



Beetles (Coleoptera) of the Rogów region. Part IX – superfamily Scarabaeoidea: Bolboceratidae, Geotrupidae, Lucanidae, Trogidae and Scarabaeidae

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ABSTRACT

In the ninth part of the series entitled “Beetles (Coleoptera) of the Rogów region” the next several families of the Scarabaeoidea superfamily is presented, as the better-known families of beetles occurring in the Rogów area. The faunistic data of the listed species is supplemented by bionomical information. 1 species of Bolboceratidae, 4 species of Geotrupidae, 3 species of Lucanidae, 4 species of Trogidae and 58 species of Scarabaeidae were recorded in the study area.

Keywords: Insecta; Coleoptera; Scarabaeoidea; Bolboceratidae; Geotrupidae; Lucanidae; Trogidae; Scarabaeidae; Rogów region; faunistic data; bionomy

1. INTRODUCTION

Until now, 1 species of Bolboceratidae, 2 species of Geotrupidae, 1 species of Lucanidae, 3 species of Trogidae, and 19 species of Scarabaeidae beetles has been reported from the Rogów region (Dominik 1954, Wiąckowski 1957, Dominik 1966, 1967, 1975,

Nunberg 1986, Kalisiak 1996, Borowski & Kieszek 1999, Byk 2000, Mokrzycki 2011, Byk 2012a, 2012b, Byk & al. 2012, Piętka 2013, Byk & al. 2013, Rutkiewicz & al. 2013, and Byk & Minkina 2014).

The following is a list of the species of Scarabaeoidea beetles that occur in the Rogów region. Almost all species have been collected and identified by the authors, and a small part of specimens comes from the collection of A. Adamczuk, M. Bischoff, Z. Dadel, D. Doktor, J. Dominik, S. Mazur, J. Mokrzycki, T. Mokrzycki, M. Nunberg, A. Sawicka, J. Sawoniewicz, M. Sawoniewicz, A. Szujewski, P. Węgrzynowicz, and M. Żak. Specimens of evidence are in the collection of Department of Forest Protection and Ecology in Rogów and Warsaw. Names are taken from the “Catalogue of Palearctic Coleoptera” (Löbl & Smetana (ed.) 2006).

2. RESULTS – REVIEW OF THE SPECIES

2.1. Bolboceratidae

2.1.1. *Odonteus armiger* (Scopoli, 1772)

The first and new data on this species in the Rogów region shown by Byk & al. (2012). A very rare species in the Rogów region. Only 1 specimen of this species was caught during more than 20 years of researches in this area and using of various traps. A light color form of this species (Fig. 1) was flight to the light on the end of spring time.



Fig. 1. A light color female of *Odonteus armiger* (Scop.) collected 19.VI.2002 in Rogów (photo by J. Borowski).

2.2. Geotrupidae

2.2.1. *Anoplotrupes stercorosus* (Scriba, 1791)

- Rogów, UTM: DC24, 1-31.V.1967, 1 ex., leg. S. Mazur;
- Rogów, „Doliska” range, UTM: DC24, 10.V.1998, 3 exx., mixed forest, leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 10.V.1998, 1 ex., mixed forest, leg. J. Borowski.

For the first time in the Rogów region shown by Wiąckowski (1957) and next by Nunberg (1986), Mokrzycki (2011), Byk & al. (2013), and Rutkiewicz & al. (2013). The commonest species of the Scarabaeoidea superfamily in the Rogów region. A forest species. The adults are every year observed, most often on the spring and autumn time in various type of forests.

2.2.2. *Geotrupes (Geotrupes) spiniger* (Marsham, 1802)

- Gutkowice, UTM: DC33, 07.XI.1997, 3 exx., excr. of *Bos taurus* L., leg. J. Borowski; 22.II.1998, 1 ex., an agricultural field, in flight, leg. J. Borowski; 13.IX.1998, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski; 23.V.2000, 1 ex., excr. of *Bos taurus* L., leg. T. Mokrzycki;
- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 19.VIII.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A common species in the Rogów region. The imagines were collected and observed on the spring and autumn time, especially in the sandy, agricultural fields and meadows.

2.2.3. *Geotrupes (Geotrupes) stercorarius* (Linnaeus, 1758)

- Popień, UTM: DC29, 09.VI.1995, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 08.V.1999, 1 ex., and 10.V.1999, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 12.V.1999, 3 exx., excr. of *Bos taurus* L., leg. J. Borowski; 10.V.2009, 2 exx., leg. A. Byk.

A less common species than *G. spiniger* in the Rogów region. The imagines were collected and observed on the spring and autumn time, in the various types of agricultural fields and meadows.

2.2.4. *Trypocopris vernalis vernalis* (Linnaeus, 1758)

- Popień, UTM: DC29, 29.V.1995, 1 ex., and 02.VI.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Lipce, UTM: DC25, 15.VIII.1998, 2 exx., mixed forest, leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 12.V.1999, 1 ex., dead chicken, leg. J. Borowski;
- Gutkowice, UTM: DC33, 14.V.1999, 2 exx., and 16.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;
- Głuchów, UTM: DC33, 18.V.2003, 1 ex., spruce forest, and 04.X.2004, 1 ex., mixed forest, leg. J. Borowski.

For the first time in the Rogów region shown by Mokrzycki (2011). A rare species in the Rogów region. The species most frequently occurs on the spring time, but collected in individual specimens.

2.3. Lucanidae

2.3.1. *Sinodendron cylindricum* (Linnaeus, 1758)

- Rogów, UTM: DC24, VI.1956, 1 ex., and VI. 1957, 1ex., leg. J. Dominik.

The two males of that species exist in the department's collection in Rogów. They were collected and labeled by J. Dominik. Since this time there is any further information considering this species. Until catching new materials we delete this species from the list of stag beetles of the Rogów region.

2.3.2. *Platycerus caraboides caraboides* (Linnaeus, 1758)

- Rogów, UTM: DC24, 21.V.1953, 1 ex., on *Betula* sp., leg. J. Dominik; 12.V.1957, 1 ex., leg. S. Mazur; 01-31.V.1994, 2 exx., leg. A. Adamczuk;

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 30.V.1991, 1 ex., 05.VI.1991, 3 exx., 10.V.1998, 3 exx., and 03.V.2006, 1 ex., on herbs, leg. J. Borowski; 25.X.1997, inside the beech stump, leg. J. Borowski;

- Rogów, dendrological garden, UTM: DC24, 07.V.1994, 1 ex., leg. T. Mokrzycki; 30.V.1995, 1 ex., on herbs, leg. J. Borowski; 10.V.2009, 1 ex., on the young aspen shoot, leg. J. Borowski;

- Rogów, „Górki” range, UTM: DC24, 25.V.1999, 2 exx., on the young oak shoots, leg. J. Borowski;

- Głuchów, UTM: DC33, 20.V.2003, 1 ex., on herbs, leg. J. Borowski;

- Rogów, „Doliska” range, UTM: DC24, 23.V.2003, 2 exx., on herbs, leg. J. Borowski.

