

Cerambycidae collected in North-East Kazakhstan by an international collecting trip 2005 (Coleoptera)

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Abstract. Totally 68 Cerambycidae species are reported for North-East Kazakhstan. Five species are recorded for the first time for Kazakhstan: *Acmaeops smaragdulus* (FABRICIUS, 1792), *Amarysius duplicatus* TSHEREPANOV, 1980, *A. sanguinipennis* BLESSING, 1872, *Rhopaloscelis unifasciatus* BLESSING, 1873 and *Saperda alberti* PLAVILSTSHIKOV, 1916. The occurrence of *Anastrangalia sequensi* (REITTER, 1898) in Kazakhstan is proved. *Xylotrechus capricornis* (GEBLER, 1830) and *X. ibex* (GEBLER, 1825) are recorded for North-East Kazakhstan for the first time. Two new synonyms are proposed: *Leptura erythropus* GEBLER, 1841 = *Grammoptera bivittis* (MOTSCHULSKY, 1860), syn. nov., *Anoplistes ephippium coreanum* OKAMOTO, 1924 = *A. altajensis ussuricus* TSHEREPANOV in TSHEREPANOV & TSHEREPANOVA, 1975, syn. nov. *Tragopogon* and *Scorzonera* are notified as food-plants of *Agapanthia maculicornis* (GYLLENHAL, 1817), as well as *Pulsatilla* for *A. violacea* (FABRICIUS, 1775) for the first time.

Key words. Cerambycidae, list of species, food plants, Kazakhstan, Palaearctic Region, new records, taxonomy, zoogeography, new synonyms.

Zusammenfassung. Insgesamt 68 Arten der Cerambycidae werden für Nord-Ost Kazakhstan aufgelistet und Daten zu ihrer generellen Verbreitung und Lebensweise mitgeteilt. Fünf Arten werden erstmals für Kazakhstan gemeldet: *Acmaeops smaragdulus* (FABRICIUS, 1792), *Amarysius duplicatus* TSHEREPANOV, 1980, *A. sanguinipennis* BLESSING, 1872, *Rhopaloscelis unifasciatus* BLESSING, 1873 und *Saperda alberti* PLAVILSTSHIKOV, 1916. Das Vorkommen von *Anastrangalia sequensi* (Reitter, 1898) in Kazakhstan wird bestätigt. *Xylotrechus capricornis* (GEBLER, 1830) und *X. ibex* (GEBLER, 1825) werden erstmals für Nord-Ost Kazakhstan gemeldet. Zwei neue Synonyme werden vorgeschlagen: *Leptura erythropus* GEBLER, 1841 = *Grammoptera bivittis* (MOTSCHULSKY, 1860), syn. nov., *Anoplistes ephippium coreanum* Okamoto, 1924 = *A. altajensis ussuricus* TSHEREPANOV in TSHEREPANOV & TSHEREPANOVA, 1975, syn. nov. *Tragopogon* und *Scorzonera* werden erstmals als Nahrungspflanzen für *Agapanthia maculicornis* (GYLLENHAL, 1817), *Pulsatilla* für *A. violacea* (FABRICIUS, 1775) belegt.

An ordinary Palaearctic species distributed from Spain to East Siberia. Development under the bark of different dead deciduous trees, adults on flowers.

2. *Rhagium inquisitor inquisitor* (LINNAEUS, 1758) – several specimens collected on the bark. An ordinary Palaearctic species distributed from Portugal to Japan and represented by a number of different subspecies; the nominative subspecies is distributed from West Europe to East Siberia. Development under the bark of different dead coniferous trees, but in Siberia often in *Betula*, in Europe it was rarely observed in *Fagus* and *Quercus*, adults sometimes on flowers, but usually on the bark of infesting trees.

3. *Pachyta quadrimaculata* (LINNAEUS, 1758) – several specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to East Siberia. The bionomy was described in details by A. I. CHEREPANOV (1979). Development of larvae in Siberia was observed in dead roots of *Pinus* far from the main trunk of the tree, pupation in soil, adults on flowers.

4. *Brachyta interrogationis* (LINNAEUS, 1758) – several specimens collected on *Paeonia*. An ordinary Palaearctic species distributed from Spain to Far East of Russia, Korea and China. The bionomy was described in details by A. I. CHEREPANOV (1979). Development of larvae in Siberia was usually observed in roots of living *Paeonia*, but sometimes in roots of *Euphorbia* and *Radiola*, in laboratory the oviposition also took place in soil near roots of *Trollius*, pupation in soil, adults on flowers of many different plants.

5. *Acmaeops smaragdulus* (FABRICIUS, 1792) – a single male was collected by Yokoi on Umbeliferae. The species is distributed from France (SAMA 2002) to the Far East of Russia Korea and China. It is rather rare in Europe, but very numerous in Siberia. The species was never before recorded for Kazakhstan, so it is our first

Introduction

An international entomological expedition to Kazakhstan arranged by M. L. DANILEVSKY in June 2005 included five persons, three entomologists from Russia, GALINA BORISOVNA DANILEVSKAYA, MIKHAIL LEONTIEVICH DANILEVSKY, ANDREY MIKHAILOVICH SHAPOVALOV and two from Germany, KARL HADULLA and YAHEITA YOKOI. The main base of the expedition was situated in Khamir river valley near Putintzevo village in East Kazakhstan, 49°53'N, 84°23'E (Fig. 1). It is mixed forest in the foothills of West Altay mountains just near the river at about

475 m (Fig. 2). Two short collecting trips to the environs of Ust-Kamenogorsk were carried out to a mountain steppe area in Sibinka river valley with adjacent tape forest at about 500 m at 49°35'N, 82°30'E (Fig. 3) and to the nearest south of Ust-Kamenogorsk at hilly suburbs at about 450 m at 49°53'N, 82°37'E. The taxonomy part of the text was arranged by DANILEVSKY.

Species collected near Putintzevo

1. *Rhagium mordax* (DE GEER, 1775) – several specimens collected on flowers.

record for the Republic. Development under the dead bark of coniferous trees (*Picea*, *Pinus*, *Abies*, *Larix*), pupation in soil, adults on flowers.

