of DUBC collection *Oe. subrobusta* (Nakane) is represented by 33 males and 29 females. 4 males were collected in June, 19 – in July and 10 – in August. But the females were collected only in July 17 specimens and in August 12 specimens. In the beginning of the season more males were collected, but in the end of the season – more females. In our collection *Oe. lurida* (Marsh.) is represented by 227 males and 225 females. The phenology of the males of this species is as follows: 5 specimen – in May, 97 – in June, 81 – in July and 44 – in August. In their turn 4 female was collected in May, 84 – in June, 95 – in July, 40 – in August and 2 – in the beginning of September.

Carrying out further research it is necessary to identify both the species precisely. The following determination key is proposed for the identification of species:

- 1 (2) Hooks of penis remote from knob-like apex (Fig. 5). The umbel of the pronotum is less transversal (Fig. 7). The elytra are covered with longer pubescence (Fig. 9). 5.0 – 8.0 mm ..... *Oe. lurida* (Marsh.)
- 2 (1) Hooks of penis close to rounded apex (Fig. 6). Pronotum more transverse (Fig. 8). Elytral pubescence shorter. (Fig. 10). 5.5 – 9.5 mm. .... *Oe. subrobusta* (Nakane)



Fig.7. Pronotum of *Oedemera lurida* (Marsh.)

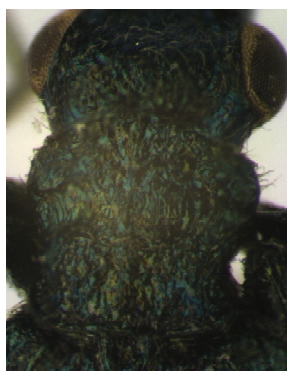


Fig. 8. Pronotum of *Oedemera subrobusta* (Nakane)



Fig.9. Elytra of *Oedemera lurida* (Marsh.)



Fig. 10. Elytra of *Oedemera subrobusta* (Nakane)

The author has not managed to discover any essential differences in the ecology and biology of both species in Latvia. It has only been observed that *Oe. lurida* (Marsh.) in Latvia has been found in dryer biotopes than *Oe. subrobusta* (Nakane). In several deposits both species have been encountered living together. In future it is necessary to research the ecology and biology of both species. The only thing evident is that *Oe. subrobusta* (Nakane) in Latvia is encountered much more seldom than *Oe. lurida* (Marsh.). Now, because of insufficient knowledge about the species, it is not possible to envisage whether any protection measures are necessary in Latvia.

## CONCLUSIONS

While investigating the materials of Oedemeridae deposited in the beetle collection of Institute of Systematic Biology of Daugavpils University (DUBC), 62 specimens of *Oe. subrobusta* (Nakane) and 452 specimens of *Oe. lurida* (Marsh.) have been determined.

Both the species have been found in the whole territory of Latvia: *Oe. subrobusta* (Nakane) is known from 12 deposits, but *Oe. lurida* (Marsh.) is known from 97 deposits. *Oe. lurida* (Marsh.) is found in Latvia in larger quantities and much

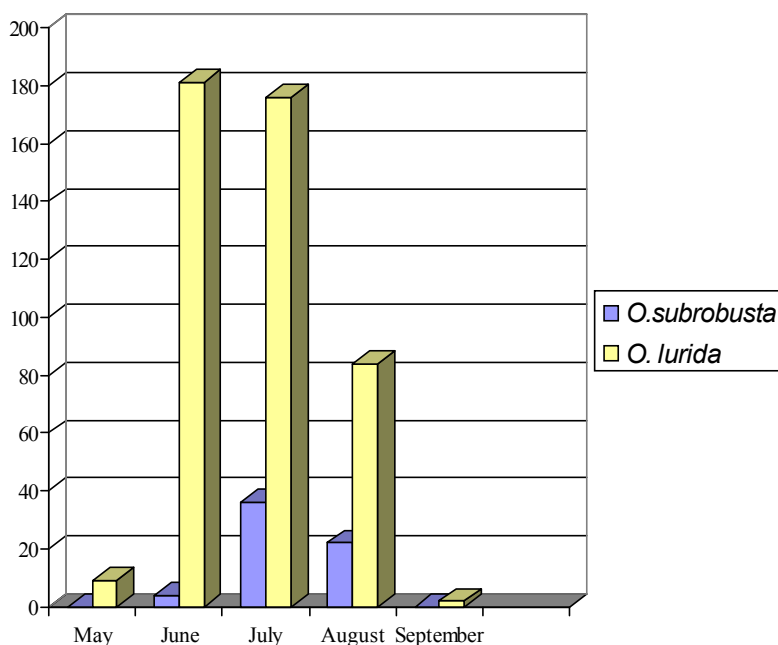


Fig. 11 . Phenology of *Oedemera subrobusta* (Nakane) and *Oedemera lurida* (Marsh.) in Latvia

