

The beetles (Insecta, Coleoptera) of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Жесткокрылые насекомые (Insecta, Coleoptera) агроландшафта юга Прикубанской равнины

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Key words: Agricultural landscape, Coleoptera, Prikubanskaya plain, Krasnodarskii Krai, biotopes, distribution.

Ключевые слова: Coleoptera, Прикубанская равнина, Краснодарский край, агроландшафт, биотопы, распределение.

Abstract. The Coleoptera diversity in the agricultural landscape located in south part of the Prikubanskaya plain was studied together with species distribution in the main biotopes of winter wheat fields and in the adjacent areas of forest belts, field-side zones and the fields. As a result of surveys carried out in 1999–2001, more than 950 species of Coleoptera, belonging to 544 genera from 76 families, were recorded. The materials with biotope distribution data amounted over 579 species of Coleoptera belonging to 346 genera from 58 families. The highest species diversity of adult Coleoptera was observed at the field-side zones. Forest belts and edges of the field are the next in terms of species richness. The middle and central zones are the poorest in beetle species diversity. Plant and beetle species diversity changes similarly from the forest belt to the center of the field. The greatest similarity of the Coleoptera fauna was observed between the field-side zone and the edge of the field, as well as between the middle and central zones, while minimal similarity was found between forest belts and other biotopes.

Резюме. Проведено изучение фауны жуков (Coleoptera) агроландшафта юга Прикубанской равнины и их распределения по основным исследованным биотопам полей озимой пшеницы и самым пограничным с ними участкам (лесополосы, обочины полей и, собственно, поля). В результате исследований, проведенных с 1999 по 2001 г., всего отмечено более 950 видов имаго жесткокрылых, относящихся к 544 родам из 76 семейств, а учётные материалы с распределением по биотопам составили более 579 видов имаго жесткокрылых, относящихся к 346 родам из 58 семейств. Наибольшее видовое разнообразие имаго жесткокрылых отмечено на обочинах полей. Далее по видовому богатству следуют лесополосы и краевые зоны полей. Серединная и центральная зоны являются наиболее бедными по видовому разнообразию жуков. Видовое

разнообразие растений и жуков изменяется одинаково от лесополосы к центру поля. Наиболее сходны по видовому составу жуков обочинная и краевая, а также серединная и центральная зоны, в то время как фауна лесополос значительно отличается от остальных биотопов.

Introduction

Studies on the Coleoptera of the Northwest Caucasus (or Pre-Caucasus) are quite numerous [Medvedev, 1962; Nikitsky, 1980; Zamotailov, 1992; Beetles..., 2010; Abdurahmanov, Nabozhenko, 2011], but they do not or little address the agricultural landscapes of this region in terms of comparative analysis of the biotopes. The few available data on agricultural landscapes mainly concern representatives of selected beetle families: more often Carabidae and Staphylinidae [Soboleva-Dokuchaeva, Soldatova, 1983; Soldatova et al., 1983]. A number of studies on some other groups of Coleoptera in agroecosystems, including their distribution in fields with certain agricultural crops, have been carried out in other geographical regions and under other climatic conditions [Puchkov, 1985, 1990; Shapran, 1989; Sheshurak, 1989]. Furthermore they do not include a significant number of the families studied in this work.

Among the works on agricultural landscapes of the region in question, a range of publications, usually focused on only one family, e.g. Carabidae [Timohova, 2001; Belyi, 2014; Homitskii et al., 2015], or in any case not on a large complex of families and without comparative analysis of the biotopes considered in this article are known.

The present paper is devoted to a comparative analysis of Coleoptera in agricultural landscapes in the south part of the Prikubanskaya plain. A complete list of superspecific taxa and data on the number of specimens found on the territory of the farm «Niva» in Krasnodarskii Krai in 1999–2001 are given. Winter wheat fields and adjacent biotopes, forest belts, field-side zones, and fields themselves, were sampled.

Material and methods

The main collections were made in two winter wheat fields in 1999–2001, from the time of snowmelt (end of February–March) until harvest (end of July). Post-harvesting collections were not carried out, because stubble was burned, resulting in complete destruction of the biotopes.

In 1999 and 2001, collections were made in the field No. 1. The field area is 95 ha, the western forest belt is older, the average age of the trees is about 50–60 years. The eastern forest belt is around 35–40 years old. The field-side zones are well defined, especially the western one (width 7–8 m). There is an irrigation channel directly adjoining the northern forest belt.

In 2000, collections were undertaken in the field No.2. The field area is 75 ha, and the western and eastern forest belts are of approximately the same age, around 35–40. The field-side zones are well defined, with a width of 7–8 m. Adjacent to the northeast corner of the field is located a stream.

We identified the following biotopes that differ in terms of vegetation and microclimate conditions as listed below.

1. Forest belt (FB).
2. Field-side zone (FS) — a relatively narrow strip delimiting the forest belt and the field. The field-side zones are covered with wild vegetation.
3. Field edge (FE) — 10-meter zone from the edge to the center of the field.
4. The middle of the path from the edge to the center of the field (M) — 200 meters from the edge.
5. Center of the field (C) — 400 m from the edge.

The transect crossed the whole field from the western to the eastern forest belt. Accordingly, two forest belts, two field-side zones, two field edges, two «middles» and the unpaired center were sampled (a total of 9 sampling sites). Material was collected using a standard-sized sweep net and soil traps.

Sweep netting was conducted at ten-day intervals. A total of forty samples were taken, with four samples collected from each biotope (except for the center of the field, where eight samples were taken). Each sample consisted of twenty-five single sweeps. The captured insects were transferred from the net to a plastic bag and killed with a cotton-gauze swab soaked in ethyl acetate. In the laboratory, the bags' contents were poured into cuvettes. The captured insects were then transferred to cotton layers using tweezers.

Plastic glasses with a capacity of 500 ml and a diameter of 90 mm were used as soil traps. Double glasses

were used to facilitate their removal during collection. The traps were placed level with the soil and covered with square tin lids (20 cm side) on stems 7 cm high to exclude rainwater. A 4 % formalin solution was poured in a three to four centimeter layer on the bottom of the inner glass as a fixing liquid. A total of 50 soil traps were set. We used 5 + 5 traps in each pair of biotopes, and 10 traps were placed in the unpaired center of the field. The traps were arranged in a line with an average distance of 1.5–2.0 meters between them. The traps were emptied using a sieve. Insects were placed in a gauze, and then transferred to cotton layers.

Additionally, we periodically collected insects from under the bark, bracket fungi, on carrion, in dung, in bird nests, and on flowering plants (in surrounding habitats of the same agricultural ecosystem). A total of 2767 sweep net samples and 2917 trap samples were taken in the field and adjacent habitats, resulting in approximately 45000 adult beetle specimens subjected to identification.

We also studied the composition of wild plants at the collection sites. The collected plants were cleaned of soil, dried under pressure for 4–5 days, and mounted on A4 sheets of dense paper. A total of 128 species of wild plants were found in the fields and adjacent biotopes, with over 250 herbarium sheets processed. Identification of the plants was assisted by V. Kosenko and S.V. Kuptsov (Moscow State University Botanical Garden).

Insects were identified mainly at the Department of Entomology of Moscow State University. N.B. Nikitsky (Zoological Museum of Moscow State University) treated mainly xylobiont and mycetobiont beetles from the families: Hydrophilidae, Histeridae, Staphylinidae (in part) Scirtidae, Clambidae, Lucanidae, Leiodidae, Lampyridae, Drillidae, Cantharidae, Ptinidae, Bostrichidae, Melyridae, Trogossitidae, Nitidulidae, Monotomidae, Silvanidae, Cerylonidae, Biphyllidae, Corylophidae, Latridiidae, Erotylidae, Mycetophagidae, Zopheridae, Meloidae, Oedemeridae, Salpingidae, Anthicidae, Tenebrionidae (in part) and Cerambycidae (in part). Following specialists participated in identification of other beetle families: L.N. Medvedev (A.N. Severtsov Institute of Ecology and Evolution RAS, Moscow) and A.G. Moseiko (Zoological Institute RAS, S. Petersburg) — Chrysomelidae; R.D. Zhantiev (Department of Entomology, Moscow State University) — Dermestidae; A.V. Alekseev (Moscow State Regional Humanitarian Institute), jointly with N.B. Nikitsky — Buprestidae; G.Yu. Lyubarsky (Zoological Museum of Moscow State University) — Phalacridae, Cryptophagidae; the late A.S. Ukrainsky (Moscow) together with N.B. Nikitsky — Coccinellidae; A.S. Prosvirov (Department of Entomology, Moscow State University) — Elateridae, Eucnemidae; V.Yu. Savitskii (Department of Entomology, Moscow State University) — Curculionoidea; A.A. Gusakov (Zoological Museum of Moscow State University) — Scarabaeidae, Trogidae; V.B. Semenov (E.I. Martynovskiy Institute of Medical Parasitology, Tropical and Vector-borne Diseases, Moscow) and A.N. Evsyunin (A.N. Severtsov Institute of Ecology

and Evolution RAS, Moscow) — Aleocharinae (Staphylinidae) and some other Staphylinidae; O.V. Savilova (Department of Entomology, Moscow State University) — Carabidae; P.N. Petrov (Department of Entomology, Moscow State University) — aquatic Adephaga (Gyrinidae, Dytiscidae) and aquatic Hydrophilidae.