6. *Gnathacmaeops pratensis* (LAICHARTING, 1784) – a single male collected by SHAPOVALOV. An ordinary Palaearctic species distributed from Spain to Far East of Russia, Korea and China, as well as in Central Asia, Near East and Caucasus. Development under the dead bark of coniferous trees (*Picea*, *Pinus*), pupation in soil, adults on flowers.

7. *Dinoptera collaris* (LINNAEUS, 1758) – several specimens collected on flowers. An ordinary Palaearctic species distributed from Portugal to the West Siberia as well as in Near East and Caucasus. Development under the dead bark of different deciduous trees, pupation in soil, adults on flowers.

8. *Alosterna tabacicolor erythropus* (GEBLER, 1841) – many specimens collected on flowers. The taxon was usually recorded as *A. t. bivittis* (MOTSCHULSKY, 1860); *Leptura erythropus* GEBLER, 1841 was described from Altai. The original description totally fits to Altai specimens of *A. tabacicolor* (DEGEER, 1775). *Grammoptera bivittis* MOTSCHULSKY, 1860 was described from the area eastwards Baikal belongs to the same taxon as *A. tabacicolor* from Altai, no other species of *Alosterna* are known from Altai. Consequently, *Leptura erythropus* GEBLER, 1841 = *Grammoptera bivittis* (MOTSCHULSKY, 1860), syn. nov. Usually the combination *Grammoptera erythropus ingrlica* (BAECKMANN, 1902) was used (PLAVILSTSHIKOV 1936), but *Alosterna ingrlica* has no connection with *Alosterna tabacicolor erythropus* and is absent in Altai.

Alosterna tabacicolor is an ordinary Palaearctic species distributed from Spain to Japan, as well as in Caucasus, Turkey and Iran and represented by a number of subspecies; *A. t. erythropus* is distributed from West Siberia to Japan. Development in dead fungoid substrate under the bark, inside the bark and in wood of different deciduous and coniferous trees, pupation in wood, adults on flowers.

9. *Pseudovadonia livida pecta* (K. & J. DANIEL, 1891) – several specimens collected on flowers. *Pseudovadonia livida* (FABRICIUS, 1776) is an ordinary Palaearctic species distributed from Spain to East

Siberia, as well as in Caucasus and Near East and represented by a number of subspecies, which geographical and morphological limits are not clear good enough. *Pseudovadonia l. pecta* is distributed from East Europe to East Siberia, recently it was recorded for Kirgizia (OVTCHINNIKOV 1996). The development was described by B. BURAKOWSKI (1979). Larvae in soil with mycelium of *Marasmius oreades*, pupation in soil inside specially constructed cocoons, adults of flowers.

10. *Anastrangalia sequensi* (REITTER, 1898) – numerous specimens collected on flowers (mostly on *Heracleum*). An ordinary Siberian species distributed eastwards to Japan, but penetrates in Europe near Central Urals. The species was not included in Kazakhstan fauna by I. A. Kostin (1973). According to him all records of *A. sequensi* for Kazakhstan were identified as *A. sanguinolenta* (LINNAEUS, 1761), and the record of *A. sequensi* for “Burabay” (KADYRBKOV et al. 2003) in Kokchetav region must be another species, most probably *A. reyi* (HEYDEN, 1885). Larvae in decaying wood of different coniferous trees (*Pinus*, *Picea*, *Abies*, *Larix*), pupation in wood, adults on flowers.

11. *Lepturobosca virens* (LINNAEUS, 1758) – several specimens collected on flowers (mostly on *Heracleum*). An ordinary Palaearctic species distributed from Spain to Far East Russia, Korea and China, very numerous in Siberia. Development in rotten wood of different coniferous trees (*Pinus*, *Picea*, *Abies*), but also known from *Betula*, pupation in wood, adults on flowers.

12. *Pachytodes erraticus* (DALMAN, 1817) – several specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to East Siberia; development in rotten roots of different deciduous trees under the soil level; pupation in soil; adults on flowers.

13. *Oedecnema gebleri* GANGLBAUER, 1889 – several specimens collected on flowers. An ordinary Siberian species distributed also in Korea, China and Japan, westwards to the Ukraine. Development in rotten roots of different deciduous and coniferous trees from *Quercus* and *Salix* to *Pinus* and *Abies* under the soil level, pupation in soil, adults on flowers.

14. *Leptura thoracica* (CREUTZER, 1799) – several specimens collected by HADUL-

LA on dead *Betula* trunk. An ordinary Siberian species distributed also in Korea, China and Japan. Distributed westwards to Croatia, Poland and Slovakia, but in Europe rather rare. Development in rotten wood of different deciduous trees, pupation in wood, adults sometimes visit flowers.

15. *Leptura quadrifasciata quadrifasciata* LINNAEUS, 1758 – several specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to Japan. In Caucasus *L. quadrifasciata caucasica* (PLAVILSTSHIKOV, 1924) occurs, which is also known from Iran and Turkey. Development in rotten wood of different deciduous trees, but sometimes reported from *Picea* and *Pinus*, pupation in wood, adults on flowers.

16. *Leptura annularis annularis* FABRICIUS, 1801 – many specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to Japan. In Japan and several Russian Far East islands *Leptura a. mimica* BATES, 1884 occurs. Development in rotten wood of different deciduous trees, but sometimes reported from *Picea* and *Abies*, pupation in wood, adults on flowers.

17. *Leptura duodecimguttata* FABRICIUS, 1801 – many specimens collected on flowers. An ordinary Siberian species distributed from West Siberia to Japan. Development in rotten wood of different deciduous trees, pupation in wood, adults on flowers.

18. *Lepturalia nigripes rufipennis* (BLESSING, 1873) – several specimens collected on flowers. *Lepturalia nigripes* (DEGEER, 1775) is an ordinary east-palaearctic species distributed from Austria and Slovakia to the Far East Russia, Korea and China. The nominate European subspecies (with yellow elytra) is distributed eastwards to Urals, where a transitional zone is situated. In the east part of European Russia and in West Siberia populations of different subspecies are intermixed, in Orenburg region several populations are known to be consisted of both color forms. Very few specimens with red elytra can be found in West Europe inside the area of the nominative subspecies, but specimens with yellow elytra are not known from East Siberia and further eastwards. Development in rotten wood of different deciduous trees, but prefer *Betula* and *Populus*, pupation in wood, adults on flowers.

