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#1

Philinae were regarded as a subfamily of Vesperidae by P.Svacha (Svacha et al., 1997).

#2

The border line between two subspecies of *Rhagium inquisitor* in East Siberia is not clear. According to Plavilstshikov (1936), the area of *Rh. i. rugipenne* begins from about Baikal Lake. So, it must be represented at least in East Mongolia, while in West Mongolia (Altai and southwards Tuva) *Rh. i. inquisitor* is distributed.

Only *Rh. i. rugipenne* was recorded for Mongolia by Namhaidorzhan (1972).

#3

Genus *Brachyta* is divided (Danilevsky,) in three subgenera including:
Brachyta (Fasciobrachyta) Danilevsky, 2014e: 113 type species: *Leptura bifasciata* Olivier, 1795)
Brachyta (Variobrachyta) Danilevsky, 2014e: 117 type species: *Leptura variabilis* Gebler, 1817)

Brachyta bifasciata plasoni (Breit, 1915) was recorded from from Mongolia-China border ("Inner Mongolia, 20 km NE Arxan [47°11'N, 119°57'E] 1200m 30.6.2008 Floriani & Saldaitis").

Brachyta variabilis sinuatolineata (Pic, 1915) [= *discobilineata* Pic, 1928c = *breiti* Tippmann, 1946] was accepted (Danilevsky, 2014b) for South-East Sayans in Buryatia and Mongolia. The taxon was recorded for Mongolia by Danilevsky (1998, as *B. breiti*).

B.v. striatiformis (Gebler, 1817) was accepted (Danilevsky, 2014b) for Mongolia only.

B.v. tuvensis Danilevsky, 2014e was described from Tuva.

B.v. scapularis (Mannerheim, 1849) was accepted (Danilevsky, 2014b) from Baikal to about Khabarovsk Region.

Brachyta interrogationis is represented in Mongolia by *B. i. mannerheimii* (Motschulsky, 1860).

#4

Nivellia extensa was recorded for Mongolia by Janovsky (1980).

#5

Anoplodera rufiventris was transformed to *Xestoleptura* by Miroshnikov (1998).

#6

Pachytodes orthotrichus was recorded for Mongolia Lobanov et al. (1981) without any comments. Later (Namkhaidorzhan, 1982) the exact data were published: "Bayan-Ulegey aimak, 20km NW Bulgan, 4.7.1980, M.Kozlov leg."

Pachytodes erraticus known up to Enisey eastwards is rather probable for Mongolia.

#7

The record of *Pidonia puziloi* for Mongolia (Lobanov et al., 1981) is rather doubtful.

The reasons for supposition of *Dokhtouroffia nebulosa* for Mongolia (Lobanov et al., 1981) are not clear.

#8

Niisato (1994) recorded *Necydalis major aino* for Mongolia.

#9

According to Hayashi (1979), *Asemum punctulatum* is represented in Mongolia.

#10

Atimia maculipuncta was recorded for Mongolia (as *Myctus*) by Lindeman and Lyamtseva (1979).

#11

Asias tuvensis seems to be never recorded for Mongolia. I've got two males of *Asias tuvensis* from Mongolia: "North Mongolia, Zuun-Erzu, 5.8.63", another locality is not readable ("5.8.62").

#12

Asias gobiensis Namhaidorz, 1973 was compared with *Asias degener* (Semenov, 1907) described from Tsaidam - a big area in China westwards from Kuku-Nor Lake. The species was never recorded for Republic of Mongolia, but absent in Gressitt's (1951) monograph on China.

#13

Amarysius duplicatus, described from Salair Mts. (near Novosibirsk) and Tuva, was recorded for Far East Russia (Amur Region and Primorsky Region) by Danilevsky (1998a) and so must be distributed in East Siberia, North China and probably in Mongolia. Two males and a female from Kazakhstan (Ust-Kamenogorsk env.) are represented in my collection. Here both *Amarysius* species occur sympatrically.

#14

I do not have any *Amarysius* from Mongolia, but my *Amarysius altajensis* from Buryatiya and Chita region are similar to Far East specimens and can be regarded as *A.a. coreanum* Okamoto, 1924. So in Mongolia must be also represented *A.a. coreanum*.

#15

The area of *Amarysius sanguinipennis* was enlarged eastwards by Tsherepanov (1982) to Altai and Tomsk.

#16

It seems, that all records for Mongolia of *Chlorophorus* with reduced black elytral design (*obliteratus*, *faldermanni*, *ubsanurensis*, *mongolicus*, *diadema kaszabi*) belong to one taxon.

According to Danilevsky (1993): *Chlorophorus obliteratus* (described from "centralen Mongolei") = *Ch. ubsanurensis*. *Ch. obliteratus* was recorded for Mongolia by Heyrovsky (1965).

Chlorophorus mongolicus Pic was described after one specimen "de Mongolie". According to Gressitt (1951), it is distributed in "NW China". The type of the taxon is absent in Pic's collection in Paris (2002). It was mentioned by Namhaidorz (1972) as a separate species. One specimen with such identification is preserved in Heyrovsky's collection (Prague) and looks very similar to my 3 males of *Ch. obliteratus* from Mongolia. Evidently just that specimen was compared with *Ch. diadema kaszabi* in its original description. Most probably *Ch. obliteratus* = *Ch. mongolicus*.

The dark elytral patterns in all my three Mongolian males of *Ch. obliteratus* (from rather distant localities: Gobi-Altai aimak, South-Gobi aimak, Kobd aimak) are a little different. The last specimen (with more reduced dark elytral pattern) is totally agree with the picture of *Ch. ubsanurensis* (recorded for Mongolia by Namhaidorz, 1982: Gobi-Altai aimak, Baian-Khongor aimak,) in Tsherepanov's (1982) monograph.

The dark elytral design in *Ch. obliteratus* males looks like reduced black design of the darkest Mongolian specimens recorded for Mongolia as "*Ch. diadema diadema*" (Namhaidorz, 1974 1976). Such specimens with totally black dark elytral areas are always females (represented by two specimens in my collection: South-Gobi aimak and Baian-Khongor aimak - one female was identified by S.Murzin as *Ch. diadema*). According to big series in Kaszab collection in Budapest, dark and pale specimens are connected by all transition forms and belong to one taxon - *Ch. obliteratus*. Dark *Ch. obliteratus* are really similar to typical *Ch. diadema* from Far East, but has

a little different elytral design. Such dark specimens of *Ch. obliteratus* from Mongolia are identified in Kaszab collection in Budapest, as *Ch. diadema ab. artemisiae* Fairmaire, 1888 by L. Heyrovsky. (*Clytus artemisiae* was described from near Peking as well as *Clytus diadema* and must be its synonym).

Specimens of "*Ch. diadema kaszabi*" and "*Ch. diadema ab. artemisiae*" identified by Heyrovsky in Kaszab collection (Budapest) are just pale and dark *Ch. obliteratus* from one locality, so *Ch. obliteratus* = *Ch. diadema kaszabi*.

New synonyms were published by Danilevsky (2010a: 46): *Ch. obliteratus* Ganglbauer, 1889 = *Ch. mongolicus* Pic, 1943 = *Ch. kaszabi* Heyrovský, 1970 = *Ch. ubsanurensis* Tsherepanov, 1971.

One male of true *Chlorophorus diadema diadema* with the label "Mongolei, Staudin." is preserved in the collection of Zoological Museum of Moscow University, but the real occurrence of the species in the territory of Mongolian Republic needs confirmation.

There is a unique female in Kaszab collection, identified by Heyrovsky as "*Ch. faldermanni*". The corresponding record was published (Heyrovsky, 1968 for Kobd aimak, Khara-Us-Nur and independently by Namkhaidorzh, 1976 for South Gobi-aimak, 20km S Bulgan). Heyrovsky's female is just a small pale *Ch. obliteratus* without elytral design; most probably, that Namkhaidorzh's record was also based on *Ch. obliteratus*.

#17

The taxon described as *Eodorcadion darigangense* Heyrovský, 1967 was unknown to Namkhaidorzh. The identification of my series was proved by comparison with holotype (elytra only are available in Heyrovsky collection in Prague). Several good collecting data of *E. darigangense* (accepted as *E. chinganicum darigangense* by Danilevsky & Lin, 2012) were published by Danilevsky (2007).

The taxon, accepted as "*E. darigangense*" by Namkhaidorzh (1976: 210), was recorded by Heyrovsky (1973a) as "*E. chinganicum rubrosuturale*". It was described as *E. chinganicum kerulenum* Danilevsky, 2007. *E. rubrosuturale* (Breuning, 1943), described as a species from In Shan Mts (far southwards from the territory of Mongolian Republic) was regarded by Breuning (1962) as morpha of *E. chinganicum*, which can be also found near Kharbin. It was accepted as south-western subspecies of *E. chinganicum*: "*E. chinganicum rubrosuturale*" by Danilevsky (2007), Danilevsky & Smetana (2010).

