

An annotated checklist of species of the family Lycaenidae (Lepidoptera) occurring in Kazakhstan

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The present checklist of species of the blue butterflies occurring in Kazakhstan includes 3 subfamilies 49 genera and 115 species as a result of long-term observations and investigations (more than 25 years) conducted by the author. Basic literature: D' Abrera, 1994; Tuzov et al., 2000.

Family **Lycaenidae** Leach
Subfamily **Theclinae** Swainson
Tribe **Theclini** Swainson

Genus *Thecla* Fabricius, 1807

Palearctic genus (3 species); in Kazakhstan 1.

Th. betulae Linnaeus, 1758. - Syst. Nat. (ed. 10), 1: 482.

Type locality: Sweden.

Distribution. Europe, N. Caucasus Major, E. Tien Shan, Siberia, N. Mongolia, Amur and Primorski Territories, Korea, E. China. Kazakhstan: valley of the Ural River, Saur, Tarbagatai, Dzhungarsky Alatau

Habitat and biology. Different types of forest. Flight period: late July to September.

Host plants: *Padus*, *Armeniaca* (Danchenko et al., 1995), *Crataegus* (Zhdanko, 1997).

Genus *Neozephyrus* Sibatani et Ito, 1942

Palearctic and Neotropical genus, word fauna consists of 41 species; in Kazakhstan 1.

N. quercus (Linnaeus, 1758). - Syst. Nat. (ed.10), 1: 482.

Type locality: [England, Europe].

Distribution. Europe, N. Asia Minor, Caucasus and Transcaucasia. Kazakhstan: valley of the Ural River.

Habitat and biology. Different types of forest. Flight period: late June to September.

Host plants: *Quercus* spp. (Higgins, Rilay, 1970).

Tribe Aphnaeini Distant

Genus *Cigaritis* Donzel, 1847 (= *Zerithis*, Lucas, 1849)

Palearctic Region: 8 species; in Kazakhstan 1.

C. epargyros (Eversmann, 1854). - Bull. Soc. Imp. Natural. Moscou, 27(2): 178, pl. 1, f. 1, 2.

Type locality: "... die südlichen Kirgisensteppen, nördlich vom Aral-See und am Syr-Darja". [Aktjubinsk Reg., Kazakhstan].

Distribution. From Asia Minor to W. China, S. Mongolia, Iran, Afghanistan. All deserts of Kazakhstan.

Habitat and biology. Deserts, banks of canals, village vicinities with *Alhagi*. Flight period: from the end of May to September, in a few broods. Larval food plant: *Alhagi* sp. (Shchetkin, 1960; Falkovich, 1986; Zhdanko, 1997).

Genus *Tomares* Rambur, 1840

Palearctic Region: 10 species; in Kazakhstan 2.

T. callimachus (Eversmann, 1848). - Bull. Soc. Imp. Natural. Moscou, 21: 208.

Type locality: "Georgia, Gelenendorf" [Azerbaijan, Khanlar], by the lectotype designated by Nekrutenko (1977).

Synonyms: *epiphania* (Boisduval, 1848); *hafis* (Kollar, 1848); *tauricus* Yakovlev et Korb, 1998.

Distribution. From SE. Russia and Kazakhstan to Asia Minor and Iran. Occurs in the S. European part, Caucasus and Transcaucasia, Turan, Kopet-Dagh, W. and N. Tien Shan.

Habitat and biology. Dry stony, steppized or desertified hills and low mountains (up to 1.400 m a.s.l.). Flight period: from the end of March to the end of May. Larval food plant in Europe: *Astragalus* spp.; in the Zailiisky Alatau meeting Range: *A. macropterus* (Zhdanko, 1997).

Tomares fedtchenkoi (Erschoff, 1874). - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera): 8, pl. 1, fig. 6.

Type locality: "...окр-ти Самарканда, Джизманское ущ.". [Uzbekistan, Samarkand vicinity; Zeravshansky meeting Range., Dzhizmansky Gorge].

Distribution. S. Turkmenistan (Badkhyz), Ghissar-Darvaz, Pamirs-Alai, W. and N. Tien Shan (including Almaty Reg.), N. Afghanistan, N. Pakistan. Besides the nominotypical subspecies, ssp. *alpina* (Grum-Grzhimailo, 1890) is known in Ghissaro-Darvaz, S. Ghissar (Kughitang).

Habitat and biology. Grassy sites in valleys, foothills and mountains (800-2,600 m a.s.l.). Flight period: from mid April to mid May. Larval food plant: *Astragalus* sp. Pupa overwinters.

Genus *Ahlbergia* Bryk, 1946

Palearctic genus (19 species, Johnson, 1992); in Kazakhstan 1.

Ah. frivaldszkyi (Lederer, 1855). - Verh. Zool.-bot. Ges. Wien, 5:100, taf. 1, Abb. 1.

Type locality: "Berge in der Nahe von Ust-Buchtarminsk" [Ust-Bukhtarminsk, W. Altai, Kazakhstan].

Distribution. From the Altai to the Primorski Territory, Mongolia, N. China. Kazakhstan: W. and S. Altai.

Habitat and biology. Larval food plant in the Sayan Mts. (Korshunov, 1969): *Spiraea hypericifolia*.

Genus *Callophrys* Billberg, 1820

Nearctic Region: 21 species (Scott, 1986); Palearctic Region: 11; in Kazakhstan 3.

C. rubi (Linnaeus, 1758). - Syst. Nat. (ed.10), 1: 483.

Type locality: "Sweden".

Distribution. Temperate zone of Europe and Asia (except deserts). Nominotypical subspecies occurs in the W. part of its range, from Europe to the Urals;

ssp. *borealis* Krulikovsky, 1890 (= *polaris* Krulikovsky, 1893) occurs in the Urals Reg.;

ssp. *sibirica* [Heyne], [1895] (= *sachalinensis* Matsumura, 1929) ranges from Tien Shan and Altai through Siberia and Transbaikalia to Far East (Amur Reg.; Primorski Territory, Sakhalin).

Habitat and biology. Marshes as well as light sandy heaths where broom grows, forests and dry areas with brush growth, gravel pits and along the edges of small roads. In mountains inhabits bushy sites up to 2,000 m a.s.l. Flight period: from mid April to mid June in a single brood; local second brood has been reported from N. Africa. Larval food plant in the North: *Vaccinium* (Ericaceae), *Rubus*; in the forest zone and south taiga: *Frangula*, *Rhamnus*, *Ribes*, *Spiraea* (Rosaceae); in the steppe zone: *Caragana*, *Chamaecytisus*, *Hedysarum*, *Genista*, *Trifolium* (Fabaceae) (Korshunov & Gorbunov, 1995); in the Tien Shan: *Hippophae rhamnoides* (Elaeagnaceae).

C. suaveola (Staudinger, 1881). - Stett. ent. Ztg., 42: 279.

Type locality: "Lepsa". [SE. Kazakhstan, Dzhungarsky Alatau, Lepsy River valley].

Distribution. Dzhungarsky Alatau, Tarbagatai and Saur Mts., W. and S. Altai.

Habitat and biology. Steppe slopes with bushes in the foothills of low and middle mountains (1,000-2,000 m a.s.l.). Flight period: from the end of May to mid July. Larval food plant: *Ferula* sp.

C. titanus Zhdanko, 1998. - Вестн. Казах. Ун-та [Vestnik Kaz. Univ.], 6: 46.

Type locality: "175 км зап. Алма-Аты, хр. Жетыжол". [175 km W. of Almaty, Zhetyzhol (= Atzhailau) Mts., Kazakhstan].

Distribution. N. and W. Tien Shan, Pamirs-Alai.

Habitat and biology. Mainly shingly-stony sites with *Ferula* sp. and *Rheum maximowiczii* in mountains (1,200-3,000 m a.s.l.). Flight period: May-June. Larval food plant is *Rheum maximowiczii*. The host ants (*Lasius* sp.) carry off the eggs and first instar larvae in the anthill for hibernation (Zhdanko, 1998). After hibernation the larvae feed on the flowers and seeds.

Genus *Superflua* Strand, 1910

Palearctic genus (4 species); in Kazakhstan 2.

S. sassanides (Kollar, [1849]). - Denkschr. K. Acad. Wiss. Wien, 1: 51.

Type locality: "Persia".

Distribution. From N. Iran over Middle Asia to W. Tien Shan, NW Himalayas and C. Tibet. Kazakhstan: Aksu-Dzhabagly Reserve. The Kopet-Dagh is populated by the nominotypical subspecies; the other territories are inhabited by the ssp. *mirabilis* (Erschoff, 1874), originally described from the Zeravshansky Mt. Range.; ssp. *deria* (Moore, 1865) occurs in Kashmir.

Habitat and biology. Dry bushy steppes or desertified slopes of mountains (500-2,600 m a.s.l.). Flight period: from May to July. Larval food plants: *Amygdalus bucharica*, *A. spinosissima*, *Cerasus verrucosa*, *Rosa* sp. (Shchetkin, 1960; Zhdanko, 1997).

S. lunulata (Erschoff, 1874), - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera): 7, pl. 1, fig. 5.

Type locality: "... между с. Иори и Дашты-Казы в Зеравшанской долине" . [...between Iori and Dashty-Kazy villages in the Zeravshan Valley, Uzbekistan].

Distribution. S. Ghissar, Ghissar, Darvaz, W. Pamirs.

Habitat and biology. Dry steppes of desertified foothills and bushy slopes of the low mountains (1,000-2,000 m a.s.l.) with *Rosa*, *Spiraea*, *Caragana*. Flight period: from May to July. Host plant: probably *Cerasus* sp. Probably, it inhabits West Tien Shan.

S. acaudata (Staudinger, 1901). - Cat. Lep. palaeart. Faunengeb.: 70.

Type locality: "Ferg.[hana]". By the lectotype (Lukhtanov, 1995): "Margelan", [Uzbekistan, Ferghana Valley].

Distribution. N., W. and Inner Tien Shan, Darvaz, N. Alai, Ferghansky Mt. Range.

Habitat and biology. Dry steppes of desertified foothills and bushy slopes of low mountains (1,000-3,200 m a.s.l.) with *Rosa*, *Spiraea*, *Caragana*, *Atraphaxis*. Flight period: in May and June. Host plant: *Cerasus* sp.

Genus *Nordmannia* Tutt, 1907

Palearctic genus (32 species); in Kazakhstan 6.

N. pruni (Linnaeus, 1758). - Syst. Nat. (ed.10), 1: 482.

Synonym: *prorsa* (Hüfnagel, 1766).

Type locality: "Deutschland".

Distribution. Temperate zone from Atlantic to Pacific. European part, Caucasus and Transcaucasia, Siberia (except far north), Transbaikalia, Amur Reg. and Primorski Territory are inhabited by the nominotypical subspecies with gradual cline. Kazakhstan: Ural River valley.

Habitat and biology. Lowlands and mountain forests, gardens and parks. Flight period: June-July. Larval host plants: *Padus asiatica*, *Prunus spinosa*, *Rubus*, *Rhamnus* and other species of Rosaceae (Korshunov, 1985; Kurentzov, 1970); *Berberis* (Berberidaceae), *Corylus* and *Betula* (Betulaceae) (Fronnet, 1906).

N. spini (Fabricius, 1787). - Mant. Ins., 2:68, Nr. 651

Type locality: "Germania".

Synonyms: *spini* ([Denis et Schiffermuller], 1775), nomen nudum; *lynceus* (Esper, [1779]), nom. praeoccup.; *cerasi* (Herbst, 1804), nom. praeoccup.; *anatolicus* (de Lattin, 1950).

Distribution. From C. Europe through Asia Minor, Caucasus and Transcaucasia, Iraq and Iran to Kopet-Dagh and S. Urals. S. and C. European part is populated by the nominotypical subspecies; Caucasus Minor and Major, Armenian Highland, Talysh, Kopet-Dagh: ssp. *melantho* (Klug, 1834). Kazakhstan: Ural River valley.