For the first time in the Rogów region shown by Dominik (1966) and next by Piętka (2013). A very common species in the Rogów region. Imagines are wintering in wood of stumps of various deciduous trees and next they were observed on the spring time, especially in May, on the young shoots of aspens, oaks and birch-trees.

2.3.3. *Dorcus parallelipedus* (Linnaeus, 1758)

- Gutkowice, UTM: DC33, 28.VII.2007, 1 ex., sandy fossa, leg. J. Borowski.

A very rare species in the Rogów region. Only 1 specimen of this species was caught during more than 20 years of researches in this area and using of various traps. The male of the species was caught under a birch-tree trunk lying in the sandy fossa, between agricultural fields.

2.4. Trogidae

2.4.1. *Trox cadaverinus cadaverinus* Illiger, 1802

- Rogów, UTM: DC24, 29.IV.2013, 1 ex., indoor the building, the restroom, cabin No. 2, leg. J. Borowski.

For the first time in the Rogów region shown by Byk (2012b). A rare species in the Rogów region. The species lives in the warm and sandy places, on carrion of mammals. Adults are flying to the light.

2.4.2. *Trox hispidus* (Pontoppidan, 1763)

- Gutkowice, UTM: DC33, 21.VII.2007, 6 exx., and 27.VII.2007, 3 exx., the fox excrement, leg. J. Borowski; 31.VII.2010, 3 exx., sandy fossa, leg. J. Borowski; 15.VIII.2010, 1 ex., the dog excrement, leg. J. Borowski.

For the first time in the Rogów region shown by Byk (2012b). A quite rare species in the Rogów region. The species was collected in the summer time, in warm and sandy places, on dry excrement of dog and fox.

2.4.3. *Trox sabulosus sabulosus* (Linnaeus, 1758)

- Rogów, UTM: DC24, IV.1953, 1 ex., indoor the building, leg. J. Dominik; 03.V.1954, 1 ex., young pine forest, leg. A. Szujecki; V.1967, 1 ex., in flight, leg. S. Mazur; 05.VII.1985, 1 ex., leg. T. Mokrzycki; 11.V.1994, 1 ex., leg. Z. Dadela;
- Gutkowice, UTM: DC33, 09.V.1998, 1 ex., the chicken bones, leg. J. Borowski; 20.IV.2002, 2 exx., the dog excrement, leg. J. Borowski; 04.IV.2012, 1ex., in flight, 1 ex., the fox excrement, and 1 ex., the badger excrement, leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 10.V.1999, 1 ex., and 15.V.1999, 5 exx., dead chicken, leg. J. Borowski.

A quite common species in the Rogów region. An early spring species. The adults were collected in warm localities, on carrion and excrement of birds and mammals.

2.4.4. *Trox scaber* (Linnaeus, 1767)

- Rogów, dendrological garden, UTM: DC24, 18.V.1993, 1 ex., leg. T. Mokrzycki;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 27.IV.1997, 1 ex., the oak hollow, leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 23.X.1997, 1 ex., sifting near *Quercus* sp. trunk, leg. J. Borowski; 12.VI.1999, 1 ex., Moericke’ trap, leg. J. Sawoniewicz;
- Gutkowice, UTM: DC33, 16.V.2001, 1 ex., the fox burrow, leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 23.X.2004, 1 ex., sifting near *Quercus* sp. trunk, leg. J. Borowski;
- Rogów, UTM: DC24, VII.2015, more than 100 exx., in nesting box with *Strix aluco* (L.) nest, leg. J. Borowski.

A commonest species of the Trogidae family in the Rogów region. For the first time in the Rogów region shown by Byk & al. (2013). The adults winter in the predator bird nests or other places near bird nests e.g. in the forest litter. A new generation of the species appears in the middle of summer.

2.5. Scarabaeidae

2.5.1. *Aphodius (Acrossus) depressus* (Kugelann, 1792)

- Rogów, „Doliska” range, UTM: DC24, 10.VI.1997, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 06.V.1999, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 07.V.1999, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A quite rare species in the Rogów region. The species occurs in the spring time. The adults were collected in various environments in the fresh excrement of livestock.

2.5.2. *Aphodius (Acrossus) rufipes* (Linnaeus, 1758)

- Rogów, UTM: DC24, 30.V.1995, 1 ex., leg. J. Borowski;

- Rogów, „Górki” range, UTM: DC24, 17.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A quite common species in the Rogów region. The species occurs in the spring time. The adults were collected in various environments in the fresh excrement of livestock.

2.5.3. *Aphodius (Agoliinus) nemoralis* Erichson, 1848

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 28.IV.1997, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski;

- Gutkowice, UTM: DC33, 09.V.1998, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;

- Rogów, dendrological garden, UTM: DC24, IV.2008, 5 exx., window trap in a mixed forest, leg. J. Borowski.

A rare species in the Rogów region. The species occurs in the early spring time. The adults were collected in various forests, in the excrement of wild and domestic animals.

2.5.4. *Aphodius (Agrilinus) ater* (DeGeer, 1774)

- Rogów, UTM: DC24, 23.V.1995, 1 ex., leg. J. Borowski;

- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 27.IV.1997, 1 ex., excr. of *Sus scrofa* L., leg. J. Borowski;

- Gutkowice, UTM: DC33, 03.IV.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 06.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Rogów, „Górki” range, UTM: DC24, 07.V.1999, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski;

- Głuchów, UTM: DC33, 08.IV.2014, 3 exx., excr. of *Cervus elaphus* L., leg. J. Borowski.

A quite common species in the Rogów region. The species occurs in the early spring time. The adults were collected in various environments, in the excrement of wild and domestic animals.

2.5.5. *Aphodius (Agrilinus) rufus* (Moll, 1782)

- Rogów, UTM: DC24, 30.VI.1995, 3 exx., and 12.VIII.1996, 1 ex., leg. J. Borowski;

- Rogów, „Górki” range, UTM: DC24, 14.IX.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 24.VI.1997, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 19.VIII.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Rogów, UTM: DC24, 01.X.2003, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski.

One of the commonest species of *Aphodius* Illig. genus in the Rogów region. Adults were collected from the early summer to the early autumn, in various environments, in the excrement of domestic animals. It is the commonest species flying to the light.