According to Danilevsky & Lin, (2012), *E. rubrosuturale* (Breuning, 1943) is a species represented in Mongolia with *E. rubrosuturale kerulenum* Danilevsky, 2007.

The differences of Mongolian *E. rubrosuturale kerulenum* (under the name "*darigangense*") from type specimens of *E. ch. chinganicum* and *E. ch. ab. melancholicum* were described by Namkhaidorzh (1976:211), who wrongly supposed his "*E. darigangense*" as a geographical form of *E. chinganicum*.

According to Danilevsky & Lin, (2012), *E. chinganicum darigangense* is a Mongolian endemic of widely distributed China species. It is shown in <http://www.zin.ru/Animalia/Coleoptera/rus/atlasdan.htm> as *E. darigangense*, and *E. rubrosuturale kerulenum* is shown here as *E. melancholicum*.

#18

E. virgatum was not recorded for Mongolia by Namkhaidorzh and most probably absent in the Republic, but was definitely recorded for East Mongolia (foothills of Khingan Ridge) by Plavilstshikov (1958).

#19

The description of *E. lutshniki altanelsense* from sands Altan-els (Ubsunur Aimak near the border with Russia) was based on two small males with antennae shorter than body (!?) and fused two dorsal white stripes (so only three dorsal white stripes present). Such elytral design is also known as rare aberration from Tuva. A pair of *E. l. altanelsense* is preserved in Zoological Institute (St.-Petersburg). A male ("Dzabkhan aimak, 20 km WNW Tes, 3.7.1968, Arnoldi leg.") is really with only 3 dorsal white stripes, antennae are a little longer than body, so shorter than in the nominative

form, body is relatively narrow. A female ("Dzabkhan aimak, 20 km WNW Tes, 3.7.1968, Emelianov leg.") is without dorsal white stripes. The presence in Altan-Else of both forms (striated and glabrous) was also mentioned by Namkhaidorzh (1972). Which subspecies of *E. lutshniki* occurs near Ulangom rests unknown to me, so I leave the name of the nominative subspecies in Mongolian fauna until new information.

#20

According to the original description *Pterolophia multinotata* Pic, 1931 = *P. mandshurica* Breuning, 1938. That is why *P. mandshurica* (very common in Ussuri land) was never recorded for Korea (neither "*P. ussuriensis* Plav.").

Pterolophia rigida (Bates, 1873), which (according to Kusama and Takakuwa, 1974), is a synonym of *P. granulata* (Motschulsky, 1866) - both described from Japan - was recorded for Mongolia by Namkhaidorzh (1974: 173). Later (Namkhaidorzh, 1976: 213) the corresponding specimens were identified as *P. burakowskii*.

I regard *Pterolophia multinotata* = *burakowskii* on the base of original description accompanied by a picture. *P. burakowskii* was described from East-Gobi Aimak. I've got a female of Mongolian *P. multinotata* from Bulgan Aimak. It was originally recorded for Mongolia by Namkhaidorzh (1974: 173 - Sukhe-Bator Aimak, East Aimak, East-Gobi Aimak) as *P. rigida*. Later (Namkhaidorzh, 1976: 213) the identifications of corresponding specimens were changed to *P. burakowskii*.

According to Tsherepanov (1983):

Pterolophia mandshurica = *selengensis* (described from Mongolian part of Selenga River Valley). Holotype and a paratype of *P. selengensis* are preserved in Zoological Museum (St.-Petersburg). In general they are a little paler than specimens from Far East Russia, but no other differences.

#21

Cerambyx hieroglyphicus Pallas, 1773 was described from "Siberia". The taxon was accepted as eastern subspecies by Breuning (1952: 177) and Gressitt (1951: 554). It is characterized by constantly blue colour of pale pubescence. It is agree with my specimens from Tuva and Russian Primorie Region.

The subspecies was recorded for "Lappland" by Breuning (1952), so can be distributed in North of the European part of Russia, as well as in Norway, Sweden and Finland; for Sakhalin Is. by Matsushita et Tamanuki (1935) - after Gressitt (1951); and for Mongolia by Heyrovsky (1973b), as well as for "Nordeuropa".

#22

Ch. motschulskyi was recorded for Mongolia by Namkhaidorzh (1976: 208). One male with a label: "Verkhneudinsk [now Ulan-Ude] env, Berezovka, 21.6.1920" is preserved in my collection.

#23

According to Namkhaidorzh (1972), *E. maurum* = *E. grumi* = *E. boldi* - described from Ubsunur ("Uvs") aimak after one female with striated elytra.

All taxa of *Eodorcadion* group "maurum-quinquevittatum" belong to one species. Now I am ready to recognize 4 subspecies, though in reality the number of subspecies must be more. Sometimes the areas of different subspecies nearly contact one another (and specimens from different populations are preserved with identic labels). Sometimes populations of different subspecies are intermixed or the area of one subspecies is interrupted by the area of another. Very often morphologically identic specimens can be observed in different subspecies.

E. m. katharinae was described from north Mongolia (most probably from the south of Ubsu-Nur lake) after one male (holotype in ZIN, St.Petersburg). The subspecies is characterized by usually wide body with very strong elytral carinae and with the wide white elytral stripes known in the species. The population from near Erzin and Shara-Sur (planes along Tes river in Tuva) with mixed smooth, glabrous and carinated, pubescent forms must be attribute to Mongolian *E. m. katharinae* distributed also all over east part of Ubsu-Nor depression southwards Tere-Hol Lake and along Tesijn-gol river (north of Ubsunur and Dzabkhan aimaks). Populations from along Tesijn-gol are

equally variable; both forms (smooth and striated) undoubtedly belong here to one population and so to one species, as all transitional forms were also collected here and more over male and females of all forms were often observed copulated (Yu. Mikhailov, personal communication of 2003). Nominative populations of *E.m. katharinae* (south bank of Ubsu-Nur) and population from Tere-Hol lake are relatively stable, without glabrous forms.

The description of *Neodorcadion maurum* Jak. was based on three syntypes: 2 males "trouvés en 1879 par M^e G.Potanin en Mongolie" and 1 female "venant de l'Alai" - the last locality is not exact. According to Namhaidorzhan (1972) the type series was collected near Ulangom.

Same population was partly used for the description of *N. grumi*: syntype male and syntype female in my collection with the label in Russian: ["Namiur River between Kobdo River and Ulangom, 18.7.1903, Grum-Grzhimailo"]. Another part of *N. grumi* syntypes was collected in north Tannu-Ola. One syntype male in my collection with the label in Russian: ["north slope of Tannu-Ola Ridge, 3-5.8.1903, Grum-Grzhimailo"]. I've got very similar specimens from Torgalyk River. I do not see the difference between specimens from Tuva and Mongolia. If the difference exists, the synonymy *maurum*=*grumi* could be canceled, after respective lectotype designation. Now the area of the taxon is very large. Tuva: planes northwards Tannu-Ola, hills southwards Tannu-Ola from Mugur-Aksy to Samagaltai. Mongolia: from the west part of Great Lakes Valley - Ureg-Nug Lake eastwards along Tesiyn-Gol to Dzabkhan aimak and southwards up to Kobdo. The area of the taxon described by Plavilstshikov (1958) is totally wrong: there is nothing similar to the taxon in Transbaikalia or in Selenga and Orkhon Rivers Valleys.

E. m. maurum is characterized by smooth, often shining elytra without humeral granules, without epical elytral white stripe, abdomen with less dense pubescence. Specimens with elytral carinae and white elytral stripes are well known as female form (ab. *leucotaenium*), but very rare males also can be striated ((only one striated male is known to me from near Sagly).