19. *Strangalia attenuata* (LINNAEUS, 1758) – many specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to Japan, as well as in Caucasus, Iran and Turkey. Development usually in rotten wood of different deciduous trees, but often in coniferous trees, pupation in wood, adults on flowers.
20. *Stenurella melanura* (LINNAEUS, 1758) – many specimens collected on flowers. An ordinary Palaearctic species distributed from Portugal to Japan, as well as in Caucasus, Iran and Turkey. Development in rotten wood of different deciduous and coniferous trees, often in roots near at soil level as well as in fallen twigs and small stems, pupation in wood, adults on flowers.
21. *Necydalis major major* LINNAEUS, 1758 – a single specimen collected by HADULLA. An ordinary Palaearctic species distributed from Spain to Japan, as well as in Caucasus and Turkey, where it is very rare. In Japan and several Russian Far East islands *Necydalis major aino* KUSAMA, 1975 occurs. Development in dead wood of many various deciduous trees, pupation in wood, adults occasionally on flowers.
22. *Asemum striatum* (LINNAEUS, 1758) – several specimens collected. An ordinary Palaearctic species distributed from Spain to Japan, as well as in Caucasus, Turkey and Kirgizia. development in dead fresh wood of many various coniferous trees, usually near the base of trunks, pupation in wood; adults on the bark of food-plants, usually active in twilight and in the night.
23. *Amarysius sanguinipennis* BLESSING, 1872 – a single flying specimen collected by DANILEVSKAYA. Rather rare Far East species traditionally known from Ussuri region, Korea, China and Japan; sometimes was collected in Amur and Khabarovsk regions. Found westwards to Tomsk and Russian Altai by CHEREPANOV (1982). It was recently recorded for Udmurtia in the east part of European Russia (DEDYUKHIN 2007), and now in East Kazakhstan – first record for the Republic. According to CHEREPANOV (1982) adults infest growing thin twigs (*Quercus*, *Acer*, *Betula*, *Corylus*, *Lespedeza*), which then die, development and pupation in wood.
24. *Amarysius altajensis altajensis* LAXMANN, 1770 – several specimens collected on the bark of *Acer* and *Padus* and on flowers of *Rosa* and *Viburnum*. The current populations can be classified as typical. An ordinary east-palaearctic species distributed from East Kazakhstan to Far East Russia, Korea and China. A poorly differentiated subspecies *A. altajensis ussuricus* TSHEREPANOV in TSHEREPANOV & TSHEREPANOVA, 1975 was described from the Ussuri region. According to our materials the area of the subspecies can be accepted westwards to about Lake Baikal, but the taxon was described much earlier from Korea as *Anoplistes ephippium* var. *coreanum* OKAMOTO, 1924. Consequently *Anoplistes ephippium coreanum* OKAMOTO, 1924 = *A. altajensis ussuricus* Tsherepanov in Tsherepanov & Tsherepanova, 1975, syn. nov., and the valid name of the taxon is *Amarysius altajensis coreanus* (OKAMOTO, 1924), comb. nov. According to Cherepanov (1982) adults infest growing thin twigs (*Padus*, *Crataegus*, *Salix*, *Quercus*, *Juglans*, *Acer*, *Fraxinus*, *Betula*, *Corylus*, *Lespedeza*, *Rosa*, *Hippophae*, *Maackia* and others), after the twigs die, development and pupation in wood.
25. *Amarysius duplicatus* TSHEREPANOV, 1980 – several hundreds of specimens collected on flowers of *Spiraea*. A relatively rare Siberian species. It was described from Salair Range near Novosibirsk (type locality) and from Tuva Republic of Russia, later recorded for Russian Primorye and Amur regions (DANILEVSKY 1998), it was also collected by KOSTIN near Ust-Kamenogorsk in 1960, but identified as *A. altajensis*, and furthermore collected at that locality by A. NAPOLOV in 1994 – (DANILEVSKY 2009, www.cerambycidae.net), but corresponding information was not published. This is the first published record of the species for Kazakhstan. Development is known only in *Spiraea*, adults infest growing thin twigs, after they die. Development and pupation in wood, beetles were observed by us on *Spiraea* flowers in very big number.
26. *Molorchus minor minor* (LINNAEUS, 1758) – several specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to Japan, as well as in Georgia. In Japan and Several Russian Far East islands the subspecies *Molorchus minor fuscus* HAYASHI, 1955 is known. Development under the bark of fresh, dead twigs and thin stems of different coniferous trees as *Pinus*, *Picea*, *Abies*, *Larix*, *Cupressus*, but sometimes reported for *Betula*, pupation in wood, adults on flowers.
27. *Echinocerus floralis* (PALLAS, 1773) – several specimens collected on flowers. An ordinary Palaearctic species distributed from Spain to the East Siberia, as well as in Caucasus, Near East and Central Asia. Oviposition in soil near stems of food-plants, larvae in roots of *Medicago* (usually), *Euphorbia*, *Achillea*, *Onobrychis*, *Melilotus*, *Amaranthus*, adults on flowers.
28. *Rhaphuma gracilipes* (FALDERMANN, 1835) – several specimens collected on flowers. An ordinary east-palaearctic species distributed from Poland to Japan, but rather rare in Europe. Development in freshly dead twigs and stems under the bark, then in wood of different deciduous plants usually in *Betula*, *Acer*, *Quercus*, *Tilia*, *Ulmus* and many others, sometimes in *Aralia*, *Vitis*, *Spiraea*, *Syringa*, *Euonymus*, *Daphne*, *Micromeles*, but also reported (CHEREPANOV 1982) from *Abies*, *Larix* and *Junipers*. Pupation in wood, adults on flowers.
29. *Xylotrechus capricornis* (GEBLER, 1830) – several specimens on the bark of *Betula* collected by HADULLA, SHAPOVALOV and YOKOI. Relatively rare species distributed from Czechia and Poland to West Siberia, known for Kazakhstan (KOSTIN 1973) on base of a single specimen collected near Karkaralinsk (Kazakhstan region). First report for North-East Kazakhstan. Larvae under the bark then in wood of freshly dead *Betula* trunks, pupation in wood.
30. *Xylotrechus ibex* (GEBLER, 1825) – four specimens collected on the bark of *Betula* by HADULLA. An ordinary west-palaearctic species distributed from Germany and Poland to Russian Far East, Korea and China. It is very abundant in Siberia, but very rare in West Europe. From Kazakhstan it was known only from the North-West part of the Republic (Ural river valley), so now it is the first record for North-East Kazakhstan. Development under the bark of freshly dead deciduous trees preferring *Betula*, but also reported for *Alnus*, *Carpinus*, *Ulmus*; pupation inside the bark (CHEREPANOV 1982) or in wood (BENSE 1995), according to CHEREPANOV (1982) adults never visit flowers.
31. *Xylotrechus rusticus* (LINNAEUS, 1758) – many specimens collected. An