Habitat and biology. Bushy sites in lowlands and gardens. Flight period: June-July. Larva lives on *Crataegus*, *Rosa*, *Pyrus* (Fronnet, 1906), *Prunus spinosa*, *Rhamnus*, *Quercus* (Kurentzov, 1970).

N. acaciae (Fabricius, 1787). - Mantissa Ins., 2: 69.

Synonym: *guichardi* Higgins, 1965.

Type locality: "South Rossia".

Distribution. S. Europe, Asia Minor. S. European part and Transcaucasia are populated by the nominotypical subspecies. Kazakhstan: Ural River valley.

Habitat and biology. Bush sites up to 1,500 m a.s.l. Flight period: June-July. Larval food plants: *Quercus* (Fronnet, 1906); *Prunus spinosa* (Korshunov & Gorbunov, 1995).

N. prunoides (Staudinger, 1887). - Romanoff, Mém. Lép., 3: 129, pl. 6, figs. 1a, b.

Type locality: "Vladivostok", [Primorski Territory, Russia].

Synonym: *fulva* (Fixsen, 1887).

Distribution. S. Siberia, Transbaikalia, Amur Reg. and Primorski Territory, Mongolia, NE China, Korea. Kazakhstan: Altai area.

Habitat and biology. Occurs along rivers and streams up to 1,500 m a.s.l. Flight period: June-August. Host plants: in the Altai *Spiraea media* (Dubatolov, pers. comment.); in the Amur Reg. *Padus maakii*, *Rhamnus dahurica* (Kurentzov, 1970).

N. ilicis (Esper, [1779]). - Schmett. Abb. Nat., 1(1): 353.

Synonyms: *lynceus* (Fabricius, 1787), nom. praeoccup.; *caudatula* (Zeller, 1847); *bischoffii* (Gerhard, 1850); *cilicica* (Holtz, 1897); *syra* (Pfeiffer, 1932); *pinoptas* (Zerny, 1932).

Type locality: "Erlangen" [Germany].

Distribution. C. and S. Europe, Asia Minor, Caucasus and Transcaucasia. Over the entire range the slight variability takes place, so that populations from European part, W. Siberia, Caucasus and Transcaucasia may be considered the nominotypical subspecies. Kazakhstan: NW area.

Habitat and biology. Usually occurs along rivers, on the rocky and bushy slopes. Flight period: June-July. Larval food plants: *Quercus* spp. (Fiori, 1957); *Robinia*, *Aesculus*, *Ulmus* (Frionnet, 1906); *Populus* (Bergmann, 1952); *Rhamnus cathartica*, *Prunus*, *Padus* (Korshunov & Gorbunov, 1995).

N. w-album (Knoh, 1782). - Beitr. Insektengesch., 2: 85, pl. 6, figs. 1, 2.

Synonyms: *cerasi* (Fabricius, 1787) *butlerovi* (Krulikovsky, 1890); *majuskula* (Jachontov, 1911).

Type locality: "Leipzig" [Germany].

Distribution. Temperate zone from Atlantic to Pacific.

The distribution of subspecies is the following.

nominotypical subspecies: European part of Russia, Caucasus and Transcaucasia, Siberia, Transbaikalia, Far East. Kazakhstan: NW area.

spp. *sutschani* (Tutt, 1896): C. Amur Reg., Primorski Territory;

spp. *fentoni* (Butler, 1881): Sakhalin and Kunashir Islands.;

Habitat and biology. Deciduous forests and forest glades. Flight period: June to mid August. Larval food plants in Uralsk Reg. are *Prunus* and *Ulmus* (Kuznetsov, Martynova, 1954); in the Amur Reg. *Rhamnus dahurica* (Kurentzov, 1970); in Europe *Rhamnus cathartica* (Gillmer, 1906), *Quercus*, *Alnus*, *Crataegus*, *Rosa* (Frionnet, 1906).

Genus *Neolycaena* de Niceville, 1890

Central Asian genus (7 species); in Kazakhstan 2.

N. sinensis (Alpheraky, 1881). - Horae Soc. ent. Ross., 16: 383, pl. 14, fig. 7.

Type locality: "Kuldja", [W. China].

Synonym: *yilliensis* Murayama, 1992.

Distribution. Dzhungarsky Alatau, N. Tien Shan (E. part), W. China.

Habitat and biology. Dry bushy mountain slopes (800-1,500 m a.s.l.). Flight period: from the end of May to mid July. Larval food plant: *Caragana balchashensis* (Zhdanko, 1997).

N. medea Zhdanko, 1998. - Зоол. журн. [Zool. Journ.], 77(2):196, figs. 1 (1, 6), 2 (2).

Type locality: "Терскей Алатао, ущелье реки Тамги". [Kadjisai, Tamga River, central part of the Terskey Alatau Mt. Range, Kyrgyzstan].

Distribution. Inner Tien Shan.

Habitat and biology. Dry bushy mountain slopes (1,700-2,600 m a.s.l.). Flight period: from the end of May to mid July. Larval food plant: *Caragana* sp.

Genus *Rhymnaria* Zhdanko, 1993

Palearctic genus (14 species); in Kazakhstan 6.

Rh. rhymnus (Eversmann, 1832). - Mém. Soc. Imp. Natural. Moscou, 2: 350, pl. 19, figs. 1, 2.

Type locality: "Sergievsk". [Samara Reg., about 140 km N. of Samara, Russia].

Distribution. S. European part, W., C. and E. Kazakhstan, Altai, Sayan. The most part of the range is inhabited by the nominotypical subspecies;

spp. *betpakdalensis* (Zhdanko, 1998) is described from Betpakdala Desert (S. Kazakhstan);

spp. *rufina* (Lukhtanov, 1994) occurs in Dzhungarsky Alatau (Katutau Mts.).

Habitat and biology. Bushes in steppes and mountains up to 1,400 m a.s.l. Flight period: from mid May to the end of July. Larval food plant: *Caragana frutex* (Zhdanko, 1997).

Rh. kazakhstana (Lukhtanov, 1990). - Vestn. Zool., 6:19, f.7,1.

Type locality: Mangystau Mts., W. Kazakhstan.

Distribution. W. Kazakhstan. Ssp. *karaliusi* Zhdanko et Churkin, 2000 is described from the Ustyurt Plateau (W. part). Larval food plant: *Caragana* sp.

Rh. submontana (Zhdanko, 1994). - Selevinia, 1:74.

Type locality: "Заилийский Алатау, 40 км зап. Алма-Аты". [40 km W. of Almaty, SE Zailiysky Alatau, Kazakhstan].

Distribution. Ghissar-Darvaz, Pamirs-Alai, N. Tien Shan, Tarbagatai and Saur Mts. The distribution of subspecies is the following:

ssp. *submontana* (Zhdanko, 1994): W. and N. Tien Shan, Turkestansky Mt. Range, Ghissar-Darvaz, Pamirs-Alai;

ssp. *oschi* (Zhdanko, 1998): E. Alai;

ssp. *saurica* (Zhdanko, 1998): Saur and Tarbagatai Mts.

Habitat and biology. Usually occurs in the mid mountain level up to 1,000 - 1,800 m a.s.l. (in Pamirs up to 3,000 m a.s.l.) on the clay or stony bushy slopes. Flight period: from the beginning of June to July. Larval food plants: *Astragalus arbuscula* and *Caragana* sp. (Zhdanko, 1997).

Rh. tengstroemi (Erschoff, 1874). - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera): 11, pl. 1, fig. 8.

Type locality: "... в песках Кызылкум... близ Байракума". [E. Kyzylkum Desert near Bairkum Vill., S. Kazakhstan Reg.].

Distribution. Turan. The distribution of subspecies is the following:

ssp. *balchaschensis* (Zhdanko, 1998): Saryesyk-Otyrau Desert;

the nominotypical subspecies inhabits the remaining territory.

Habitat and biology. Bushy sites in sandy deserts. Flight period: from the end of April to the end of May. Larval food plants: *Astragalus pajuciugus*, *A. villosissimus* (Zhdanko, 1997).

Rh. iliensis (Grum-Grshimailo, 1891). - Horae Soc. ent. Ross., 25: 452.

Type locality: "Suidun (Kuldja)". [W. China, Ili River valley between Khorgos and Kuldja].

Distribution. Ili River valley (from Kuldja to Kapchagai gorge).

Habitat and biology. Bushes in the semidesert sites. Flight period: mid May to mid June. Larval food plant: probably *Astragalus*.

Rh. eckweileri (Lukhtanov, 1993). - Atalanta, 24: 65.

Type locality: "Kazakhstan, Dzhungarsky Alatau Mt. Range, Dzhalanashkol Lake, 175 km E. of Sarkand".

Distribution. Dzhungarsky Alatau, N. Tien Shan. nominotypical subspecies inhabits the Dzhungarsky Alatau Mt. Range and Tarbagatai Mts.;

ssp. *transiliensis* Lukhtanov, 1993 occurs in N. Tien Shan.

Habitat and biology. Locally in the mountain meadows (1,200-1,800 m a.s.l.). Flight period: mid June to mid July. Larval food plants in Zailiysky Alatau meeting Range: *Caragana aurantiaca* (Zhdanko, 1997) or *Onobrychis* sp.

Subfamily Lycaeninae

Genus *Lycaena* Fabricius 1807

Holarctic genus (3 species); in Kazakhstan 2.

Lycaena helle Dennis & Schiffermuller 1775. - Syst. Werke. Schmett. Wien:181

Synonym: (= *amphidamas* Esp.)

Type locality: "Umgebung von Wien" [Vienna, Austria].

Distribution. From N. and C. Europe through Siberia to Primorski Territory, Altai, Dzhungarsky Alatau, Mongolia, China. The nominotypical subspecies inhabit the European part of the distribution range, including Caucasus Major;

ssp. *phintonis* (Fruhstorfer, 1910) inhabits the Asian part of range.

Habitat and biology. Wet forest meadows and bogs, mountain meadows up to 2,000 m. Host plants: in the European part and Siberia *Bistorta major*, *Persicaria amphibia*, *Rumex aquaticus*, *R. acetosa* (Korshunov, Gorbunov, 1995); in Dzhungarsky Alatau *Bistorta elliptica* (Zhdanko, 1997).

L. phlaeas Linnaeus 1761. - Fauna Svecica, (ed 2):285.

Type locality: "...in pratis Westmanniae" [Västmanland, C. Sweden].

Distribution. The entire Palaearctic region except the Far North.

Habitat and biology. Ecologically plastic species occurring in different landscapes, though preferring open biotopes, in the mountains up to 4,500 m. Host plants: *Rumex*, *Polygonum*, etc. (Korshunov, 1995); in Zailiisky Alatau *Rumex acetosa* (Zhdanko, 1997).

Genus *Heodes* Dalman, 1816

Palaeartic genus (4 species); in Kazakhstan 3.

H. virgaurea (Linnaeus 1758). - Syst. Nat. (ed 10), 1:484.

Type locality: "Schweden, Västmanland".

Distribution. Temperate belt of the entire Palaeartic Region:

nominotypical subspecies populates the European part, the Caucasus Major and Minor, W. Siberia, N Kazakhstan: Kokshetau Region, the Tarbagatai Mts. and the Altai.

ssp. *virgaureola* (Staudinger, 1892) (= *steni* Bryk, 1946; = *mongolica* (Kurentzov, 1970) occurs in the Sayan, Transbaikalia, the Amur and Primorski Territorys;

ssp. *lena* (Kurentzov, 1970) inhabits the C. Urals, C. Siberia and Far East;

ssp. *armeniaca* (O. Bang-Haas, 1906) has been described from Armenian Highland.

Habitat and biology. Inhabits in meadows, forest-steppe and other open landscapes. Host plants:

Rumex ssp.

H. tityrus (Poda 1761). - Ins. Mus. Graec.: 77.

Type locality: Vicinity of Graz, Austria.

Distribution. From Europe over the Caucasus and Transcaucasia to W. Siberia, Tarbagatai, Altai; Turkey, Iran, Afghanistan. N Kazakhstan.

Habitat and biology. Prefers warm sandy biotopes with rank vegetation, meadows, in the mountains up to 2,200 m. Host plants: *Rumex*, *Sarothamnus* (Higgins, Rilay, 1970).