The present work is registered in ZooBank (www.zoobank.org) under LSID urn:lsid:zoobank.org:pub:07D350DA-D7FF-483F-9AEB-877A06726E16.

Results

As a result of surveys carried out in 1999–2001, a total of more than 950 species of Coleoptera, belonging to 544 genera from 76 families were recorded. The materials with biotope distribution data amounted to over 579 species of Coleoptera belonging to 346 genera from 58 families. The highest taxonomic diversity of beetles was observed in the field-side zones — 467 species from 47 families, and in forest belts — 328 species from 51 families, followed by the edges of the field — 266 species from 37 families. The poorest species composition, 138 species from 24 families and 92 species from 24 families, respectively, was observed in the middle and central field zones.

Differences in the biotopes in terms of species abundance are as follows. The highest abundance was observed in the field-side zones (15205 specimens), followed by the edges of the field (10330) and forest belts (7753), while the lowest numbers (5929 and 5886, respectively) were observed in the middle and center of the field (Table 1). A full annotated species list will be given elsewhere, due to its very large size.

The analysis of the flora shows that it is most diverse in the field-side zones (128 species in the woody-shrub and herb-shrub layers), followed by the edges of the field and forest belts (49 and 44 species respectively), and then the middle (23) and center of the field (9 species). Thus, we can see that plant and beetle species diversity changes similarly along the transect from the forest belt to the center of the field (Pearson correlation coefficient $R = 0.91$, $P = 0.029$), reaching highest numbers in the field-side zone (Fig. 1).

Correlation shows that beetle complexes are dominated by groups directly or indirectly related to wild plants (phytophages, anthophages, palinophages, and partially predators and parasites). However, the taxa from the other trophic groups are also present and may be quite abundant. Examples of trophic associations for the most abundant taxa are as follows.

1. Obligate predators: *Carabus* Linnaeus, 1758 and *Anchomenus* Bonelli, 1810 (Carabidae); *Coccinella* Linnaeus, 1758, *Coccinula* Dobrzhansky, 1925 and *Propylea* Mulsant, 1846 (Coccinellidae).

2. Predators and parasites at different stages of development: *Brachinus* F. Weber, 1801 (Carabidae).

3. More or less facultative predators (on adult and larval stage): *Poecilus* Bonelli, 1810, *Harpalus* Latreille, 1802 (Carabidae); *Silpha* Linnaeus, 1758 (Silphidae),

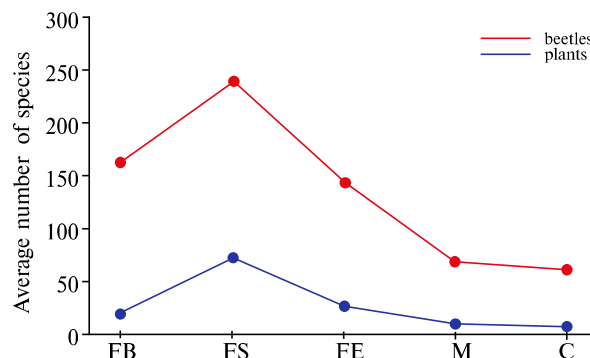


Fig. 1. Diversity of plants and beetles in biotopes along the transect from the forest belt to the center of the field. Designations: FB — forest belt, FS — field-side zone, FE — edge of the field, M — middle zone, C — center of the field.

Рис. 1. Изменение видового разнообразия растений и жесткокрылых вдоль трансекты от лесополосы к центру поля. Обозначения: FB — лесополоса, FS — обочина поля, FE — край поля, M — середина поля, C — центр поля.

Drasterius Eschscholtz, 1829 (Elateridae).

4. Facultative predators and sapro-mycetophages (or saprophages): *Anthelephila* Hope, 1833 (Anthicidae).

5. Copro-necro-saprophages, with coprophagy being predominant: *Onthophagus* Latreille, 1802 (Scarabaeidae).

6. Sapro-necro-?mycetophages: *Ptomaphagus* Hellwig, 1795 (Leiodidae).

7. Coprophages and detritophages: *Pleurophorus* Mulsant, 1842 (Scarabaeidae).

8. Necrofages: *Dermestes* Linnaeus, 1758 (Dermestidae).

9. Sapro-detritophages on larval stage, and anthophages on adult stage: *Oxythyrea* Mulsant, 1842 (Scarabaeidae).

10. Mycetophages: *Combocerus* Bedel, 1867 (Erotylidae) and *Thea* Mulsant, 1846 (Coccinellidae).

11. Xylophages on larval stage, and often anthophages on adult stage: *Anthaxia* Eschscholtz, 1829 (Buprestidae).

12. Phytophages (except xylophages, but partly anthophages or palinophages): *Meligethes* Stephens, 1830 (Nitidulidae); *Byturus* Latreille, 1797 (Byturidae); *Oulema* Des Gozis, 1886, *Zygogramma* Chevrolat, 1836, *Phyllotreta* Chevrolat, 1836, *Chaetocnema* Stephens, 1831, *Cassida* Linnaeus, 1758 (Chrysomelidae), *Holotrichapion* Györfy, 1956, *Protapion* Schilsky, 1908 (Apionidae) and *Sitona* Germar, 1817 (Curculionidae).

The cluster analysis (Fig. 2) showed the greatest similarity of the Coleoptera fauna in the field-side zone and the edge of the field, as well as in the middle and central zones, while minimal similarity was found between forest belts and other biotopes.

The data table of diversity and abundance of beetles in studied biotopes of the agricultural landscape in the south of the Prikubanskaya plain, Russia is given in Appendix (p. 1–11).

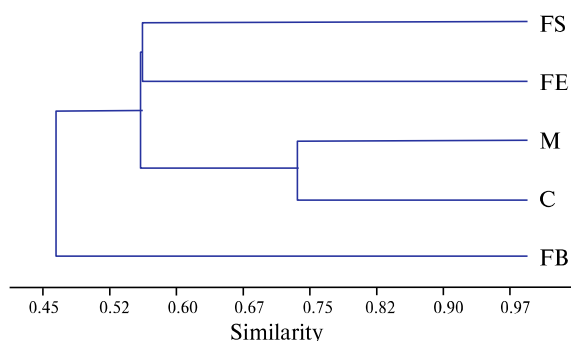


Fig. 2. Similarity of beetle fauna in the studied biotopes, based on the Bray-Curtis index. Designations as in Fig. 1.

Рис. 2. Дендрогрaмма сходства изученных биотопов по фауне жесткокрылых, построенная на основе индекса Брея-Кёртиса. Обозначения как на Рис. 1.