ordinary Palaearctic species distributed from Portugal to Japan, as well as in Caucasus, Iran, Turkey and Central Asia. Larvae under the bark then in wood of freshly dead deciduous trees preferring *Populus*, often in *Betula* and *Salix*, but also reported from *Tilia*, *Acer*, *Sorbus*, *Ulmus*, *Castanea*, *Quercus* and others. Pupation in wood, adults very often can be seen on the bark of food-plants.

32. *Xylotrechus adpersus* (GEBLER, 1830) – several specimens collected on the bark of *Populus* by HADULLA. An ordinary west-palaearctic species distributed from West Siberia to Japan. Oviposition takes place on living twigs; larvae under the bark then in wood of *Salix*, also known from *Chosenia*, pupation in wood.

33. *Cyrtoclytus capra* (GERMAR, 1824) – several specimens collected on flowers. An ordinary Palaearctic species distributed from France to Japan, which is rather rare and sporadic in West Europe, but very numerous in Siberia. Development in solid dead wood of very many deciduous trees from *Betula*, *Quercus* and *Sorbus* to *Euonymus*, *Vitis* and *Aralia*, though in West Europe the range of food-plants seems to be rather narrow (*Acer*, *Anus*), pupation in wood.

34. *Clytus arietoides* REITTER, 1899 – many specimens collected on the bark of *Abies*. An ordinary east-palaearctic species distributed from the north-east of European Russia to Japan. Development under the dead bark of many coniferous trees (*Pinus*, *Picea*, *Abies*, *Larix*), pupation in wood, adults often on flowers.

35. *Mesosa myops* (DALMAN, 1817) – many specimens collected on trunks of different deciduous trees – mostly on *Padus*. An ordinary east-palaearctic species distributed from Poland to Far East Russia, Korea and China; development under the bark of many rather different dead deciduous trees (often in *Quercus*), pupation also under the bark, but sometimes in wood, adults on the bark of food-plants.

36. *Monochamus saltuarius* GEBLER, 1830 – several specimens collected on *Abies*. An ordinary Palaearctic species

distributed from Portugal to Japan, but much more numerous in Siberia. Development under the freshly dead bark and then in wood of many coniferous trees, but usually in *Picea* and *Abies*, pupation in wood, adults on food-plants.

37. *Monochamus galloprovincialis pistor* (GERMAR, 1818) – several specimens collected on *Pinus*. An ordinary Palaearctic species distributed from Italy to Japan. In France and Iberian Peninsula a nominative subspecies (with red head and antennae) is distributed. Development under the freshly dead bark and then in wood of *Pinus*, pupation in wood, adults on food-plants.

38. *Monochamus urussovii* (FISCHER, 1806) – several hundreds of specimens collected on *Abies* logs. An ordinary east-palaearctic species distributed from Poland to Japan. Development in many coniferous trees, but usually in *Picea* and *Abies*, only in Siberia the species often infests *Betula*. Larvae under the freshly dead bark and then in wood, pupation in wood; adults on food-plants.

39. *Lamia textor* (LINNAEUS, 1758) – several specimens collected on the soil. An ordinary Palaearctic species distributed from Spain to Japan, as well as in Caucasus, Iran, Turkey. Oviposition takes place at the bases of living trunks; larvae in bases of trunks and in roots, under the bark then in living wood of several deciduous trees preferring *Populus* and *Salix*, but also in *Betula*, *Alnus*, *Morus*, pupation in wood, adults often can be seen on the soil.

40. *Rhopaloscelis unifasciatus* BLESSIG, 1873 – a single specimen accidentally collected 9.VI.2005 by HADULLA on the stem of *Artemisia*. An ordinary Far East species traditionally known from Russian Primorye, Korea, China and Japan, sometimes collected in Amur and Khabarovsk regions, recently in the Russian Altai by CHEREPANOV (1984). Our discovery of the species in Kazakhstan was quite unexpected; a single available specimen does not differ from Ussuri specimens. The species is very polyphagous; the development in the wood of thin twigs of many different deciduous plants, but

usually in *Salix*, *Morus*, *Acer*, *Aralia*, *Ulmus*, often in *Quercus*, *Fraxinus*, *Carpinus* and many others, sometimes in *Tilia*, *Alnus*, *Seringa*, *Lespedeza* and others.