H. hippothoe (Linnaeus 1758). - Fauna Swec. (ed.2): 274.

Type locality: Sweden.

Distribution. Temperate belt of the entire Palaeartic Region:

ssp. *hypotoe* occurs in the European part, W. Siberia, Dzhungarsky Alatau, Tarbagatai Mts.;

ssp. *siberi* (Gerhard, 1850) in N. Urals;

ssp. *eurybia* (Ochsenheimer, 1808) in the Altai, Sayan, Far East;

ssp. *amerensis* (Staudinger, 1892) in Transbaikalia, Amur Region and Primorski Territory.

Habitat and biology. Common in the wet meadows, sometimes in bogs, both lowland and mountains up to 1000 m, in the W. Sayan up to 2,800 m, in S. Siberia in steppe habitats. Host plants: *Rumex*, *Polygonum* (Ebert, 1991).

Genus *Phoenicurusia* Verity, 1943

Asian genus (2 species); in Kazakhstan 1.

Ph. margelanica (Staudinger, 1881). - Stett. ent. Ztg., 42: 282.

Type locality: "Margelan". [N. slope of Alaisky Mt. Range, Kyrgyzstan].

Distribution. From S. Tajikistan to N. Tien Shan.

Species has a large variability.

Nominotypical subspecies occurs in the C. part of range (Ghissar, Darvaz, Alai, W. Tien Shan);

ssp. *legezini* Zhdanko, 2000 in the S. part of range (S. Ghissar: Babatag, Karatau, Teriklitau and Rangontau Mts);

ssp. *nigra* Zhdanko, 2000. inhabits N. part of range (mountains around Issyk-Kul Lake).

Habitat and biology. Bushy sites on the dry stony semidesert slopes of low and middle mountains (1,000-2,500 m a.s.l.). Flight period: June-July. Larval host plants are *Atraphaxis frutescens*, *A. pyrifolia* (Zhdanko, 1997).

Genus *Thersamonolycaena* Verity, 1957

Palaeartic genus (11 species); in Kazakhstan 4.

Th. dispar ([Haworth], 1802). - *Prodromus* Lepid. Drit.:3, N 44 et nota.

Type locality: "Anglia, ...Cambridgeshire and Huntingdonshire".

Distribution. Temperate belt of the entire Palaeartic Region: once nominotypical subspecies inhabited England but disappeared there about a hundred years ago.

ssp. *rutila* (Werneburg, 1864) inhabits the European part of Russia, the Caucasus and Transcaucasia, the N and W Tien Shan, Dzhungarsky Alatau, Ghissar;

ssp. *festiva* (Krulikovsky, 1909) occurs in W. Siberia;

ssp. *dahurica* (Craeser, 1888) in Transbaikalia and W. Amur Region;
 ssp. *aurata* (Leech, 1887) (= *borodovsky* Grum-Grzhimailo, 1900);
 ssp. *parvus* Kurentzov, 1941) in C. Siberia, E. Amur and Primorski Territorys.

Habitat and biology. Meadows. Flight period: June to August. Host plants: *Rumex* ssp. Two generation in S. Kazakhstan.

Th. violacea (Staudinger, 1892). - D. ent. Z. Iris, 5:315.

Type locality: "Kentei" [Kudara-Somon, Malakhansky Mts., Republic of Buryatia, Russia (Korshunov, Gorbunov, 1995)].

Distribution. S. Siberia to Transbaikalia, Mongolia.

Habitat and biology. Steppe site in lowlands or at hills up to 1700 m. Host plants: *Rheum rabarbarum* (Korshunov, Gorbunov, 1995).

Th. splendens (Staudinger, 1881). - Stett. ent. Ztg., 42:280.

Type locality "Lepsa" [Dzhungarsky Alatau, probably Lepsy River Valley].

Distribution. Dzhungarsky Alatau, Tien Shan.

Habitat and biology. Inhabits in wet mountain meadows at about 1,400-3000 m. Flight period: June to August. Host plant in Zailiisky Alatau: *Polygonum alpinum* (Zhdanko, 1997).

Th. alciphron (Rottenburg, 1775). - Anmerk. Tab. Schmett., Naturforscher, 6:11.

Type locality: Vicinity of Berlin, Germany.

Distribution. Temperate belt of the entire Palaearctic Region.

ssp. *alciphron* (Rottenburg, 1775) occurs in the European part, W. Siberia, Altai, Sayan;

ssp. *chairemon* (Fruhsorfer, 1917); inhabits Carpathians;

ssp. *melibea* (Staudinger, 1878) in the Caucasus and Transcaucasia;

ssp. *naryna* (Oberthur, 1910) in N. and Inner Tien Shan, Dzhungarsky Alatau;

ssp. *rubida* Korshunov, 1995 in Transbaikalia.

Habitat and biology. Wet meadows, bottomland, in the mountains up to 2,000 m. Flight period: June to August. Host plant is *Rumex* spp.; in Zailiisky Alatau *Rumex acetosa*. (Zhdanko, 1997).

Genus *Thersamonia* Verity, 1919

Palaearctic genus (11 species); in Kazakhstan 2.

Th. thersamon (Esper, [1784]). - Schmett. Abb. Nat., 1(2): 176. Taf. 89, fig. 6.

Type locality: "Sarepta, Südrussland". [Sarepta (Krasnoarmeisk), Volgograd Reg., Russia].

Synonyms: *hyllus* (Cramer, [1775]); *omphale* (Klug, 1834); *hylla* Kocak, 1983.

Distribution. From S. Europe over Asia Minor and Middle Asia (except highlands of Tien Shan and E. Pamirs), Kazakhstan to Altai and W. China:

nominotypical subspecies occupies the remaining part of the range.

ssp. *persica* (Bienert, 1870) inhabits Kopet-Dagh and Ghissar;

Habitat and biology. Inhabits semiarid and mesophilous sites, cultural landscapes. In the mountains usually occurs up to 2,000 but in Ghissar occupies the level 2,900 in 3,400 m a.s.l. In the south part of the range the flight period from April to October in 3-4 broods. In the temperate zone usually in two broods (April-June and July-August). In the mountains above 2,000 m only one brood. Larval food plants in Europe: *Rumex*, *Polygonum aviculare* (Falkovitch, 1969), *Polygonum bistorta* (Zhdanko, 1997); in the semidesert biotops: *Atraphaxis laetevirens* (Zhdanko, 1997); on the SE Russia: *Limonium gmelini* (Dantchenko, pers. comm.). Such food plant as *Sarothamnus scoparius*, *Cytisus scoparius*, *Caragana frutex* (Higgins, Riley, 1970; Korshunov, 1985) are unlikely as all the Lycaeninae live on Polygonaceae. Eggs and larvae overwinter.

Th. solskyi (Erschoff, 1874). - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera): 8, tab. 1, fig. 7.

Type locality: "Maracanda". [The mountains southeast words of from Samarkand (Uzbekistan)].

Distribution. Tien Shan, Pamirs-Alai, Ghissar-Darvaz:

nominotypical subspecies inhabits Ghissarsky, Turkestansky and Zeravshansky Mts. Range;

ssp. *fulminans* Grum-Grzhimailo, 1888 described from Transalai Mt. Range occurs in Tien Shan, Alai and Darvaz. Sary-Dzhaz Mts. probably inhabits separate subspecies.

Habitat and biology. Prefers arid rocky biotops at 2,000-3,000 m a.s.l. with scanty vegetation. Flight period: June-August. Larval food plant in Talassky Alatau: *Acantholimon laxum* (Zhdanko, 1997).

Genus *Athamanthia* Zhdanko, 1983

Asian genus (14 species); in Kazakhstan 6.

A. athamantis (Eversmann, 1854). - Bull. Soc. Imp. Natural. Moscou., 27(3): 180, Taf. 1, figs. 3, 4.

Type locality: "... die südlichen Kirgisensteppen, nördlich vom AralinSee und am SirinDarja". [Kazakhstan, Aktyubinsk Reg.].

Synonyms: *iliensis* (Staudinger, 1886).

Distribution. N Turan (including Zaisan Reg.), Dzhungarskiy Alatau Mts., Boguty Mts.

Habitat and biology. Usually occurs in sandy deserts, and locally in dry stony semi-deserts up to 1,000 m a.s.l. Flight period: May-June. Larval food plant: *Atraphaxis spinosa* (Zhdanko, 1997).

A. alexandra (Pungeler, 1901). - D. ent. Z. Iris, 14: 179, tab. 2, fig. 6, 6a, b.

Type locality: "... Alexandergebirge". [E. part of Kirgizsky Mt. Range, Kyrgyzstan].

Distribution. N. Tien Shan, Dzhungarsky Alatau (Malaisary and Ili River Valley, Sholak, Katutau, Ortatau Mts.). Besides the nominotypical subspecies, a very small sized ssp. *darja* Zhdanko, 1990 was described in the Syr-Darya River Valley.

Ssp. *zhanibeki* Zhdanko, 2000 (Dzhungarsky Alatau and Ili River Valley).

Habitat and biology. Bushy sites in desertified or steppe foothills up to 1,400 m a.s.l., occasionally in stony or sandy deserts. Flight period: June-July. Larval food plants: *Atraphaxis spinosa*, *A. laetevirens* (Zhdanko, 1997).

A. dimorpha (Staudinger, 1881). - Stett. ent. Ztg., 42: 282.

Type locality: "Lepsa". [Dzhungarsky Alatau Mt. Range, Lepsy River Valley near Cherkasskoe].

Distribution. nominotypical subspecies: SW Mongolia, S Altai, Saur and Tarbagatai Mts., Dzhungarsky Tien Shan, E. Balhash Reg., N. Tien Shan (eastern part);

ssp. *bogutena* Zhdanko, 1990 is known only from the type locality (Boguty Mts.).

Habitat and biology. Dry bushy sites in low mountains (500-1,400 m a.s.l.). Flight period: from the end of May to June. Larval food plant: *Atraphaxis laetevirens* (Zhdanko, 1997).

A. turgena Zhdanko, 1990. - Энтомол. обзор. [Revue d'Entom.], 69(1):140.

Type locality: "хр. Заилийский Алатау, 85 км вост. Алма-Аты, Тургенское ущ." [SE. Kazakhstan, Zailiisky Alatau, 85 km E. of Almaty, Turgen Gorge].

Distribution. Center part of Zailiyskiy Alatau Mts. Rdg..

Habitat and biology. Bushes sites on dry mountain slopes at 1,500-2,000 m a.s.l. Flight period: July. Larval food plants are probably *Atraphaxis laetevirens*, *A. mushketovi*.

A. japhetica (Nekrutenko et Effendi, 1983). - Вестн. зоол. [Vestnik zool.], 4:12, fig. 3, 4.

Type locality: "Азербайджан, Апшеронский п-остров, дол. р. Дизаварчай". [Dizavarchai River Valley, Apsheron Peninsula, Azerbaijan].

Distribution. West coast of Caspian Sea, C. Kazakhstan, N. Balkhash Reg. ;

nominotypical subspecies is known only from the type locality;

ssp. *irghiza* Nekrutenko, 1985 inhabits semideserts of C. and N. Kazakhstan.

Taxonomic note: subspecies *irghiza* is known by 2♂ and 3♀. Holotype (male) and paratype (female) figured in original description belong to different taxa: holotype (fig. 2, 1a, 1б) is ssp. *irghiza*, but the paratype (fig. 2, 2a, 2б) is *Athamanthia athamantis*. This female paratype is deposited in the V.S. Murzin's collection; localization of another paratypes is unknown for us.

Habitat and biology. Dry steppe bushy hills. Flight period: mid May to July. Larval food plant: *Atraphaxis spinosa* (Zhdanko, 1997).

A. infera (Nekrutenko, 1984). - Вестн. зоол. [Vestnik zool.], 6: 47.

Type locality: "Хребет Каржантау, ур. Хумсан, Ташкентская обл.". [Khumsan, Karzhantau Mts., Uzbekistan].