Several localities known to me (ZIN - collection of Zoological Museum, St.-Petersburg; MD - my collection):

***E. maurum katharinae*:**

1. Ubsu-Nur aimak, south bank of Ubsu-Nur Lake, 10.8.1975, L. Medvedev leg. (typical form) (MD)
2. Ubsu-Nur aimak, 40km ESE Dzun-Goby (near Barun-Turun), 12.8.1975, L. Medvedev leg. (typical). (MD)
3. Ubsu-Nur aimak, 30km NE Barun-Turun [Sands Altan-Els], 5.7.1968, Arnoldi leg. (incl. strongly widened carinated males and females, and very white females, as well as specimens with partly reduced carinae and white stripes to totally smooth and glabrous) (ZIN)
4. Dzabkhan aimak, 10km NW Tes (or Delgerekh), 13-16.8.1975 L. Medvedev leg. (typical form) (MD)
5. Dzabkhan aimak, 30km WNW Tes (or Delgerekh), 3-4.7.1968, Emelianov leg. (transition to *E.q.maurum* males with reduced carinae and elytral stripes to totally smooth and glabrous) (ZIN)

***E. maurum maurum*:**

1. Ubsu-Nur aimak, south bank of Ubsu-Nur Lake, 50km E Ulangom, 6.8.1970, Emelianov leg. (type locality?) (only typical form) (ZIN)
2. Ubsu-Nur aimak, NW bank of Urug-Nur Lake, 17.7.1968, Arnoldi (typical male and ab. *leucotaenium*) (ZIN)
3. Ubsu-Nur aimak, Dzun-Gobi, 9.8.1970, Emelianov (typical form) (ZIN)
4. Ubsu-Nur aimak, 30km W Ulangom, 13.7.1968, Arnoldi leg. (typical form) (ZIN)
5. Ubsu-Nur aimak, 19-32km NW Ulangom, 27.6-8.7.1968, Kaszab's exp. (typical form with Heyrovsky's identifications: "grumi" and "dorcac morozum") (MD)
6. Ubsu-Nur aimak, 20km NW Mt. Turgen-Ula, 20.7.1968, Arnoldi (typical form) (ZIN)
7. Ubsu-Nur aimak, SW Orog-Nur Lake, 14km WSW from Ulan-Daba, 6.7.1968, Kaszab's exp. (typical form with Heyrovsky's identifications: "dorcac morozum") (MD)

#24

E. dorcas was described (as *Neodorcadion*) from "Nord de la Mongolie". No specimens of typical form (with white stripes) with good geographical labels are preserved in Zoological Institute (St.-Petersburg), in Moscow Zoological Museum, in Pic,s collection (Paris) or in Heyrovsky's collection (Prague). My typical male has the label: "Shurgyngol" - it is a river in the south part of Dzabkhan aimak south-eastwards Uliasutai. Same locality was mentioned for *E. dorcas* by Namkhaidorzh (1972).

Neodorcadion morosum was described as a species from "Nord-Ouest de la Mongolie" on a single male ("21mm"). The holotype (20mm) with the label in Russian: ["N-W Mongolia, 8.7.1894, Clemenz"] is preserved in Zoological Institute (St.-Petersburg). The name was faithfully declared as a synonym of *E. dorcas* (glabrous form) by Plavilstshikov (1958). It is agree with my materials as I've got *E. dorcas* ab. *morosum* from Aldarkhan, that is about same population as from Shurgyngol River Valley. My series from Ereen Lake (north part of Gobi-Altai aimak) consists mostly of ab. *morosum*, but includes one female of typical form.

E. dorcas scabrosum was described from sands near Khukh-Mort (north of Gobi-Altai aimak - type locality), that is less than 100km eastwards population of nominative subspecies. Another locality represented in the type series is sandy desert in Khungui River Valley (Dzabkhan aimak), that is about 120km northwards from the type locality. Two paratypes from near Khuh-Mort are preserved in Zoological Institute (St.-Petersburg). Male is glabrous, but female with white stripes. I've got a glabrous pair from near type locality. The taxon really differs from the nominative subspecies by much more rough elytral sculpture.

L.Heyrovsky had no adequate imagination of the species. I've got a homogenous series of *E. maurum maurum* from one locality (Ubsunur aimak, 32km NW Ulangom, 1200m, 27.6-7.7.1968, Exp.Dr.Z.Kaszab) with two different identifications by L.Heyrovsky: "*E. dorcas* m. *morosum*" and "*E. grumi*". In fact, the very peculiar rough elytral sculpture of *E. dorcas* makes the identification of the species very easy.

E. dorcas fortecostatum Heyrovsky, 1975 described after several series from near Ulangom (Ubsunur aimak) most probably belongs to the corresponding form of *E. maurum maurum*. The paratype series must be represented in Heyrovsky collection in Prague, but it is absent there.

The separation of *E. dorcas annulatum*, as it was mentioned by Namkhaidorzh (1972), can not be accepted. Holotype was collected near "Žergalan, Zarghan-Niederung, 23.6.1964" (Gobi-Altai aimak) as well as two paratype-males with same labels preserved in Heyrovsky's collection in Prague Národní Museum. All three specimens are *E. m. maurum*, as well as paratypes collected in Kobd aimak near Chara-Us-Nur lake (HNHM). So, *E. m. maurum* (Jakovlev, 1890) = *E. d. annulatum* Heyrovsky, 1969. Another part of the type series from south part of Kobd aimak (Altai) can not be *E. maurum*, as the species absent here. If the label is right, it can be only glabrous form of *E. egregium*, as it was also mentioned by B.Namkhaidorzh (1972). Before specimens from Hara-Us-Nur lake were better named as *E. grumi annulatum* Heyrovsky, 1968 (nomen nudum), though were collected from same population as *E. grumi grumi* sensu Heyrovsky, 1968. Later (Heyrovsky, 1973a) all three names (*E. grumi*, *E. dorcas morosum* and *E. dorcas annulatum*) were recorded for one locality (32km NW Ulangom).

Plavilstshikov (1958) described too wide area for *E. dorcas*. The species sure absent near Ulan-Bator and in Selenga River Valley. I believe, that its are is limited by the region to south-west from Khingai Ridge (Gobi-Altai and Dzabkhan aimaks). It must be absent both in Russia and in China.

#25

E. brandti was definitely recorded for Mongolia by Heyrovsky (1964, 1968, 1969), but all records are unbelievable, as it was mentioned by Namkhaidorzh (1972). All specimens from Mongolia in the collection of Hungarian Natural History Museum (Budapest), identified as "*E. brandti*" by L.Heyrovsky are striated females of *E. m. maurum*. So, *E. brandti* absent in Mongolia.

#26

E. zichyi was described from "Naran environs in Gobi Desert". According to Namkhaidorzh (1972) the type locality is situated in East-Gobi aimak (so it is not modern Naran in Sukhe-Bator aimak, where *E. zichyi* absent). I've collected more than 100 specimens of the species (9-10.8.2002) in the central part of East-Gobi aimak in sands near Khuvsgel (males: 16.0-24.7mm, females: 22.7-32mm - so it is the longest known *Dorcadionini*).

Namkhaidorzh (1972) proposed a new synonymy: *E. heros* = *E. zichyi*.

E. heros (Jakovlev, 1899) was described (as *Neodorcadion*) on one female ("24mm") from "montibus Alashanicis meridionalibus...". The holotype (24.5mm) is preserved in Zoological Institute (St.-Petersburg) with the label in Russian ["S Alashan, VI and beginning of VII.1873, Przhevalsky"; besides one conspecific male is also preserved with the label in Russian ["China"].

E. heros is very close to *E. zichyi*, but differs from all specimens of *E. zichyi* by rather flat male elytra, less rough pronotal sculpture and red femora (that is impossible in *E. zichyi*). Besides the area of *E. zichyi* is delimited from Alashan Desert by the area of *E. gorbunovi*. So I regard both as different species (Danilevsky, 2004).

#27

A revision of *E. intermedium*-group was published by M. Danilevsky (2004) together with a description of *E. gorbunovi*.

E. intermedium was described (as *Neodorcadion*) "du Nord de Gobi, près de la fontain Ourdjume et à Outben-Kotel" on two syntypes. According to Namkhaidorzh (1972), the type locality, Kotel-Usu well or Khutel-Us, is situated in South-Gobi aimak between two mountain ridges Tost-Ula and Nemegt-Ula (south-west part of the aimak). Both syntypes (each with label: "Mong. centr., 20-21.VIII.1886, G.Potanin") preserved in Zoological Museum, St.-Petersburg (same specimens, as were studied by Namkhaidorzh before 1972) do not correspond good enough to the original description. Both are males, while Jakovlev mentioned male and female; both males are about 16.5mm long, while Jakovlev's male must be 15mm and "female" - 18mm. Elytra of both males are abnormal and rather different, but such situation is not reflected in the original description, which is too general. Still, I regard both specimens as true syntypes, as they are characterized by very special character reflected in the original description - antennae, legs, elytral borders and partly frons are red.

E. mongolicum was described (as *Neodorcadion*) on series of specimens "trouvées en 1893 dans la Mongolie par M. Clemenz". Jakovlev mentioned the size of one male (17mm) and one female (20mm), but in the text he used several males for description.

Now in Zoologica Institute (St.-Petersburg) three similar males (14.5-16.5mm) are equipped with original Jakovlev's red type labels, but all without any geographical label. A female (19.5mm) undoubtedly belongs to syntype series, though has only one original label in Russian ["V. Jakovlev's coll."]. Besides, there are a very similar pair of males (17.5mm and 20mm) without Jakovlev's labels, but with the geographical labels in Russian ["N-W Mongolia, 20.VI-7.VII.1894, Clemenz" and "N-W Mongolia, 9.VII-10.VIII.1894, Clemenz"]. Any way all these specimens look like members of one population.