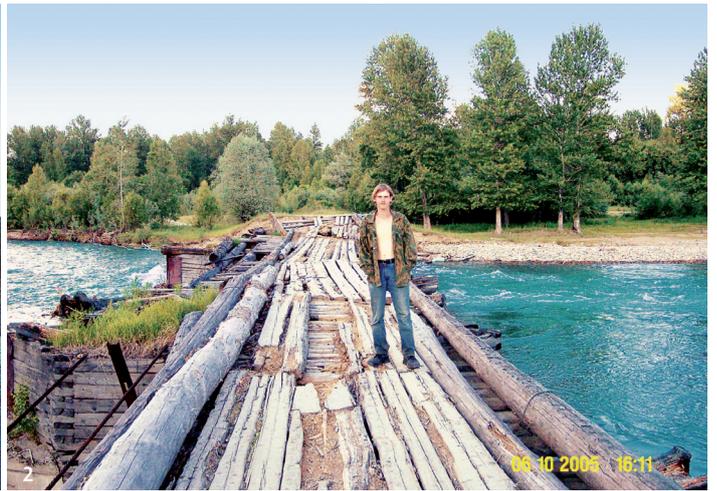
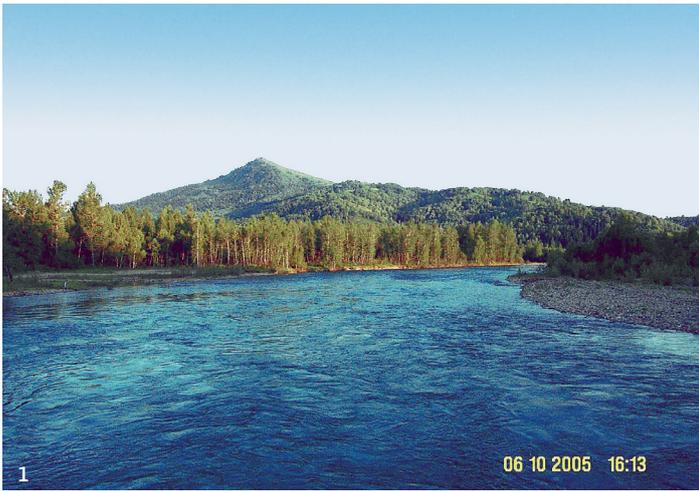
41. *Pogonocherus fasciculatus fasciculatus* (DEGEER, 1775) – several specimens collected. An ordinary Palaearctic taxon distributed from Spain to Japan, as well as in Caucasus, Iran, Turkey. *Pogonocherus f. hondoensis* OHBAYASHI, 1963 was described from Japan (Central Honshu). Larvae under the bark of twigs of many coniferous trees (*Pinus*, *Picea*, *Abies*, *Larix*), but also recorded for several deciduous trees (*Castanea*, *Ficus*), pupation in wood.

42. *Aegomorphus clavipes* (SCHRANK, 1781) – many specimens collected. An ordinary Palaearctic species distributed from Spain to Japan including North Africa, as well as in Caucasus, Iran, Turkey. Larvae under the bark of many deciduous trees preferring *Populus*, *Salix* and *Betula*, but also in *Prunus*, *Acer*, *Alnus* and many others, pupation in wood.

43. *Aegomorphus obscurior* (PIC, 1904) – two males collected on *Betula* bark by SHAPOVALOV. The species was recently described as Polish endemic with the name *A. wojtylai* HILSZCZANSKI & BYSTROWSKI, 2005. Then the species was recognized as being widely distributed all along Palaearctic area up to Russian Far East including Ust-Kamenogorsk environs (DANILEVSKY & SHAPOVALOV 2007). The study of the holotype of *Acanthoderes clavipes* var. *obscurior* PIC, 1904 (described from “Amur”) in PIC’s collection in Muséum Nationale d’Histoire Naturelle (Paris) by DANILEVSKY proved the synonymy of the two names (HILSZCZANSKI 2008). The species is known to be connected with *Quercus*, but most probably rather polyphagous.

44. *Acanthocinus griseus* (FABRICIUS, 1792) – several specimens collected on *Abies* bark. An ordinary Palaearctic species distributed from Spain to East Siberia. Larvae under dead bark of different coniferous trees, usually in *Pinus*, but also in *Picea* and *Abies*, pupation under or inside the bark, adults on food-plants, sometimes attracted by light.

Figs 1–8. Collecting sites and expedition members. 1. Khamir river near Putintzevo. 2. A. SHAPOVALOV with mixed *Populus-Salix* forest at the background. 3. Clearing in the *Populus* wood, locality of *Amarysius sanguinipennis*. 4. *Betula* forest near Putintzevo, locality of *Amarysius altajensis* and *A. duplicatus*. 5. Y. YOKOI collecting *Monochamus urussovii* on *Abies* logs near Putintzevo. 6. Mountain meadow, locality of several species of *Phytoecia* and *Agapanthia*. 7. Sibinka river valley with tape forest at the background. 8. K. HADULLA with *Padus* and *Viburnum* bushes full of *Amarysius altajensis* and *Obera kostini*.



45. *Acanthocinus aedilis* (LINNAEUS, 1758) – several specimens collected. An ordinary Palaearctic species distributed from Portugal to Far East Russia, Korea and China; larvae under dead bark (sometimes in roots) of different coniferous trees, usually in *Pinus*, but also in *Picea*, *Abies*, *Larix*, pupation under the bark, adults on food-plants.

46. *Saperda alberti* PLAVILSTSHIKOV, 1916 – numerous specimens collected on *Populus* bark by HADULLA, SHAPOVALOV and YOKOI. An ordinary east-asian species very numerous in Russian Far East, but known from West Siberia to Japan. First record for Kazakhstan. Larvae under recently dead bark of *Populus*, *Salix* and *Chosenia*, pupation in sapwood, under or inside the bark, adults on food-plants, sometimes attracted by light.

47. *Saperda perforata* (PALLAS, 1773) – numerous specimens collected; ordinary Palaearctic species distributed from Spain to Far East Russia and China including North Africa, as well as in Caucasus, Iran and Turkey. Larvae under dying bark of several deciduous trees, usually in *Populus* and *Salix*, but sometimes in others (*Sorbus*), pupation in sapwood, under or inside the bark, adults on food-plants, sometimes attracted by light.

48. *Saperda scalaris hyeroglyphica* (PALLAS, 1773) – numerous specimens collected. *Saperda scalaris* (LINNAEUS, 1758) is an ordinary Palaearctic species distributed from Spain to Far East Russia and China including North Africa. *Saperda s. hyeroglyphica* is distributed from the east part of European Russia to the Far East and is characterized by stable blue-grey body pubescence. Larvae under recently dead bark of many deciduous trees, but sometimes reported from *Larix* and *Abies*. Pupation in sapwood, under or inside the bark, adults on food-plants, sometimes attracted by light.

49. *Oberea kostini* DANILEVSKY, 1988 – many specimens on twigs of *Lonicera*. Relatively rare Siberian species known from the east of European Russia to West Siberia and East Kazakhstan. Up to now *Lonicera* is a single known food-plant. No bionomy data are known, but all must be about same as in *O. pupillata* (GYLLENHAL, 1817), larvae in the wood of living twigs or thin stems, adults on food-plants.