Distribution. W. Tien Shan. Nominotypical subspecies: Karzhantau Mts.; Ssp. *funeraria* (Nekrutenko, 1984): Chatkal Mts. in Uzbekistan.

Habitat and biology. Dry and stony habitats with steppe vegetation. Flight period: mid June to the beginning of July. Larval food plant: *Atraphaxis pyrifolia*.

Subfamily Polyommatae

Tribe Everini

Genus *Cupido* Schrank, 1801

Palearctic genus (8 species); in Kazakhstan 5.

C. buddhista (Alpheraky, 1881). - Horae Soc. ent. Ross., 16: 393, t. 14, f. 9, 10.

Type locality: "Kuldja Mts.", [W. China]

Distribution. Tien Shan, Ghissar-Darvaz, Alai, NWChina (it is very variable species especially in size); nominotypical subspecies inhabits the remaining part of the range.

ssp. *garmicus* J.J. Shchetkin, 1986 inhabits the Peter I Mts. Range;

Habitat and biology. Alpical meadows at 2,300-3,400 m a.s.l. Flight period: June-September in a single brood. Larva lives in the flowers of *Oxytropis* spp. (Zhdanko, 1997).

C. minimus (Fuessly, 1775). - Verz. bekannt. Schweiz. Ins.: 31.

Type locality: "Schwitzerland".

Synonyms: *alsus* (Denis et Schiffermuller, 1775); *minimus* (Esper, [1778]); *magna* ([Heyne], [1895]), *magnus* Sugitanii, 1938.

Distribution. Temperate zone of Palearctic Region. European part, Siberia, Transbaikalia, Far East, Amur Reg. and Primorski Territory, Caucasus and Transcaucasia, N. and Dzhungarsky Alatau. Individual variability is moderate, and the entire range is inhabited by nominotypical subspecies.

Habitat and biology. In the most part of its range it occurs in steppe sites, often on the sandy or stony hills, in Siberia in the meadows (Korshunov, 1985). In the Alps, Altai, Magadan Reg., Kamchatka and Primorski Territorys are common in the alpine tundras. Flight period: May-August in 1-2 broods. Larval food plants: *Melilotus*, *Coronilla*, *Anthyllis vulneraria*, *Sangusorba* sp, *Astragalus cicer Lathyrus*, *Onobrychis*, *Trifolium*, *Vicia* (Malicky, 1969). Larva feeds on flowers and seeds.

C. tuzovi Zhdanko, 1994 (April). - Selevinia, 1: 73.

Type locality: "Восточный Казахстан, 35 км юго-вост. пос. Кендерлык, ур. Айна-Булак". [E. Kazakhstan, 35 km SE. Kenderlyk, Aina-Bulak locality].

Synonym: *tuzovi* Lukhtanov, 1994 (July), nom. preoccup.

Distribution. Saur, Tarbagatai, ?S. Altai.

Habitat and biology. Steppe slopes and dry meadows up to 800-1,200 m a.s.l. Flight period: June-July.

C. proscusa (Erschoff, 1874). - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera): 13, pl. 1, fig. 9.

Type locality: "...в окрестностях города Туркестана". [Vicinity of Turkestan, Chimkent Reg., Kazakhstan].

Distribution. Turan., W. China (locally).

Habitat and biology. Exclusively in the arid zone, prefers the site with shallow bedding of underground water, i.e. riparian woodland, marshes, depressions in the deserts. Occurs locally in the low mountain zone up to 1,700 m a. s. l. Flight period: April-August in two broods. Larval food plants: *Sphaerophysa salsula* and *Halimodendron halodendron* (Fabaceae) (Zhdanko, 1997). Eggs layings are found in the flowers or on the underside leaves. Pupa overwinters.

Genus *Everes* Hubner, 1819

Holarctic genus. Nearctic Region 2 species; Palearctic Region 4; in Kazakhstan 3.

E. argiades (Pallas, 1771). - Reise Prov. Russ. Reichs., 1: 472.

Type locality: "Поволжье". [Samara Region, Russia].

Synonym: *amyntas* ([Denis et Schiffermuller], [1775]).

Distribution. Temperate zone of Palearctic Region:

nominotypical subspecies inhabits the most part of range (European part of Russia, Caucasus and Transcaucasia, Tien Shan, Altai, Sayan, Siberia, Far East);

ssp. *seitzi* (Wnukowsky, 1928) in the Primorski Territory;

ssp. *amurensis* ([Heyne], [1895]) in Amur Reg.

Habitat and biology. Inhabits different types of wet meadows. Flies in May-June and July-September in two broods. Larval food plants: Fabaceae (*Trifolium*, *Lotus*, *Medicago*, *Colutea*, *Anthyllis*, *Pisum*, *Coronilla*, *Genista*, *Onodrychis*, *Rhamnus* (Frionnet, 1906); in Zailiisky Alatau: *Trifolium pratense* (Zhdanko, 1997).

E. decolor (Staudinger, 1886). - Stett. ent. Ztg.: 203.

Type locality: "Margelan". [Uzbekistan, Fergana Valley, Margelan vicinity].

Distribution. Syr-Darya River Valley. Kazakhstan: Chardara

Habitat and biology. Mesophilous sites by the rivers. Flight period: May-June.

E. alcetas (Hoffmansegg, 1804). - Mag. f. Insektenk., 3: 205.

Type locality: "Austria".

Synonym: *coretas* (Ochsenheimer, 1807).

Distribution. Temperate zone from W. Europe to Transbaikalia. Nominotypical subspecies inhabits S. European part, Carpathians, Crimea, Siberia, Caucasus Major, Kazakhstan (except southern part), Altai, Sayan, Transbaikalia (locally).

Habitat and biology. Occurs locally in different meadows. Flies from May to July, 1-2 broods. Larval food plants: different Fabaceae (Higgins, Riley, 1970).

Genus *Tongeia* Tutt, 1908

Asian genus (9 species); in Kazakhstan 1.

T. fischeri (Eversmann, 1843). - Bull. Soc. Imp. Natural. Moscou, 16(3): 537.

Type locality: "Spassk". [Spasskoe locality, Big Ik River., Orenburgh Reg., Russia].

Distribution. From Urals through Siberia, Mongolia and N. China to Sakhalin, Japan and Korea:

ssp. *sachalinensis* (Matsumura, 1925) is described from Sakhalin;

ssp. *caudalis* (Bryk, 1946) (type locality: "Korea") is known from S. Primorski Territory. This subspecies is very close to nominotypical ssp. occurring Tarbagatai and Saur Mts., Dzhungarsky Alatau, Siberia, Transbaikalia, Amur Reg. and Primorski Territory.

Habitat and biology. Dry stony sites on small hills, as well as in mountains (800-2,000 m a.s.l.), occasionally in the humid forest meadows. Flight period: mid of May to August in two broods. Larval food plants in Siberia: *Sedum*, *Orastachys malocophylla* (Korshunov & Gorbunov, 1995); in the E. Kazakhstan: *Orastachys spinosa*, *Sedum* and *Pseudosedum* (Zhdanko, 1997).

Tribe Celastrini

Genus *Celastrina* Tutt, [1907]

C. argiolus (Linnaeus, 1758). - Syst. Nat. (ed. 10), 1:483.

Type locality: England.

Distribution. Temperate belt of the entire Palaearctic Region:

nominotypical subspecies occurs in the European part, Caucasus Major and Minor, Armenian Highland, Talych Mts., Kazakhstan, Altai, Sayan, W. and C. Siberia;

ssp. *hypoleuca* (Kollar, [1849]): Kopet-Dagh, Tien Shan, Ghissar-Darvaz, Pamirs-Alai.

Habitat and biology. Different types of biotope with blooming bushes. Flight period: April to August in 2-3 broods. Larval food plants in Middle Asia: *Berberis*, *Cuscuta engelmannii*, *C. lechmanniana* (Zhdanko, 1997).

Tribe Lampidini

Genus *Lampides* Hubner, [1819]

Old World and Australia; 1 species.

L. boeticus (Linnaeus, 1767). - Syst. Nat. (ed. 12), 1(2): 789.

Type locality: Algeria.

Distribution. Africa, S. Europe, S. Asia, (from the Middle East to Japan) Oriental Region, Micronesia, Australia. Kazakhstan (occurs locally over the whole territory).

Habitat and biology. Different types of biotope, in the mountains up to 2,500 m a.s.l. Flight period: May to October. Host plants (Hesselbarch et al., 1995; Falkovich, 1986; Shchetkin, 1960; Zhdanko, 1997): *Pisum*, *Phaseolus*, *Cicer*, *Medicago*, *Alhagi*, *Colutea persica*, *C. paulsenii*, *Astragalus* ssp.

Tribe Scolitantidini

Genus *Praepilotes* Forster, 1938

Middle Asian genus (1 species); in Kazakhstan 1.

P. antracias (Christoph, 1877). - Horae Soc. ent. Ross., 12: 239, pl. 5, f. 12.

Type locality: "Krasnovodsk", [Turkmenistan].

Distribution. Turan, northern Caspian area, W. China (locally), southern Tajikistan.

Habitat and biology. Occurs locally in sandy deserts, occasionally in the arid submountain zone (300-1,200 m a.s.l.). Flight period: April-May. In March-April larvae feed on buds and flowers of different species *Calligonum* (Polygonaceae): *C. griseum* in Vakhsh River Valley (Stshetkin, 1960); *C. microcarpum*, *C. eriopodum* in S. Karakum Desert, *C. leuocladum* in S. Kazakhstan (Zhdanko, 1997).

Genus *Glaucopsyche* Scudder, 1872

Nearctic Region: 2 species; Palaearctic Region: 9; in Kazakhstan 4.

G. alexis (Poda, 1761). - Ins. Mus. Graec.: 77.

Synonyms: *cyllaris* (Rottenburg, 1775); *tshatkala* (Korb, 1997).

Type locality: "Graz", [Austria].

Distribution. From Europe (except northern part) and Caucasus to Kazakhstan, Middle Asia, S. Siberia, Mongolia. European part, W. and S. Siberia, Ghissar-Darvaz, Tien Shan are inhabited by the nominotypical subspecies;

ssp. *blachieri* (Milliere, 1887) in Carpathians;

ssp. *lugens* (Caradja, 1893) in Caucasus and Transcaucasia.

Habitat and biology. Inhabits different types of meadows up to 2,000 m a.s.l.. Flight period: May-July. Larval food plants: *Astragalus*, *Cytisus*, *Trifolium*, *Medicago*, *Pisum*, *Melilotus*, *Vicia* and other Fabaceae (Higgins, Riley, 1970); in the Zailiisky Alatau: *Hedysarum montanum* (Zhdanko, 1997).

Glaucopsyche laetifica (Pungeler, 1898). - Soc. ent., 13(8): 57.

Type locality: "Ili-Gebiet". [SE Kazakhstan, Ili River Valley].

Distribution. S and SE Kazakhstan.

Habitat and biology. Mesophilous sites in sandy tidal deserts. Flight period: April-May. Larval food plant in the Ili River Valley: *Glycyrrhiza uralensis*.

G. argali Elwes, 1899. - Trans. ent. Soc. London: 328.

Type locality: "... mountains south of Kuch Agatch" [Kosh-Agach loc., Chuya River Valley, SE. Altai, Russia,].

Distribution. Altai, Saur:

nominotypical subspecies occurring in SE. Altai;

ssp. *arkhar* Lukhtanov, 1990 is known from Saur, Manrak and Kurchum Mts. .

Habitat and biology. Dry and stony steppe slopes with *Oxytropis* sp. in mountains from 1,000 to 2,500 m a.s.l. Flight period: May-June.

G. lycormas (Butler, 1868). - J. Linn. Soc. Lond., Zool., 9: 57.

Type locality: "North Japan".

Distribution. From W. Siberia (Irtysh River) to Far East, Sakhalin, S. Kuril Islands, Japan, Korea, NE. and C. China, Mongolia:

nominotypical subspecies inhabits Japan;

ssp. *lederi* (O.Bang-Haas, 1907) in S. part of W. Siberian lowland, Kuznetski Alatau, Salair Mts., N. Altai, E. Sayan, Transbaikalia, Mongolia;

ssp. *scylla* (Obertür, 1880) (= *lada* Kozhantschikov, 1936) in Amur Reg., Primorski Territory, Sakhalin; ssp. *tomariana* (Matsumura, 1928) in Kunashir Island.