The syntype series does not allow to identify exactly its geographical origine, as very similar specimens (collection of Zoological Museum, St.-Petersburg) are known from very wide area (from Dzabkhan River Valley in the north part of Gobi-Altai aimak, to Ushugin-Obo Mt. in the east part of Uver-Khangai aimak. Besides, I've got similar specimens from near Beger in the east part of Gobi-Altai aimak.

The syntypes of *E. intermedium* do not possess any character, which could distinguish *E. intermedium* as a species from *E. mongolicum*. In general elytral and thoracic punctuation and design are same. The locality of *E. intermedium* is situated at the south part of *E. mongolicum* area. So, *E. intermedium* = *E. mongolicum*.

E. kaszabi was described from two localities: Bogd environs in Bain-Khongor aimak and Khovd environs in Uver-Khangai aimak. Both localities are

inside the area of *E. intermedium*. The original description is equipped with photographs of a male and a female, besides I've studied a syntype female in Heyrovsky collection in Prague Narodni Museum. The specimens used by Heyrovsky for his description are nearly identical to syntypes of *E. mongolicum*. So, *E. intermedium* = *E. mongolicum* = *E. kaszabi*.

Heyrovsky did not compare his new species with any other species, but mentioned: "Dem *E. ornatum* Fald. nahestehend.", which was totally out of the reality.

All localities, mentioned above, are situated westwards from 103°E. So, I accept the area of the nominative form as the western half of the species area.

Neodorcadion kozlovi was described from "Zentral Mongolei; Chutzen-Shanda Brunnen 16.VII.1909 (Expedition P.K. Kozlov, coll. P.P. Semenov-Tian-Shansky)." on series of males (16-20mm) and a female (22mm). Now a series with original Suvorov's type labels preserved in Zoological Museum (St.-Petersburg) consists of two specimens: male (15.5mm) with label in Russian ["Cent. Mongolia, Tzosto River, 28.VI-2.VII.1909, Kozlov's exp."] and a female (22.5mm) with Russian label ["Cent. Mongolia, Khutzen-Shanda well, 16.VII.1909, Kozlov's exp."]. Namkhaidorzh (1972) had in his disposal 10 syntypes. According to I.Kerzhner (2003, personal communication), the well Chutzen-Shanda is situated in the north part of South-Gobi aimak near Mandal-Obo (44°08'N, 104°05'E). One more male is preserved in the museum from the type locality ("Omnogov aimak, Mandal-Obo, 26.7.1967, B.Namkhaidorzh leg"). Nearby I've collected a series of specimens in 2002 from near Mandal-Gobi (45°10'N, 105°30'E) to Manlai (44°03'N, 107°02'E) and to Mandah (44°24'N, 108°13'E - more than 100 ex.); I've also got several specimens from near Sain-Shand (44°47'N, 110°07'E). Both syntypes and a male from Mandal-Obo are very similar to my series collected in 2002 because of usual (by not constant!) conjugation of internal dorsal elytral stripes with sutural stripe forming wide central white elytral triangular area, which are always absent in specimens of *E. intermedium* from westwards of 103°E. So, I regard all these populations as *E. intermedium* ssp. *kozlovi*. Still certain specimens of *E. i. kozlovi* are indistinguished from the nominative form.

Plavilstshikov (1958) used in the key only one character for separation of his *E. mongolicum* from his *E. kozlovi*: the wide fusion between humeral elytral stripe and external dorsal stripe at elytral base. According to the original description only one syntype male (the biggest) had a connection between humeral elytral stripe and external dorsal stripe at elytral base. This character is really absent in all known to me *E. i. intermedium*, but present in about 80% of *E. i. kozlovi*.

The description of *Neodorcadion princeps* was based on a single male ("18mm") without exact geographical data. The holotype (18mm) without geographical label, preserved in Zoological Museum (St.-Petersburg), has an original label by Ménetriés hand "*D. ornatum* var." mentioned in the original description and totally corresponds to it. The holotype is characterized by totally fused humeral and external dorsal elytral stripes forming rather wide joined humeral stripe, sutural stripe is also wide. In fact such elytral design is simply a very rare aberration known in many different taxa (*E. argali rugipenne*, *E. i. intermedium*, *E. i. kozlovi*, *E. oryx*). Among more than hundred *E. i. kozlovi*, collected by me in East-Gobi aimak about 6 males and 2 female have similar elytral design.

The holotype of *N. princeps* is the corresponding aberration of *E. ornatum* (as it was reflected in the original label by Ménetriés) because of: black legs, black antennae, absence of internal dorsal elytral stripe (so, not *E. intermedium* or *E. oryx*), moderately rough elytral sculpture near humeri similar to *E. argali rugipenne* (so not *E. intermedium*, or *E. zichyi*, or *E. heros* - besides much smaller than *E. heros* or *E. zichyi*), rather rough elytral sculpture near middle - just same as in syntype female of *E. ornatum* (so, not *E. argali rugipenne*). Besides, the syntype female of *E. ornatum* has very special strongly developed white pubescence of pronotum which is unknown to me in any specimen of related species, but just same as in Holotype of *N. princeps*. So, *E. ornatum* = *E. princeps*.

Namkhaidorzh (1972) mentioned a single male of *E. princeps* from near Altan-Shire (East-Gobi aimak) as the first record of the species for Mongolia. That was rather natural as the locality is situated inside the population of *E. i. kozlovi*. So, *E. i. kozlovi* = *E. princeps*, sensu Namkhaidorzh, 1972 (not Jakovlev, 1899).

I can suppose now several local subspecies inside the very big area of *E. intermedium*, but now all infraspecific names belong to the nominative form and to *E. i. kozlovi*.

E. argali, *E. hircus*, *E. intermedium*, *E. oryx*, *E. gorbunovi* and *E. zichyi* constitute a system of vicariant species.

#28

E. argali rugipenne (= *E. exaratum exaratum* - see Danilevsky, 2007) was described from near Dariganga (Sukhe-Bator aimak). In 2002 I had the possibility to collect many hundreds of specimens of this taxon in different populations around Dariganga. *E. e. exaratum* differs from *E. exaratum argali* (I know about hundred specimens) by some more or less constant characters and occupies south east part of species area.

Namkhaidorzh (1972) mentioned that the taxon (as *E. argali rugipenne*) was not known to him. But in 1976 he reported it under the name "*E. argali*", though exactly from the type locality of *E. a. rugipenne*.

The abundance of the specimens just on the border with China makes me sure that *E. e. exaratum* is also distributed in North China.

E. quadricarinatum described from near Ulan-Bator is a synonym of *E. exaratum argali*, as it was faithfully supposed by Namkhaidorzh.

#29

According to Namkhaidorzh (1974), *E. egregium* = *E. albitarsale* Breun.

E. kabaki Kadyrbekov, 2004 was described from "Western China, Eastern Tien-Shan, Southern Slope of Bogdo-Ula, range, Juldus-Terebol river" (so, from the area of *E. egregium*) on the base of glabrous specimens (and specimens with hardly developed hair stripes) of *E. egregium*, which are known now in several populations of *E. egregium* in China, so *E. egregium* (Reitter, 1897) = *E. kabaki* Kadyrbekov, 2004.

#30

Olenecamptus octopustulatus was recorded for Transbaicalie (Tchikoi - borderline with Mongolia) by Tcherepanov (1983), so old records of the taxon for Mongolia (ignored by Plavilstshikov, 1958) could be right.

#31

I've got in my collection one specimen of *Apomecyna histrio* with the label: "East Siberia, Selenginsk, 1914".

#32

Several species were definitely recorded from Mongolia by Janovsky (1974): *Anastrangalia renardi* (Khubsugul and Ara-Khangai aimaks), *Callidium aeneum* (Khubsugul, Baian-Ulegey, Kobd aimaks), *Xylotrechus altaicus* (Ubsunur aimak), *Amarysius sanguinipennis* (Selenga aimak), *Leiopus albivittis* (Selenga and Khubsugul aimaks).

#33

Acanthocinus griseus and *A. carinulatus* were recorded for Mongolia by Namkhaidorzh (1972). The taxonomy of Siberian *Acanthocinus* was revised by Hasegawa (1996). *A. carinulatus* was recorded by Hasegawa from Altai to Buriatia and so presents in Mongolia. According to my materials (checked by Dr. M. Hasegawa in 2003): *A. griseus* is distributed eastwards to about Krasnoirsk Region and *A. sachalinensis* is distributed westwards to about Buriatia, so in Mongolia can be represented both.

#34

Tetrops rosarum was recorded for Mongolia by Tsherepanov (1985) and O.Krivolutzkaia (in: Tsherepanov, 1996) without special comments. Most probably the records were based on *Tetrops mongolicus* Murzin, 1977.

