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The general distribution of *Orthoptera* in the eastern parts of the Saharan-Gobian and Scythian Subregions

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Abstract. The biogeographical problems concerning the distribution and diversity of the *Orthoptera* in Central Asia are discussed. The regionalization scheme is presented for the eastern parts of the Saharan-Gobian and Scythian Subregions of the Palaearctic. New synonyms: *Thrinchini* STAL (= *Thrinchinae* YIN); *Mekongianina* KEVAN & AKBAR (= *Mekongiellinae* YIN); *Eyprepocnemidini* BRUNNER VON WATTENWYL (= *Habrocneminae* YIN); *Bryodemini* BEY-BIENKO (= *Bryodeminae* YIN); *Bryodemini* BEY-BIENKO (= *Bryodemellinae* YIN); *Arcypterini* SHUMAKOV (= *Arcypterinae* YIN); *Hypernephini* L. MISTSHENKO (= *Asoninae* YIN); *Hypernephini* L. MISTSHENKO (= *Dysaneminae* YIN); *Sphingonotini* SHUMAKOV (= *Orinhippinae* YIN).

Key words: distribution, zoogeography, *Orthoptera*, Palaearctic, regionalization, diversity, endemism.

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In this paper, I use the traditional Russian geographical term "Central Asia". It is the arid and subarid part of Inner Asia, mainly within the state frontiers of China and Mongolia. It is in fact a very readily distinguished territory of Eurasia, because it is characterized by maximum precipitation in the middle of summer, the generally low level of precipitation, rather cold winter and hot summer. Monsoons reach part of it and bring abundant summer rainfall (see CHANG D. 1983). As a result, there are various arid and subarid landscapes (different types of plain and montane deserts, semi-deserts, and steppes), which are very suitable habitats for many *Orthoptera*, especially grasshoppers and some katydids. And what is important, this region is mainly mountainous. Very high mountains surround huge intermountane basins situated on the high plateaus of Mongolia, Tuva and China. These conditions favour speciation, and so sometimes significant biological diversity and coexisting forms of different origin can be observed here.

The main aim of this article is to discuss some taxonomic and biogeographical problems connected with biological diversity in the eastern parts of the Saharan-Gobian and Scythian subregions. I deliberately exclude the Russian and Kazakhstan parts of these deserts, semi-deserts and steppes (see Fig. 1) because they have been described before (SERGEEV 1992, 1993). So only the eastern part of the Turanian Province, the southern parts of the Sarmathian and Russian-Siberian

provinces are included in this paper. Besides, I do not discuss the eastern part of the Dongbei Province, which may be characterized by the colonization of Manchurian *Orthoptera*.

It should be noted that this region has been very poorly investigated. But some old works (e.g., BEY-BIENKO 1930; CHANG 1937; UVAROV 1943 et al.) and especially new data presented by Chinese orthopterists (CHENG & HANG 1974; HUANG et al. 1981; KANG et al. 1990; LI et al. 1990; MA et al. 1991; YIN 1984 et al.) allow us tentatively to describe the pattern of the orthopteran distribution, to evaluate the regionalization scheme, and to discuss some biogeographical problems linked with this region and its neighbours.

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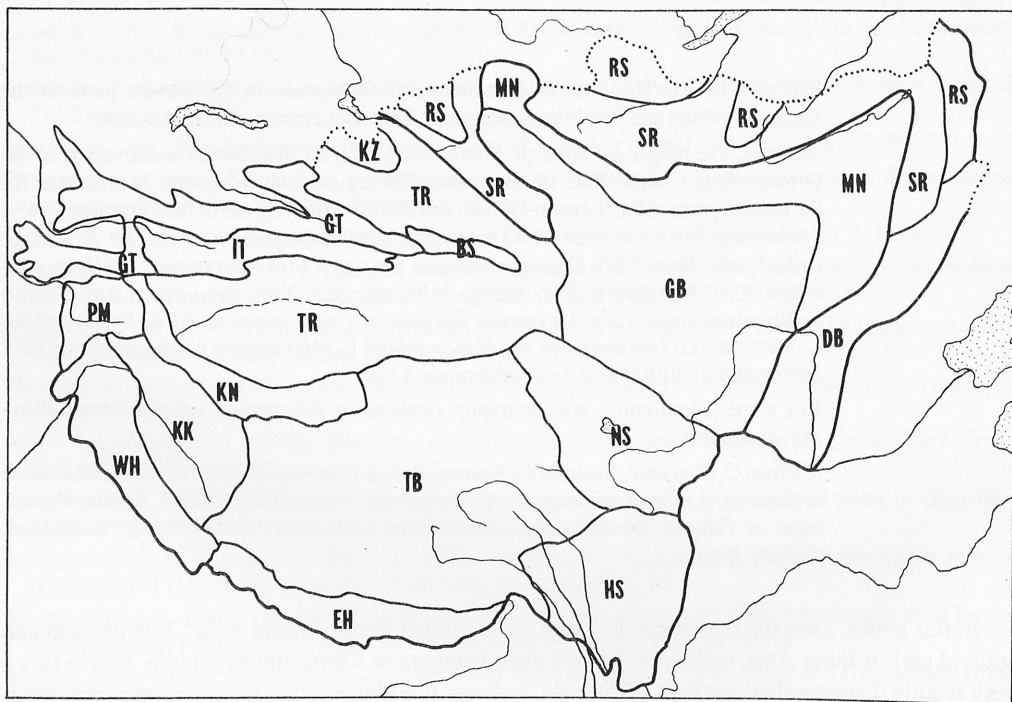


Fig. 1. Zoogeographical provinces of Central Asia (see text).