Habitat and biology. Flies from end of May to the end of August in open landscapes (two broods). Larval food plants: different Fabaceae (Korshunov, 1985).

Genus *Maculinea* van Eecke, 1915

Palaearctic genus (7 species); in Kazakhstan 6.

M. alcon ([Denis et Schiffermuller], 1775). - Syst. Werke Schmitt. Wienergegend: 182.

Type locality: "Wien" [Vienna, Austria].

Distribution. Temperate belt of the Palaearctic Region:

nominotypical subspecies inhabits C. European part of Russia;

ssp. *xerophyla* Berger, 1946 occurs in S. European part of Russia;

ssp. *sevastos* Rebel, Zerny, 1931 in Carpathians;

ssp. *janissejensis* (Sheljuzhko, 1928) in W. and C. Siberia and N. Kazakhstan.

Habitat and biology. Meadows. Flight period: June in July. Host plants: *Gentiana* spp.

M. rebeli (Hirschke, 1904). - Jber. Wien. Ent. Ver., 11: 109, Taf. 2, Abb. 1in2.

Type locality: "Hochschwab" [Austria].

Distribution. From C. Europe through Asia Minor to the Primorski Territory.

Habitat and biology. Dry meadows. Flight period: July in August. Host plants: *Gentiana* spp., in Zailiisky Alatau *Gentiana kirilowii* (Zhdanko, 1997).

M. arion (Linnaeus, 1758). - Syst. Nat. (ed. 10), 1: 483.

Type locality: "Europa" [Nurnberg, Germany].

Distribution. Temperate belt of the Palaearctic Region. Nominotypical subspecies occurs in the European part, W. Siberia, Altai, NW and N. Kazakhstan.

Habitat and biology. Different types of dry meadows. Flight period: June – July, in the single generation. Host plants: in NW Kazakhstan *Ziziphora clinopodioides* (Zhdanko, 1997), in Europe (Hesselbarth et al., 1995): *Thymus*, *Origanum*, *Prunella*.

M. cyanecula (Eversmann, 1848). - Bull. Soc. Imp. Natural. Moscou, 21: 207.

Type locality: [Kyachta, Buryatia, Russia].

Distribution. From the Tien Shan and the Alai to Transbaikalia, Mongolia. Distribution of the subspecies is the following:

ssp. *cyanecula*: Transbaikalia, Khakassia, Tuva;

ssp. *ussuriensis* (Sheljuzhko, 1928): Amur Region and Primorski Territorys;

ssp. *obscurior* (Staudinger, 1901): Tien Shan;

ssp. *taras* (Fruhstorfer, 1915): N. Tien Shan.

Habitat and biology. Dry and steppe meadows, in the mountains up to 2,800 m a.s.l. Flight period: June to July.

M. teleius (Bergstrasser, 1779). - Nomen. Besch. Insecten. Hanau-Munzenberg, 2: 71, Taf. 43, Abb. 4.

Type locality: [Hanau-Munzenberg, Germany].

Distribution. Temperate belt of the Palaearctic Region. Distribution of the subspecies is the following:

ssp. *teleius*: Europaen part, W. Siberia (N. and NE Kazakhstan), Caucasus Major and Minor;

ssp. *splendens* (Kozhanchikov, 1924): Altai, Sayan;

ssp. *obscurata* (Staudinger, 1892): Transbaikalia.

Habitat and biology. Wet meadows. Flight period: from July to August. Host plant: *Sanguisorba officinalis* (Korshunov, Gorbunov, 1995).

M. nausitous (Bergstrasser, [1779]) - Nomen. Besch. Insecten. Hanau-Munzenberg, 2: 70, Taf. 43, Abb. 1.

Type locality: . [Hanau in Munzenberg, Germany].

Distribution. From W. Europe to C. Siberia, Turkey. The nominotypical subspecies inhabits the European part and Siberia, the Caucasus Major and Minor. Kazakhstan: NW, N. and NE Regions.

Habitat and biology. Dry meadows. Flight period: from July to August. Host plant: *Sanguisorba officinalis* (Korshunov, Gorbunov, 1995).

Genus *Turanana* Betune-Baker, 1916

Asian genus (10 species); in Kazakhstan 1.

T. panageides (Staudinger, 1886). - Stett. ent. Ztg., 47: 206.

Type locality: "Gebirgen bei Samarkand". [Uzbekistan, W. part of Ghissarsky Mts. Range].

Synonyms: *alaica* (Staudinger, 1886); *tshatkalica* J.J. Shchetkin, 1984.

Distribution. Ghissar, W. and Inner Tien Shan, Alai, Pamirs, Hindukush. Gradual clinal variability makes the segregation of subspecies inexpedient.

Habitat and biology. Dry stony slopes at 1,100-4,000 m a.s.l. Flies in June in September in two broods. Larval food plants *Acantholimon* spp.; in the Talassky Alatau and Syrdariinsky Karatau Mts. Range: *A. laxum* (Zhdanko, 1997).

Genus *Otnjukovia* Zhdanko, 1997 (= *Otaria* Zhdanko, 1984, nom. praec.)

Middle Asian monotypical genus.

O. tatjana (Zhdanko, 1984). - Тр. Зоол. ин-та [Trudy Zool. Inst.], 122: 103.

Type locality: "...юго-восточный Казахстан, (Зайлийский Алатау), 11 км южнее с. Отар (170 км западнее Алма-Аты)". [Otar, 170 km W. of Almaty, Zailiisky Alatau Mts. (W. part), Kazakhstan].

Distribution. N. Tien Shan, Dzhungarsky Alatau, ?Tarbagatai, S. Altai.

Habitat and biology. Dry stony slopes of foothills and low mountains from 800 to 1,600 m a.s.l. Flight period: April-May. Larval food plants: different species of *Goniolimon*. Egg layings are found by the buds. Larva or pupa overwinter.

Genus *Scolitantides* Hubner, [1819]

Palearctic monotypical genus; in Kazakhstan 1 species.

S. orion (Pallas, 1771). - Reise Prov. Russ. Reichs, 1 (Anhang :471).

Type locality: [Krymza River, Syzran Distr., Samara Region, Russia].

Distribution. Temperate belt of the entire Palearctic Region. Kazakhstan: NW, N., NE (Altai), C., E. (Tarbagatai, Saur, Dzhungarsky Alatau, N. Tien Shan) parts are inhabited by the ssp. *johanseni* (Wnukovsky, 1934).

Habitat and biology. Different types of warm open landscapes, in mountains up to 2,500 m a. s. l. Flight period: May-August in 2 broods. Larval food plant in Zailiisky Alatau: *Sedum hybridum* (Zhdanko, 1997).

Genus *Pseudophilotes* Beuret, 1958

Palearctic genus (7 species); in Kazakhstan 3.

P. vicrama (Moore, 1865). - Proc. Zool. Soc. London: 505, pl. 31, fig. 6.

Type locality: "Chiene in Middle Kunavur and the Alps above the Chinese village of Shipkee in Thibet".

Distribution. From Europe through Asia Minor to the Altai and N. India. Kazakhstan: the entire territory.

Habitat and biology. Dry stony or sandy landscape up to 3,000 m a.s.l. Flight period: May-August in 1-2 broods. Larval food plant in Dzhungarsky Alatau: *Dracocephalum* sp.

P. panope (Eversmann, 1851). - Bull. Soc. Imp. Natural. Moscou, 24(2):69.

Type locality: "Indersk" [Lake Inder, NW Kazakhstan].

Distribution. NW Kazakhstan.

Habitat and biology. Steppe and/or semidesert habitats surrounding calcareous outcrops; extremely local. Flight period: mid April to mid May. Larval food plant in European part of S. Russia: *Salvia nutans* (Danchenko, in press).

P. bavius (Eversmann, 1832). - Mem. Soc. Imp. Imp. Natural. Moscou, 2:349; pl. 19, figs., 3,4.

Type locality: [S. Urals, Russia].

Distribution. From S. Europe to N. Kazakhstan.

Habitat and biology. Steppe sites. Flight period: April to late June. Larval food plant in the Urals region: *Salvia nutans*.

Tribe Polyommataini**Genus *Alpherakya* Zhdanko, 1994**

Middle Asian genus (3 species); in Kazakhstan 1.

A. sarta (Alpheraky, 1881). - Horae Soc. ent. Ross., 16: 387, t. 16, f. 8.

Type locality: "Кульджа". [W. China, E. Tien Shan, Kulja reg.].

Synonyms: *phryxis* (Lang, 1884); *phryxis* (Staudinger, 1886).

Distribution. Ghissar-Alai, Tien Shan, Tarbagatai and Saur Mts., S. Altai; Afghanistan, Pakistan.

Habitat and biology. Rock debris dry slopes with scanty grass vegetation from 600 up to 2,000 m a.s.l. Flight period: May-September in 2-3 broods. Larval food plants: *Pseudosedum longidentatum*, *Rosularia kokanica* (Zhdanko, 1997) and *Orostachys thyrsoiflora*. All stages overwinter.

Genus *Patricius* Balint, 1992

Asian genus (5 species); in Kazakhstan 1.

P. lucifer (Staudinger, 1867). - Stett. ent. Ztg., 28:100.

Type locality: "Ust-Kamenogorsk im Altai". [E. Kazakhstan, SW Altai near Ust-Kamenogorsk].

Synonym: *selengensis* (Forster, 1940), *lornex* (Higgins, 1981).

Distribution. S. Altai, Sayan, Transbaikalia, Mongolia, N. China:

nominotypical subspecies inhabits the Altai and Sayan;

ssp. *otton* Korshunov, 1996, (= *biton* Bremer, 1861, nom. praeoccup.), occurs eastwards.

Habitat and biology. Dry steppe slopes up to 2,000 m a.s.l. In Siberia is found in the alpine tundra (Korshunov et Gorbunov, 1995). Flight period: June-July.

Genus *Plebejus* Kluk, 1802

Holarctic genus. Palaearctic region: 2 species; in Kazakhstan 2.

P. argus (Linnaeus, 1758). in Syst. Nat. (ed. 10), 1: 483.

Synonyms: *sylvius* (Poda, 1761); *aegon* ([Denis et Schiffermuller], [1775]); *argyrotoxus* (Bergstrasser, [1779]).

Type locality: "Schweden". [S. Sweden].

Distribution. Europe, the Urals, Caucasus, Asia Minor, Kazakhstan (except sandy deserts), Middle Asia, W., C. and S. Siberia, Far East. According to our opinion, the following subspecies are valid:

ssp. *argus* (Linnaeus, 1758) – Scandinavia;

ssp. *aegon* (Denis et Schiffermuller, 1775) inhabits the C. Europe, southeastern border of its range is obscure;

ssp. *cleomenes* (Fruhstorfer, 1910) from the Carpathians is close to nominotypical subspecies and probably represents a local alpine form;

ssp. *wolgensis* (Forster, 1936) occurs in S. European part; taxonomic status of populations from the lowland Kazakhstan, Tien Shan, Tarbagatai, Saur and S. Altai remains obscure, outside populations represent the transition to ssp. *wolgensis*.

ssp. *obensis* (Forster, 1936) (= *korshunovi* Stadel, 1960; = *katunica* Stadel, 1960) is described from Barnaul vicinity and distributed in the W. Siberia and Altai.

ssp. *clarasiatica* (Verity, 1931) occurs eastwards to Middle Amur Region.

ssp. *pamira* (Forster, 1936) occurs in the Pamirs-Alai and probably in Tien Shan (highland populations);

ssp. *coreanus* (Tutt, 1909) (= *kurentzovi* Kocak, 1980; = *orientalis* Kurentzov, 1970, nom. praecoccup.) inhabiting Amur Region and Primorski Territory, it is the largest in size subspecies;

ssp. *pseudoaegon* (Butler, [1881]) inhabits Sakhalin Is., it is the small in size and light-blue color.