One specimen of *Tetrops mongolicus* from Russia is preserved in the collection of Moscow Pedagogical State University: "Buriatija, Selenga river valley, 5km NE Dzhida, 4-9.6.2001, A.Anishchenko leg."

#35

Menesia flavotecta, *Ropaloscelis unifasciatus*, *Agapanthia dahli* and *A. villosoviridescens* were recorded for Mongolia by Lobanov et al. (1982) without any comments most probably on the base of specimens which now are not in my disposal.

The occurrence of *A.dahli* in Mongolia does not look impossible, as I have a very typical *A.dahli* specimen from Khakassia (Maina - southwards Abakan). The species is very common near Novosibirsk.

A. villosoviridescens is represented in my collection from Altai and from Novosibirsk.

#36

Agapanthia leucaspis was recorded for Mongolia (Selenga aimak) by Namhaidorzhan (1982).

#37

As it was written to me by G.Sama (personal communication, 2003): "Semenov (1914) introduced *Asias* a new name replacing *Anoplites* Serville, 1833 not Westwood, 1831 (Diptera). I was able to consult Neave (Nomenclator Zoologicus, 1939, 1: 216); according to it, *Anoplites* was described by Westwood only in 1835 (*Anoplites* Westwood, 1835, London & Edinb., Phil. Mag., 3(6) (34): 280). This is confirmed by Horn & Schenkling, 1929 (Index Litteraturae Entomologicae, series 1, band 4: 1312) where any Westwood's paper dealing with Diptera is listed in 1831, while is confirmed for 1835 the description of "Insectorum novorum exoticorum". Phillos. Mag. (3), 6: 280-281".

So, the name *Anoplites* Serville, 1833 is valid.

#38

Asaperda stenostola was recorded for Mongolia (as well as for Kazakhstan) by Lobanov et al. (1982) most probably on the base of specimens which are now not in my disposal. I have in my collection a female from Altai (Chemal).

#39

The occurrence in Mongolia (as well as in Siberia) *Chlorophorus sartor* is rather doubtful. No collecting data were published by Plavilstshikov, Heyrovsky or Namhaidorzhan. Tsherepanov (1982) did not find the species in Siberia.

#40

E. ptyalopleurum (Suvorov, 1909) absent in Mongolia. It was not mentioned in any publication by Namkhaidorzhan. The record by Breuning (1946) was evidently based on wrong identification of *E. maurum*.

#41

Mantitheus pekinensis was recorded for Mongolia by Namhaidorzhan (1974) on the base of one female from East-Gobi Aimak, which is not known to me. Later (Namhaidorzhan, 1976: 221) apparently same specimen was identified as *Mantitheus gracilis*.

Both names are synonyms. *Mantitheus gracilis* was described from "Patachu". According to the syntype labels in Paris Museum, "Patashu" was situated in Pekin environs and all syntypes of *Mantitheus gracilis* are very similar to numerous old specimens of *Mantitheus pekinensis*.

#42

The text below was published by M.Danilevsky (2004).

E. oryx was described (as *Neodorcadion*) without any geographical data (and without size data). The original description was undoubtedly based on a single male (15.4mm long), preserved now in Zoological Institute (St.-Petersburg). The holotype is characterized by exceptional elytral design (abnormally narrow sutural white stripe, and so abnormally wide internal dorsal glabrous carina), which is precisely reflected in the original description. Other specimens (3 males and 1 female) identified as *E. oryx* (by Suvorov and Baeckmann) in the Museum's collection are sure conspecific with holotype, though differ from the later by less deep elytral punctuation and by normally wide sutural stripe and narrower glabrous dorsal internal carina. All 4 specimens belong to one series with the label: "Nordl. Mongolei, Changai, Leder". All 4 specimens and holotype have several granules near humeri, which are nearly indistinct in one male; so the main Plavilstshikov's (1958: 480) distinguishing character of *E. oryx* - the presence of humeral granules - is wrong. These granules are also indistinct in all my specimens of *E. oryx* with good geographical labels:

1 male: "Mong. m., Barun-Bajan-Ulan, 18.8.1966" - Uver-Khangai aimak.

2 males and 3 females, "Uver-Khangai aimak, 50km NW Aiverkhei, 45°51'N, 101°58'E, 1800m, 19.7.2002, S.Churkin leg."

As far as I know, no exact distributional data on *E. oryx* were published up to now (2003). Three localities from East-Gobi aimak (near Tenger-Nur Lake, near Shokhoi-Nur Lake and near Sulan-Khere) published by Namkhaidorzhan (1976) [wrongly attributed by him to South Gobi aimak], concern another species, close to *E. intermedium* (I've studied two males from near Tenger-Nur, preserved in Zoological Institute, St.-Petersburg, and identified by Namkhaidorzhan as *E. oryx*).

So, *E. oryx* has small area near south-east part of Khangai mountains. It must be in vicariant relations with neighbour populations of *E. argali* and *E. intermedium*.

E. oryx easily differs from *E. intermedium* by smooth elytra and from *E. argali* by wide sutural white stripe.

Neodorcadion oryx var. *hedini* Pic, 1935 is in fact *E. intermedium kozlovi*. A male of the taxon (most probably holotype) is preserved in Pic's collection (Paris) with the label (by Pic's hand): "S Mongoliet 1927" and "Sven Hedins Exp. Ctr. Asien Dr. Hummet".

#43

Neodorcadion hircus Jak. was described after a single glabrous female collected by I.V.Palibin from Kerulen River valley between "Tzara-bulun" and "Arahonchor-Nur" 21.7.1899 during his joined expedition with N.I. Damaskin - see I.M.Kerzhner (1972: 90). I do not know the holotype, but three females (ZIN and collection of J.Vorisek) are available from same expedition with labels: ["valley of Kherulium (Kerulen), 7.1899, Dr. Damaskin leg."] [in Russian], identified as "*N. ornatum* var. *exaratum*" by G.Suvorov. Type locality (Kerzhner, 1972: 90) is situated in Kerulen valley ESE Bajan-Dzhargalan (on 20.7.1899 the expedition was on the bank of the river).

All three available females look like glabrous form of *E. argali* and differ considerably (because of very rough frons sculpture and scarce abdomen pubescence) from glabrous form of *E. novitzkyi* (var. *inalbatum*), distributed nearby north-eastwards. More over a typical striated male (ZIN) of *E. argali* belong to same series from between "Tzara-bulun" and "Arahonchor-Nur" collected on 21.7.1899 by I.V.Palibin, so *Neodorcadion argali* Jakovlev, 1890 = *N. hircus* Jakovlev, 1906. *N. hircus* Jak., was traditionally regarded (Plavilstshikov, 1958: 473; Breuning, 1962: 40; Namkhaidorzhan, 1972: 528) as a synonym (glabrous form) of *E. ornatum*.

All records of *E. ornatum* for Mongolian Republic were wrong.

All *Neodorcadion* (1 male and 3 females), identified as *E. ornatum* by N.N. Plavilstshikov in his collection (Zoological Museum, Moscow) are *E. oryx*, including two females - types of *E. ornatum* ab. *praeligatum* and *E. ornatum* ab. *illustatum*.

One male from Mongolia (with well developed elytral white stripes, though with totally fused internal dorsal stripe and sutural stripe) preserved in Zoological Institute (St.-Petersburg): East-Gobi Aimak, 10km NW

Erdene, 13.7.1975, Gurieva leg. is identified by Namkhaidorz (hand label) as *E. ornatum* - in fact it is normal *E. i. kozlovi*.

E. ornatum was described (as *Dorcadion*) from "Mongoliae" (in fact Inner Mongolia) on at least one male and one female (without size data). The original description is equipped with good colour drawing of a male. A syntype female (22.5mm) is preserved in Zoological Institute (St.-Petersburg) without any geographical label. It has just same elytral design as pictured male.

#44

E. argaloides was described from "Mongolie méridionale" after 1 female. In the original description it was compared with *E. mongolicum*, but latter (Breuning, 1962) - with *E. ornatum* and *E. kaznakovi*.

The holotype (Lyon Museum) is totally similar to specimens (5 males and 2 females partly identified as *E. oryx* by M.Namhaidirzh or *E. kaznakovi* by J.Vorisek) collected in the southmost area of East Gobi aimak (ZIN, collection of J.Vorisek and my collection), southwards area of *E. gorbunovi*. So, *E. argalodes* is Mongolian species close to *E. intermedium* and *E. gorbunovi*, which is most probably also distributed in neighbour regions of Chinese Inner Mongolia.

Another female from Lyon Museum, identified (and wrongly designated as paratype) by S.Breuning as *E. argaloides*, also belongs to this species.