TAXONOMIC NOTES

Unfortunately, the last proposals of some Chinese orthopterologists (YIN 1982, 1984 et al.) seriously disagree with the traditional understanding of the orthopteran taxonomy both by the European school (I mean UVAROV, DIRSH and their followers) and by the Russian one (BEY-BIENKO, MISTSHENKO, STOROZHENKO et al.). HSIUNG (1987) soon criticized YIN's proposals for the taxonomy of Chinese grasshoppers, too.

I do not want to discuss the ranks of and relations between different taxa here, because this problem is too complicated. For example, the division of the *Acrididae* into subfamilies and tribes

is still unsatisfactory (INGRISCH 1989). Now we can observe some significant distinctions between the European, Russian and American systems of *Orthoptera*. As a result, the tribes in the Russian system resemble the corresponding subfamilies of the European system. In accordance with the Russian tradition, I think that the tribal rank is very suitable and useful for the *Orthoptera* taxonomy. Generally, however, these systems are more or less similar. On the contrary, the taxonomic proposals of the Chinese orthopterists are not trivial.

Recently YIN (1982, 1984) has described some new subfamilies. Most of them are the evident synonyms of the well-studied groups. Some Chinese authors (CHANG, CHIN 1965; YIN 1984 et al.) have also described many new genera and species. Among them there are some synonyms too. Unfortunately, it is impossible to discuss their status without type studies. Besides, their full descriptions are in Chinese. So a general revision of all the Central Asian *Orthoptera* on the basis of type studies is really needed.

It should be noted that YIN often used wing absence as the basis for erecting new taxa. On the contrary, UVAROV (1943) emphasized that some completely apterous genera are certainly secondary phenomena.

MISTSHENKO & STOROZHENKO (1990) and STOROZHENKO (1991, 1993) have suggested the following synonymy:

Oxyini BRUNNER VON WATTENWYL (= *Gesonulini* USMANI & SHAFEE);

Oxyini BRUNNER VON WATTENWYL (= *Caryandinae* YIN & LIU);

Tristriini TINKHAM (= *Spatosterninae* YIN);

Melanoplini SCUDDER (= *Parapodisminae* INOUE);

Mecostethini HEBARD (= *Ceracrinae* YIN).

Actually some taxa being described by YIN (1982, 1984) are simply objective synonyms of early erected groups:

Thrinchini STAL (= *Thrinchini* YIN, syn.n.). The status of *Thrinchini* was discussed by UVAROV (1943). It should be added that this name is a senior synonym of *Akicerini* I. BOLIVAR. And so if this group is an integrated taxon (a subfamily or a tribe) the first name should be preferably used.

Arcypterini I. BOLIVAR (= *Arcypterinae* YIN, syn.n.);

Bryodemini BEY-BIENKO (= *Bryodeminae* YIN, syn.n.).

The only significant difference between the genus *Mekongiella* KEVAN and the other allied genera (*Yunnanites* UVAROV and *Mekongiana* UVAROV) is absence of wing. General organization and phallic structures of these genera are very similar (KEVAN 1966), and so *Mekongianina* KEVAN & AKBAR (= *Mekongiellinae* YIN, syn.n.).

The same is true of the *Habrocneminae* YIN, 1982 and *Orinhippinae* YIN, 1982 only that the genus *Habrocnemis* UVAROV differs from the allied groups in its short lateral wings. So *Eyprepocnemidini* JACOBSON (= *Habrocneminae* YIN, syn.n.). The genus *Orinhippus* UVAROV is evidently an aberrant high montane member of the *Sphingonotini* (see BEY-BIENKO 1951). It clearly resembles some *Sphingonotus* FIEBER, and only because its lateral wings was recognized as a new separate species. I suggest therefore that *Sphingonotini* SHUMAKOV (= *Orinhippinae* YIN, syn.n.).

YIN (1982, 1984) includes *Hypernephia* UVAROV, *Dysanema* UVAROV and allied genera in the subfamily *Dysaneminae*. Earlier MISTSHENKO (1973) suggested the name *Hypernephini* for this group. As a result, *Hypernephini* MISTSHENKO (= *Dysaneminae* YIN, syn.n.). YIN (1984) separated the subfamilies *Dysaneminae* and *Asoninae* on the basis of the developmental state of the tympanum. Actually this feature is unsatisfactory for the differentiation of subfamilies or tribes. Therefore, *Hypernephini* MISTSHENKO (= *Asoninae* YIN, syn.n.).