Taxa *bella* Herrich-Schaffer, [1844], *tscherkessica* Forster, 1936, *georgica* (Forster, 1936), *orientaloides* (Verity, 1931) are known from Caucasus, Transcaucasia and Iran and may represent a good subspecies but their status hitherto is not completely clear. Until the revision is made we use the oldest name *bella* Herrich-Schaffer, [1844] (type locality: Turkey);

Habitat and biology. Different types of meadows on the plains and mountains up to 2,000 m a.s.l. Flight period: in June-July and in August-September, usually two broods, but in mountains only single one. Larval food plants: *Astragalus*, *Chamaecytisus*, *Colutea*, *Coronilla*, *Hippocrepis*, *Lathyrus*, *Lotus*, *Medicago sativa*, *Onobrychis*, *Ononis*, *Vicia* (Fabaceae); *Helianthemum* (Cistaceae), *Thimus* (Labiaceae), *Erica*, *Calluna* (Ericaceae) (Hasselbarth & al., 1995).

P. dzhizaki Zhdanko, 2000. - Guide Butt. Russ. and adjac. Terr., vol.II:159.

Type locality: near Buston Village, Dzhizak Reg., Uzbekistan.

Distribution. Dzhizak Region. Kazakhstan: probably Chardara area.

Habitat and biology. Flies in June in the mesophilous site.

Genus *Lycaenides* Hubner, 1819.

Holarctic genus. Palaearctic region: 31 species; in Kazakhstan 11.

L. eversmanni (Staudinger, 1886). - Stett. ent. Ztg., 47:205.

Type locality: "Fergana". [NE Alaisky Mts. Range, Kyrgyzstan].

Synonyms: *eversmanni* (Lang, 1884); *grumi* (Staudinger, 1901).

Distribution. Kopet-Dagh, Ghissar-Darvaz, Pamirs-Alai, W. Tien Shan, NE. Afghanistan. Kazakhstan: Talassky Alatau (Aksu-Dzhabagly Natural Reserve).

Habitat and biology. Rock debris slopes of southern exposition with scanty vegetation at 1,500-3,800 m a.s.l. (Pamirs). Flight period: May-July, usually in two broods, the first one is more productive. Larva lives on *Chesneya* spp. (Fabaceae): *Ch. quinata* in Alaisky Mts. Range; *Ch. gissarica* in Ghissar Mts. Range (Zhdanko, 1997).

L. idas (Linnaeus, 1761). - Fauna Svec. (ed. 2):284.

Synonyms: *argus* ([Denis et Schiffermuller], [1775]); *leodorus* (Esper, 1782).

Type locality: "S. Sweden".

Distribution. Europe, Caucasus and Transcaucasia, W. and N. Kazakhstan, Middle Asia, Saur, Altai, Asia Minor. The distribution of subspecies is the following:

ssp. *idas* in Denmark, Scandinavia;

ssp. *armoricanella* (Beuret, 1934) in Finland, Karelia, N. European part, very close to nominotypical subspecies;

ssp. *acreon* (Fabricius, 1787) in C. and S. European part, W. and N. Kazakhstan;

ssp. *altarmena* (Forster, 1936) in Armenian Highland, N. Turkey;

ssp. *naruena* (Courvoisier, 1913) in N. and Inner Tien Shan;

ssp. *gissari* Zhdanko, 1999 in Ghissar Mts. Range;

ssp. *tshimgana* (Forster, 1936) in W. Tien Shan.

Habitat and biology. Dry meadows on the plains and in the mountains up to 2,000 m a.s.l. (Altai) or 2,700 m (Tien Shan). Flight period: June-August, in 1-2 broods. Larval food plant in the N. European part of Russia is *Calluna vulgaris* (Ericaceae); but southwards different Fabaceae: *Coronilla emerus*, *Cersis siliguastrum* (Malicky, 1969); in the Tien Shan *Astragalus alpinus*, *Cicer flexuosum* (Zhdanko, 1997).

L. nushibi Zhdanko, 2000. - Guide Butt. Russ. and adjac. Terr., vol.II:159.

Type locality: SE. Kazakhstan, Zailiisky Alatau, Kaskelen gorge, 1500 m a.s.l.

Distribution. N. Tien Shan.

Habitat and biology. Dry meadows in mountains at 1500-2,3000 m a.s.l., in July, on *Astragalus* sp.

L. uiguricus Zhdanko, 2000. - Helios, 1:101.

Type locality: 20 km SE of Karatogai, Kurchum Mts., S. Altai.

Distribution. S. Altai, Saur and Tarbagatai Mts., ?Dzhungarsky Alatau.

Habitat and biology. Mountain steppe (1,300-1,800 m a.s.l.). Flight period: June to mid July.

L. argyrognomon (Bergstrasser, [1779]). - Nomen. Besch. Insecten Hanau-Münzenberg, 2:76, pl. 46, fig. 1, 2.

Type locality: "Hanau". [Hanau-Münzenberg, Germany].

Synonyms: *ismenias* (Meigen, 1829); *aegus* (Chapman, 1917); *ligurica* (Obertur, 1910), nom. praecoccup.

Distribution. Temperate zone from Europe to Primorski Territory:

nominotypical subspecies is distributed in the C. European part of Russia.

ssp. *danapriensis* (Stempfer-Schmidt, 1932) is known in W. and S. European part of Russia (until Don River);

ssp. *ussurica* (Forster, 1936) inhabits the Primorski Territory. The status of populations from Altai, Transbaikalia and Amur reg. Hitherto remains obscure.

Taxa *mongolica* Ruhl, [1893] (type locality: Mongolia) and *sinica* Forster, 1936 (type locality: Szechuan, China) are known in the adjacent territories of Asia.

Habitat and biology. Flies from May to August in two broods on the dry meadows and especially in the waste lands. Larva lives on *Coronilla varia* and other Fabaceae. (Malicky, 1969).

L. maracandicus (Erschoff, 1874). - Федченко, Путешествие в Туркестан [Fedtchenko, Voyage in the Turkestan], II, 5(3), (Lepidoptera):10.

Type locality: "...окр. Самарканда". [Samarkand vicinity, Uzbekistan].

Synonyms: *dschagatai* (Grum-Grzhimailo, 1887); *buchara* Forster, 1936.

Distribution. From S. European part of Russia and Turan to Yakutia:

nominotypical subspecies inhabites the southern part of range (Turan):

ssp. *caspica* (Forster, 1936) occurs in N. Caspian area;

ssp. *planorum* (Alpheraky, 1881) occurs in Balchash Lake region, Ili River valley and N. Tien Shan and Dzhungarsky Alatau;

ssp. *chalcha* Korshunov, 1982 occurs in Tuva, Transbaikalia (S. part), Mongolia;

ssp. *transbaikalisensis* (Kurentzov, 1970) occurs in Transbaikalia (N. Part);

ssp. *jakutica* (Kurentzov, 1970) occurs in Yakutia.

Habitat and biology. Mesophilous sites in the steppe zone, deserts and semideserts including cultural lands. Flight period: from mid April to September in 4-5 (on the southern part) broods (J.L. Shchetkin, 1960). Larval food plant in the desert of Ili River valley: *Astragalus sogotensis* (Zhdanko, 1997).

L. lepidus Zhdanko, 2000. - Guide Butt. Russ. and adjac. Terr., vol.II:159.

Type locality: "15 km E. Aksuat Village" [E.Kazakhstan].

Distribution. E. Kazakhstan, Zaisan area.

Habitat and biology. Semidesert and steppe localities in the Zaisan valley. Flight period: May-June.

L. christophi (Staudinger, 1874). - Stett. ent. Ztg., 35:87.

Type locality: "Schachrud", [NE. Iran].

Distribution. From NE Turkey, N. Iran and N. Afghanistan through Turkmenistan, Tajikistan, Uzbekistan to S. and SE Kazakhstan.

Distribution. nominotypical subspecies occurs in Turan and S. Ghissar.

Habitat and biology. Sandy and clay deserts, tugai, waste lands, occasionally cultural lands. Along river valleys ascends up to 1,400 m a.s.l. Larval food plant: *Alhagi* sp. (Degtyareva & Shchetkin, 1975; Falkovich, 1986). Flight period: May-June in 3 broods.

L. argivus (Staudinger, 1886). - Stett. ent. Ztg., 47:204.

Type locality: Ferghana Valley.

Distribution. Turan (in Kazakhstan SE areas).

Habitat and biology. Sandy and clay deserts, tugai, waste lands. In the mountains up to 1,400 m a.s.l.

Flight period: May-September in 2-3 broods. Larval food plant: *Alhagi* spp.

L. bergi Kusnetzov, 1908. - "Известия Туркест. Отд. Импер. Русс. Геогр. общ-ва". [News Turkest. Branche of Imp. Russ. Geogr. Soc.], 4(8):107, t. 4a, fig. 1-3.

Type locality: "...северное побережье Аральского моря". [Kazakhstan, N. coast of Aral Sea].

Distribution. C. and E.(locally) Kasakhstan.

Habitat and biology. Sandy and clay deserts, tugay, waste lands. Flight period: May. Larval food plants: *Alhagi* spp.

Genus *Plebejides* Sauter, 1968

Palearctic genus (5 species); in Kazakhstan 2.

P. pylaon (Fischer von Waldheim, 1832). - Mém. Soc. Imp. Natural. Moscou, 8: 357, t. 19, f. 5-6.

Type locality: "Sarepta". [Vicinity of Volgograd, Russia].

Synonym: *cyane* (Freyer, 1845).

Distribution. From S. European part of Russia to Altai. Distribution of subspecies is the following: nominotypical subspecies inhabits S. European part of Russia, W. Siberia, Turan, W. Altai;

ssp. *katunensis* Balint et Lukhtanov, 1990 occurs C. and E. Altai;

ssp. *forsteri* Balint, 1990 inhabits Dzhungarsky Alatau.

Habitat and biology. Inhabits dry steppe plains and steppe slopes up to 1,200-2,000 m a.s.l. Flight period: May-July. Larval food plant in the NW Kazakhstan: *Astragalus rupifragus* (Zhdanko, 1997).

P. zephyrinus (Christoph, 1884). - Romanoff Mém. Lép., 1:102, t. 6, f. 3.

Type locality: "Askhabad". [Ashghabad, Turkmenistan].

Distribution. From Transcaucasia to S. Altai. Distribution of subspecies is the following:

nominotypical subspecies ssp. *zephyrinus* (Christoph, 1884; = *turcmenicus* Forster, 1936) inhabits Kopet-Dagh, Ghissar, S. Ghissar;

ssp. *usbecus* Forster, 1939 in W., N.Tien Shan and Dzhungarsky Alatau;

ssp. *tarbagataiensis* Balint, [1993] in S. Altai, Saur, Tarbagatai;

ssp. *klausrosei* Balint, 1992 in E. Pamirs;

ssp. *ordubadi* Forster, 1938 (= *solimana* Forster, 1938; = *iranica* Forster, 1939; = *albertii* Nekrutenko, 1975; = *iranicola* Kocak, 1980) in Armenian Highland, Talysh, Caucasus Major.

Habitat and biology. Inhabits in dry steppe and stony sites at 800-3,000 m a.s.l. Flight period: May-July in two broods. Larval food plant in NW Kazakhstan: *Astragalus* sp.

Genus *Umpria* Zhdanko, 1994

Asian genus (1 species), in Kazakhstan 1.

U. chinensis (Murrey, 1874). - Trans. ent. Soc. London, 4:523.

Type locality: "North China".

Distribution. From Turan to Primorski Territory; China, Korea, Mongolia.

nominotypical subspecies (= *mandschurica* Staudinger, 1892) is distributed in Transbaikalia and Primorski Territory;

ssp. *sibiricana* (Kozhantshikov, 1923) is known from S. Siberia to the W. Baikal Lake.

ssp. *myrmecias* (Christoph, 1877) inhabits Turan. However, the variability is not clear over the entire range.