#45

The taxonomy of *Asias* close to *A. halodendri* is not clear. It was evident mistake to regard all populations from European Russia to Far East as one species without any subspecies, as it was proposed by Namhaidorz, 1972 (*halodendri* = *ephippium* = *minutus* = *kozlovi*).

The differences between European and Far East populations are evident, so the name *A. halodendri halodendri* can not be used for east populations, as *Cerambyx halodendri* Pallas, 1776 was described "... ad Irtysh" (= Irtysh), and the specimens from Kazakhstan are not close to Far East populations.

As it was declared by Kostin (1974), populations from East Kazakhstan differs from West Kazakhstan populations at the subspecies level. I preliminary accept that *A. halodendri ephippium* (Steven et Dalman, 1817), described from South Russia (Terek River), is distributed from North Caucasus to the south part of European Russia (northwards to about Saratov) and in Ural Region of Kazakhstan.

In Semipalatinsk region *Asias halodendri halodendri* is distributed.

For far east Maritime subspecies, which penetrates far in East Siberia, the name *Asias h. pirus* (Arakawa, 1932) can be used. It was introduced for Korean population as *Purpuricenys pyrus*.

Rather peculiar specimens from Tuva populations were described as *Anoplistes minutus* Hammarström, 1893 - same in Mongolia.

According to Tsherepanov (1982), different *A. halodendri* (from Urals to Far East Russia) were observed on *Caragana*, *Quercus*, *Salix*, *Fraxinus*, *Lespedeza*, *Daphne mezereum*. He added for his "*A. ephippium*" (Urals and Tuva): *Caragana*, *Ulmus*, *Salix*, *Prunus*, *Rosa*.

#46

According to Namhaidorz (1972): "In low, south areas of Mongolia as well as in neighbour China a small, pale, pubescent form, described as *A. kozlovi*, occurs." (Lectotype was designated by him). It is sure a separate species. I've studied a big series (about 60 ex.) of *A. kozlovi* collected by D.Obydov and A.Saldaitis in Ara-Khangai aimak (47°19'N, 103°41'E, 3-5.8.2003). *A. kozlovi* differs from *A. halodendri* first of all by long white elytral and pronotal pubescence, pronotal puncturation is much smaller and distinctly less homogenous. *A. kozlovi* in general bigger than *A. h. minutus* (though only small specimens were known to Namhaidorz). Body length in *A. kozlovi* males is up to 15.5mm, in females - up to 16.3mm, while in *A. h. minutus* males are up to 14.5mm, females - 14.9mm.

A. kozlovi was collected in same locality as *A. h. minutus*, though about 1 month later and, according to A.Saldaitis, on *Salix*, while *A. halodendri* was collected by me in Kazakhstan (2002) and Mongolia (2002) only on *Caragana* spp.

#47

The morphology of everted and inflated Dorcadionini endophallus is described and figured by Danilevsky et al. (2004) on the base of dry constant samples of 127 species and subspecies of four genera: *Neodorcadion*, *Eodorcadion*, *Iberodorcadion* and *Dorcadion* of all subgenera. The homology of different endophallus parts is established. The original terminology is proposed. All genera and subgenera of Dorcadionini are clearly delimited on the base of endophallic structures. New compositions of *Eodorcadion* is proposed. The phylogenetic relations inside the tribe are discussed. A key for 4 genera and all subgenera is proposed on the base of endophallic characters.

According to Danilevsky et al. (2005):

E. quinquevittatum, *E. leucogrammum* (= *sajanicum*), *E. tuvense*, *E. ptyalopleurum* and *E. maurum*, as well as *E. sifanicum* and *E. glaucopterum* are placed in *Eodorcadion* (s. str.).

Several taxons are proposed to be accepted as subspecies: *Eodorcadion carinatum blessigi* (Ganglbauer, 1883), *E. c. bramsoni* Pic, 1901, **stat. n.**, *E. c. altaicum* (Suvorov, 1909), **stat. n.**

#48

The existence of *Callidium chlorizans* (described after one female as *Semanotus* from Irkutsk) as a separate species is rather doubtful. I do not know the type, but a series, identified as "C.chlorizans" (mostly from Yakutia) in Plavilstshikov's collection (Zool. Mus. of Moscow Univ.) shows no real differences from his numerous *C. coriaceum* from all over Siberia. The distinguishing characters, listed by N.N. Plavilstshikov (1940), are not proved by his own materials. The areas of both "species" coincide in Siberia, but according to Tsherepanov (1981), *C. chlorizans* is monopagous on *Larix*.

#49

According to the study of type specimens: *Anoplites amoenus* Reitter, 1898 = *Purpuricenus procerus* Semenov, 1907 = *A. francisci* Reymond, 1933.

Types of all specimens were collected in about same area in China Dzhungaria from about Hami to Turfan depression. Type locality of *A. amoenus* - „Kurusch-Dagh" (=Kuruk-Tag) is just same as in *A. procerus* - „Kurla, Bagratch-kul) - the western part of Kuruk-Tag ridge. *A. francisci* was described from „Chi Ku Chinge (Sin Kiang)" [=Xinjiang], that was not far from „depression de Lokchun" [=Lukchan]. According to the syntype label (a male from Zoological Museum of Moscow University): „Hami-Turfan" (see also Plavilstshikov, 1940: 600) - it is about same area (about 200km northwards Kuruk-Tag). According to N.N. Plavilstshikov the taxon („*A. amoenus*") is known from near Barkul-lake (100km NW Hami), Goitszo valley [N Alashan, eastwards Hara-hoto ruins - 1 male from that locality is in the collection of Zoological Museum of Moscow University and 1 in my collection, both: 15-21.5.1909, Kozlov's exp.] and foothills of Ergu-Hara ridge(?).

Anoplites mongolicus Ganglbauer, 1890 described from near Gaxun-Nur lake (north China near south-east border of Mongolian South-Gobi aimak - type available) is represented now in different museums by recently collected big series and sometimes is undistinguishable from *A. amoenus*, though in general it is characterized by darker elytra (with larger black spot) and sparse pronotal pubescence. *A. mongolicus amoenus* Reitter, 1898 is in fact western China subspecies (Danilevsky, 2010a: 44). In Mongolian Republic *A. mongolicus mongolicus* Ganglbauer, 1889 is widely distributed and penetrates from here to Alashan and Ordos. The status of relative population from Central China is not clear."

According to recently published data (Namhaidorz, 1972, 1976; Heyrovsky, 1965, 1968, 1970) *Asias m. mongolicus* is distributed in south-west and south Mongolia from Kobd aimak to East-Gobi aimak.

A. m. mongolicus was recorded for Shansi and Hopei by Gressitt (1951).

Certain specimens of *Asias mongolicus* from Mongolia (about 60 specimens from different localities preserved in Hungarian Museum of Natural History) are indistinguished from certain *A. m. amoenus* from China Dzhunagaria (Bagrach-Kul - Kuruk-Tag Ridge environs); but in general black elytral area in *A. mongolicus* is more developed - always touching scutellum, while in Dzhungarian population it is usually smaller, not reaching scutellum; the

development of elytral pubescence varies considerably: from hardly visible to totally hiding elytral sculpture (pronotal pubescence is never well developed), but never so strong as in specimens from N Alashan (Goitszo valley); the maximal level of the development of pubescence observed in the type of *A. francisci* is not known in Mongolia. Prothorax in *A. mongolicus* varies from about as long as wide to strongly transverse, pronotal lateral tubercles can be very distinct to totally absent; male antennae in *A. mongolicus* are always a little longer than body (just as in *A. amoenus*), in females - from very shorte hardly reaching elytral middle to much longer reaching apical elytral forth.

A. m. mongolicus is characterized by usually dark elytra and sparce pronotal pubescence. The population in north Alashan most probably must be described as another subspecies.

A. mongolicus amoenus is distributed in Xinjiang.

#50

Several species of *Eodorcadion* were wrongly recorded for Russia by Wang Zhicheng (2003) without any reasons:

E. chinganicum (Suvorov, 1909), (as *E. melancholicum*, not available name),
E. glaucopterum (Ganglbauer, 1883),
E. dorcas (Jakovlev, 1901),
E. consentaneum (Jakovlev, 1899),
E. heros (Jakovlev, 1899),
E. oryx (Jakovlev, 1895),
E. ornatum (Faldermann, 1833),
E. egregium (Reitter, 1897).