YIN (1982, 1984) has erected a new subfamily, *Bryodemellinae*, including the new genus *Bryodemella* YIN, for *Bryodema holdereri* and allied species. The only reason for its erection was the absence of the intercalary vein in the discoidal area of the elytra. The other features of *Bryodema* and *Bryodemella* are too close (BEY-BIENKO 1930; e.g., see also the key to subfamilies – YIN 1984) and may be very polymorphic. Really some species of the genus *Bryodema* (including *Bryodema holdereri*) are very variable in intercalary vein's presence (BEY-BIENKO 1930). In some cases, the sexual dimorphism can be observed (BEY-BIENKO 1930, 1951). As a result, the following synonymy should be evaluated: *Bryodemini* BEY-BIENKO (= *Bryodemellinae* YIN, syn.n.) and *Bryodema* FIEBER (= *Bryodemella* YIN, syn.n.).

Recently, I have supported an old proposal (UVAROV 1943) to erect a new tribe, *Haplotropini*, for the genus *Haplotropis* SAUSSURE (SERGEEV 1993). This genus agrees with the *Pamphagini* s.str. in the structure of the vertex and pronotum, but the second vannal vein of the hind wing is curved, thickened and well developed. As a result, it resembles the *Thrinchini* too. The genus *Sulcotropis* YIN & CHOU from the Qinling Mts should be included in this tribe.

Some genera are also synonymous with the old genera:

Conophyma ZUBOVSKY [= *Conophymopsis* HUANG (SERGEEV 1988a)];

Rhinopodisma MISTSHENKO [= *Aserratus* HUANG (STOROZHENKO 1993)];

Sikkimiana UVAROV [= *Serrifemora* LIU (INGRISCH 1990)].

I think that the species described in the genera *Chorthippus*, *Glyptobothrus*, and *Omocestus* create some problems. It is often impossible to determine their true generic position using short descriptions without type studies.

BIOLOGICAL DIVERSITY

The complicated environment of Central Asia proper is very favorable for many *Orthoptera*. As a result, there are many specific centers of *Orthoptera* diversity and endemism (see Table I), where, what is important, some tribes, subtribes, and generic groups have probably originated. Among these are *Deracanthinae*, *Hypernephini*, *Bryodemini*, some groups of *Drymadusini*, *Gomphomastacinae* and *Melanoplini*, the so-called *Filchnerellae* group of the *Pamphagidae* (UVAROV 1943).

They are mainly connected with xerophytic vegetation (plain and mountain steppes, stone deserts, and semi-deserts) – *Deracanthini*, *Drymadusini*, *Filchnerellae*, *Hypernephini* (partly), *Bryodemini*, or with montane cold meadows (other *Hypernephini* and *Melanoplini*). Accordingly, the former grow both in mountains and in plain biotopes, the latter are limited to the high mountains only.

Some other taxa are distributed rather widely, but have endemic genera and species in this region (*Platycleidini*, *Gryllini*, *Sphenariini*, *Chrysochraontini*, *Gomphocerini*, *Epacromiini*, *Sphingonotini* et al.). Often they are connected both with the local mountains and with high plateaus, too.

Other groups are observed near the outer boundaries of the region. Such a situation is very typical of groups associated with humid and warm landscapes. The tropic and subtropic groups inhabit places at low altitudes in the Himalayas and Hengduanshan. Among them there are *Letanini*, *Trigonidiinae*, *Scelemeninae*, *Cyrtacanthacridini*, *Catantopini*, and some other taxa.

Therefore, Central Asian mountain fauna resembles that of Middle Asia: the main centres of diversity and endemism are connected with outer (marginal) mountains (SERGEEV 1988a). Thus, the Tibetan plateau is surrounded by some provinces with a high level of diversity and endemism. Besides, there are many taxa associated mainly with the neighbouring regions. It is especially

interesting that in the southern parts of the Saharan-Gobian Subregion some tropical forms may be observed at low altitudes.

Finally, it should be noted that the type localities of some species (*Bryodema brunnerianum* SAUSSURE, *Paraconophyma* spp., *Eclipophleps xinjiangensis* LIU) are not known.

REGIONALIZATION

Recently, I have suggested a general scheme of regions for North and Central Asia on the basis of an analysis of ranges (SERGEEV 1992, 1993). It has been proved that the *Orthoptera* fauna of the mountains of Middle Asia is not an integral unity and is generally closer to the Near East fauna than to the Central Asian fauna proper.

Here I want to add some new provinces (Fig. 1). One of them (East Himalayan) includes the high mountains of Nepal, Sikkim, Buthan and the southern part of Tibet (Xizang) (generally – the whole eastern part of the Himalayas). The main reason for this division is the high level of local endemism. Some endemic genera (*Hypernephia*, *Dysanema*, *Orinhippus* et al.) and many endemic species inhabit this part of Central Asia. BEY-BIENKO (1968) emphasized an important distinction between the western and eastern parts of the Himalayas. He remarked that in the eastern part some typical Palaearctic forms occupy high-lying places only. As a result, my scheme partly resembles some of the proposals for the Xizang flora (LI & WU 1983).

Another new province (Dongbei) is situated in the eastern part of the Scythian Subregion, where there are many Manchurian and subtropical forms.