50. *Phytoecia (Musaria) affinis altaica* SUVOROV, 1913 – numerous specimens collected on *Daucus*. The infraspecific taxonomy of *Ph. affinis* (HARRER, 1784) is extremely complicated; most probably many traditional species such as *Ph. tuerki* GANGLBAUER, 1884, *Ph. volgensis* KRAATZ, 1884, *Ph. boeberi* GANGLBAUER, 1884 are not more than subspecific forms of *Ph. affinis*, more over the subspecific status of *Ph. a. altaica* is not evident. Any way *Ph. affinis* is an ordinary species distributed from Spain to West Siberia, as well as in Caucasus and probably in Turkey and Iran; many food-plants are known but specially *Chaerophyllum aureum*. In Siberia often in *Libanotis intermedia*, larvae in stems, pupation in roots, adults on food-plants.

51. *Phytoecia* (s. str.) *nigricornis* (FABRICIUS, 1781) – several specimens collected. An ordinary Palaearctic species distributed from Spain to East Siberia, as well as in Caucasus, Iran and Turkey. Many food-plants are known: *Tanacetum*, *Solidago*, *Artemisia*, *Galatella*, *Achilleae*, *Chrysanthemum* and others. Larvae in stems, pupation in roots, adults on food-plants.

52. *Phytoecia* (s. str.) *cylindrica* (LINNAEUS, 1758) – several specimens collected. An ordinary Palaearctic species distributed from Portugal to Russian Far East, as well as in Caucasus, Iran and Turkey. Many food-plants are known: *Daucus*, *Chaerophyllum*, *Bupleurum*, *Aegopodium*, *Heracleum*, *Phlomis* and others. Larvae in stems, pupation in roots, adults on food-plants.

53. *Phytoecia* (s. str.) *icterica* (SCHALLER, 1783) – two specimens collected by SHAPOVALOV and YOKOI. An ordinary west-palaearctic species distributed from Portugal to West Siberia, as well as in North Caucasus, all records for Transcaucasia and Turkey concern another species. Many food-plants are known: *Pastinacia*, *Daucus*, *Heracleum*, *Pimpinella* and others. Larvae in stems, pupation in roots, adults on food-plants.

54. *Agapanthia alternans* (FISCHER-WALDHEIM, 1842) – several specimens collected on Umbeliferae. The species is distributed from East Siberia to Central Kazakhstan, specimens from Karaganda region, Tarbagatai Mts. and Dzhungarsky Alatau, as well as from Tuva Republic are represented in the collection of DANILEVSKY. The species is known to

be connected with *Prangos* and *Ferula*, adults on food-plants.

55. *Agapanthia dahli dahli* (RICHTER, 1821) – several specimens collected on different plants, but mostly on *Malva*. An ordinary Palaearctic species distributed from Spain to East Siberia, all records for Transcaucasia connected with *A. walteri* REITTER, 1898, which might be only a subspecies of *A. dahli*. Many populations of the species from Altai, Zaisan environs, South Kazakhstan, Uzbekistan and Tadzhikistan need to be described as new subspecies. Many food-plants are known, usually it develops in *Carduus* and *Cirsium*, but also in *Pastinacia*, *Heracleum*, *Pyrethrum*, *Daucus* and many others, in NE Kazakhstan usually in *Malva*. In our locality the species was quite sympatric with *A. alternans*, but used different food-plants, adults on food-plants.

54. *Agapanthia villosoviridescens* (DEGEER, 1775) – several specimens collected on different plants. An ordinary Palaearctic species distributed from Spain to East Siberia, all records for Caucasus are connected with another species, absent in Central Asia. In Siberia the species is rather rare and sometimes can be observed in one locality with *A. daurica* GANGLBAUER, 1884. A lot of food-plants are known: *Carduus*, *Cirsium*, *Heracleum*, *Artemisia*, *Urtica*, *Senecio* and many others. CHEREPANOV'S (1984) bionomical data are not adequate, as he mixed the species with *A. daurica*, adults on food-plants.

57. *Agapanthia violacea* (FABRICIUS, 1775) – several specimens collected on different plants. An ordinary Palaearctic species distributed from Spain to West Siberia. The old distributional published data are not acceptable, as traditionally the species was mixed with *A. intermedia* GANGLBAUER, 1884 (which seems to be more or less monophagous on *Knautia*). For example *A. violacea* is absent in Moscow and Kaluga regions, while *A. intermedia* is represented here. On the other hand the steppe area of South Russia (Volgograd region) is occupied by *A. violacea*, and in Samara environs both species occur sympatrically, but *A. violacea* is much more abundant. Many food-plants are known: *Medicago*, *Phlomis*, *Echium*, *Salvia*, *Valeriana*, *Carduus* and many others. In several localities of North Kazakhstan and Orenburg region of Russia numerous specimens of *A. violacea*

were found by DANILEVSKY and SHAPOVALOV on stems of *Pulsatilla*, and no other plants were visited in corresponding localities by *A. violacea*, adults on food-plants.

58. *Agapanthia maculicornis* (GYLLENHAL, 1817) – one male and three females on stems of *Scorzonera* collected by DANILEVSKY and SHAPOVALOV. Rather rare species distributed from Balkans to West Siberia, as well as in North Caucasus. All names of food-plants published up to now look rather doubtful. The species was often observed by DANILEVSKY on *Tragopogon* in South Russia, so *Scorzonera* and *Tragopogon* are notified here as true food-plants of *A. maculicornis*, adults on food-plants.

59. *Agapanthiola leucaspis* (STEVEN, 1817) – many specimens collected on different plants. An ordinary Palaearctic species distributed from Balkans to East Siberia. Many food-plants known: *Melilotus*, *Erigeron*, *Campanula*, *Salvia*, *Ptarmica*, *Vernica*, *Potentilla*, *Cephalaria* and others. Larvae in stem, pupation inside stem near its base, adults on food-plants.

Species collected in Sibinka river valley

1. *Brachyta interrogationis* – several specimens collected on *Ranunculus*; see the annotation above.

2. *Dinoptera collaris* – several specimens collected on flowers; see the annotation above.

3. *Lepturalia nigripes rufipennis* – several specimens collected on flowers; see the annotation above.