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Appendix to the article: N.B. Nikitsky, A.V. Suyazov, A.V. Polevoi. The beetles (Insecta, Coleoptera) of the agricultural landscape in the south of the Prikubanskaya plain, Russia (Euroasian Entomological Journal. 2024. Vol.23. No.3. P.155–158)

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Table 1. Diversity and abundance of beetles in studied biotopes
Таблица 1. Разнообразие и численность жесткокрылых в изученных биотопах

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
Gyrinidae Latreille						Gyrinidae Latreille					
<i>Gyrinus</i> Geoffroy	0	24	5	0	0	<i>Gyrinus</i> Geoffroy	0	2	1	0	0
Noteridae C.G. Thomson						Noteridae C.G. Thomson					
<i>Noterus</i> Clairville	1	9	0	0	0	<i>Noterus</i> Clairville	1	1	0	0	0
Dytiscidae Leach						Dytiscidae Leach					
<i>Ilybius</i> Erichson	0	12	0	0	0	<i>Ilybius</i> Erichson	0	1	0	0	0
<i>Colymbetes</i> Clairville	0	1	1	0	0	<i>Colymbetes</i> Clairville	0	1	1	0	0
Carabidae Latreille						Carabidae Latreille					
<i>Cicindela</i> Linnaeus	0	0	0	1	0	<i>Cicindela</i> Linnaeus	0	0	0	1	0
<i>Leistus</i> Frölich	2	0	0	1	0	<i>Leistus</i> Frölich	1	0	0	1	0
<i>Calosoma</i> F. Weber	3	0	4	4	5	<i>Calosoma</i> F. Weber	1	0	1	1	1
<i>Carabus</i> Linnaeus	103	299	88	29	43	<i>Carabus</i> Linnaeus	3	3	4	3	3
<i>Elaphrus</i> Fabricius	0	1	0	0	0	<i>Elaphrus</i> Fabricius	0	1	0	0	0
<i>Bembidion</i> Latreille	0	2	0	0	0	<i>Bembidion</i> Latreille	0	2	0	0	2
<i>Stomis</i> Clairville	1	1	0	0	0	<i>Stomis</i> Clairville	1	1	0	0	0
<i>Poecilus</i> Bonelli	4	30	862	93	33	<i>Poecilus</i> Bonelli	1	1	1	1	1
<i>Pterostichus</i> Bonelli	1	40	3	3	1	<i>Pterostichus</i> Bonelli	1	3	3	2	1
<i>Calathus</i> Bonelli	1	1	0	0	0	<i>Calathus</i> Bonelli	1	1	0	0	0
<i>Dolichus</i> Bonelli	3	8	0	0	0	<i>Dolichus</i> Bonelli	1	1	0	0	0
<i>Agonum</i> Bonelli	0	1	0	0	0	<i>Agonum</i> Bonelli	0	1	0	0	0
<i>Anchomenus</i> Bonelli	216	498	133	40	19	<i>Anchomenus</i> Bonelli	1	1	1	1	1
<i>Amara</i> Bonelli	24	56	7	7	32	<i>Amara</i> Bonelli	3	7	4	4	5
<i>Anisodactylus</i> Dejean	4	4	12	10	11	<i>Anisodactylus</i> Dejean	1	1	1	1	1
<i>Acupalpus</i> Latreille	1	2	2	1	3	<i>Acupalpus</i> Latreille	1	2	2	1	2
<i>Parophonus</i> Ganglbauer	0	1	2	1	0	<i>Parophonus</i> Ganglbauer	0	1	1	1	0
<i>Harpalus</i> Latreille	209	179	72	53	70	<i>Harpalus</i> Latreille	4	4	1	3	3
<i>Ophonus</i> Dejean	2	6	2	0	0	<i>Ophonus</i> Dejean	1	3	2	0	0
<i>Panagaeus</i> Latreille	11	9	0	0	0	<i>Panagaeus</i> Latreille	2	2	0	0	0
<i>Callistus</i> Bonelli	0	0	0	0	1	<i>Callistus</i> Bonelli	0	0	0	0	1
<i>Dinodes</i> Bonelli	0	1	0	0	0	<i>Dinodes</i> Bonelli	0	1	0	0	0
<i>Chlaenius</i> Bonelli	0	3	4	0	0	<i>Chlaenius</i> Bonelli	0	3	2	0	0
<i>Licinus</i> Latreille	0	1	0	0	0	<i>Licinus</i> Latreille	0	1	0	0	0
<i>Badister</i> Clairville	19	21	0	0	0	<i>Badister</i> Clairville	1	1	0	0	0
<i>Lebia</i> Latreille	0	4	0	0	0	<i>Lebia</i> Latreille	0	1	0	0	0
<i>Microlestes</i> Schmidt-Göbe	2	10	8	2	0	<i>Microlestes</i> Schmidt-Göbe	2	2	1	2	0
<i>Drypta</i> Latreille	0	1	2	0	0	<i>Drypta</i> Latreille	0	1	1	0	0
<i>Brachinus</i> F. Weber	105	682	708	472	372	<i>Brachinus</i> F. Weber	2	4	4	3	3

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
Hydrophilidae Latreille						Hydrophilidae Latreille					
<i>Hydrophilus</i> Geoffroy	0	28	17	0	0	<i>Hydrophilus</i> Geoffroy	0	1	1	0	0
<i>Hydrobius</i> Leach	0	8	0	0	0	<i>Hydrobius</i> Leach	0	1	0	0	0
<i>Helochaeres</i> Mulsant	0	1	2	0	0	<i>Helochaeres</i> Mulsant	0	1	1	0	0
<i>Cercyon</i> Leach	0	4	2	0	0	<i>Cercyon</i> Leach	0	2	1	0	0
<i>Cryptopleurum</i> Mulsant	0	7	5	0	0	<i>Cryptopleurum</i> Mulsant	0	1	1	0	0
<i>Sphaeridium</i> Fabricius	3	62	4	0	0	<i>Sphaeridium</i> Fabricius	1	2	2	0	0
Histeridae Gyllenhal						Histeridae Gyllenhal					
<i>Saprinus</i> Erichson	5	17	0	0	0	<i>Saprinus</i> Erichson	1	2	0	0	0
<i>Pachylister</i> Lewis	0	1	0	0	0	<i>Pachylister</i> Lewis	0	1	0	0	0
<i>Hister</i> Linnaeus	1	11	6	5	2	<i>Hister</i> Linnaeus	1	2	2	2	1
<i>Margarinotus</i> Marseul	32	40	52	44	6	<i>Margarinotus</i> Marseul	1	1	3	1	1
<i>Atholus</i> C.G. Thomson	0	14	0	0	0	<i>Atholus</i> C.G. Thomson	0	1	0	0	0
<i>Hololepta</i> Paykull	24	0	0	0	0	<i>Hololepta</i> Paykull	1	0	0	0	0
Ptiliidae Erichson						Ptiliidae Erichson					
<i>Pteryx</i> Matthews	0	1	0	0	0	<i>Pteryx</i> Matthews	0	1	0	0	0
Leiodidae Fleming						Leiodidae Fleming					
<i>Catops</i> Paykull	9	16	2	3	0	<i>Catops</i> Paykull	2	2	2	1	0
<i>Ptomaphagus</i> Hellwig	374	154	124	219	239	<i>Ptomaphagus</i> Hellwig	2	3	3	2	1
<i>Nemadus</i> C.G. Thomson	0	2	0	0	0	<i>Nemadus</i> C.G. Thomson	0	1	0	0	0
<i>Agathidium</i> Panzer	35	31	19	0	0	<i>Agathidium</i> Panzer	1	1	1	0	0
Silphidae Latreille						Silphidae Latreille					
<i>Oiceoptoma</i> Leach	26	0	0	0	0	<i>Oiceoptoma</i> Leach	1	0	0	0	0
<i>Necrodes</i> Leach	4	4	1	1	0	<i>Necrodes</i> Leach	1	1	1	1	0
<i>Silpha</i> Linnaeus	160	246	163	220	629	<i>Silpha</i> Linnaeus	3	3	3	3	3
<i>Aclypea</i> Reitter	0	9	0	0	0	<i>Aclypea</i> Reitter	0	1	0	0	0
<i>Phosphuga</i> Leach	1	0	0	0	0	<i>Phosphuga</i> Leach	1	0	0	0	0
<i>Thanatophilus</i> Leach	6	69	2	33	2	<i>Thanatophilus</i> Leach	1	3	2	3	1
<i>Nicrophorus</i> Fabricius	3	96	5	4	1	<i>Nicrophorus</i> Fabricius	2	4	3	2	1
Staphylinidae Latreille						Staphylinidae Latreille					
<i>Megarthus</i> Stephens	2	0	0	0	0	<i>Megarthus</i> Stephens	2	0	0	0	0
<i>Acrulia</i> C.G. Thomson	9	0	0	0	0	<i>Acrulia</i> C.G. Thomson	1	0	0	0	0
<i>Omalium</i> Gravenhorst	1	9	0	0	0	<i>Omalium</i> Gravenhorst	1	1	0	0	0
<i>Eusphalerum</i> Kraatz	56	160	32	0	0	<i>Eusphalerum</i> Kraatz	1	1	1	0	0
<i>Anthophagus</i> Gravenhorst	0	2	1	0	0	<i>Anthophagus</i> Gravenhorst	0	1	1	0	0
<i>Deleaster</i> Erichson	16	21	21	17	3	<i>Deleaster</i> Erichson	1	1	1	1	1
<i>Coprophilus</i> Latreille	0	10	0	0	0	<i>Coprophilus</i> Latreille	0	2	0	0	0
<i>Oxytelus</i> Gravenhorst	2	11	0	0	0	<i>Oxytelus</i> Gravenhorst	1	1	0	0	0
<i>Anotylus</i> C.G. Thomson	30	103	10	13	14	<i>Anotylus</i> C.G. Thomson	2	1	1	1	1
<i>Tachyporus</i> Gravenhorst	121	1	26	0	0	<i>Tachyporus</i> Gravenhorst	6	1	1	0	0
<i>Tachinus</i> Gravenhorst	20	1	2	0	0	<i>Tachinus</i> Gravenhorst	5	1	1	0	0