The boundary between the Palaearctic and Oriental Regions may be altitudinal (AVINOV 1913; see also SERGEEV 1988b). I think that the pattern is actually more complicated. In the northern parts of the territory explored, the boundaries between plain and mountainous faunistic regions usually coincide with the geomorphological line of junction of local piedmont plains with mountain slopes (SERGEEV 1988b, 1992). In the southern parts, the situation is supposed to be more complicated. Really, this junction seems to limit some tropical plain species. The typical Palaearctic forms inhabit the upper altitudinal belts, which are connected with the high arid and subarid plateaus of Tibet, Ladakh and the Pamirs (AVINOV 1913; HUANG et al. 1981; YIN 1984). The middle belts of the Chitral and West Himalayas are usually settled by a specific conglomeration of Middle Asian (including montane), subtropical and tropical *Orthoptera*. The same belts in the East Himalayas are mainly occupied by some so-called Sino-Himalayan (Orthrian) forms. So I tentatively propose to place the lower boundary of the Saharan-Gobian Subregion in the southern parts of the Himalayas, Tibet, and Hengduanshan at an altitude of 2000 m. The boundary between the Palaearctic and Oriental Regions seems to be situated near 1000 m a.s.l. Therefore, in the West Himalayas, all the altitudinal belts perhaps belong to the Palaearctic (the Saharan-Gobian Subregion proper). On the contrary, in the East Himalayas, South Tibet and Hengduanshan, the lower belts should be included in the Oriental Region, the middle ones – in the Orthrian Subregion of the Palaearctic, and the upper ones – in the Saharan-Gobian Subregion. Certainly, the study of the distribution of species settlement along altitudinal transects is needed for the conclusive solution of this problem.

The following provinces are proposed here (Fig. 1):

The Scythian Subregion

(RS) – the Russian-Siberian Province is mainly situated in Russia and reaches the Hungarian Plain in the west;

(SR) – the Sarmathian Province is connected with the steppe zone proper; some of its parts cover the northern territories of Mongolia and China;

(DB) – the Dongbei Province includes the eastern part of the Subregion and is connected with the southward bend of the steppe zone (CHANG D. 1983); there are many Manchurian and even subtropical forms in this province;

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(KZ) – the Kazakhstan Province includes a narrow belt along the south-western slope of the Mongolian Altai Mountains;

(MN) – the Mongolian Province;

(TR) – the Turanian Province – embraces Dzungaria and Kashgaria; Dzungaria lies in the western part of Central Asia and receives some of the Mediterranean (Atlantic proper) subtropical air masses; this copious spring rains and has led to the development of vegetation with spring-om-brophilous formes (CHANG 1983);

(GB) – the Gobian Province;

(GT) – the Gissar-Tien Shan Province;

(PM) – the Pamirian Province;

(IT) – the Inner Tien Shan Province;

(BS) – the Bogda Shan Province;

(KN) – the Kunlun Province;

(KK) – the Karokoram Province;

(WH) – the West Himalayan Province;

(NS) – the Nan-Shan Province – AVINOV (1913) emphasized the similarity of the Mongolian and Northern Tibetan faunas;

(TB) – the Tibetan Province;

(EH) – the East Himalayan Province;

(HS) – the Hengduanshan Province is situated on the border of the subtropical evergreen broad-leaved forests (e.g. see CHANG 1983); perhaps this territory should be included in the Orthrian Subregion.

Of course, this scheme is tentative. The boundaries and ranks of some regions should be revised but more investigation is needed for carrying out this revision. Despite a preliminary character of my proposals, I think that they may be useful for further studies including collecting and analyzing new ecological and biogeographical data in these regions. I will be pleased with any critical remarks and suggestions as to the solution of the problems discussed.

ADDENDUM

After finishing this article, I have got opportunities to study a few old papers (BOLIVAR, 1914; UVAROV, 1921; CHOPARD & DREUX 1966). Some new important works have been published recently (JIN, XIA, 1994). So I can made some data more accurate.

(1) The group *Arcypterae* was erected by BOLIVAR in 1914 (BOLIVAR, 1914; UVAROV, 1921).

(2) The following species should be added to the species list in the Table I:

– *Dreuxia incerta* CHOPARD & DREUX, 1966 (*Decticini*) – for the East Himalayan Province;

– *Plicigera himalayana* UVAROV, 1923 (*Ctenodecticini*) – for the West Himalayan Province;

– *Hyphinomos svenhedini* RAMME, 1950 (*Onconotinae*) seems to be the member of the orthopteran fauna of the Tibetan Province;

– *Melanogryllus carmichaeli* (CHOPARD, 1928) (*Gryllinae*) – for the East Himalayan Province.

(3) The group *Sphingonoti* was erected by H. B. JOHNSTON (1956).