Habitat and biology. Inhabits the different types of xerophytic sites: deserts, waste land, pebble shores, dry steppe; in foothills and low mountains on the dry slopes from 800 to 1,400 m a.s.l. Flight period: April-July according to climate conditions. Larval food plant in the region of Balkhash Lake: *Erodium oxyrhynchum* (Geraniaceae) (Zhdanko, 1997).

Genus *Albulina* Tutt, 1909

Asian genus (6 species); in Kazakhstan 1.

A. orbitulus (de Prunner, 1798). - Lep. Pedemont.: 75.

Synonyms: *atys* (Gramer, 1780)]; *atys* (Hubner, [1804]); *pheretes* Hoffmannsegg, 1806); *pheretes* Hubner, [1806]].

Type locality: "Piemont" [North Italy].

Distribution. From the Alps, Sweden, Norway, N. European part to Siberia (including Stanovoe Highland), Tarbagatai, Saur, Transbaikalia, Mongolia, Amur area. (locally), NW. China, Tibet:

nominotypical subspecies inhabits the Alps, Norway, Sweden, Ural;

ssp. *pheretimus* (Staudinger, 1892) was described from Kentei Mts. (Mongolia) and distributed also in Transbaikalia, Amur area. and W. China;

ssp. *sajana* (Heyne, [1895]) occurs in the Sayans, Altai, Saur and Tarbagatai. The borders limiting the subspecies are not clear as the distinctions between them are not constant.

Habitat and biology. usually inhabits the mountain slopes from 500 to 3,000 m a.s.l. Flight period: June-July. Larval food plant in *Astragalus* sp. (Zhdanko, 1997).

Genus *Eumedonia* Forster, 1938

Palaeartic genus (4 species); in Kazakhstan 2.

E. eumedon (Esper, [1780]). - Smitt. Abb. Nat., 1(2): 16, Taf. 52, Abb. 2-3.

Type locality: Vicinity of Erlangen, Germany.

Distribution. Temperate belt of the Palaeartic Region. In Kazakhstan occurs everywhere, except sandy deserts.

Habitat and biology. Wet meadows up to 3,500 m a.s.l. Flight period: May to August. Larval food plants: different species of *Geranium*, in the Talassky Alatau: *G. saxatile*, *G. callinum* (Zhdanko, 1997).

E. persephatta (Alpheraky, 1881). - Hor. Soc. Ent. Ross., 16 (3in4): 395, pl. 14, fig. 11.

Type locality: "...Kounguesse" [Kulja, Kungess Valley, W. China]

Distribution. From the Hindu Kush to the Dzhungarsky Alatau:

nominotypical subspecies inhabits Dzhungarsky Alatau, Ghissar, Darvaz;

ssp. *minuta* (Grum-Gzhimailo, 1890) in Pamirs-Alai.

Habitat and biology. Wet meadows up to 3,500 m a.s.l. Flight period: May to August. Larval food plant: different species of *Geranium* e.g., in the Talassky Alatau *G. saxatile*, *G. callinum* (Zhdanko, 1997).

Genus *Aricia* Reichenbach, 1817

Palaeartic genus (12 species); in Kazakhstan 3.

A. allous (Hubner, [1819]). - Samml. Europ. Schmett.:Abb. 988.

Type locality: Alps of Provence [France].

Distribution. Temperate belt and mountains of Eurasia. In Kazakhstan everywhere, except sandy deserts:

ssp. *turgaica* (Obraztsov, 1935) inhabits N. Kazakhstan;

ssp. *strandii* (Obraztsov, 1935) inhabits Altai to W. Amur area.

ssp. *lepsinskana* (Obraztsov, 1935) occurs in Tien Shan.

Habitat and biology. Wet meadows on lowlands, foothills up to 3,500 m a.s.l. Flight period: May to August. Larval food plant: different species of *Geranium*, in Talassky Alatau *G. saxatile*, *G. callinum* (Zhdanko, 1997).

Genus *Cyaniris* Dalman, 1816

Palaeartic genus (4 species); in Kazakhstan 1.

C. semiargus (Rottenburg, 1775). - Anmerk. Tab. Schmett., Naturforscher, 6: 20.

Type locality: Germany.

Distribution. Temperate belt of the Palaeartic Region. In Kazakhstan:

nominotypical subspecies inhabits N. Kazakhstan;

ssp. *altaianus* Tutt, 1909 occurs in Tien Shan, Altai and Sayan, Transbaikalia in Russia.

Habitat and biology. Different types of meadows, in the mountains up to 2,500 m a.s.l. . Flight period: May to August. Larval food plant: *Trifolium*, *Anthyllis*, *Genista*, *Melilotus*, etc. (Korshunov, Gorbunov, 1995).

Genus *Agriades* Hubner, (1819)

Palaeartic genus (10 species); in Kazakhstan 2.

A. diodorus (Bremer, 1861). - Mem.Acad. Imp. Sci. St-Peterburg, 3: 471.

Type locality: [Lake Baikal, Russia].

Distribution. S. Siberia and Transbaikalia, Mongolia, N. China. *Ssp. orbitulinus* (Staudinger, 1892) inhabits Altai, Sayan and Tarbagatai, Saur in Kazakhstan.

Habitat and biology. Stony slopes of mountains up to 2,000 m a.s.l. Flight period: June to July. Larval food plant in the S. Altai: *Saxifraga* sp. (Zhdanko, 1997).

Genus *Vacciniina* Tutt, 1909

Palearctic genus (3 species); in Kazakhstan 2.

V. fergana (Staudinger, 1881). - Stett. Ent. Ztg., 42: 262.

Type locality: [Alaisky Mts. Range, (northern slope)].

Distribution. From Iran and Afghanistan through the Kopet-Dagh, Middle Asian mountains to the S. Altai.

Habitat and biology. Inhabits in the dry steppe and stony sites at 800-3,000 m a.s.l. Flight period: May-July in two broods. Larval food plant in the SE Kazakhstan is *Astragalus* sp.

V. optilete (Knoch, 1781). - Beitr. Insektengesch., 1: 76, Taf. 5, Abb. 5in6.

Type locality: "Braunschweig" [Germany].

Distribution. From C. Europe to NE China, Korea, Japan and N. America (W. part). *Ssp. sibirica* (Staudinger, 1892) inhabits Kazakhstan (Altai).

Habitat and biology. Open wet woodland, sphagnum bogs, plains to mountain tundra up to 2,000 m a.s.l. Flight period: May to August. Larval food plant: *Vacciniinum*, *Oxycoccus*, *Empetrum* (Korshunov, Gorbunov, 1995).

Genus *Farsia* Zhdanko, 1992

Middle Asian genus (7 species); in Kazakhstan 1.

F. sieversi (Christoph, 1873). - Horae Soc. Ent. Ross., 10:23.

Type locality: "Schachkuh" [N. Iran].

Distribution. Kopet-Dagh, Ghissar-Darvaz, Pamirs-Alai, W. and Inner Tien Shan; Iran, Afghanistan, Pakistan.

Habitat and biology. Steppe and dry meadows in mountains, occasionally rocky slopes from 1,400 to 4,800 m a.s.l. Flight period: July. Host plant in the Ghissar: *Astragalus sericeopuberulus* (Zhdanko, 1997).

Genus *Rimisia* Zhdanko, 1994

Middle Asian genus (2 species); in Kazakhstan 1.

R. miris (Staudinger, 1881). - Stett. ent. Ztg. 47: 263.

Synonym: *oblitestens* (Schilz, 1906).

Type locality: "... Schachrud (Nord Persien am Fusse des Gebirges)" [N. Iran, Schachrud].

Distribution. N. Iran, N. Afghanistan, Kopet-Dagh, Ghissar, Darvaz, Pamirs, Tien Shan, Balkhash Lake area, Dzhungarsky Alatau, Tarbagatai and Saur, S. Altai, NW China.

Habitat and biology. Inhabits the different types of xerophytic sites: deserts, waste land, pebble shores, dry steppe; in foothills and low mountains the dry slopes from 700 to 2,000 m a.s.l. Flight period: May-July according to climate conditions. Larval food plant in the Balkhash Lake area: *Astragalus balchaschensis* (Zhdanko, 1997).

Genus *Plebejidea* Kocak, 1983

Palearctic genus (3 species); in Kazakhstan 2.

P. cyane (Eversmann, 1837). - Bull. Soc. Imp. Natural. Moscou, 10 (1):22.

Type locality: [SE. Orenburgh Region, Russia].

Distribution. Volga-Ural region, Turan, Tien Shan, Ghissar, Darvaz, Pamirs-Alai, Saur and Tarbagatai, Altai, Sayan (locally), Transbaikalia, Mongolia.

Habitat and biology. Inhabits the different types of xerophytic sites: deserts, waste land, pebble shores, dry steppe; in foothills and low mountains the dry slopes from 700 to 2,800 m a.s.l. Flight period: May-August according to climate conditions. Larval food plants in Tien Shan: *Limonium leptolobum*, *Goniolimon cuspidatum* (Zhdanko, 1997); WN Kazakhstan: *Limonium gmelini* (Danchenko, in press).

P. elvira (Eversman, 1854). - Bull. Soc. Imp. Natural. Moscou 27:177.

Type locality: [Syr-Darya River valley, S. Kazakhstan].

Distribution. Valley of Syr-Darya, Amu-Darya and Ili rivers, Alakol Lake.

Habitat and biology. Riverine thickets and wet marshes by the rivers and lakes. Host plant in Kazakhstan: *Limonium gmelini* (Zhdanko, 1997).

Genus *Lysandra* Hemming, 1933

Palearctic genus (13 species); in Kazakhstan 1.

L. coridon (Poda, 1761). - Ins. Mus. Graec.: 77.

Type locality: Vicinity of Graz, Austria.

Distribution. Europe (excluding the Far North) to S. Urals region. Ssp. *borussia* (Dadd, 1908) occurs in European part of Russia and NW Kazakhstan.

Habitat and biology. Steppes. Flight period: June-August. Larval food plants: *Securigera varia* (Danchenko, 2000) and *Coronilla*, *Astragalus*, *Hippocrepis*, *Vicia* (Korshunov, Gorbunov, 1995).

Genus *Neolysandra* Kocak, 1977

Palearctic genus (10 species); in Kazakhstan 4.

N. coelestina (Eversmann, 1843. - Bull. Soc. Imp. Natural. Moscou, 16 (3):535.

Type locality: "... in promontorium Uralensium" [S. Urals].

Distribution. S. Europe, S. European part of Russia, Transcaucasia, W. Siberia, Turkey, Iraq, Iran. Kazakhstan: NW area.

Habitat and biology. Steppe biotopes. Flight period: June. Larval food plant: *Astragalus* sp.

Subgenus *Plebecula* Higgins 1969

P. amanda (Schneider, 1792). - Neust. Mag. ent. Stralsund, 1(4):428-429.

Type locality: S. Sweden.

Synonyms: *icarius* (Esper, [1789]); *agathon* Godart, [1824].

Distribution. Temperate zone of Palearctic region. Distribution of subspecies is following: nominotypical subspecies (= *lydia* Krulikovsky, 1892; = *orientalis* Staudinger, 1901; = *amandina* Krulikovsky, 1908; = *gina* Higgins, 1958) inhabits European part, Siberia, Transbaikalia, Far East, Caucasus and Transcaucasia, Kopet-Dagh;

ssp. *turensis* (Heyne, 1895) in ?Tien Shan;

ssp. *amata* (Grum-Grzhimailo, 1890) in Ghissar, S. Ghissar, Alai, W. Pamirs;

ssp. *amurensis* (Staudinger, 1892) in Amur River basin.

Habitat and biology. Flight period: in June-July, in the southern regions produces the second generation in August. It occurs on humid meadows; along the rivers and streams ascend up to 3,000 m a.s.l. Larval food plants in Europe: different *Vicia* species (Eckstein, 1913, etc.); in Alai: *Vicia kokandica*; in Tien Shan: *Vicia costata* and *Medicago romanica* (Zhdanko, 1997).

P. dorylas ([Denis et Schiffermuller], [1775]). - Syst. Verz. Schmett. Wien.: 322.

Type locality: Vienna vicinity, Austria.