The beetles of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens					
	FB	FS	FE	M	C
<i>Aleochara</i> Gravenhorst	41	68	61	26	14
<i>Erichsonius</i> Fauvel	21	0	0	0	0
<i>Drusilla</i> Leach	5	7	25	9	3
<i>Cyphea</i> Fauvel	1	0	0	0	0
<i>Zyras</i> Stephens	14	6	3	12	5
<i>Oxyporus</i> Fabricius	66	0	0	0	0
<i>Paederus</i> Fabricius	16	78	21	0	0
<i>Astenus</i> Dejean	12	3	3	4	3
<i>Rugilus</i> Leach	126	30	11	23	0
<i>Lathrobium</i> Gravenhorst	20	15	8	14	6
<i>Stenus</i> Latreille	3	140	11	12	0
<i>Xantholinus</i> Dejean	42	9	4	6	0
<i>Othius</i> Stephens	3	0	0	0	0
<i>Quedius</i> Stephens	81	48	11	22	0
<i>Philonthus</i> Stephens	182	55	3	32	26
<i>Ocyopus</i> Leach	90	79	17	0	0
<i>Gabrius</i> Stephens	7	0	0	0	0
<i>Carpelimus</i> Leach	0	7	0	0	0
<i>Staphylinus</i> Linnaeus	44	69	33	12	7
<i>Ontholestes</i> Ganglbauer	24	26	16	0	38
<i>Emus</i> Leach	1	6	0	0	0
<i>Creophilus</i> Leach	1	12	0	0	0
<i>Astrapaeus</i> Gravenhorst	0	3	0	0	0
<i>Mycetoporus</i> Mannerheim	8	0	0	0	0
<i>Bolitobius</i> Leach	80	6	0	0	0
<i>Bythinus</i> Leach	26	11	0	0	0
<i>Pselaphus</i> Herbst	14	10	0	0	0
<i>Scaphidium</i> Olivier	11	0	0	0	0
Lucanidae Latreille					
<i>Lucanus</i> Scopoli	2	0	0	0	0
<i>Dorcus</i> MacLeay	12	12	1	0	0
<i>Platycerus</i> Geoffroy	1	0	0	0	0
Trogidae MacLeay					
<i>Trox</i> Fabricius	46	44	16	39	10
Scarabaeidae Latreille					
<i>Copris</i> Geoffroy	1	14	0	0	0
<i>Onthophagus</i> Latreille	127	178	20	262	97
<i>Caccobius</i> C.G. Thomson	5	16	0	0	0
<i>Euoniticellus</i> A. Janssens	4	37	0	0	0
<i>Pleurophorus</i> Mulsant	104	135	100	156	267

Number of species					
	FB	FS	FE	M	C
<i>Aleochara</i> Gravenhorst	1	1	1	1	1
<i>Erichsonius</i> Fauvel	1	0	0	0	0
<i>Drusilla</i> Leach	1	1	1	1	1
<i>Cyphea</i> Fauvel	1	0	0	0	0
<i>Zyras</i> Stephens	1	1	1	1	1
<i>Oxyporus</i> Fabricius	2	0	0	0	0
<i>Paederus</i> Fabricius	1	2	2	0	0
<i>Astenus</i> Dejean	1	1	1	1	1
<i>Rugilus</i> Leach	1	2	2	1	0
<i>Lathrobium</i> Gravenhors	1	1	1	1	1
<i>Stenus</i> Latreille	1	2	2	1	0
<i>Xantholinus</i> Dejean	4	2	1	1	0
<i>Othius</i> Stephens	1	0	0	0	0
<i>Quedius</i> Stephens	5	1	2	2	0
<i>Philonthus</i> Stephens	5	5	1	1	1
<i>Ocyopus</i> Leach	5	5	2	0	0
<i>Gabrius</i> Stephens	1	0	0	0	0
<i>Carpelimus</i> Leach	0	1	0	0	0
<i>Staphylinus</i> Linnaeus	3	3	3	1	2
<i>Ontholestes</i> Ganglbauer	1	1	1	0	1
<i>Emus</i> Leach	1	1	0	0	0
<i>Creophilus</i> Leach	1	1	0	0	0
<i>Astrapaeus</i> Gravenhorst	0	1	0	0	0
<i>Mycetoporus</i> Mannerheim	1	0	0	0	0
<i>Bolitobius</i> Leach	1	1	0	0	0
<i>Bythinus</i> Leach	2	2	0	0	0
<i>Pselaphus</i> Herbst	1	1	0	0	0
<i>Scaphidium</i> Olivier	1	0	0	0	0
Lucanidae Latreille					
<i>Lucanus</i> Scopoli	1	0	0	0	0
<i>Dorcus</i> MacLeay	1	1	2	0	0
<i>Platycerus</i> Geoffroy	1	0	0	0	0
Trogidae MacLeay					
<i>Trox</i> Fabricius	2	2	2	1	1
Scarabaeidae Latreille					
<i>Copris</i> Geoffroy	1	1	0	0	0
<i>Onthophagus</i> Latreille	3	6	3	2	2
<i>Caccobius</i> C.G. Thomson	1	1	0	0	0
<i>Euoniticellus</i> A. Janssens	1	1	0	0	0
<i>Pleurophorus</i> Mulsant	1	1	1	1	1

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens					
	FB	FS	FE	M	C
<i>Aphodius</i> Hellwig	2	104	0	1	0
<i>Agrilinus</i> Mulsant & Rey	1	11	0	0	0
<i>Calamosternus</i> Motschulsky	0	32	0	0	0
<i>Nialus</i> Mulsant & Rey	0	4	0	0	0
<i>Oryctes</i> Hellwig	5	8	0	0	0
<i>Pentodon</i> Hope	0	3	0	0	0
<i>Valgus</i> Scriba	83	37	0	0	0
<i>Trichius</i> Fabricius	4	3	0	0	0
<i>Cetonia</i> Fabricius	2	84	0	0	0
<i>Protaetia</i> Burmeister	0	5	0	0	0
<i>Oxythyrea</i> Mulsant	1	335	162	0	0
<i>Tropinota</i> Mulsant	0	138	10	0	0
Clambidae Fischer von Waldheim					
<i>Clambus</i> Fischer von Waldheim	2	1	0	0	0
Scirtidae Fleming					
<i>Elodes</i> Latreille	1	1	0	0	0
<i>Contacyphon</i> Gozis	8	1	3	0	0
<i>Scirtes</i> Illiger	0	1	0	0	0
Psephenidae Lacordaire					
<i>Eubria</i> Latreille	0	15	0	0	0
Buprestidae Leach					
<i>Acmaeodera</i> Eschscholtz	2	0	0	0	0
<i>Acmaeoderella</i> Cobos	1	0	0	0	0
<i>Eurythyrea</i> Dejean	2	0	0	0	0
<i>Dicerca</i> Eschscholtz	1	0	0	0	0
<i>Anthaxia</i> Eschscholtz	12	423	20	0	0
<i>Coraeus</i> Gory & Lapporte	6	43	0	0	0
<i>Agrilus</i> Curtis	52	9	9	0	0
<i>Trachys</i> Fabricius	27	8	0	0	0
Byrrhidae Latreille					
<i>Lamprobyrrhulus</i> Ganglbauer	1	35	57	58	80
Elateridae Leach					
<i>Drasterius</i> Eschscholtz	54	124	22	107	200
<i>Adrastus</i> Eschscholtz	1	2	0	0	0
<i>Agriotes</i> Eschscholtz	2	42	5	0	0
<i>Ampedus</i> Dejean	9	0	0	0	0
<i>Melanotus</i> Eschscholtz	16	20	32	0	0
<i>Athous</i> Eschscholtz	55	53	0	0	0
<i>Limonius</i> Eschscholtz	10	69	11	0	0
<i>Denticollis</i> Piller & Mitterpacher	2	25	13	0	0