2.5.6. *Aphodius (Agrilinus) sordidus sordidus* (Fabricius, 1775)

- Rogów, UTM: DC24, 12.X.1995, 1 ex., leg. J. Borowski; 27.VI.1997, 1 ex., and 14.X.2004, 1 ex., leg. A. Byk;

- Rogów, „Doliska” range, UTM: DC24, 14.X.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 14.VII.2010, 1 ex., to the light, leg. J. Borowski;

- Gutkowice, UTM: DC33, 14.X.2004, 2 exx., and 08.VI.2009, 7 exx., leg. A. Byk.

A common species in the Rogów area. Adults were collected from the early summer to the early autumn, in various environments, in the excrement of domestic animals. The species often is flying to the light.

2.5.7. *Aphodius (Aphodius) fimetarius* (Linnaeus, 1758)

- Rogów, UTM: DC24, 03.VIII.1990, 1 ex., leg. P. Węgrzynowicz; 05.VI.1991, 1 ex., and 25.IV.1995, 1 ex., leg. J. Borowski; 14.X.2004, 1 ex., leg. A. Byk;
- Gutkowice, UTM: DC33, 08.XI.1997, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski.

One of the commonest species of *Aphodius* Illig. genus in the Rogów region. The species occurs throughout the year but most often in the spring and autumn time. The adults were collected in various environments, in the excrement of wild and domestic animals.

2.5.8. *Aphodius (Aphodius) foetens* (Fabricius, 1787)

- Rogów, UTM: DC24, 10.VIII.1995, 1 ex., leg. A. Byk; 07.X.1995, 1 ex., leg. J. Borowski;
- Gutkowice, UTM: DC33, 03.VII.1999, 3 exx., and 18.X.2010, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 19.VIII.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 03.X.2010, 1 ex., leg. A. Byk;
- Rogów, UTM: DC24, 24.IX.2012, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A quite common species in the Rogów region. The adults were collected and observed from summer to autumn, in various environments, in the excrement of domestic animals.

2.5.9. *Aphodius (Calamosternus) granarius* (Linnaeus, 1767)

- Rogów, „Górki” range, UTM: DC24, 23-30.V.1995, 5 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Popień, UTM: DC23, 24.V.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 09.V.1998, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 10.V.2006, 1 ex., leg. A. Byk;
- Głuchów, UTM: DC33, 22.III.2014, 1 ex., in flight, leg. J. Borowski.

A common species in the Rogów region. The species occurs in the early spring time. The adults were collected in various environments, in the excrement of wild and domestic animals.

2.5.10. *Aphodius (Chilo thorax) distinctus distinctus* (Müller, 1776)

- Rogów, UTM: DC24, 05.VI.1991, 1 ex., and 30.V.1995, 1 ex., leg. J. Borowski; 1995, 4 exx., excr. of *Bos taurus* L., leg. A. Byk; 10.VIII.1995, 1 ex., and 03.X.2001, 2 exx., leg. A. Byk; 01.X.2003, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 15.X.1997, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 04.VI.1997, 1 ex., excr. of *Bos taurus* L., leg. T. Mokrzycki; 08.XI.1997, 5 exx., and 20.X.2005, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 20.II.1998, 1 ex., on herbs, leg. J. Borowski; 03.IV.1999, 2 exx., dead chicken, leg. J. Borowski; 17-19.X.2006, 1 ex., leg. A. Byk.

A very common species in the Rogów region. The adults were collected and observed in the spring and autumn time, in various environments. It occurs in the excrement of wild and domestic animals. The species often is flying to the light.

2.5.11. *Aphodius (Chilothorax) paykulli* Bedel, 1907

- Rogów, UTM: DC24, 1995, 2 exx., 3-4.X.1995, 3 exx., leg. A. Byk; 12.X.1995, 2 exx., leg. T. Mokrzycki; 03.XI.1999, 6 exx., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 12.X.1995, 2 exx., and 03.XI.1999, 20 exx., excr. of *Bos taurus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 03.X.2003, 2 exx., and 08.X.2009, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski; 21.X.2005, 8 exx., excr. of *Bos taurus* L., leg. T. Mokrzycki; 17-19.X.2006, 10 exx., leg. A. Byk.

For the first time in the Rogów region shown by Kalisiak (1996). A quite common species in the Rogów region. The species occurs in the autumn time. The adults were collected in the agricultural and meadow environments, in the excrement of domestic animals, especially cows.

2.5.12. *Aphodius (Colobopterus) erraticus* (Linnaeus, 1758)

- Rogów, UTM: DC24, 06.V.1994, 2 exx., leg. M. Bischoff; 02.VII.1995, 1 ex., leg. J. Borowski;
- Gutkowice, UTM: DC33, 10.V.2009, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 21.V.2012, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A rare species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the fresh excrement of domestic animals.

2.5.13. *Aphodius (Esymus) pusillus pusillus* (Herbst, 1789)

- Rogów, UTM: DC24, 27.IV.1994, 1 ex., leg. A. Sawicka; 06.V.1994, 2 exx., leg. M. Bischoff; 24.V.1994, 1 ex., 23.V.1995, 8 exx., and 30.V.1995, 1 ex., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 23-24.V.1995, 11 exx., excr. of *Equus caballus* L., and 24.V.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 04.VI.1997, 9 exx., leg. A. Byk and 4 exx., excr. of *Bos taurus* L., leg. T. Mokrzycki.
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 06.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A common species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the excrement of domestic animals.

2.5.14. *Aphodius (Euorodalus) coenosus* (Panzer, 1798)

- Głuchów, UTM: DC33, 02.V.2013, 1 ex., excr. of *Cervus elaphus* L., leg. J. Borowski.

A very rare species in the Rogów region. Only 1 specimen of this species was caught during more than 20 years of researches in this area and using of various traps. The species occurs in the early spring time. The forest species, occurs in the excrement of wild animals.

2.5.15. *Aphodius (Euorodalus) paracoenosus* Balthazar & Hrubant, 1960

- Gutkowice, UTM: DC33, 25.V.1997, 1 ex., and 10.V.2009, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 04.VI.1997, 2 exx., leg. A. Byk;
- Rogów, UTM: DC24, 25.VI.1997, 1 ex., leg. D. Doktor;
- Rogów, „Doliska” range, UTM: DC24, 29.V.2012, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A rare species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the excrement of domestic animals.

2.5.16. *Aphodius (Eupleurus) subterraneus subterraneus* (Linnaeus, 1758)

- Rogów, UTM: DC24, 01.V.1957, 1 ex., leg. S. Mazur; 23.V.1995, 1 ex., and 30.V.1995, 1 ex., leg. J. Borowski;
- Gutkowice, UTM: DC33, 04.VI.1997, 1 ex., and 10.V.2009, 6 exx., leg. A. Byk; 15.IV.1999, 4 exx., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 17.V.1999, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 29.V.2012, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A common species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the excrement of domestic animals.