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Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>Drymadusini</i>																		
<i>Lithoxenus grandis</i> (TARBINSKY, 1930)	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<i>L. nigrofasciatus</i> PRAVDIN, 1979	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<i>L. heptapotamicus</i> (PYLNOV, 1911)	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-
<i>L. miramae</i> (VELTISTSEV, 1940)	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<i>Bergiola balchaschica</i> (STSELKANOVITZEV, 1907)	-	-	-	-	?	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>B. hissarica</i> BEY-BIENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Eulithoxenus mongolicus</i> (UVAROV, 1928)	-	L	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Eu. emeljanovi</i> MISTSHENKO, 1968	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Bienkoxenus mongolicus</i> MISTSHENKO 1968	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>B. gobiensis</i> (BEY-BIENKO, 1951)	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>B. transaltaicus</i> PODGORNAYA & GOROCHOV, 1989	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>B. beybienkoi</i> (STEBAEV, 1964)	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Uvarovina chinensis</i> RAMME, 1936	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>U. daurica</i> (UVAROV, 1928)	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Tadzhikia pavlovskii</i> MISTSHENKO, 1952	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>T. beybienkoi</i> MISTSHENKO, 1952	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ceraocercus fuscipennis</i> UVAROV, 1910	-	-	-	+	-	+	-	+	+	+	-	-	-	-	-	-	-	-
<i>Drymadusella hissarica</i> (MISTSHENKO, 1952)	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ferganusa hemiptera</i> UVAROV, 1926	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Calopterus panirica</i> STOLYAROV, 1969	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
<i>C. mistshenkoi</i> SERGEEV & POKIVAILOV, 1992	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Mongolodectes kiritshenkoi</i> (MIRAM, 1929)	-	-	-	-	?	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>M. kaszabi</i> BAZYLUK, 1972	-	-	-	-	?	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>M. alashanicus</i> BEY-BIENKO, 1951	-	-	-	L	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Atlanticus sinensis</i> UVAROV, 1924	-	-	-	L	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>A. brunneri</i> (PYLNOV, 1914)	L?	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-

[illegible]

Glyphonotinae

[illegible]

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>G. coniciplicus</i> UVAROV, 1914	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>G. alactaga</i> MIRAM, 1925	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
Onconotinae																		
<i>Hyphinomos fasciata</i> UVAROV, 1921	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	?	-	-
Conocephalinae																		
Conocephalini																		
<i>Conocephalus discolor</i> THUNBERG, 1815	+	+	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. dorsalis</i> (LATREILLE, 1804)	L	L	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. beybienkoi</i> STORozHENKO, 1981	L	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. chinensis</i> (REDTENBACHER, 1891)	-	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. japonicus</i> (REDTENBACHER, 1891)	-	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copiphorini																		
<i>Ruspolia nitidula</i> (SCOPOLI, 1786)	-	-	L	-	?	-	?	-	-	-	-	-	-	-	-	-	-	-
MIMNERMIDAE																		
Anabropsinae																		
<i>Apteranabropsis miser</i> (BEY-BIENKO, 1968)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
RHAPHIDOPHORIDAE																		
<i>Diastrammena unicolor</i> BRUNNER VON WATTENWYL, 1888	-	-	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GRYLLACRIDIDAE																		
Gryllacridinae																		
<i>Diaphanogryllacris aequalis</i> (WALKER, 1859)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
GRYLLIDAE																		
Gryllinae																		
Gryllini																		
<i>Gryllus bimaculatus</i> DEGEER, 1773	L	-	-	L	-	L	-	-	-	-	-	-	-	L	-	-	-	-
<i>Tugainus dreuxi</i> (CHOPARD, 1966)	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-
<i>Melanogryllus desertus</i> (PALLAS, 1771)	-	+	-	+	+	+	+	+	+	+	-	-	-	-	-	?	L	-
<i>M. conscutus</i> (WALKER, 1869)	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>Tartarogryllus tartarus</i> (SAUSSURE, 1874)	-	-	-	-	-	?	-	+	-	-	-	-	-	-	-	-	-	-
<i>Modicogryllus frontalis</i> (FIEBER, 1845)	-	+	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
<i>Eumodicogryllus burdigalensis</i> (LATREILLE, 1804)	-	L	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
<i>Promodicogryllus bucharicus</i> (BEY-BIENKO, 1933)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-
<i>Gryllodinus kerkennensis</i> (FINOT, 1893)	-	-	-	?	?	?	?	-	-	-	-	-	-	-	-	-	-	-
<i>Turanogryllus lateralis</i> (FIEBER, 1853)	-	-	-	-	-	+	?	+	-	-	-	-	-	-	-	-	-	-
<i>T. stolyarovi</i> GOROCHOV, 1986	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>Teleogryllus infernalis</i> (SAUSSURE, 1877)	-	-	L	-	-	-	L	-	-	-	-	-	-	-	-	-	-	-
<i>T. emma</i> (OHMACHI & MATSUURA, 1951)	-	-	+	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-
<i>Cophaphonus kozłovi</i> MISTSHENKO, & GOROCHOV, 1981	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Loxoblenmus doenitzi</i> (STEIN, 1881)	-	-	-	-	-	-	L	-	-	-	-	-	-	-	-	-	-	-
<i>Velarifictorus nepalicus</i> BEY-BIENKO, 1968	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>V. flavifrons</i> CHOPARD, 1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Conoblenmus saussurei</i> ADELUNG, 1910	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-
<i>C. hedini</i> CHOPARD, 1933	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-
<i>C. acutifrons</i> CHOPARD, 1936	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>Goniogryllus potanini</i> BEY-BIENKO, 1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Nemobiinae</i>																		
<i>Pteronemobiini</i>																		
<i>Pteronemobius heydeni</i> (FISCHER, 1853)	-	-	L	-	-	-	L	+	-	-	-	-	-	+	-	-	-	-
<i>P. nitidus</i> (BOLIVAR, 1901)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	?
<i>P. neimongolensis</i> KANG & MAO, 1990	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>Dianemobius fascipes</i> (WALKER, 1869)	+	+	+	-	-	-	-	-	-	-	-	-	-	-	L	-	L	?
<i>D. furungensis</i> (OHMACHI & FURUKAWA, 1929)	-	-	L	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>D. csikii</i> (BOLIVAR, 1910)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	?
<i>D. rufipes</i> (CHOPARD, 1969)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-
<i>Polionemobius taprobanensis</i> (WALKER, 1869)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	L	L