4. *Anoplistes halodendri halodendri* (PALLAS, 1776) – one specimen collected on stem of *Caragana* by SHAPOVALOV. Many specimens were collected here under the same conditions by DANILEVSKY and HADULLA in 2002. The current population can be accepted as typical. *A. halodendri* is an ordinary east-palaearctic species, known from the Balkan to Russian Far East, China, Korea and Japan. In Europe only one subspecies – *A. h. ephippium* (STEVEN & DALMAN, 1817), which is distributed eastwards to about Urals, as well as in North Caucasus.

5. *Amarysius altajensis altajensis* – several specimens collected on twigs of *Padus*.

Many hundreds of specimens were collected here by DANILEVSKY and HADULLA in 2002; see the annotation above.

6. *Rhaphuma gracilipes* – several specimens collected on flowers; see above.

7. *Xylotrechus rusticus* – several specimens collected; see above.

8. *Xylotrechus adpersus* – more than 20 specimens collected on the twigs of *Salix* by SHAPOVALOV; see above.

9. *Cyrtoclytus capra* – several specimens collected on flowers; see the annotation above.

10. *Mesosa myops* – several specimens collected on the bark of *Padus*; see above.

11. *Lamia textor* – several specimens collected on the soil; see above.

12. *Politodorcadion eurygyne eurygyne* (SUVOROV, 1911) – numerous but rather old specimens collected on soil among grass in steppe locality. More than hundred of specimens were collected here by DANILEVSKY in 2002. The species is an endemic of East Kazakhstan distributed southwards to Tarbagatai mountains and distribution reaches to the border regions of Russia and China. Several populations from Kalba Range with pubescent males were described as *D. e. lailanum* DANILEVSKY, 2007.

13. *Aegomorphus clavipes* – several specimens collected on the bark of *Padus*; see above.

14. *Tetrops praeusta* (LINNAEUS, 1758) – three specimens on *Rosa* and *Lonicera* collected by SHAPOVALOV. An ordinary Palaearctic species distributed from Portugal to East Siberia, as well as in Caucasus and Near East. The distributional data from Europe must be revised as it was traditionally mixed with the yellow form of *Tetrops gilvipes* (FALDERMANN, 1837). Larvae in living thin twigs of many deciduous trees and shrubs usually in Rosaceae (*Malus*, *Crataegus*, *Pirus*, *Prunus*, *Padus* and others), but also in *Ulmus*, *Quercus*, *Tilia*, *Populus* and others. Young larvae under the bark, then in wood, pupation in wood, adults on twigs and leaves of food-plants.

15. *Saperda carcharias* (LINNAEUS, 1758) – several specimens collected on *Salix*.

An ordinary Palaearctic species distributed from Spain to Far East Russia and China. Larvae in living wood of trunks and roots of *Populus* and *Salix*, pupation in wood.

16. *Oberea kostini* – numerous specimens on *Lonicera* twigs; see above.

17. *Oberea erythrocephala* (SCHRANK, 1776) – several specimens collected on *Euphorbia*. An ordinary west-palaearctic species distributed from Portugal to West Siberia including North Africa, as well as in Caucasus and Near East. Development in stems of different species of *Euphorbia*, pupations inside the plant.

18. *Phytoecia* (*s. str.*) *nigricornis* – several specimens collected; see above.

19. *Phytoecia* (*Opsilia*) *coerulescens* (SCOPOLI, 1763) – several specimens collected. An ordinary west-palaearctic species distributed from Portugal to West Siberia including North Africa, as well as in Caucasus, Near East and Central Asia, though the Central-Asian populations can represent another species described from Kirgizia as *Phytoecia tienschanica* FUCHS, 1965. Larvae in stems of many plants like *Echium*, *Cerithe*, *Lithospermum*, *Rochelia*, *Cinoglossum*, *Lappula*, *Salvia* and others. Pupation inside stem, adults on food-plants.

20. *Agapanthia dahli* – several specimens collected on *Malva*; see above.

21. *Agapanthia villosoviridescens* – several specimens collected on different plants; see above.

22. *Agapanthia violacea* – several specimens collected on different plants; see above.

Species collected near Ust-Kamenogorsk

1. *Xylotrechus rusticus* – several specimens collected on *Populus* bark; see above.

2. *Saperda populnea* (LINNAEUS, 1758) – numerous specimens collected on leaves of several young *Populus tremula*. An ordinary west-palaearctic species distributed from Portugal to West Siberia including North Africa, as well as in Caucasus and Turkey.

3. *Agapanthia villosoviridescens* – several

specimens collected on different plants; see above.

4. *Agapanthia violacea* (Fabricius, 1775) – a single specimen on *Pulsatilla* stem collected by Shapovalov; see above.

5. *Agapanthiola leucaspis* – several specimens collected on different plants; see above.

Two interesting species, which were not collected by our expedition, were collected in the area before and are represented in the collection of Danilevsky:

Acmaeops marginatus (FABRICIUS, 1781) – a male and a female collected by DANILEVSKY using sweeping over grass in Sibinka river valley in 2002. The species is widely distributed from Spain to Russian Far East and China, but rather rare everywhere. Larvae under the dead bark of *Pinus* and *Picea*, pupation in soil, adults on flowers.

Cortodera ciliata ciliata DANILEVSKY, 2001 – three males and a female accidentally collected by Y. MIKHAILOV (Ekaterinburg) using sweeping over grass in Sibinka river valley 25.V.2000. *Cortodera c. milaenderi* DANILEVSKY, 2001 was described from near Ufa (SW Urals). Up to now no other specimens are known, no food-plants known.

Discussion

The studied area includes several rather different nature zones. Typical taiga forest (Fig. 5) is situated about 20 km along the road northwards Putintzevo village with many deciduous (mostly *Betula*, *Populus*, *Salix* and *Padus*) and coniferous (*Abies*, *Pices*, *Larix*, *Pinus*) trees. A *Populus* forest which consist of rather old trees, extends along Khamir river (Figs 1–3). Large *Betula* groves (Fig. 4) were numerous around our camp. Mountain meadows (locality of many *Phytoecia* and *Agapanthia*) with very rich grass vegetation (Fig. 6) are on the hills near Putintzevo across the river. The border of surrounding forests (Fig. 6) were full of flowering *Rosa*, *Spiraea*, *Viburnum* and others, a typical locality of *Amarysius* species and *Oberea kostini*.