2.5.17. *Aphodius (Limarus) zenkeri* Germar, 1813

- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 19.VIII.1999, 3 exx., and 20.VIII.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

For the first time in the Rogów region shown by Borowski & Kieszek (1999) and later by Byk (2000). A rare species in the Rogów region. A forest species. Adults were collected and observed from the middle of August to the middle of September, in the excrement of wild and domestic animals.

2.5.18. *Aphodius (Liothorax) plagiatus* (Linnaeus, 1767)

- Rogów, „Doliska” range, UTM: DC24, 24.VI.2012, 1 ex., an edge of the pond, leg. J. Borowski.

A very rare species in the Rogów region. Only 1 specimen of this species was caught during more than 20 years of researches in this area and using of various traps. The species occurs in the spring time, on the edges of overflowing waters.

2.5.19. *Aphodius (Melinopterus) prodromus* (Linnaeus, 1767)

- Rogów, UTM: DC24, 1995, 2 exx., and 03.X.2001, 3 exx., leg. A. Byk; 24.IV.1995, 2 exx., leg. J. Borowski; 01.X.2003, 1 ex., and 11.X.2009, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 08.XI.1997, 3 exx., 09.V.1998, 1 ex., and 13.IX.1998, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 12.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

For the first time in the Rogów region shown by Mokrzycki (2011). A very common species in the Rogów region. The adults were collected and observed in the spring and autumn time, in various environments. It occurs in the excrement of wild and domestic animals. The species often is flying to the light.

2.5.20. *Aphodius (Melinopterus) sphaclatus* (Panzer, 1798)

- Rogów, UTM: DC24, 01.V.1967, 1 ex., leg. S. Mazur;

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 15.IV.1999, 4 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A rare species in the Rogów region. The species occurs in the early spring time. The adults were collected in the mixed forest, in the excrement of horse.

2.5.21. *Aphodius (Nimbus) contaminatus* (Herbst, 1783)

- Rogów, UTM: DC24, 11.X.2009, 1 ex., 30.IX.2011, 1 ex., and 06.X.2011, 1 ex., excr. of *Equus caballus* L., 06.X.2011, 1 ex., excr. of *Vulpes vulpes* (L.), leg. J. Borowski; 19.X.2009, 1 ex., on the building wall, leg. T. Mokrzycki.

For the first time in the Rogów region shown by Byk (2012a). A very rare species in the Rogów region. The adults were collected and observed in the autumn time, in various environments. It occurs in the excrement of wild and domestic animals, especially horses.

2.5.22. *Aphodius (Otophorus) haemorrhoidalis* (Linnaeus, 1758)

- Rogów, „Górki” range, UTM: DC24, 06.VI.1995, 7 exx., excr. of *Ovis aries* L., leg. J. Borowski;

- Gutkowice, UTM: DC33, 08.VI.2009, 2 exx., leg. A. Byk.

A common species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the excrement of domestic animals.

2.5.23. *Aphodius (Planolinus) fasciatus* (Olivier, 1789)

- Gutkowice, UTM: DC33, 08.XI.1997, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;

- Głuchów, UTM: DC33, 08.IV.2014, 1 ex., excr. of *Cervus elaphus* L., leg. J. Borowski.

A very rare species in the Rogów region. Only 2 specimens of this species were caught during more than 20 years of researches in this area and using of various traps. The adults were collected and observed in the spring and autumn time, in forest and meadows near forests. It occurs in the excrement of wild animals and occasionally of domestic animals.

2.5.24. *Aphodius (Sigorus) porcus* (Fabricius, 1792)

- Rogów, „Górki” range, UTM: DC24, 07.X.1995, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski;

- Rogów, UTM: DC24, 12.X.1995, 1 ex., leg. T. Mokrzycki; 03.X.2001., 1 ex., leg. A. Byk; 03.X.2001., 1 ex., leg. J. Borowski; 06.X.2011, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Rogów, „Doliska” range, UTM: DC24, 14.X.1995, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;

- Gutkowice, UTM: DC33, 20.X.1999, 2 exx., 20.X.2005, 2 exx., and 08.X.2009, 3 exx., excr. of *Bos taurus* L., leg. J. Borowski; 14.X.2004, 1 ex., 17-19.X.2006, 2 exx., and 03.X.2010, 1

ex., leg. A. Byk; 03.X.2010, 1 ex., leg. M. Sawoniewicz; 03.X.2001, 5 exx., 03.X.2010, 1 ex., leg. T. Mokrzycki.

For the first time in the Rogów region shown by Kalisiak (1996) and next by Byk (2000). A quite common species in the Rogów region. The adults were collected and observed in the autumn time, in various environments. It occurs in the excrement of domestic animals, especially cows and horses.

2.5.25. *Aphodius (Teuchestes) fossor* (Linnaeus, 1758)

- Rogów, „Górki” range, UTM: DC24, 23.V.1995, 3 exx., and 17.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;
- Rogów, UTM: DC24, 24.V.1995, 1 ex., leg. J. Borowski; 26.VI.1997, 1 ex., leg. D. Doktor;
- Popień, UTM DC:23, 24.V.1995, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 04.VI.1997, 1 ex., leg. A. Byk.

For the first time in the Rogów region shown by Kalisiak (1996). A quite rare species in the Rogów region. The species occurs in the spring time. The adults were collected in the agricultural and meadow environments, in the fresh excrement of domestic animals.

2.5.26. *Aphodius (Volinus) sticticus* (Panzer, 1798)

- Rogów, UTM: DC24, 19.V.1993, 2 exx., 26.IV.1995, 1 ex., and 30.V.1995, 2 exx., leg. J. Borowski; 27.IV.1994, 2 exx., leg. A. Sawicka;
- Rogów, dendrological garden, UTM: DC24, 02.VI.1997, 1 ex., on the building wall, leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 03.VI.1998, 1 ex., on herbs, 12.IV.1999, 1 ex., and 06.V.1999, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 18.X.2010, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski.

A very common species in the Rogów region. The adults were collected and observed in the spring and autumn time, in various environments. It occurs in the excrement of wild and domestic animals. The species often is flying to the light.

2.5.27. *Oxyomus sylvestris* (Scopoli, 1763)

- Rogów, dendrological garden, UTM: DC24, 20.VII.1985, 1 ex., leg. T. Mokrzycki;
- Rogów, UTM: DC24, 04.V.1954, 1 ex., leg. A. Szujecki; 10.V.1995, 1 ex., leg. J. Borowski; 27.III.1999, 4 exx., and 05.V.2006, 1 ex., in flight, leg. J. Borowski; 01.X.2003, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 25.V.2001, 2 exx., the fox burrow, leg. J. Borowski; 14.IV.2004, 1 ex., sandy fossa, leg. J. Borowski.