[illegible]

[illegible]

[illegible]

Haplotropini

[illegible]

Species		RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
ACRIDIDAE																			
Catantopinae																			
Dericorythini																			
<i>Dericorys annulata</i> (FIEBER, 1853)	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-
<i>D. tibialis</i> (PALLAS, 1773)	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
Egnatiini																			
<i>Egnatioides desertus</i> UVAROV, 1926	-	-	-	?	-	-	?	-	-	-	-	-	-	-	-	-	-	-	-
<i>E. xinjangensis</i> LIU, 1983	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>Egnatius apicalis</i> STAL, 1876	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-
<i>Ferganacris mushketovi</i> SERGEEV & BUGROV, 1988	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
Coptacriini																			
<i>Coptacra minuta</i> BEY-BIENKO, 1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Apalacris varicornis</i> (WALKER, 1870)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	-
Oxyini																			
<i>Oxya hyla</i> AUDINET SERVILLE, 1831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	L	-
<i>O. fuscovittata</i> (MARSCHALL, 1836)	-	-	-	-	-	-	-	-	L	-	-	-	-	-	-	-	-	-	-
<i>O. velox</i> (FABRICIUS, 1787)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	L	-
<i>O. chinensis</i> (THUNBERG, 1815)	-	-	+	-	-	-	-	L	-	-	-	-	-	-	-	-	-	-	-
<i>Oxyina bidentata</i> (C.WILLEMSE, 1925)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	-
<i>Caryanda gyirongensis</i> HUANG, 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
Tropidopolini																			
<i>Tropidopola daurica</i> UVAROV, 1926	-	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Teratodini																			
<i>Kabulia nuristana</i> RAMME, 1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Tristriini																			
<i>Spathosternum prasiniferum</i> (WALKER, 1871)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	L	L
Hieroglyphini																			
<i>Hieroglyphus banian</i> (FABRICIUS, 1798)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	L

[illegible]

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>C. egregium</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. zachvatkini</i> PRAVDIN, 1969	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. prasinum</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. armatum</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. badium</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. nigrescens</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. fuscum</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. olsuffevi</i> MISTSHENKO, 1937	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. dumale</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. petrosus</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. laudanense</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. comatum</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. saxatile</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. pylhovi</i> UVAROV, 1925	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. xerophilum</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. plotnikovi</i> UVAROV, 1925	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. berezhkovi</i> BEY-BIENKO, 1948	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. maracandicum</i> MISTSHENKO, 1950	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. sinile</i> ZUBOVSKY, 1899	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. kusnezovi</i> UMINOV, 1931	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-
<i>C. reinigi</i> (RAMME, 1930)	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<i>C. labrispinum</i> (HUANG, 1983) comb.n.	-	-	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-
<i>C. linguspinum</i> (HUANG, 1983) comb.n.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. sokolowi</i> ZUBOVSKY, 1899	-	-	-	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-
<i>C. jacobsoni</i> UVAROV, 1925	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
<i>C. nitens</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
<i>C. virgatum</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
<i>C. dirshi</i> BEY-BIENKO, 1948	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-

[illegible]

Species		RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>K. nigrofemora</i> YIN, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>K. bicollina</i> YIN, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>K. magna</i> YIN, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>Eokingdonella gentiana</i> (UVAROV, 1939)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>E. tibetana</i> (MISTSHENKO, 1952)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>E. chengtunica</i> YIN, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>E. kaulbacki</i> (UVAROV, 1939)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Conophymacris chinensis</i> C. WILLEMSE, 1933		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Rhinopodisma assama</i> (UVAROV, 1930)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>R. eminiifronta</i> HUANG, 1981		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Anepipodisma punctata</i> HUANG, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Curvipennis wixiensis</i> HUANG, 1984		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Cyrtacanthacridini</i>																			
<i>Anacridium aegyptium</i> (LINNAEUS, 1764)		-	-	-	-	-	?	-	+	-	-	-	-	-	-	-	-	-	-
<i>Schistocerca gregaria</i> FORSKAL, 1779		-	-	-	-	-	-	-	M	M	-	-	-	-	M	-	-	M	-
<i>Cyrtacanthacris japonica</i> (BOLIVAR, 1898)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	?
<i>C. humilis</i> (BI, 1985)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Chondracris rosea</i> (DEGEER, 1773)		-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	-
<i>Pachyacris vinosa</i> (WALKER, 1870)		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	L	-
<i>P. violascens</i> (WALKER, 1870)		-	-	-	-	-	-	-	-	-	-	-	-	-	L	-	-	-	-
<i>Calliptamini</i>																			
<i>Calliptamus abbreviatus</i> IKONNIKOV, 1913		+	+	+	-	+	-	+	-	-	-	-	-	-	-	+	+	-	-
<i>C. turanicus</i> TARBINSKY, 1930		-	-	-	L	-	+	-	+	-	-	-	-	-	-	-	-	-	-
<i>C. italicus</i> (LINNAEUS, 1758)		-	-	-	+	-	+	-	+	+	+	-	-	-	-	+	-	-	-
<i>C. barbarus</i> (COSTA, 1836)		?	+	+	+	+	+	+	+	+	+	-	-	-	+	+	+	-	-
<i>C. coelestyriensis</i> (GIGLIO-TOS, 1893)		-	-	-	+	-	+	-	+	+	+	-	-	-	-	-	-	-	-
<i>C. brachypterus</i> (DIRSH, 1954)		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>Sphodromerus undulatus</i> (KIRBY, 1914)		-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-