Number of species					
	FB	FS	FE	M	C
<i>Aphodius</i> Hellwig	1	11	0	1	0
<i>Agrilinus</i> Mulsant & Rey	1	1	0	0	0
<i>Calamosternus</i> Motschulsky	0	1	0	0	0
<i>Nialus</i> Mulsant & Rey	0	1	0	0	0
<i>Oryctes</i> Hellwig	1	1	0	0	0
<i>Pentodon</i> Hope	0	1	0	0	0
<i>Valgus</i> Scriba	1	1	0	0	0
<i>Trichius</i> Fabricius	1	1	0	0	0
<i>Cetonia</i> Fabricius	1	1	0	0	0
<i>Protaetia</i> Burmeister	0	2	0	0	0
<i>Oxythyrea</i> Mulsant	1	1	1	0	0
<i>Tropinota</i> Mulsant	0	1	1	0	0
Clambidae Fischer von Waldheim					
<i>Clambus</i> Fischer von Waldheim	1	1	0	0	0
Scirtidae Fleming					
<i>Elodes</i> Latreille	1	1	0	0	0
<i>Contacyphon</i> Gozis	1	1	1	0	0
<i>Scirtes</i> Illiger	0	1	0	0	0
Psephenidae Lacordaire					
<i>Eubria</i> Latreille	0	1	0	0	0
Buprestidae Leach					
<i>Acmaeodera</i> Eschscholtz	1	0	0	0	0
<i>Acmaeoderella</i> Cobos	1	0	0	0	0
<i>Eurythyrea</i> Dejean	1	0	0	0	0
<i>Dicerca</i> Eschscholtz	1	0	0	0	0
<i>Anthaxia</i> Eschscholtz	3	8	4	0	0
<i>Coraeus</i> Gory & Lapporte	2	1	0	0	0
<i>Agrilus</i> Curtis	6	3	3	0	0
<i>Trachys</i> Fabricius	2	1	0	0	0
Byrrhidae Latreille					
<i>Lamprobyrrhulus</i> Ganglbauer	1	1	1	1	1
Elateridae Leach					
<i>Drasterius</i> Eschscholtz	1	1	1	1	1
<i>Adrastus</i> Eschscholtz	1	1	0	0	0
<i>Agriotes</i> Eschscholtz	1	3	2	0	0
<i>Ampedus</i> Dejean	1	0	0	0	0
<i>Melanotus</i> Eschscholtz	1	1	1	0	0
<i>Athous</i> Eschscholtz	2	2	0	0	0
<i>Limonius</i> Eschscholtz	1	1	1	0	0
<i>Denticollis</i> Piller & Mitterpacher	2	1	1	0	0

The beetles of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens					
	FB	FS	FE	M	C
<i>Hemicrepidius</i> Germar	0	0	2	0	2
Eucnemidae Eschscholtz					
<i>Dirrhagofarsus</i> Fleutiaux	1	0	0	0	0
<i>Melasis</i> Olivier	5	0	0	0	0
Drilidae Blanchard					
<i>Drilus</i> Olivier	0	1	0	0	0
Lampyridae Rafinesque					
<i>Luciola</i> Laporte	0	18	0	0	0
Cantharidae Imhoff					
<i>Cantharis</i> Linnaeus	0	128	68	18	30
<i>Rhagonycha</i> Eschscholtz	25	93	41	32	7
<i>Macrocerus</i> Motschulsky	0	2	0	0	0
<i>Malthodes</i> Kiesenwetter	1	4	8	4	0
Dermestidae Latreille					
<i>Dermestes</i> Linnaeus	128	458	87	252	168
<i>Attagenus</i> Latreille	23	57	0	0	0
<i>Anthrenus</i> Geoffroy	0	60	0	0	0
Bostrichidae Latreille					
<i>Sinoxylon</i> Duftschmid	1	0	0	0	0
<i>Lyctus</i> Fabricius	1	0	0	0	0
Ptinidae Latreille					
<i>Niptus</i> Boieldieu	0	3	0	0	0
<i>Ptinus</i> Linnaeus	36	128	30	3	2
<i>Ptinomorphus</i> Mulsant & Rey	1	0	0	0	0
<i>Ptilinus</i> Geoffroy	2	0	0	0	0
<i>Dorcatoma</i> Herbst	2	0	0	0	0
<i>Caenocara</i> C.G. Thomson	2	0	0	0	0
Trogossitidae Latreille					
<i>Tenebroides</i> Piller & Mitterpacher	34	0	0	0	0
<i>Ostoma</i> Laicharting	1	0	0	0	0
<i>Peltis</i> O.F. Müller	1	0	0	0	0
Cleridae Latreille					
<i>Tillus</i> Olivier	10	0	0	0	0
<i>Opilo</i> Latreille	1	0	0	0	0
<i>Trichodes</i> Herbst	0	78	58	0	0
<i>Korynetes</i> Herbst	1	0	0	0	0
Melyridae Leach					
<i>Dolichosoma</i> Stephens	4	36	33	6	0
<i>Dasytes</i> Paykull	80	111	101	17	2

Number of species					
	FB	FS	FE	M	C
<i>Hemicrepidius</i> Germar	0	0	1	0	1
Eucnemidae Eschscholtz					
<i>Dirrhagofarsus</i> Fleutiau	1	0	0	0	0
<i>Melasis</i> Olivier	1	0	0	0	0
Drilidae Blanchard					
<i>Drilus</i> Olivier	0	1	0	0	0
Lampyridae Rafinesque					
<i>Luciola</i> Laporte	0	1	0	0	0
Cantharidae Imhoff					
<i>Cantharis</i> Linnaeus	0	6	5	4	2
<i>Rhagonycha</i> Eschscholtz	1	2	2	2	1
<i>Macrocerus</i> Motschulsky	0	1	0	0	0
<i>Malthodes</i> Kiesenwetter	1	1	1	1	0
Dermestidae Latreille					
<i>Dermestes</i> Linnaeus	4	7	4	2	1
<i>Attagenus</i> Latreille	1	2	0	0	0
<i>Anthrenus</i> Geoffroy	0	3	0	0	0
Bostrichidae Latreille					
<i>Sinoxylon</i> Duftschmid	1	0	0	0	0
<i>Lyctus</i> Fabricius	1	0	0	0	0
Ptinidae Latreille					
<i>Niptus</i> Boieldieu	0	1	0	0	0
<i>Ptinus</i> Linnaeus	3	4	3	2	1
<i>Ptinomorphus</i> Mulsant & Rey	1	0	0	0	0
<i>Ptilinus</i> Geoffroy	1	0	0	0	0
<i>Dorcatoma</i> Herbst	1	0	0	0	0
<i>Caenocara</i> C. G. Thomson	1	0	0	0	0
Trogossitidae Latreille					
<i>Tenebroides</i> Piller & Mitterpacher	1	0	0	0	0
<i>Ostoma</i> Laicharting	1	0	0	0	0
<i>Peltis</i> O.F. Müller	1	0	0	0	0
Cleridae Latreille					
<i>Tillus</i> Olivier	1	0	0	0	0
<i>Opilo</i> Latreille	1	0	0	0	0
<i>Trichodes</i> Herbst	0	1	1	0	0
<i>Korynetes</i> Herbst	1	0	0	0	0
Melyridae Leach					
<i>Dolichosoma</i> Stephens	1	1	1	1	0
<i>Dasytes</i> Paykull	2	2	1	2	1