A quite common species in the Rogów region. The adults were collected and observed in the spring and autumn time, in various environments. It occurs in the organic remains and occasionally in the excrement of wild and domestic animals.

2.5.28. *Diastictus vulneratus* (Sturm, 1805)

- Gutkowice, UTM: DC33, 14.IV.2004, 1 ex., 21.IV.2004, 4 exx., 24.V.2004, 14 exx., and 17.VI.2011, 4 exx., sandy fossa, leg. J. Borowski; 26.IV.2004, 1 ex., 14.X.2004, 1 ex., 10.V.2006, 1 ex., 10.V.2009, 13 exx., 16.VI.2011, 1 ex., and 26.V.2015, 3 exx., sandy fossa, leg. A. Byk; 17.VI.2005, 1 ex., sandy fossa, leg. T. Mokrzycki.

For the first time in the Rogów region shown by Byk (2012a). A rare species in the Rogów region. The species occurs in an old gravel pit in Gutkowice village. Adults were collected in the spring time, in a small sandy fossa, together with *Psammodytes asper* (F.).

2.5.29. *Psammodytes asper* (Fabricius, 1775)

- Gutkowice, UTM: DC33, 06.V.2004, 1 ex., sandy fossa, leg. A. Byk; 24.V.2004, 4 exx., 09.V.2006, 1 ex., and 17.VI.2011, 1 ex., sandy fossa, leg. J. Borowski.

For the first time in the Rogów region shown by Byk (2012a). A rare species in the Rogów region. The species occurs in an old gravel pit in Gutkowice village. Adults were collected in the spring time, in a small sandy fossa, together with *Diastictus vulneratus* (Sturm).

2.5.30. *Rhyssalus puncticollis* Brown, 1929

The first and new data on this species in the Rogów region shown by Byk & Minkina (2014). A quite common species in the Rogów area. The species is observed every spring from April to June, on pavements along mowed lawn.

2.5.31. *Copris (Copris) lunaris* (Linnaeus, 1758)

- Gutkowice, UTM: DC33, 22.V.1997, 7 exx., 01.VI.1997, 1 ex., and 09.V.1998, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski; 04.VI.1997, 4 exx., leg. A. Byk and 2 exx., leg. T. Mokrzycki;

- Rogów, „Doliska” range, UTM: DC24, 17.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

A quite rare species in the Rogów region. The species occurs in the spring time. The adults were collected in various environments, in the fresh excrement of domestic animals. The species often is flying to the light.

2.5.32. *Euoniticellus fulvus* (Goeze, 1777)

- Gutkowice, UTM: DC33, 10.V.2009, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;

- Rogów, „Doliska” range, UTM: DC24, 21.V.2012, 4 exx., and 27.V.2012, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A very rare species in the Rogów region. The species was discovered in 2009, in a very sunny and warm agricultural zone; the second locality was discovered in 2012, on a small but very warm meadow with the horse excrement. Probably, together with *Onthophagus taurus* (Schreber) it is a kind of dispersive and ecological complex.

2.5.33. *Onthophagus (Onthophagus) taurus* (Schreber, 1759)

- Gutkowice, UTM: DC33, 08.X.2009, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski;

- Rogów, „Doliska” range, UTM: DC24, 21.V.2012, 2 exx., and 27.V.2012, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A very rare species in the Rogów region. The species was discovered in 2009, in a very sunny and warm agricultural zone; the second locality was discovered in 2012, on a small but very warm meadow with the horse excrement. Probably, together with *Oniticellus fulvus* (Goeze), it is a kind of dispersive and ecological complex.

2.5.34. *Onthophagus (Palaeonthophagus) coenobita* (Herbst, 1783)

- Rogów, UTM: DC24, 02.IX.2004, 1 ex., 15.VI.2005, 4 exx., human excrement, 01.VI.2010, 1 ex., indoor the building, 07.VI.2010, 1 ex., on the street, 18.IX.2010, 1 ex., the pig liver, leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 06.VI.2010, 2 exx., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 28.V.2012, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A quite rare species in the Rogów region. The adults were collected in the spring and late summer time. The species occurs in the very warm and sunny places only, in the excrement of dogs, human and occasionally of domestic animals or on the carrion.

2.5.35. *Onthophagus (Palaeonthophagus) fracticornis* (Preyssler, 1790)

- Głuchów, UTM: DC33, 13.XI.1997, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, „Zimna Woda” reserve, UTM: DC24, 07.IV.1998, 1 ex., excr. of *Sus scrofa* L., leg. J. Borowski;
- Gutkowice, UTM: DC33, 04.VI.1997, 1 ex., and 10.V.2009, 3 exx., leg. A. Byk; 29.IV.1999, 1 ex., and 08.X.2009, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski;
- Rogów, UTM: DC24, 02.IX.2004, 20 exx., and 15.VI.2005, 5 exx., human excrement, leg. J. Borowski.

A common species in the Rogów region. The adults were collected in the spring and autumn time. The species occurs in the warm and sunny places, in the excrement of various species of wild and domestic animals.

2.5.36. *Onthophagus (Palaeonthophagus) nuchicornis* (Linnaeus, 1758)

- Rogów, UTM: DC24, 24.V.1994, 1 ex., and 26.IV.1995, 4 exx., leg. J. Borowski; 02.IX.2004, 1 ex., dry excrement of dog, leg. J. Borowski;
- Gutkowice, UTM: DC33, 10.V.2009, 4 exx., leg. A. Byk; 25.VI.2004, 1 ex., and 30.IV.2005, 1 ex., excr. of *Bos taurus* L., leg. J. Borowski; 10.VI.2004, 2 exx., excr. of *Equus caballus* L., leg. J. Borowski.

A quite common species in the Rogów region. The adults were collected in the spring and autumn time. The species occurs in the warm and sunny places, in the excrement of various species of wild and domestic animals.

2.5.37. *Onthophagus (Palaeonthophagus) ovatus* (Linnaeus, 1758)

- Rogów, „Doliska” range, UTM: DC24, 21.V.2012, 8 exx., 28.V.2012, 5 exx., and 29.V.2012, 4 exx., excr. of *Equus caballus* L., 27.V.2012, 4 exx., excr. of *Sus scrofa* L., 10.VI.2012, 6 exx., excr. of *Vulpes vulpes* (L.), leg. J. Borowski.

A very rare species in the Rogów region. The species was discovered in 2012, in very sunny and warm localities. Since this time, there is any further information considering this species.