Many Russian and Mongolian taxons were wrongly recorded for China and partly illustrated with pictures from Plavilstshikov's monograph (1957) and with photographs from my WEB-site (Danilevsky, 2006b):

E. maurum maurum (Jakovlev, 1890) (as *E. maurum*)
E. maurum katharinae (Reitter, 1898) (as *E. katharinae*)
E. m. quinquevittatum (Hammarström, 1893) (as *E. quinquevittatum*)
E. m. sajanicum (Suvorov, 1909) (as *E. leucogrammmum*)
E. ptyalopleurum (Suvorov, 1909),
E. consentaneum (Jakovlev, 1899),
E. dorcas (Jakovlev, 1901),
E. intermedium (Jakovlev, 1890),
E. i. kozlovi (Suvorov, 1912) (as *E. kozlovi*),
E. lutshniki (Plavilstshikov, 1937)
E. novitzkyi (Suvorov, 1909)
E. oryx (Jakovlev, 1895)
E. zichyi (Csiki, 1901)

#51

Phytoecia cylindrica was recorded for Far East Russia and China by Lobanov et al., (1982) without any comments. The species was not mentioned for China before (Gressitt, 1951). A.I. Tsherepanov (1985) did not mentioned Far East of Russia, but recorded North China without any comments. Amur region and North China were recorded by A.I. Tsherepanov (1996). All records for Amur region and Far East need confirmation. I've got two females from near Krasnoiarsk and one female from Buriatia (Turan near Mondy). The last locality is very close to Mongolian border, so the species is definitely represented in North Mongolia.

#52

Xylotrechus salicis Takakuwa et Oda., 1978 = *X. nadezhdae* Tsher., 1982 (Danilevsky, 1988). One male and three females from Tuva are preserved in Zoological Museum of Moscow University; occurence of the species in Mongolia is very probable.

#53

According to J. Hilszczanski (personal message, 2006), specimens of *Aegomorphus wojtylai* are known to him from Russian Altaj and from Mongolia.

In fact the species is widely distributed all along Russia (Danilevsky, Shapovalov, 2007): Moscow-city (Uzkoe, Shchelkovo), Rjazan region (Kiritzy), south Urals (Cheljabinsk reg., Zlatoust), Orenburg region (Kvarkeno distr.), Omsk, west Baikal lake (Irkutsk reg., Kultuk), Primorie region (Pozharskij distr., Urunga river[?]); and in NE Kazakhstan (Zyrianovsk env., Putintzevo).

According to Jacek Hilszczanski (personal message, 2007), the record of "*Acanthoderes clavipes* ab. *obscurior* Pic" for Mongolia by L. Heyrovsky (1973: 118, "30km N Batsumber") was based on specimens of *A. wojtylai*. Bat-Sumber is situated in Central aimak in about 56km northwards Ulan-Bator, so the locality is situated in Selenga aimak southwards Dzun-Khara.

According to my study of the holotype (male from "Amur" with mounted genital structures - see photo in www.cerambycidae.narod.ru) of *Acanthoderes clavipes* var. *obscurior* Pic, 1904 it is just same species; so *Aegomorphus obscurior* (Pic, 1904) = *A. wojtylai* Hilszczanski, Bystrowski, 2005.

#54

The tribe Apatophysides Lacordaire, 1869 was originally raised to subfamily level by Danilevsky (1979).

According to a number of consultations the correct spelling of subfamily name is Apatophyseinae.

According to P. Svacha (personal message, 2007) the name Dorcasomides Lacordaire, 1869 was published in volume 8 [in fact 1868! see #678], while Apatophysides Lacordaire, 1869 - in volume 9 - so, the name Apatophysides is younger. Dorcasomus was placed inside Apatophysinae by P. Svacha (Svacha, Danilevsky, 1987). So, according to him, the name of subfamily must be changed: Dorcasominae Lacordaire, 1868 = Apatophyseinae Lacordaire, 1869.

This act was published by Özdikmen (2008).

But it is impossible to join South African Dorcasomus (with allied genera) and Apatophysis (with numerous allied Madagascar genera) in one subfamily. Besides many differences Dorcasomus has clearly divided stridulatory plate (the character of Spondylidinae and Lepturinae), that is impossible in Apatophyseinae (neither in Cerambycidae). So, the name Apatophyseinae must be retained as valid.

#55

A single available (ZIN) syntype [according to A. Semenov (1935) another syntype was destroyed] of *Apatophysis tomentosa* (Gehl.) belongs to the species later described as *A. mongolica* Sem. on the base of three males from China Dzhungaria: Guchen, Baityk-Bogdo and "Mongolia sept.-occid. (G. Potanin! 1876)". The synonymy was already supposed in the original description and by N.N. Plavilstshikov, (1936). The main distinguishing character of "*A. tomentosa*" mentioned by N.N. Plavilstshikov (1936): elytral punctation distinct only in the anterior elytral half - really present in the syntype, but such situation can be often observed in specimens of *A. mongolica* from different parts of its very big area (and was recorded as typical for *A. mongolica* by S. Kadlec, 2006), so *A. tomentosa* = *A. mongolica*.

Only one species of *Apatophysis* is distributed from Central and East Kazakhstan to Mongolian Republic. *A. serricornis* (Gehl.) and *A. obtusicollis* (Motsch.) were described from East Kazakhstan on the base of females (both types are not available). The synonymy *A. serricornis* = *A. tomentosa* = *A. obtusicollis* was supposed by A.P. Semenov-Tian-Shanskij and T.I. Stchegoleva-Barovskaja (1935) and accepted by Gressitt (1951).

Apatophysis kadyrbekovi was described from near Borandisu (or Borandaisu near Chilik - 43°40'N, 78°35'E) - left side of Ily river valley eastwards from Kapchagaj water reserve - on the base of a single small (10.8mm) male of *A. serricornis* (sensu nov.) (= *A. mongolica*). *A. serricornis* is very numerous in the locality (I also have specimens just from here) and it is very natural, that the smallest specimen differs a little in body shape (short and wide); other published distinguishing characters are not adequate: small size of the holotype is really exceptional, I do not know so small specimens; according to S. Kadlec the length of "*A. mongolica*" is 13-17mm, but I've got a male (also from Chilik) with body length 12.0mm; distinct punctation in the posterior elytral half is just a traditional character of *A. mongolicum* auct; elytral punctation limited in the anterior half is the character of the holotype of

A. tomentosus and was recorded by Plavilstshikov (1936) as the main character of that "species"; 3d antennal joint of "*A. kadyrbekovi*" is in fact not so short ("1.6 times longer than 2nd") as described by S. Kadlec - it is clearly seen in the original foto, that 3d joint is about twice longer than 2nd, that is very typical for *A. serricornis*.

A. serricornis = *A. tomentosa* = *A. obtusicollis* = *A. mongolica* = *A. kadyrbekovi*.

#56

The type species of the genus *Apatophysis* was several times (Lobanov et al., 1981; Danilevsky, 1988) wrongly marked as *Leptura serricornis* Gebler, 1843. It was just citation of wrong note by J.L. Gressitt (1951: 48).

#57

The genus *Eodorcadion* was revised by M.L. Danilevsky (2007).

E. (s.str.) carinatum involvens = *E. longjiangensis* Wang, 2003 (Manchzhuria), syn.n.

E. (s.str.) chinganicum kerulenum Danilevsky, 2007 is described from Mongolia. The taxon is widely distributed in the east part of the Republic and probably penetrates to China. It was recorded by Namkhaidorz (1976: 210) as *E. darigangense* and by Heyrovsky (1973a) as *E. chinganicum rubrosuturale*.

E. (s.str.) maurum maurum (Jakovlev, 1889), stat. nov.

E. (s.str.) maurum katharinae (Reitter, 1898), stat. nov., comb. n.

E. (s.str.) maurum maurum Jakovlev, 1889 = *hirtipes* Jakovlev, 1901 = *grumi* Suvorov, 1909 = *boldi* Heyrovsky, 1965 = *fortecostatum* Heyrovsky, 1975, syn. n.

E. (Ornatodorcadion) dorcas = *morosum* Jakovlev, 1901 = *annulatum* Heyrovsky, 1969, syn. n.

E. (O.) exaratum exaratum Ménétrié in Motschulsky, 1854 = *E. argali rugipenne* Heyrovsky, 1967, syn. n.

E. (O.) exaratum argali Jakovlev, 1889 = *miraculum* Reitter, 1897 = *hircus* Jakovlev, 1906 = *quadricarinatum* Heyrovsky, 1970, syn. n.

E. (O.) egregium Reitter, 1897 = *albitarsale* Breuning, 1966 = *kabaki* Kadyrbekov, 2004, syn. n.

#58

Several mistakes and misprints were discovered in my recently published (Danilevsky, 2007) revision of *Eodorcadion*.

1. The descriptions of *Neodorcadion maurum* Jakovlev, 1889, *N. argali* Jakovlev, 1889 and *N. intermedium* Jakovlev, 1889 were wrongly dated as 1890. Two first numbers of 24th volum of *Horae Soc. Ent. Ross.* were published in 1889 (Kerzhner, 1984), and it is correctly dated in the references to my book.

Jakovlev B.E. (B.E. Jakowleff), 1889.