From the other side Sibinka river valley (Fig. 7) is relatively dry and steppe vegetation occurs (Fig. 8), which partly look like semi-desert areas. This is a typical lo-

cality of an abundant population of *Politodorcadion eurygyne*. The tape-forest along Sibinka river (Fig. 7), which mostly consists of *Populus* and *Salix*, contains rather numerous population of *Xylotrechus ibex*. Stony mountain areas around the valley (Fig. 8) were not rich with Cerambycidae, but just here were collected *Acmaeops marginatus* by DANILEVSKY and *Cortodera ciliata* by MIKHAILOV.

North-East Kazakhstan is in general a very interesting area from zoogeographical point of view being situated close to the border between Europe and Asia. Here the eastern most localities of European species are situated as well as western most localities of East Asian species, causing a highly diverse fauna in North East Kazakhstan. Faunistically remarkable is our discover of some species from the Far East, like *Amarysius sanguinipennis*, *Ropaloscelis uinfasciatus* and *Saperda alberti*. We regard the regional fauna as very far from being well investigated, so new expeditions to the region are very desirable.

References

- BAECKMANN, J. N. 1902. Beschreibung einer neuen Art der Gattung Grammoptera Serv. aus dem St. Petersburger Gouvernement. *Annuaire du Musée Zoologique de l'Académie Impériale de Sciences de St.-Petersbourg* 7: 280–282.
- BENSE, U. 1995. Longhorn beetles. *Illustrated key to the Cerambycidae and Vesperidae of Europe*. 512 p. Margraf Verlag, Weikersheim.
- BURAKOWSKI, B. 1979. Immature stages and biology of *Vadonia livida* F. (Coleoptera, Cerambycidae). *Annales Zoologici* 35 (2): 25–42.
- CHEREPANOV, A. I. 1979. *Usachi Severnoy Azii* (Prioninae, Disteniinae, Lepturinae, Aseminae). 472 p. Nauka, Novosibirsk.
- CHEREPANOV, A. I. 1982. *Usachi Severnoy Azii* (Clytini, Stenaspini). 259 p. Nauka, Novosibirsk.
- CHEREPANOV, A. I. 1980. Novye vidy usachey (Coleoptera, Cerambycidae) lesov yuzhnoi Sibiri. In: *Sistematika i ecologia zhivotnykh. Novye i maloizvestnyye vidy fauny Sibiri*, 88–92. 168 p. Nauka, Novosibirsk.
- CHEREPANOV, A. I. 1984. *Usachi Severnoy Azii* (Lamiinae: Pterycoptini – Agapanthiini). 214 p. Nauka, Novosibirsk.
- CHEREPANOV, A. I. & CHEREPANOVA, N. E. 1975. *Zhuki drovoseki i vovnykh lesov Sibiri*. 207 p. Nauka, Moskva.
- DANILEVSKY, M. L. 1998. Remarks and additions to the key to longicorn beetles (Coleoptera, Cerambycidae) from »Key to the insects of Russian Far East«. *Russian Entomological Journal* 6 (1/2): 49–55.
- DANILEVSKY, M. L. 2009. Systematic list of Longicorn beetles (Cerambycoidea) of the territory of the former USSR. www.cerambycidae.net (updated 25.05.2009)
- DANILEVSKY, M. L. & SHAPOVALOV, A. M. 2007. The occurrence of *Aegomorphus wojtylai* Hilsz-

czanski, Bystrowski, 2005 (Coleoptera, Cerambycidae) in Russia. *Eversmannia, Entomological Research in the Russia and Adjacent Regions* 9: 8–10 + 2 plates.

GEBLER, F. A. von. 1841. Notae et additamenta ad Catalogum Coleopterorum Sibiriae occidentalis et confinis Tatariae operis. *Bulletin de la Société Impériale des Naturalistes de Moscou* 14 (4): 577–625.

HILSZCZAŃSKI, J. 2008. The synonymy and distribution of *Aegomorphus obscurior* (Pic, 1904), new status and occurrence of *A. francottei* Sama, 1994 in Poland (Coleoptera: Cerambycidae). *Genus* 19 (1): 61–63.

KADYRBEKOV, R. K., ZLEPPAEVA, A. M. & CHILDEBAEV, M. K. 2003. K faune Zhukov-drovosekov (Cerambycidae) i zlatok (Buprestidae) natsionalnogo prirodnogo parka »Burabay« National Park. *Izvestiya Natsionalnoy Akademii Nauk Respubliki Kazakhstan, Seriya Biologicheskaya i Meditsinskaya* 6: 34–42.

KOSTIN, I. A. 1973. *Zhuki-dendrofagi Kazakhstan (Koroedy, drovoseki, zlatki)*. 288 p. Izdatel'stvo »Nauka« Kazakhskoy SSR, Alma-Ata.

MOTSCHULSKY, V. DE. 1860. Coléoptères rapportés de la Sibérie orientale et notamment des pays situés sur le bords du fleuve Amour par MM. Schrenck, Maack, Ditmar, Voynessenski etc. In: *Reisen und Forschungen im Amur-Lande in den Jahren 1854–1856 im Auftrage der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg ausgeführt und in Verbindung mit mehreren Gelehrten herausgegeben. Band II*. pp. 80–257. Zweite Lieferung. Coleopteren. Eggers & Comp., St. Petersburg.

OKAMOTO, H. 1924. The insect fauna of Quelpart Island (Saishiu-to). *Bulletin of the Agricultural Experimental Station, Government-General of Chosen (Suigen)* 1 (2): 47–233.

OVTCHINNIKOV, S. V. 1996. *Sem. Cerambycidae – usachi*. In: TARBINSKY, Yu. S. (ed.) *Genetical fund cadastre of Kyrgyzstan*. Vol. 3. Superclassis Hexapoda (Entognatha and Insecta): 160–163. 400 p. Bishkek.

PLAVILSTSHIKOV, N. N. 1936. *Fauna SSSR. Nasekomye zhestokrylye. T. XXI. Zhuki-drovoseki (ch. 1)*. 612 p. Izdatel'stvo Akademii Nauk SSSR, Moskva – Leningrad.

SAMA, G. 2002. *Atlas of the Cerambycidae of Europe and the Mediterranean Area*. Vol. 1. 173 p. Nakladatelství Kabourek, Zlín.

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