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
<i>Troglops</i> Erichson	0	1	0	0	0	<i>Troglops</i> Erichson	0	1	0	0	0
<i>Ebaeus</i> Erichson	0	1	0	0	0	<i>Ebaeus</i> Erichson	0	1	0	0	0
<i>Axinotarsus</i> Motschulsky	0	1	0	0	0	<i>Axinotarsus</i> Motschulsky	0	1	0	0	0
<i>Malachius</i> Fabricius	1	3	0	0	0	<i>Malachius</i> Fabricius	1	3	0	0	0
<i>Cordylepherus</i> Evers	2	36	17	0	0	<i>Cordylepherus</i> Evers	1	1	1	0	0
<i>Clanoptilus</i> Motschulsky	2	16	1	0	0	<i>Clanoptilus</i> Motschulsky	1	3	1	0	0
Kateretidae Kirby						Kateretidae Kirby					
<i>Brachypterus</i> Kugelann	3	11	0	0	0	<i>Brachypterus</i> Kugelann	1	1	0	0	0
Nitidulidae Latreille						Nitidulidae Latreille					
<i>Carpophilus</i> Stephens	4	0	0	0	0	<i>Carpophilus</i> Stephens	1	0	0	0	0
<i>Eपुरaea</i> Erichson	3	8	0	0	0	<i>Eपुरaea</i> Erichson	1	1	0	0	0
<i>Nitidula</i> Fabricius	1	8	0	0	0	<i>Nitidula</i> Fabricius	1	2	0	0	0
<i>Omosita</i> Erichson	2	3	0	0	0	<i>Omosita</i> Erichson	1	1	0	0	0
<i>Cylloides</i> Erichson	7	0	0	0	0	<i>Cylloides</i> Erichson	1	0	0	0	0
<i>Glischrochilus</i> Reitter	191	0	0	0	0	<i>Glischrochilus</i> Reitter	2	0	0	0	0
<i>Pria</i> Stephens	2	41	0	0	0	<i>Pria</i> Stephens	1	1	0	0	0
<i>Meligethes</i> Stephens	100	448	58	113	48	<i>Meligethes</i> Stephens	2	1	1	1	1
Monotomidae Laporte						Monotomidae Laporte					
<i>Rhizophagus</i> Herbst	95	0	0	0	0	<i>Rhizophagus</i> Herbst	2	0	0	0	0
Silvanidae Kirby						Silvanidae Kirby					
<i>Uleiota</i> Latreille	8	0	0	0	0	<i>Uleiota</i> Latreille	1	0	0	0	0
Cryptophagidae Kirby						Cryptophagidae Kirby					
<i>Sternodea</i> Reitter	2	0	0	0	0	<i>Sternodea</i> Reitter	1	0	0	0	0
<i>Cryptophagus</i> Herbst	4	71	85	14	4	<i>Cryptophagus</i> Herbst	2	3	3	2	1
<i>Atomaria</i> Stephens	0	33	23	7	3	<i>Atomaria</i> Stephens	0	2	2	2	2
Biphyllidae LeConte						Biphyllidae LeConte					
<i>Diplocoelus</i> Guérin-Méneville	2	0	0	0	0	<i>Diplocoelus</i> Guérin-Méneville	1	0	0	0	0
Erotylidae Latreille						Erotylidae Latreille					
<i>Tritoma</i> Fabricius	8	0	0	0	0	<i>Tritoma</i> Fabricius	1	0	0	0	0
<i>Triplax</i> Herbst	14	0	0	0	0	<i>Triplax</i> Herbst	2	0	0	0	0
<i>Combocerus</i> Bedel	110	88	117	106	25	<i>Combocerus</i> Bedel	1	1	1	1	1
<i>Dacne</i> Latreille	27	0	0	0	0	<i>Dacne</i> Latreille	1	0	0	0	0
Cerylonidae Billberg						Cerylonidae Billberg					
<i>Cerylon</i> Latreille	1	0	0	0	0	<i>Cerylon</i> Latreille	1	0	0	0	0
Byturidae Gistel						Byturidae Gistel					
<i>Byturus</i> Latreille	46	337	55	0	0	<i>Byturus</i> Latreille	1	2	2	0	0
Phalacridae Leach						Phalacridae Leach					
<i>Olibrus</i> Erichson	0	32	15	0	0	<i>Olibrus</i> Erichson	0	2	2	0	0
Corylophidae LeConte						Corylophidae LeConte					
<i>Orthoperus</i> Stephens	0	0	7	0	0	<i>Orthoperus</i> Stephens	0	0	1	0	0

The beetles of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
Coccinellidae Latreille						Coccinellidae Latreille					
<i>Subcoccinella</i> Agassiz	31	54	49	0	0	<i>Subcoccinella</i> Agassiz	1	1	1	0	0
<i>Coccidula</i> Kugelann	9	39	27	0	0	<i>Coccidula</i> Kugelann	1	2	1	0	0
<i>Stethorus</i> Weise	2	36	14	30	0	<i>Stethorus</i> Weise	1	1	1	1	0
<i>Scymnus</i> Kugelann	0	6	1	2	0	<i>Scymnus</i> Kugelann	0	2	1	2	0
<i>Nephus</i> Mulsan	0	5	0	4	0	<i>Nephus</i> Mulsan	0	2	0	1	0
<i>Chilocorus</i> Leach	0	12	12	6	2	<i>Chilocorus</i> Leach	0	1	1	1	1
<i>Hippodamia</i> Chevrolat	65	51	56	73	65	<i>Hippodamia</i> Chevrolat	1	1	1	1	1
<i>Adonia</i> Mulsant	2	4	2	2	0	<i>Adonia</i> Mulsant	1	1	1	1	0
<i>Bulaea</i> Mulsant	0	31	0	0	0	<i>Bulaea</i> Mulsant	0	1	0	0	0
<i>Adalia</i> Mulsant	2	67	39	12	0	<i>Adalia</i> Mulsant	1	2	2	2	0
<i>Harmonia</i> Mulsant	0	2	1	1	1	<i>Harmonia</i> Mulsant	0	1	1	1	1
<i>Coccinella</i> Linnaeus	84	136	182	160	87	<i>Coccinella</i> Linnaeus	1	2	2	2	2
<i>Coccinula</i> Dobrzhansky	71	117	184	322	321	<i>Coccinula</i> Dobrzhansky	1	1	1	1	1
<i>Propylea</i> Mulsant	70	238	166	237	238	<i>Propylea</i> Mulsant	1	1	1	1	1
<i>Myrrha</i> Mulsant	16	16	24	10	0	<i>Myrrha</i> Mulsant	1	1	1	1	0
<i>Halyzia</i> Mulsant	5	24	24	15	2	<i>Halyzia</i> Mulsant	1	1	1	1	1
<i>Thea</i> Mulsant	57	104	211	259	111	<i>Thea</i> Mulsant	1	1	1	1	1
Latridiidae Erichson						Latridiidae Erichson					
<i>Latridius</i> Herbst	4	16	5	27	4	<i>Latridius</i> Herbst	1	1	1	1	1
<i>Cartodere</i> C.G. Thomson	0	15	6	10	0	<i>Cartodere</i> C.G. Thomson	0	1	1	1	0
Mordellidae Latreille						Mordellidae Latreille					
<i>Tomoxia</i> Costa	48	0	0	0	0	<i>Tomoxia</i> Costa	1	0	0	0	0
<i>Mordella</i> Linnaeus	0	23	10	0	0	<i>Mordella</i> Linnaeus	0	1	1	0	0
<i>Variimorda</i> Méquignon	0	23	0	0	0	<i>Variimorda</i> Méquignon	0	2	0	0	0
<i>Mordellistena</i> Costa	0	3	0	0	0	<i>Mordellistena</i> Costa	0	1	0	0	0
Meloidae Gyllenhal						Meloidae Gyllenhal					
<i>Cerocoma</i> Geoffroy	0	1	0	0	0	<i>Cerocoma</i> Geoffroy	0	1	0	0	0
<i>Mylabris</i> Fabricius	0	1	0	0	0	<i>Mylabris</i> Fabricius	0	1	0	0	0
<i>Lytta</i> Fabricius	1	14	0	0	0	<i>Lytta</i> Fabricius	1	1	0	0	0
<i>Meloe</i> Linnaeus	0	1	0	0	0	<i>Meloe</i> Linnaeus	0	1	0	0	0
Oedemeridae Latreille						Oedemeridae Latreille					
<i>Oedemera</i> Olivier	147	147	52	0	0	<i>Oedemera</i> Olivier	2	2	2	0	0
Salpingidae Leach						Salpingidae Leach					
<i>Salpingus</i> Illiger	39	39	2	0	0	<i>Salpingus</i> Illiger	1	1	1	0	0
Mycteridae Oken						Mycteridae Oken					
<i>Mycterus</i> Clairville	109	1	0	0	0	<i>Mycterus</i> Clairville	1	1	0	0	0
Anthicidae Latreille						Anthicidae Latreille					
<i>Notoxus</i> Geoffroy	0	2	0	0	0	<i>Notoxus</i> Geoffroy	0	1	0	0	0
<i>Anthelephila</i> Hope	106	127	92	94	56	<i>Anthelephila</i> Hope	1	1	1	1	1