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Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>Mesaspippus kozhevnikovi</i> (TARBINSKY, 1925)	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-
<i>M. geophilus</i> (BEY-BIENKO, 1948)	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>Pezohippus callosus</i> (UVAROV, 1926)	-	-	-	-	-	-	-	L	-	-	-	-	-	-	-	-	-	-
<i>P. biplatus</i> KANG & MAO, 1990	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Stauroderus scalaris</i> (FISCHER DE WALDHEIM, 1846)	+	+	-	+	-	+	-	+	+	+	-	-	-	-	-	-	-	-
<i>Megaulacothrus aethalinus</i> (ZUBOVSKY, 1899)	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. chinensis</i> (TARBINSKY, 1927)	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>M. flexivensus</i> (LIU, 1981)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>M. rufitibis</i> (ZHENG, 1989) comb.n.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>Glyptobothrus brunneus</i> (THUNBERG, 1815)	?	?	?	?	?	?	?	?	?	?	-	-	-	-	?	?	?	-
<i>G. biguttulus</i> (LINNAEUS, 1758), s.l.	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	+	-	-
<i>G. mollis</i> (CHARPENTIER, 1825)	+	+	-	+	-	-	-	+	-	-	-	-	-	-	?	?	-	-
<i>G. dubius</i> (ZUBOVSKY, 1898)	+	+	+	+	+	-	+	-	-	-	-	-	-	-	+	+	-	-
<i>G. hemipterus</i> (UVAROV, 1926)	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-
<i>G. amplintersitus</i> (LIU, 1981) comb.n.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>G. hsiat</i> (CHENG & TU, 1964)	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	+	-	-
<i>G. yulingensis</i> (CHENG & TU, 1964)	-	-	+	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-
<i>G. albonemus</i> (CHENG & TU, 1964)	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-
<i>G. muktinathensis</i> (BALDERSON & YIN, 1987) comb.n.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>G. bellus</i> (ZHANG & YIN, 1985) comb.n.	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>G. hingstoni</i> (UVAROV, 1925)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>G. dierli</i> INGRISCH, 1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>G. caporiaccoi</i> (SALFI, 1934) comb.n.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Chorhippus vagans</i> (EVERSMANN, 1848)	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-
<i>Ch. indus</i> UVAROV, 1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>Ch. uvarovi</i> (BEY-BIENKO, 1926)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. tibetanus</i> UVAROV, 1935	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. chayensis</i> YIN, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+

[illegible]

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>Ch. maracandicus</i> MISTSHENKO, 1979	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. badius</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. plotnikovi</i> UMNNOV, 1931	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. pavlovskii</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. jachontovi</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. jacobsoni</i> (IKONNIKOV, 1911)	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. almoranus</i> UVAROV, 1942	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
<i>Ch. bucharius</i> BEY-BIENKO, 1948	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. curtus</i> MISTSHENKO, 1951	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. pascuus</i> UMNNOV, 1931	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. chaglutunensis</i> YIN, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
<i>Ch. louguanensis</i> CHENG & TU, 1964	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. markamensis</i> YIN, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Ch. aroliamulus</i> XIA & JIN, 1982	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+
<i>Ch. breviteris</i> YIN, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Ch. separatanus</i> LIU, 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Ch. qinghaiensis</i> WANG & ZHENG, 1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
<i>Ch. flavoabdomenis</i> LIU, 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Ch. huchengensis</i> XIA & JIN, 1982	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. conicaudatus</i> XIA & JIN, 1982	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. unicusbitus</i> XIA & JIN, 1982	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
<i>Ch. foveatus</i> XIA & JIN, 1982	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. occidentalis</i> XIA & JIN, 1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ch. nepiopennis</i> XIA & JIN, 1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ch. gongbuensis</i> LIANG & ZHENG, 1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ch. rubensabdomenis</i> LIU, 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ch. deginensis</i> LIU, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ch. fallax</i> (ZUBOVSKY, 1900)	+	+	-	-	+	-	+	-	-	-	-	-	-	-	+	-	-	-