2.5.38. *Onthophagus (Palaeonthophagus) similis* (Scriba, 1790)

- Gutkowice, UTM: DC33, 01.IV.1999, 2 exx., and 03.IV.1999, 2 exx., dead chicken, 03.IV.1999, 2 exx., excr. of *Equus caballus* L., 15-16.IV.1999, 7 exx., excr. of *Bos taurus* L., 15.IV.2004, 1 ex., sandy fossa, leg. J. Borowski;

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 06.V.1999, 3 exx., excr. of *Equus caballus* L., leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 07.V.1999, 1 ex., excr. of *Equus caballus* L., leg. J. Borowski.

The commonest species of the *Onthophagus* Latr. genus in the Rogów region. The adults were collected in the spring time. The species occurs in the warm, sunny and sandy places, in the excrement of various species of wild and domestic animals and occasionally on the carrion.

2.5.39. *Hoplia (Hoplia) graminicola* (Fabricius, 1792)

- Rogów, dendrological garden, UTM: DC24, 06.VII.1995, 2 exx., on the ground, leg. J. Borowski;
- Głuchów, UTM: DC33, 20.VI.2013, 1 ex., on herbs, leg. J. Borowski.

A very rare species in the Rogów region. The imagines were accidentally collected in the late spring and early summer.

2.5.40. *Melolontha (Melolontha) hippocastani hippocastani* Fabricius, 1801

- Rogów, UTM: DC24, 25.V.1994, 1 ex., leg. M. Żak;
- Głuchów, UTM: DC33, 17.V.2003, 9 exx., on the oak leaves, leg. J. Borowski; 20.V.2003, 1 ex., leg. T. Mokrzycki.

For the first time in the Rogów region shown by Dominik (1967). A very common species in the Głuchów forest. The imagines are observed in the spring time, sometimes in mass, in the pine and mixed forests.

2.5.41. *Melolontha (Melolontha) melolontha* (Linnaeus, 1758)

- Rogów, dendrological garden, UTM: DC24, 09.V.1998, 3 exx., on *Abies holophylla* Maxim., leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 29.V.1998, 2 exx., on shrubs, leg. J. Borowski.

For the first time in the Rogów region shown by Dominik (1954) and later by Nunberg (1986), Byk & al. (2013), Rutkiewicz & al. (2013). One of the commonest scarab beetles in the Rogów region. The imagines are observed in the spring time, sometimes in mass, in various types of forest and outside the forest.

2.5.42. *Polyphylla (Polyphylla) fullo fullo* (Linnaeus, 1758)

- Rogów, UTM: DC24, 07.VII.1954, 1 ex., leg. M. Nunberg;
- Rogów, „Doliska” range, UTM: DC24, 07.VII.2010, 1 ex., on shrub, leg. M. Kaczmarska;
- Gutkowice, UTM: DC33, 08.VII.2010, 1 ex., in flight, leg. J. Borowski.

For the first time in the Rogów region shown by Dominik (1975). A rare, psammophilous species in the Rogów region. The adults are flying at evenings, in the beginning of July. The species occurs in the open areas, outside the forests. Larvae live in the soil, at warm and sandy places.

2.5.43. *Amphimallon solstitiale solstitiale* (Linnaeus, 1758)

- Gutkowice, UTM: DC33, 26.VI.1997, 1 ex., and 10.VII.1997, 1 ex., on herbs, leg. J. Borowski;
- Rogów, UTM: DC24, 02.VII.1997, 1 ex., and 29.VI.1999, 2 exx., in flight, leg. J. Borowski.

A common species in the Rogów region. Adults are collected and observed in the end of June and the beginning of July. Imagines are flying at evenings, in warm and open places, outside the forests.

2.5.44. *Maladera (Maladera) holosericea* (Scopoli, 1772)

- Rogów, UTM: DC24, 13.V.1989, 1 ex., leg. T. Mokrzycki;
- Gutkowice, UTM: DC33, 06.VI.1997, 1 ex., 09.V.1998, 2 exx., 12.V.1999, 1 ex., and 21.IV.2004, 1 ex., sandy road, leg. J. Borowski; 26.09.1997, 1 ex., and 01.X.1997, 1 ex., under stones, leg. J. Borowski; 15.IV.2004, 1 ex., 24.V.2004, 2 exx., and 03.VI.2004, 1 ex., sandy fossa, leg. J. Borowski; 10.V.2009, 2 exx., leg. A. Byk;
- Głuchów, UTM: DC33, 20.V.2005, 1 ex., leg. T. Mokrzycki.

A quite common, psammophilous species in the Rogów region. Adults winter in the upper part of soil and next occur in warm and sandy places, from April to June.

2.5.45. *Serica brunnea* (Linnaeus, 1758)

- Rogów, dendrological garden, UTM: DC24, 08.VII.1997, 1 ex., and 11.VII.1997, 1 ex., on the wall of building, leg. J. Borowski;
- Rogów, UTM: DC24, 01.VIII.1997, 1 ex., at home, to the light, leg. J. Borowski;
- Głuchów, UTM: DC33, 20.VII.1998, 1 ex., sandy fossa, leg. J. Borowski;
- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 06.VIII.2001, 1 ex., window trap, mixed forest, leg. J. Borowski.

For the first time in the Rogów region shown by Dominik (1954) and later by Mokrzycki (2011). A very common species in the Rogów region. The summer time species, which lives in the forest and less frequently outside the forest. The adults often are flying to the light.

2.5.46. *Chaetopteroptia segetum segetum* (Herbst, 1783)

- Głuchów, UTM: DC33, 10.VI.2003, 1 ex., on herbs, leg. J. Borowski;
- Gutkowice, UTM: DC33, 08.VI.2007, 24 exx., flowering grain, leg. J. Borowski; 09.VI.2007, 2 exx., leg. T. Mokrzycki; 09.VI.2007, 8 exx., leg. J. & T. Mokrzyccy.

For the first time in the Rogów region shown by Byk (2012b). The species was discovered in 2003. Since this time *Ch. segetum* is observed every year at few localities. Adults were collected and observed in the beginning of June, on flowering grain e.g. *Secale cereale* L.

2.5.47. *Anomala dubia* (Scopoli, 1763)

- Rogów, dendrological garden, UTM: DC24, 17.VII.1951, 1 ex., leg. J. Dominik;
- Gutkowice, UTM: DC33, 26.VI.1997, 3 exx., 28.VI.1997, 1 ex., 27.VII.1997, 10 exx., and 28.VI.1998, 1 ex., xerothermic field, leg. J. Borowski;
- Rogów, „Górki” range, UTM: DC24, 15.VII.2001, 1 ex., on herbs, leg. J. Borowski;
- Rogów, UTM: DC24, 24.VII.2009, 1 ex., the center of village, leg. J. Borowski.