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
<i>Anthicus</i> Paykull	29	49	114	53	62	<i>Anthicus</i> Paykull	2	3	2	2	1
<i>Hirticomus</i> Pic	8	19	9	6	0	<i>Hirticomus</i> Pic	1	1	1	1	0
<i>Omonadus</i> Mulsant & Rey	0	3	0	0	0	<i>Omonadus</i> Mulsant & Rey	0	1	0	0	0
Zopheridae Solier						Zopheridae Solier					
<i>Colydium</i> Fabricius	1	0	0	0	0	<i>Colydium</i> Fabricius	1	0	0	0	0
<i>Bitoma</i> Herbst	22	0	0	0	0	<i>Bitoma</i> Herbs	1	0	0	0	0
Tenebrionidae Latreille						Tenebrionidae Latreille					
<i>Lagria</i> Fabricius	317	52	12	0	0	<i>Lagria</i> Fabricius	1	1	1	0	0
<i>Anatolica</i> Eschscholtz	1	6	0	0	0	<i>Anatolica</i> Eschscholtz	1	1	0	0	0
<i>Prosodes</i> Eschscholtz	0	3	0	0	0	<i>Prosodes</i> Eschscholtz	0	1	0	0	0
<i>Blaps</i> Fabricius	0	21	5	8	4	<i>Blaps</i> Fabricius	0	2	2	1	1
<i>Gonocephalum</i> Solier	0	3	0	0	0	<i>Gonocephalum</i> Solier	0	1	0	0	0
<i>Pedinus</i> Latreille	3	15	8	42	14	<i>Pedinus</i> Latreille	1	1	1	1	1
<i>Opatrum</i> Fabricius	8	25	20	25	14	<i>Opatrum</i> Fabricius	1	1	1	1	1
<i>Bolitophagus</i> Illiger	2	0	0	0	0	<i>Bolitophagus</i> Illiger	1	0	0	0	0
<i>Scaphidema</i> Redtenbacher	161	16	2	0	0	<i>Scaphidema</i> Redtenbacher	1	1	1	0	0
<i>Platydema</i> Laporte & Brullé	5	0	0	0	0	<i>Platydema</i> Laporte & Brullé	1	0	0	0	0
<i>Diaclina</i> Jacquelin du Val	31	0	0	0	0	<i>Diaclina</i> Jacquelin du Val	1	0	0	0	0
<i>Tenebrio</i> Linnaeus	0	4	1	0	0	<i>Tenebrio</i> Linnaeus	0	1	1	0	0
Cerambycidae Latreille						Cerambycidae Latreille					
<i>Stenocorus</i> Geoffroy	0	1	0	0	0	<i>Stenocorus</i> Geoffroy	0	1	0	0	0
<i>Pseudovadonia</i> Lobanov, Danilevsky & Murzin	0	6	0	0	0	<i>Pseudovadonia</i> Lobanov, Danilevsky & Murzin	0	1	0	0	0
<i>Leptura</i> Linnaeus	1	25	0	0	0	<i>Leptura</i> Linnaeus	1	2	0	0	0
<i>Stenurella</i> Villiers	0	64	1	0	0	<i>Stenurella</i> Villiers	0	3	1	0	0
<i>Anoplodera</i> Mulsant	0	1	0	0	0	<i>Anoplodera</i> Mulsant	0	1	0	0	0
<i>Asemum</i> Eschscholtz	4	0	0	0	0	<i>Asemum</i> Eschscholtz	1	0	0	0	0
<i>Trichoferus</i> Wollaston	0	1	0	0	0	<i>Trichoferus</i> Wollaston	0	1	0	0	0
<i>Certallum</i> Dejean	0	1	0	0	0	<i>Certallum</i> Dejean	0	1	0	0	0
<i>Echinocerus</i> Mulsant	0	19	0	0	0	<i>Echinocerus</i> Mulsant	0	1	0	0	0
<i>Chlorophorus</i> Chevrolat	0	4	4	0	0	<i>Chlorophorus</i> Chevrolat	0	1	1	0	0
<i>Xylotrechus</i> Chevrolat	6	17	0	0	0	<i>Xylotrechus</i> Chevrolat	1	1	0	0	0
<i>Clytus</i> Laicharting	2	12	0	0	0	<i>Clytus</i> Laichartin	1	1	0	0	0
<i>Dorcadion</i> Dalman	1	0	3	1	1	<i>Dorcadion</i> Dalman	1	0	1	1	1
<i>Tetrops</i> Kirby	0	5	0	0	0	<i>Tetrops</i> Kirby	0	1	0	0	0
<i>Saperda</i> Fabricius	4	1	0	0	0	<i>Saperda</i> Fabricius	1	1	0	0	0
<i>Agapanthia</i> Audinet-Serville	2	43	9	0	0	<i>Agapanthia</i> Audinet-Serville	1	1	1	0	0
<i>Calamobius</i> Guérin-Méneville	0	2	0	0	0	<i>Calamobius</i> Guérin-Méneville	0	1	0	0	0
Chrysomelidae Latreille						Chrysomelidae Latreille					
<i>Bruchus</i> Linnaeus	97	125	128	15	0	<i>Bruchus</i> Linnaeus	2	3	3	2	0
<i>Acanthoscelides</i> Schilsky	0	17	0	0	0	<i>Acanthoscelides</i> Schilsky	0	1	0	0	0

The beetles of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
<i>Spermophagus Schoenherr</i>	25	313	29	2	0	<i>Spermophagus Schoenherr</i>	1	1	1	1	0
<i>Donacia</i> Fabricius	0	4	0	0	0	<i>Donacia</i> Fabricius	0	1	0	0	0
<i>Lilioceris</i> Reitter	0	6	0	0	0	<i>Lilioceris</i> Reitter	0	1	0	0	0
<i>Crioceris</i> Geoffroy	0	10	0	0	0	<i>Crioceris</i> Geoffroy	0	1	0	0	0
<i>Lema</i> Fabricius	0	20	3	0	0	<i>Lema</i> Fabricius	0	1	1	0	0
<i>Oulema</i> Des Gozis	97	256	375	308	777	<i>Oulema</i> Des Gozis	1	1	1	1	1
<i>Labidostomis</i> Chevrolat	0	51	2	0	0	<i>Labidostomis</i> Chevrolat	0	1	1	0	0
<i>Clytra</i> Laicharting	0	14	0	0	0	<i>Clytra</i> Laicharting	0	2	0	0	0
<i>Smaragdina</i> Chevrolat	0	71	0	0	0	<i>Smaragdina</i> Chevrolat	0	2	0	0	0
<i>Cryptocephalus</i> Geoffroy	0	243	19	0	0	<i>Cryptocephalus</i> Geoffroy	0	12	6	0	0
<i>Pachybrachis</i> Chevrolat	0	2	0	0	0	<i>Pachybrachis</i> Chevrolat	0	2	0	0	0
<i>Bromius</i> Chevrolat	5	28	0	0	0	<i>Bromius</i> Chevrolat	1	2	0	0	0
<i>Zygogramma</i> Chevrolat	141	186	886	509	743	<i>Zygogramma</i> Chevrolat	1	1	1	1	1
<i>Leptinotarsa</i> Chevrolat	10	112	0	1	0	<i>Leptinotarsa</i> Chevrolat	1	1	0	1	0
<i>Chrysolina</i> Motschulsky	13	210	25	0	0	<i>Chrysolina</i> Motschulsky	4	6	2	0	0
<i>Colaphellus</i> Weise	8	105	105	0	0	<i>Colaphellus</i> Weise	1	1	1	0	0
<i>Chrysomela</i> Linnaeus	13	51	0	0	0	<i>Chrysomela</i> Linnaeus	4	2	0	0	0
<i>Gastrophysa</i> Chevrolat	24	158	10	0	0	<i>Gastrophysa</i> Chevrolat	1	2	1	0	0
<i>Phaedon</i> Latreille	0	38	4	0	0	<i>Phaedon</i> Latreille	0	1	1	0	0
<i>Lochmaea</i> Weise	0	23	97	0	0	<i>Lochmaea</i> Weise	0	1	1	0	0
<i>Galerucella</i> Crotch	0	44	8	0	0	<i>Galerucella</i> Crotch	0	1	1	0	0
<i>Agelastica</i> Chevrolat	0	23	0	0	0	<i>Agelastica</i> Chevrolat	0	1	0	0	0
<i>Luperus</i> Geoffroy	0	34	11	0	0	<i>Luperus</i> Geoffroy	0	1	1	0	0
<i>Altica</i> Geoffroy	0	119	58	0	0	<i>Altica</i> Geoffroy	0	1	1	0	0
<i>Podagrica</i> Chevrolat	6	49	44	0	0	<i>Podagrica</i> Chevrolat	1	1	1	0	0
<i>Phyllotreta</i> Chevrolat	548	603	998	493	519	<i>Phyllotreta</i> Chevrolat	4	6	6	3	1
<i>Longitarsus</i> Latreille	0	105	48	0	0	<i>Longitarsus</i> Latreille	0	2	2	0	0
<i>Chaetocnema</i> Stephens	222	444	373	283	151	<i>Chaetocnema</i> Stephens	2	5	5	2	1
<i>Psylliodes</i> Latreille	41	132	132	0	0	<i>Psylliodes</i> Latreille	1	2	2	0	0
<i>Hispa</i> Linnaeus	0	0	1	0	0	<i>Hispa</i> Linnaeus	0	0	0	0	0
<i>Hypocassida</i> Weise	0	61	26	0	0	<i>Hypocassida</i> Weise	0	1	1	0	0
<i>Cassida</i> Linnaeus	55	162	210	6	3	<i>Cassida</i> Linnaeus	3	4	3	2	2
Anthribidae Billberg						Anthribidae Billberg					
<i>Anthribus</i> Geoffroy	1	0	0	0	0	<i>Anthribus</i> Geoffroy	1	0	0	0	0
Rhynchitidae Gistel						Rhynchitidae Gistel					
<i>Neocoenorhynchus</i> Legalov	1	2	0	0	0	<i>Neocoenorhynchus</i> Legalov	1	1	0	0	0
<i>Involvulus</i> Schrank	5	2	0	0	0	<i>Involvulus</i> Schrank	1	1	0	0	0
<i>Epirhynchites</i> Voss	6	0	0	0	0	<i>Epirhynchites</i> Voss	1	0	0	0	0
<i>Rhynchites</i> D.H. Schneider	2	0	0	0	0	<i>Rhynchites</i> D.H. Schneider	1	0	0	0	0
<i>Deporaus</i> Samouelle	15	0	0	0	0	<i>Deporaus</i> Samouelle	1	0	0	0	0