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>Ch. parallelus</i> (ZETTERSTEDT, 1821)	-	-	-	?	-	?	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. turanicus</i> TARBINSKY, 1927	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. montanus</i> (CHARPENTIER, 1825)	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. dorsatus</i> (ZETTERSTEDT, 1821)	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ch. dichrous</i> (EVERSMANN, 1859)	-	+	-	+	+	?	?	+	-	-	-	-	-	-	-	-	-	-
<i>Ch. karatavicus</i> BEY-BIENKO, 1936	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	+	-	-
<i>Ch. albomarginatus</i> (DEGEER, 1773)	+	+	+	+	+	+	+	+	-	+	-	-	-	-	-	-	-	-
<i>Ch. angulatus</i> TARBINSKY, 1927	-	-	-	-	-	?	-	+	-	+	-	-	-	-	-	-	-	-
<i>Ch. qingzangensis</i> YIN, 1984	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+
<i>Ch. schmidtii</i> (IKONNIKOV, 1913)	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Euchorthippus pulvinatus</i> (FISCHER DE WALDHEIM, 1846)	-	-	-	+	-	+	-	+	-	+	-	-	-	-	-	-	-	-
<i>E. flexucarinatus</i> B1 & XIA, 1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
<i>E. unicolor</i> (IKONNIKOV, 1913)	-	-	+	-	-	-	L	-	-	-	-	-	-	-	+	+	-	-
<i>E. chenbaensis</i> TU & CHENG, 1964	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>E. cheui</i> HSIA, 1965	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>E. yungningensis</i> CHENG, 1965	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>Mecostethini</i>																		
<i>Stethophyma grossum</i> (LINNAEUS, 1758)	+	+	+	-	+	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>S. therskii</i> IKONNIKOV, 1911	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Mecostethus alliaceus</i> (GERMAR, 1817)	-	?	?	?	-	?	-	+	-	-	-	-	-	-	-	-	-	-
<i>Ceracris xizangensis</i> LIU, 1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
<i>C. nigricornis</i> WALKER, 1870	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	L
<i>C. brevicornis</i> (B1 & XIA, 1985)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Ceracrisoides shannanensis</i> B1 & XIA, 1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-
<i>Epacromiini</i>																		
<i>Epacromius pulverulentus</i> (FISCHER DE WALDHEIM, 1846)	+	+	+	+	+	+	+	+	-	-	-	-	-	+	+	+	-	-
<i>E. tergestinus</i> (CHARPENTIER, 1915)	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	+	-	-

[illegible]

Species	RS	SR	DB	KZ	MN	TR	GB	GT	PM	IT	BS	KN	KK	WH	NS	TB	EH	HS
<i>S. maculatus</i> UVAROV, 1925	-	-	-	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-
<i>S. nigrifemurus</i> HUANG & CHEN, 1981	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-
<i>S. halocnemii</i> UVAROV, 1925	-	-	-	-	-	+	-	L	-	-	-	-	-	-	-	-	-	-
<i>S. rubescens</i> (WALKER, 1870)	-	-	-	+	+	+	+	+	+	+	-	-	-	+	-	-	-	-
<i>S. pilosus</i> SAUSSURE, 1884	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-
<i>S. yenchihensis</i> CHENG & CHIU, 1965	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>S. elegans</i> MISTSHENKO, 1936	-	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-
<i>S. lucidus</i> MISTSHENKO, 1936	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
<i>S. ningsianensis</i> ZHENG & GOW, 1981	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-
<i>S. tsinlingensis</i> CHENG, 1963	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>S. beybienkoi</i> MISTSHENKO, 1936	-	-	-	+	+	+	+	-	-	-	+	-	-	-	+	+	-	-
<i>S. caerulans</i> (LINNAEUS, 1767)	-	-	-	+	-	-	-	L	-	-	-	-	-	-	-	-	-	-
<i>S. coerulipes</i> (UVAROV, 1922)	-	-	-	+	-	-	-	+	-	-	+	-	-	-	-	-	-	-
<i>S. yunnanensis</i> UVAROV, 1924	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>S. eurasius</i> MISTSHENKO, 1936	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>S. kuedensis</i> YIN, 1984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>S. nebulosus</i> (FISCHER DE WALDHEIM, 1846)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-
<i>S. mongolicus</i> SAUSSURE, 1888	-	-	-	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-
<i>S. qinghaiensis</i> YIN, 1984	+	+	+	-	-	-	L	-	-	-	-	-	-	-	-	-	-	-
<i>S. zadaensis</i> HUANG, 1981	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	-	-
<i>S. octofasciatus</i> (AUDINET SERVILLE, 1839)	-	-	+	-	-	+	-	+	+	-	-	-	-	-	-	-	-	-
<i>S. obscuratus</i> (WALKER, 1925)	-	-	-	-	-	+	+	L	-	-	-	-	-	-	-	-	-	-
<i>S. satrapes</i> SAUSSURE, 1884	-	-	-	-	-	-	-	L	-	-	-	-	-	-	-	-	-	-
<i>S. salinus</i> (PALLAS, 1773)	-	-	-	+	+	+	+	-	-	-	+	-	-	-	-	-	-	-
<i>S. balteatus</i> AUDINET SERVILLE, 1839	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>S. tenuipennis</i> MISTSHENKO, 1937	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-
<i>S. kashmirensis</i> UVAROV, 1925	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
<i>S. longipennis</i> SAUSSURE, 1884	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+