For the first time in the Rogów region shown by Dominik (1954). A common, psammophilous species in the Rogów region. Adults were collected and observed from the end of June to the end of July, in the warm and sandy places.

2.5.48. *Phyllopertha horticola* (Linnaeus, 1758)

- Gutkowice, UTM: DC33, 20.VI.1997, 1 ex., xerothermic field, leg. J. Borowski;
- Rogów, UTM: DC24, 17.VI.2005, 7 exx., leg. A. Byk.

For the first time in the Rogów region shown by Dominik (1954) and later by Nunberg (1986) and Byk & al. (2013). One of the commonest scarab beetles in the Rogów region. An ubiquitous species, lives in various environments.

2.5.49. *Oryctes (Oryctes) nasicornis nasicornis* (Linnaeus, 1758)

- Rogów, dendrological garden, UTM: DC24, 05.VIII.1998, 5 exx., compost, leg. J. Borowski; 08.VII.2004, 1 ex., to the light, leg. J. Borowski.

A quite common species in the Rogów region. The adults occur in the summer time and fly to the light. Larvae live in the various types of compost.

2.5.50. *Cetonia (Cetonia) aurata aurata* (Linnaeus, 1761)

- Rogów, dendrological garden, UTM: DC24, 25.VII.1998, 1 ex., and 16.V.2003, 1 ex., on flowers, leg. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 27.V.2012, 1 ex., on flowers, leg. J. Borowski;
- Popień, UTM: DC23, 02.VI.2014, 1 ex., on flowers, leg. J. Borowski.

For the first time in the Rogów region shown by Byk & al. (2013). One of the commonest scarab beetles in the Rogów region. An ubiquitous species, lives in various environments. The adults occur on various flowers from the spring to the late summer time. Larvae live in the various types of compost.

2.5.51. *Protaetia (Cetonischema) aeruginosa* (Drury, 1770)

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 18.VIII.2012, 1 ex., on herbs, obs. J. Borowski;
- Rogów, „Doliska” range, UTM: DC24, 01.IV.2013, 1 ex., on the road, obs. J. Borowski;
- Popień, UTM: DC23, 10.VI.2014, 1 ex., the axe hollow, obs. J. Borowski.

For the first time in the Rogów region, the species was discovered in 2012. A very rare species in the Rogów region. Adults were observed from April to August, near old trees with hollows inside the trunks. Probably, the imagines are wintering.

2.5.52. *Protaetia (Liocola) marmorata marmorata* (Fabricius, 1792)

- Popień, UTM: DC23, VII.2010, 1 ex., window trap, mixed forest, leg. J. Borowski.

A very rare species in the Rogów region. Only 1 specimen of this species was caught during more than 20 years of researches in this area and using of various traps. Larvae live inside larger hollows of various deciduous trees.

2.5.53. *Protaetia (Potosia) metallica metallica* (Herbst, 1782)

- Popień, UTM: DC23, 30.V.1995, 3 exx., on flowers of *Sorbus aucuparia* L., leg. J. Borowski;
- Rogów, dendrological garden, UTM: DC24, 22.V.2003, 2 exx., on flowers, leg. J. Borowski;
- Gutkowice, UTM: DC33, 25.V.2003, 1 ex., leg. A. Byk.

For the first time in the Rogów region shown by Nunberg (1986). A common species in the Rogów region. The adults were collected and observed from May to June, on various

flowers. Larvae live in anthills of bigger ants e.g. *Formica rufa* L. and *Formica polyctena* Först.

2.5.54. *Tropinota (Epicometis) hirta hirta* (Poda, 1761)

- Rogów, „Doliska” range, UTM: DC24, 01.V.2003, 1 ex., flowers of *Prunus spinosa* L., leg. J. Borowski;

- Gutkowice, UTM: DC33, 14.IV.2004, 1 ex., xerothermic field, in flight, leg. J. Borowski; 21.IV.2004, 9 exx., gravel pit, leg. J. Borowski.

A quite rare species in the Rogów region. An early spring time species. The adults occur on flowers, especially of *Taraxacum officinale* Wigg., in the warm and sandy localities.

2.5.55. *Oxythyrea funesta* (Poda, 1761)

- Rogów, „Doliska” range, UTM: DC24, 10.VI.2012, 1 ex., the railway embankment, leg. J. Borowski;

- Rogów, dendrological garden, UTM: DC24, 22.VIII.2012, 2 exx., and 24.VIII.2012, 3 exx., on flowers, leg. J. Borowski.

An invasive species. For the first time in the Rogów region, the species was discovered in 2012. Since this time *O. funesta* is observed every year at many localities. Adults were collected and observed in the summer time, on various flowers.

2.5.56. *Gnorimus nobilis nobilis* (Linnaeus, 1758)

- Rogów, UTM: DC24, VI.1956, 1 ex., leg. J. Dominik.

The one specimen of that species exist in the department’s collection in Rogów. It was collected and labeled by J. Dominik, in 1956. Since this time there is any further information considering this species. Until catching new materials we delete this species from the list of scarab beetles of the Rogów region.

2.5.57. *Trichius fasciatus* (Linnaeus, 1758)

- Rogów, UTM: DC24, VII.1956, 2 exx., leg. J. Dominik.

The two specimens of that species exist in the department’s collection in Rogów. They were collected and labeled by J. Dominik. Since this time there is any further information considering this species. Until catching new materials we delete this species from the list of scarab beetles of the Rogów region.

2.5.58. *Valgus hemipterus* (Linnaeus, 1758)

- Popień, UTM: DC23, 24.V.1995, 1 ex., on flowers of *Sorbus aucuparia* L., leg. J. Borowski;

- Rogów, „Górki” range, UTM: DC24, 17.V.1999, 2 exx., on flowers of *Crataegus* L., leg. J. Borowski;

- Rogów, „Zimna Woda and Wilczy Dół” range, UTM: DC24, 15.V.2001, 1 ex., in flight, and 18.V.2001, 1 ex., on oak stump, leg. J. Borowski;

- Rogów, dendrological garden, UTM: DC24, 15.V.2002, 1 ex., on flowers of *Spiraea* L., leg. J. Borowski;

- Głuchów, UTM: DC33, 10.VI.2003, 5 exx., in wood of *Fraxinus* L., and 3 exx., in wood of *Salix* L., leg. J. Borowski;

- Rogów, UTM: DC24, 25.IV.2004, 2 exx., and 27.IV.2004, 2 exx., linden wood, leg. J. Borowski;

- Gutkowice, UTM: DC33, 25.V.2003, 2 exx., leg. A. Byk; 10.V.2009, 1 ex., on herbs, leg. J. Borowski.