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens						Number of species					
	FB	FS	FE	M	C		FB	FS	FE	M	C
<i>Byctiscus</i> C.G. Thomson,	4	0	0	0	0	<i>Byctiscus</i> C.G. Thomson	2	0	0	0	0
Attelabidae Billberg						Attelabidae Billberg					
<i>Apoderus</i> Olivier	2	0	0	0	0	<i>Apoderus</i> Olivier	1	0	0	0	0
Apionidae Schoenherr						Apionidae Schoenherr					
<i>Apion</i> Herbst	29	22	16	0	0	<i>Apion</i> Herbst	2	2	2	0	0
<i>Taeniapion</i> Schilsky	9	63	18	0	0	<i>Taeniapion</i> Schilsky	1	1	1	0	0
<i>Cyanapion</i> Bokor	15	2	31	0	0	<i>Cyanapion</i> Bokor	1	1	1	0	0
<i>Holotrichapion</i> Györfly	196	224	106	1	0	<i>Holotrichapion</i> Györfly	2	2	2	1	0
<i>Squamapion</i> Bokor	2	6	24	8	0	<i>Squamapion</i> Bokor	1	1	1	1	0
<i>Protapion</i> Schilsky	111	162	203	19	6	<i>Protapion</i> Schilsky	1	1	1	1	1
<i>Nanophyes</i> Schoenherr	0	11	0	0	0	<i>Nanophyes</i> Schoenherr	0	1	0	0	0
Curculionidae Latreille						Curculionidae Latreille					
<i>Sitophilus</i> Schoenherr	23	15	23	8	1	<i>Sitophilus</i> Schoenherr	2	1	2	2	1
<i>Sphenophorus</i> Schoenherr	0	3	3	0	0	<i>Sphenophorus</i> Schoenherr	0	3	2	0	0
<i>Curculio</i> Linnaeus	1	0	0	0	0	<i>Curculio</i> Linnaeus	1	0	0	0	0
<i>Acalyptus</i> Schoenherr	2	0	0	0	0	<i>Acalyptus</i> Schoenherr	1	0	0	0	0
<i>Anthonomus</i> Germar	19	3	0	0	0	<i>Anthonomus</i> Germar	2	1	0	0	0
<i>Tychius</i> Germar	0	3	2	0	0	<i>Tychius</i> Germar	0	2	1	0	0
<i>Baris</i> Germar	0	54	30	1	0	<i>Baris</i> Germar	0	1	1	1	0
<i>Malvaevora</i> Zaslavskij	0	9	2	0	0	<i>Malvaevora</i> Zaslavskij	0	1	1	0	0
<i>Aulacobaris</i> Desbrochers des Loges	0	21	24	0	0	<i>Aulacobaris</i> Desbrochers des Loges	0	2	2	0	0
<i>Nedyus</i> Schoenherr	7	51	29	1	0	<i>Nedyus</i> Schoenherr	1	1	1	1	0
<i>Ceutorhynchus</i> Germar	15	58	56	2	0	<i>Ceutorhynchus</i> Germar	3	4	5	1	0
<i>Glocianus</i> Reitter	0	1	0	0	1	<i>Glocianus</i> Reitter	0	1	0	0	1
<i>Sirocalodes</i> Voss	0	4	2	0	0	<i>Sirocalodes</i> Voss	0	2	1	0	0
<i>Coryssomerus</i> Schoenherr	0	0	1	0	0	<i>Coryssomerus</i> Schoenherr	0	0	1	0	0
<i>Polydrusus</i> Germar	15	3	1	0	0	<i>Polydrusus</i> Germar	1	2	1	0	0
<i>Pseudomylocerus</i> Desbrochers des Loges	0	6	0	0	0	<i>Pseudomylocerus</i> Desbrochers des Loges	0	1	0	0	0
<i>Phyllobius</i> Germar	0	14	1	0	0	<i>Phyllobius</i> Germar	0	4	1	0	0
<i>Sciaphilus</i> Schoenherr	0	4	1	0	0	<i>Sciaphilus</i> Schoenherr	0	1	1	0	0
<i>Tanymecus</i> Germar	7	54	45	132	105	<i>Tanymecus</i> Germar	1	1	1	1	1
<i>Omius</i> Germar	0	2	0	0	0	<i>Omius</i> Germar	0	1	0	0	0
<i>Psallidium</i> Herbst	3	5	8	2	2	<i>Psallidium</i> Herbst	1	1	1	1	1
<i>Urometopus</i> Formánek	0	8	9	3	0	<i>Urometopus</i> Formánek	0	1	1	1	0
<i>Sitona</i> Germar	117	371	697	84	60	<i>Sitona</i> Germar	3	4	3	3	3
<i>Foucartia</i> Jacquelin du Val	0	1	0	0	0	<i>Foucartia</i> Jacquelin du Val	0	1	0	0	0
<i>Otiorhynchus</i> Germar	68	34	23	0	0	<i>Otiorhynchus</i> Germar	3	2	3	0	0
<i>Nastus</i> Schoenherr	0	3	0	0	0	<i>Nastus</i> Schoenherr	0	1	0	0	0
<i>Hypera</i> Germar	19	73	76	8	3	<i>Hypera</i> Germar	2	2	2	2	1
<i>Lixus</i> Fabricius	0	92	0	0	0	<i>Lixus</i> Fabricius	0	7	0	0	0

The beetles of the agricultural landscape in the south of the Prikubanskaya plain, Russia

Table 1. (continuations)
Таблица 1. (продолжение)

Number of specimens					
	FB	FS	FE	M	C
<i>Larinus</i> Dejean	17	100	34	0	0
<i>Bothynoderes</i> Schoenherr	0	1	0	1	0
<i>Cyphocleonus</i> Motschulsky	0	5	0	0	0
<i>Magdalis</i> Germar	9	0	0	0	0
<i>Gasterocercus</i> Laporte & Brullé	1	0	1	0	0
Scolytidae Latreille					
<i>Xyleborus</i> W.J. Eichhoff	1	0	0	0	0

Number of species					
	FB	FS	FE	M	C
<i>Larinus</i> Dejean	1	4	3	0	0
<i>Bothynoderes</i> Schoenherr	0	1	0	1	0
<i>Cyphocleonus</i> Motschulsky	0	1	0	0	0
<i>Magdalis</i> Germar	1	0	0	0	0
<i>Gasterocercus</i> Laporte & Brullé	1	0	1	0	0
Scolytidae Latreille					
<i>Xyleborus</i> W.J. Eichhoff	1	0	0	0	0