Synonyms: *hylas* (Esper, [1778]); *argester* (Bergstrasser, [1779]); *albicans* (Gerhard, 1851).

Distribution. C. and S. Europe, Caucasus and Transcaucasia, NW Kazakhstan, Turkey:

ssp. *magna* Balint, 1985 inhabits C. and S. of European part of Russia;

ssp. *armenus* Staudinger, 1871 in Caucasus Major, Caucasus Minor, Armenian Highland.

Habitat and biology. Flight period: mid June to mid August in two broods. It prefers dry meadows and steppe slopes up to 2,000 m a.s.l. Larval food plants: *Melilotus*, *Medicago*, *Trifolium*, *Thymus* (Hesselbarth & al., 1995).

P. thersites (Cantener, [1835]). - Hist. Nat.:53-54 (nota), Taf. 11, Fig. 1, 2.

Type locality: NE France.

Synonyms: *alexius* (Freyer, [1858]); *gravesi* (Chapman, 1912).

Distribution. From Europe and N. Africa (Maroc) through Minor and Middle Asia to Mongolia:

nominotypical subspecies (= *ardavdana* Obraztsov, 1936; = *zhicharevi* Obraztsov, 1936; = *narzana* Obraztsov, 1936; = *gandzhana* Obraztsov, 1936; = *karatshaica* Obraztsov, 1936; = *rjabovi* Obraztsov, 1936; = *ketshevana* Obraztsov, 1936; = *kislovodskana* Obraztshov, 1936) inhabits C. and S. European part of Russia, W. Siberia, Caucasus Major, Caucasus Minor, Armenian Highland, Talysh;

ssp. *orientis* Sheljuzhko, 1928 (= *orientalis* Chapman, [1913], nom. praeoccup.) occurs in Altai, Sayan, N. Tien Shan and Dzhungarsky Alatau, Alai.

Habitat and biology. It occurs on meadows, in the mountains up to 2,500 m a.s.l. Flight period: mid May to mid August in two broods. Larval food plants: in different *Onobrychis* species; Zailiisky Alatau: *Onobrychis viciifolia* (Zhdanko, 1997).

Genus *Polyommatus* Latreille, 1804

Palaeartic genus (40 species); in Kazakhstan 7.

P. eros Ochsenheimer, [1808]. - Schmitt. Europa 1(2):42.

Type locality: Alps of Tirol and Switzerland.

Distribution. N., Inner Tien Shan and Dzhungarsky Alatau is inhabited by the ssp. *stigmatifera* Courvoisier, 1903 (= *lunulata* Courvoisier, 1903; *vasilyi* Tshikolovets, 1995.)

Habitat and biology. Mountains, on grass slopes at 2,000-3,300 m a.s.l, usually at alpine. Flight period: July and August. Larval food plants in Tien Shan: *Astragalus* spp. and *Oxytropis* spp.

P. eroides (Frivaldsky, 1835).- Cat. Lep. Balcan 2:270, pl.7, fig.9.

Type locality: "Balkan-Halbinsel"[The Balkan Peninsula].

Distribution. From E. Germany, Czechia, Poland, through S. end C. Russia, W. Siberia to Altai. Besides nominotypical subspecies, inhabiting territory from the Urals to Omsk. The following subspecies are known:

ssp. *orientalis* Krziwitsky, 1983 was described from Poland and occurs in Byelorussia, Ukraine and European part of Russia;

ssp. *boisduvalii* (Herrich-Schaffer, 1844) inhabits N. Kazakhstan.

Habitat and biology. Dry meadows and steppes in lowlands and on hills. Flight period: from the end of June to the end of July.

P. erotides (Staudinger, 1892). - D. ent. Z. Iris, 5: 319.

Type locality: "Kentei-Gebirge". [Transbaikalia, Malachansky Mts. Range, Kudara-Somon].

Distribution. Altai, Saur, S. Siberia, Transbaikalia, Mongolia; in Kazakhstan: S. Altai.

Habitat and biology. Dry southern slopes of mountains at 500-2,000 m a.s.l. Flight period: from the end of May to the end of June and from the mid July to September, in two broods.

P. venus (Staudinger, 1886). - Stett. ent. Ztg., 47:211.

Type locality: "Naryn".

Distribution. Darvaz, Alai, W. Pamirs, Tien Shan; in Kazakhstan: ssp. *wiskotti* (Courvoisier, 1911) inhabits N. Tien Shan, Dzhungarsky Alatau.

Habitat and biology. Flight period: July-August. Larval food plants in Talassky Alatau: *Oxytropis talassica*, *O. aulieatensis* (Zhdanko, 1997).

P. icarus (Rottemburg, 1775). - Anmerk. Tab. Schmett., Naturforscher, 6: 21.

Type locality: Sachsen, Germany.

Distribution. Temperate zone of Palaeartic region. Distribution of subspecies is the following:

nominotypical subspecies inhabits European part of Russia, Caucasus and Transcaucasia;

ssp. *fuchsi* Sheljuzhko, 1928 (= *sibiricus* Fuchs, 1901, nom. praeoccup.) in S. Siberia, Transbaikalia;

ssp. *omelkoi* Dubatolov et Korshunov, 1995 in Amur Region and Primorski Territory;

ssp. *napeae* (Grum-Grshimailo, 1891) - Tien Shan, Ghissar, Alai;

ssp. *amosovi* Kurentzov, 1970 in Far East, Kamchatka.

Habitat and biology. Different types of meadows up to 2,000 m a.s.l. Flight period: May-August in 1-2 broods according to local conditions. Larval food plants in Europe: *Trifolium*, *Medicago*, *Genista*, *Lotus*, *Melilotus*, *Ononis* etc. (Korshunov & Gorbunov, 1995); in NW Kazakhstan: *Medicago romanica*, *M. falcata*; in Zailiisky Alatau: *Trifolium repens* (Zhdanko, 1997). Larva associates with ants: *Lasius alienus*, *L. flavus*, *L. niger*, *Formica subrufa*, *Plagiolepis pigmaea*, *Myrmica sabuleti* (Hesselbarth & al., 1995).

P. icadius (Grum-Grshimailo, 1890). - In: Romanoff, Mém. Léop., 4:402.

Type locality: Near Beik-Pass [E. Pamirs].

Distribution. Tien Shan, Ghissar-Darvaz, Alai, Pamirs, Hindukush:

nominotypical subspecies inhabits Pamirs;

ssp. *alaicus* (Balletto et Nekrutenko, 1987) in Darvaz;

ssp. *candidus* Zhdanko, 2000 in W. Tien Shan.

Habitat and biology. Dry and stony slopes with steppe vegetation. Flies from May to August in two broods, inhabits scree at 800-3,500 m a.s.l. Larval food plants: *Cicer songaricum*, *C. flexuosum* (Zhdanko, 1997).

Subgenus *Meleageria* De Sagarra, 1925

M. daphnis ([Denis et Schiffermuller], 1775). - Syst. Werke Schmett. Wienergegend: 182.

Type locality: Vienna, Austria.

Distribution. Europe (except the Far North), Caucasus, Transcaucasia, Turkey, W. Iran; in Kazakhstan: NW and N. parts (locally).

Habitat and biology. Different types of meadows and steppe-meadows.

Flight period: from the end of June to August. Larval food plants: *Securiega varia* (Tuzov et al., 2000).

Genus *Agrodiaetus* Latreille, 1804

Palearctic genus (78 species); in Kazakhstan 7.

A. ripartii (Freyer, 1830). - Bitr. Gesch. Europ. Schmett., 3:128, Taf. 133, Abb. 3.

Type locality: [Spain].

Distribution. From W. Europe through S. European part of Russia, Turkey, Transcaucasia to Central Asia and Buryatia; in Kazakhstan: all the territory, except sandy deserts.

Habitat and biology. Dry meadows from lowlands up to 2,000 m a.s.l. Flight period: from the end of July to the end of August. Larval food plant in Zailiisky Alatau: *Onobrychis* sp.

A. damon ([Denis et Schiffermuller], 1775). - Syst. Werke Schmett. Wienergegend: 182.

Type locality: [Vicinity of Vienna, Austria].

Distribution. Europe, Middle Asia, Turkey, S. Siberia, Mongolia, China; in Kazakhstan:

ssp. *damon* inhabits NW area of Kazakhstan;

ssp. *mongolensis* Kocak, 1980 occurs in E. Kazakhstan;

ssp. *merzbacheri* (Courvoisier, 1913) inhabits SE Kazakhstan.

Habitat and biology. Dry steppe on lowlands to alpine meadows up to 2,500 m a.s.l. Flight period: July to the end of August. Larval food plant in Zailiisky Alatau: *Onobrychis* sp.

A. damone (Eversmann, 1841). - Bull. Soc. Imp. Natural. Moscou, 14 (1):18.

Type locality: "Sergiewsk [Samara Region, Russia].

Distribution. S. European part of Russia, S. Siberia, Mongolia; in Kazakhstan:

ssp. *damone* inhabits NW Kazakhstan;

ssp. *altaicus* (Elwes, 1899) occurs in C. and E. Kazakhstan;

Habitat and biology. Steppes, from lowlands up to 1,800 m a.s.l. in the mountains. Flight period: July. Larval food plant in C. Kazakhstan (Kazakh Tableland): *Onobrychis* sp.

A. juldusus (Staudinger, 1886). - Stett. Ent. Ztg., 47:213.

Type locality: [Juldus Plateau, Xinjiang, China].

Distribution. N. Tien Shan and Dzhungarsky Alatau, NW China:

ssp. *kirgisorum* V. Lukhtanov, Danchenko, 1994 inhabits N. Tien Shan;

ssp. *kasachstanus* V. Lukhtanov, Danchenko, 1994 occurs in Dzhungarsky Alatau.

Habitat and biology. Dry steppes, from lowlands up to 2,600 m a.s.l. in the mountains. Flight period: mid June to August. Larval food plant in N. Tien Shan: *Hedysarum* sp.

A. iphigenides (Staudinger, 1886). - Stett. Ent. Ztg., 47:214.

Type locality: [Ferghana Valley, Uzbekistan].

Distribution. Ghissar, Pamirs-Alai, Darvaz, W. Tien Shan; in Kazakhstan: ssp. *karatavicus* Lukhtanov, 1990 inhabits Karatau Mts., Aksu-Dzhabagly Natural Reserve.

Habitat and biology. Dry steppes, from lowlands up to 2,500 m a.s.l. in the mountains. Flight period: June to July. Larval food plant in Aksu-Dzhabagly Natural Reserve: *Hedysarum* sp.

A. phyllides (Staudinger, 1886). - Stett. Ent. Ztg., 47:225.

Type locality: [Ferghana Valley, Uzbekistan].

Distribution. S. Turan, Pamirs-Alai, Tien Shan; in Kazakhstan: SE area.

Habitat and biology. Different types of arid biotopes with xerophytic vegetation from lowlands up to 2,400 m a.s.l. in the mountains. Flight period: June - July, the end of September. Larval food plant in Kopet-Dagh and N. Tien Shan: *Hedysarum* spp. (Zhdanko, 1997).

A. magnificus (Grum-Grzhimailo, 1885). - Romanoff, Mem. Lep., 2:232.

Type locality: [Alaisky Mts., Tajikistan].

Distribution. Ghissar, Alai, Darvaz, W. Tien Shan; in Kazakhstan: Kirghizsky and Talassky Alatau Mts. Ranges.

Habitat and biology. Stony steppe and/ or dry biotopes from 1000 to 2,500 m a.s.l. Flight period: from May to August in 2 broods. Larval food plant in W. Tien Shan: *Onobrychis grandis* (Zhdanko,1997).

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Резюме

Жданко А.Б. Аннотированный список видов семейства Lycaenidae (Lepidoptera) Казахстана.

Аннотированный список голубянок (Lycaenidae) включает 115 видов, относящихся к 49 родам и 3 подсемействам. Он составлен на материалах, собранных автором за 25 лет. Для каждого вида указывается первоисточник, а также типовая местность, сведения по биологии, фенологии и распространению.