For the first time in the Rogów region shown by Byk & al. (2013) and next by Byk & al. (2013). A quite common species in the Rogów region. Adults were collected and observed on white flowering plants, from the middle of April to the middle of June. Larvae live in hard and dead wood of various species of deciduous trees.

3. CONCLUSIONS

From the Rogów region, 1 species of Bolboceratidae representing 50% of all species in the Polish fauna was collected. We don't expect to be able to collect the second species, *Bolbelasmus unicornis* (Schrank) in the study area.

4 species of Geotrupidae, representing approx. 57% of all species in the Polish fauna were collected. In the future, it is possible to find one or two new species: *Geotrupes mutator* (Marsh.) and *Typhaeus typhoeus* (L.).

The Lucanidae family is represented by 2 species (approx. 29% of all species in the Polish fauna) in the Rogów region. One more, *Sinodendron cylindricum* (L.) needs confirm the occurrence in the studied area.

From the Rogów region, 4 species of Trogidae representing 80% of all species in the Polish fauna was collected. The occurrence of one or two new species of Trogidae can expect in the Rogów region.

58 species of Scarabaeidae, representing approx. 41% of all species in the Polish fauna, were collected in the Rogów region. Most species published and collected in the 50s, 60s and 70s of the twentieth century is collecting today. However, the two species previously collected, *Trichius fasciatus* (L.) and *Gnorimus nobilis* (L.), despite the use of variety traps and collecting by many entomologists and students were not caught again. The occurrence of several more new species of scarab beetles can expect in the Rogów area e.g. *Aphodius merdarius* (F.), *A. borealis* Gyll., *A. scrofa* (F.), *Heptaulacus testudinarius* (F.), *Caccobius schreberi* (L.), *Onthophagus gibbulus* (Pallas), *O. joannae* Goljan, *O. medius* (Kugel.), *O. vacca* (L.) and *Osmoderma barnabita* Motsch.

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References

- [1] Borowski J., Kieszek C. 1999. Ciekawsze chrząszcze (Coleoptera) odłowione w rezerwacie dębowym Zimna Woda w Rogowie. *Wiad. entomol.*, 18(2): 125-126.
- [2] Byk A. 2000. Nowe stanowiska niektórych krajowych gatunków chrząszczy z grupy Scarabaeidae laparosticti (Coleoptera: Scarabaeidae). *Wiad. entomol.*, 19(2): 119-120.

- [3] Byk A. 2012a. Nowe stanowiska niektórych krajowych gatunków chrząszczy z rodziny Scarabaeidae (Coleoptera). *Wiad. entomol.*, 31(2): 121-123.
- [4] Byk A. 2012b. Nowe stanowiska niektórych krajowych gatunków chrząszczy z rodzin: Trogidae, Geotrupidae, Ochodaeidae (Coleoptera). *Wiad. entomol.*, 31(2): 123-124.
- [5] Byk A., Minkina Ł. 2014. *Rhyssemus puncticollis* Brown, 1929 (Coleoptera: Scarabaeidae: Aphodiinae: Psammodiini): A New Record for the Fauna of Poland and Latvia. *Coleopt. Bull.*, 68(3): 377-383.
- [6] Byk A., Mokrzycki T., Dworakowski M., Bidas M. 2012. Rozmieszczenie *Odonteus armiger* (Scopoli, 1772) (Coleoptera: Scarabaeoidea: Bolboceratidae) w Polsce z uwagami o jego bionomii. *Wiad. entomol.*, 32(2): 100-112.
- [7] Byk A., Borowski J., Mazur S., Mokrzycki T., Rutkiewicz A. 2013. Waloryzacja lasów Leśnego Kompleksu Promocyjnego „Lasy Spalsko-Rogowskie” na podstawie zgrupowań chrząszczy saproksylicznych. *Studia i Materiały CEPL w Rogowie*, 35(2): 82-128.
- [8] Dominik J. 1954. Próba zwalczania trzyletniego pędraka chrabąszcza (*Melolontha melolontha* L.) preparatem „Intox 8”. *Sylwan*, 98(3): 204-209.
- [9] Dominik J. 1966. Obserwacje nad występowaniem owadów żyjących w drewnie w lasach doświadczalnych SGGW w Rogowie. *Zesz. Nauk. SGGW, Leśn.*, 9: 103-112.
- [10] Dominik J. 1967. Obserwacje nad nasileniem uszkodzenia przez owady, ssaki i pasożytnicze grzyby upraw sosny wydmowej (*Pinus contorta* var. *murrayana* Eng.), sosny wejmutki (*P. strobus* L.) i sosny pospolitej (*P. silvestris* L.) w Lasach Doświadczalnych SGGW w Rogowie. *Sylwan*, 10: 59-63.
- [11] Dominik J. 1975. Szkodniki i grzyby pasożytnicze występujące na sosnach: zachodniej (*Pinus monticola* Lamb.), smółowej (*P. rigida* Mill.) i Banksa (*P. banksiana* Lamb.) w Lasach Doświadczalnych w Rogowie. *Sylwan*, 11: 29-34.
- [12] Kalisiak J. 1996. Jesienne plugi (Coleoptera: Aphodiidae: *Aphodius* III.) okolic Łodzi. *Biul. entomol.*, 2(14): 5-7.
- [13] Löbl I., Smetana A. (ed.) 2006. Catalogue of Palearctic Coleoptera, Vol. 3. Stenstrup, Apollo Books, 690 pp.
- [14] Mokrzycki T. 2011. Zgrupowania saproksylicznych chrząszczy (Coleoptera) w pniakach wybranych gatunków drzew – studium porównawcze. Wydawnictwo SGGW, Warszawa, 135 pp.
- [15] Nunberg M. 1986. The beetles (Coleoptera) collected on the area of the Forest Experimental Station at Rogów. *Ann. Agric. Univ. – SGGW-AR, For. and Wood Techn.*, 34: 11-17.
- [16] Piętka J. 2013. Czynna ochrona zagrożonych grzybów nadrzewnych w lasach. Wydawnictwo SGGW, Warszawa, 188 pp.
- [17] Rutkiewicz A., Borowski J., Byk A., Mokrzycki T. 2013. Waloryzacja lasów Leśnego Kompleksu Promocyjnego „Lasy Spalsko-Rogowskie” na podstawie zgrupowań

chrząszczy saproksylicznych powierzchni pni drzew. *Studia i Materiały CEPL w Rogowie*, 35(2): 129-159.

- [18] Wiąckowski S. 1957. Entomofauna pniaków sosnowych w zależności od wieku i rozmiaru pniaka. *Ekol. Pol., ser. A*, 5(3): 13-140.

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