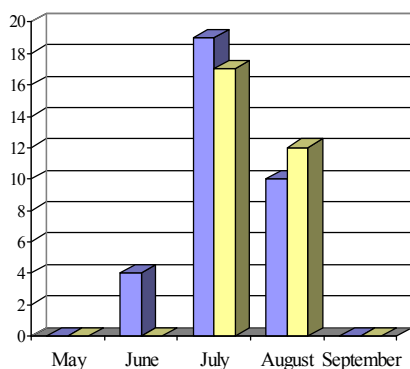


Fig. 12. Division of the specimens of *Oedemera subrobusta* (Nakane) by sex

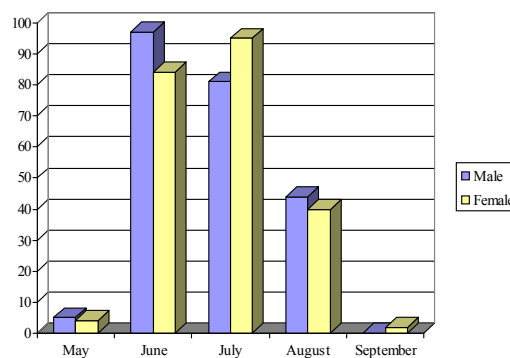


Fig. 13. Division of the specimens of *Oedemera lurida* (Marsh.) by sex

more frequently. In some deposits both species have been encountered together.

Due to meagre information, it is impossible to say more about the situation of the population of *Oe. subrobusta* (Nakane) in Latvia, as well as it is impossible to envisage whether any

measures aimed at protection of these species will be necessary. Carrying out further research it is necessary to investigate the ecology and biology of both species in the conditions of Latvia.

## ACKNOWLEDGEMENTS

The author expresses his gratitude to all the people who participated in collecting the materials for the collection of both species: K.Aksjuta, M.Balalaikins, K.Barševska, A.Bukejs, R.Cibuļskis, A.Čuļina, J.Daņilova, J.Donis, O.Drožina, V.Krone, J.Ivanova, M.Janovska (Murd), I.Leiskina, M.Nitcis, R.Orlovskis, A.Ozoliņa, A.Pankjāns, E.Rudāns, A.Soldāns, J.Staskeviča, N.Strode, U.Valainis. The author expresses his gratitude to A.Pankjāns for his assistance in preparing the photographs, to K.Aksjuta for her help in treatment of the collection materials, and M.Nitcis for the assistance in preparation of cartographic material. The article has been prepared with the financial support from the ESF project Nr. 2009/0140/IDP/1.1.2.1.2/09/IPIA/VIAA/015.

## REFERENCES

- Barševskis A. 2008. *Oedemera subrobusta* (Nakane, 1954) (Coleoptera: Oedemeridae) – new species for Baltic fauna. *Acta Biol. Univ. Daugavp.*, 8(2): 283 – 286.
- Hojer J. 2008. *Oedemera subrobusta* Nakane (*laticollis* auct), an overlooked beetle species in Northern Europe. *Entomologisk Tidskrift* 129(2): 91 – 94.
- Lobl I., Smetana A. (eds.) 2008. Catalogue of Palearctic Coleoptera, Vol. 5, Stenstrup: Apollo Books, 670 pp.
- Silfverberg H. 2004. Enumeratio nova Coleopterorum Fennoscandiae, Daniae et Baltiae. *Sahlbergia*, 9 (1): 1-111.
- Vazquez X.A. 2002. European Fauna of Oedemeridae (Coleoptera). Argania editio S.C.P., Barcelona, 179 pp.

Received: 20.09.2009.

Accepted: 01.12.2009.