Insecta, a cl. G.N. Potanin in China et in Mongolia novissime lecta. X. Coleoptera (Neodorcadion et Compsodorcadion).- *Horae Soc. Ent. Ross.*, 24(1-2): 244-253.

2. According to Kerzhner (1984: 854) the reprints with the descriptions of *Neororcadion oryx* Jakovlev, 1895 and *N. mongolicum* Jakovlev, 1895 were distributed in 1895, though the corresponding volume was published in 1896.

Jakovlev B.E. (B.E. Jakowleff), 1895.

Description de quelques Longicornes paléarctiques nouveaux ou peu connus.- *Horae Soc. Ent. Ross.*, 29(3-4): 506-514.

3. The date of the original description of var. *hedini* Pic, 1935 was wrongly mentioned by me (Danilevsky, 2007: 101) as 1926. The wrong data was forgotten in my manuscript after S. Breuning (1962: 45). The correct data - 1935 - was also published in my monograph several times (: 103, 105, 111), as well as in corresponding reference (: 199) and in the previous publication on *Eodorcadion* (Danilevsky, 2004: 15).

4. Page 133:

printed: *Neodorcadion potanini* Jakovlev, 1889: 245 ("de l'Altai", "en Mongolie");

must be: *Neodorcadion potanini* Jakovlev, 1889: 245 ("Ordos")

5. Page 133:

printed: Type locality. China, Inner Mongolia - Ordos (Map 30), according to the syntypes label.

must be: Type locality. China, Inner Mongolia - Ordos (Map 30), according to original description.

6. Page 49:

printed: *Eodorcadion jilinense* Chiang, 1983 (= *mandschukoense* Breun.);

must be: *Eodorcadion jilinense* Chiang in Chou, Chao & Chiang, 1983: 60, 66 (= *mandschukoense* Breun.);

#59

The name *Tetrops* was originally introduced for several Cerambycidae species with divided eyes by W. Kirby (in Kirby et Spence, 1826a: 498): "*Lamia Tornator* (*Cerambyx tetraophthalmus* Forst.) and some others, of which I make a genus under appellation of *Tetrops*, are also so distinguished [by divided eyes]." with the reference on the same page (498) to the Plate XXVI Fig. 36h, which was placed in the next volume IV (Kirby, Spence, 1826b), page 595: "Lateral view of the head of *Tetraopes* Dalm., to show the eye wholly divided by the canthus".

And in the Index of names to 4th volume, page 619: "*Tetraopes* (*Tetrops*), iii. 498." So, W. Kirby himself regarded both names as synonyms. It looks, that Kirby was informed about *Tetraopes* in the period between 3rd and 4th volumes.

More over, there is a "foot-note" in the original introduction of *Tetrops* Kirby (same page 498) with the statement that *Saperda praeusta* L. also has same character [divided eyes]. So, in fact two species were definitely mentioned by Kirby originally inside genus *Tetrops*: *Cerambyx tetraophthalmus* Forst. and *Leptura praeusta* L.

J. Thomson (1866: 115-116) mentioned *Leptura praeusta* L. as a type species of genus *Tetrops* Kirby.

Many authors (Plavilstshikov, 1948; Breuning, 1965; Villiers, 1978; Vives, 2000; Sama, 2002 and others) regarded J.S. Stephens (1829) as the author of the genus, while others (Bily & Mehl, 1989; Bense, 1995; Althoff & Danilevsky, 1997) reasonably addressed it to W. Kirby (1826).

In fact Stephens (1829) was just the first, who published the combination "*Tetrops*, Kir. *praeusta*, Lin." in his list of British insects.

According to E. Vives and M. A. Alonzo-Zarazaga (in Vives. 2000: 660-661) the introduction of *Tetrops* by Kirby, 1826 was just a wrong spelling of *Tetraopes*. But we have no reasons for such conclusion.

#60

I've got a big (20mm) totally black female of *Stenocorus quercus* from Mongolia with the label: "Mongolia centr., Tuulara, 11.8.1981 leg. A. Kotnauer [or Kothauer]". It does not differ from certain European or Caucasian specimens, though elytra are rather rugose. It is the first real record of the genus for Mongolia.

#61

Monochamus sutor is regarded here to be composed of two subspecies. Siberian subspecies is characterized by rather glabrous shining specimens. It was described as *M. s. longulus* Pic, 1898. European specimens of the nominative subspecies are usually more or less densely covered with pale setae spots. The transitional area is situated across West Siberia.

#62

A new subgenus of *Xylotrechus* with a new species is described from Mongolia: *Xylotrechus* (*Kostiniclytus* Danilevsky, 2009) - type species: *X. zaisanicus* Plavilstshikov, 1940 and *X. (K.) medvedevi* Danilevsky, 2009 from Kobd aimak.

Rusticoclytus Vives, 1977 described as a genus is regarded as a subgenus of *Xylotrechus*.

#63

According to Sama (1994):

Type species of American genus *Acanthoderes* is *Lamia daviesi* (Thomson des., 1864) from C and S America.

Palaeartic species belong to another genus - *Aegomorphus* Haldeman, 1847 - type species *Aegomorphus decipiens* Haldeman, 1847 (monotypy) = *Lamia modesta* Gyllenhal, 1817 (North America).

According to Monne (1994), the type species of *Acanthoderes* is *Lamia varia* F., 1787 = *Acanthoderes clavipes* (Schrank, 1781), designated by Bates, 1861 (but not S American *Lamia daviesi*, designated by Thomson, 1864).

The text by Bates (1861: 19): "In *A. varius*, the European species which may be considered typical of the genus,..." can not be regarded as the type designation of the genus.

Before the type species of *Acanthoderes* Audinet-Serville, 1835 was designated by Thomson (1859: 152) as *Cerambyx varius* Fabricius, 1787 (= *Cerambyx clavipes* Schrank, 1781, but it seems another very early designation must be discovered, which return *Acanthoderes* to *Lamia daviesi*, so *Aegomorphus* Haldeman, 1847 is accepted here as valid.

#64

Rapuzziana hangaiensis Danilevsky, 2006 was described on the base of single female ("Mongolia, Baian-Hongor aimak, 50km SW Baian-Hongor, h-1780, 4.6.2004, Saldaitis leg." [46°2'24.6"C, 100°3'55.8"B]) from the collection of P.Rapuzzi (Italy). Another much more darker female (author's collection - see "Gallery" in www.cerambycidae.net) is known ("Mongolia, Gobi-Altay aimak, 45km SE Beger, 19.6.2003, 1950-2050m, S.Churkin leg.).

#65

Four new subgenera were proposed for *Chlorophorus* [only type species were included in each taxon]:

Immaculatus Özdikmen, 2011a: 536 (type species: *Chlorophorus kanoi* Hayashi, 1963) - "Apex of each elytron truncate and extended into an angle on the outer edge; elytra uniform without any contrasting spot or stripe."

Perderomaculatus Özdikmen, 2011a: 537 (type species: *Cerambyx sartor* Müller, 1766) - "Apex of each elytron truncate; elytra with distinctly contrasting thin stripes; each elytron without a distinct spot at the shoulder."

Humeromaculatus Özdikmen, 2011a: 537 (type species: *Cerambyx figuratus* Scopoli, 1763) - "Apex of each elytron truncate; elytra with distinctly contrasting thin stripes; each elytron with a distinct spot at the shoulder."

Crassofasciatus Özdikmen, 2011a: 538 (type species: *Callidium trifasciatum* Fabricius, 1781) - "Apex of each elytron rounded; elytra with distinctly contrasting thick strips (or rarely like spots)."

Chlorophorus s.str. is characterized by two characters: "Apex of each elytron truncate and extended into an angle on the outer edge; elytra with distinctly contrasting thick spots or stripes."

The existence of several more or less distinct groups of species inside *Chlorophorus* is evident, but the separation shown above does not look good enough. The proposed distinguishing characters often can not be used; for example the structure of elytral apex in *Ch. sartor* is about same as in *Ch. figuratus*. The presence or absence of a spot at the shoulder often varies inside one species.

The study of the shape of everted and inflated endophalus is extremely desirable. That method gave extraordinarily beautiful results inside old genus *Plagionotus* and in Dorcadionini.

Anyway a provisional placement of available taxa among new names could be proposed on the base of type species:

Ch. (*Immaculatus*):

obliteratus (Ganglbauer, 1889)

simillimus (Kraatz, 1879)

Ch. (*Humeromaculatus*):

motschulskyi (Ganglbauer, 1887)

diadema (Motschulsky, 1854)

Ch. (*Perderomaculatus*):

sartor (Müller, 1766)

#66

Pachytella churkini Danilevsky, 2011 was described from Mongolia, Gobi-Altay aimak [30km S Beger, about 45°25'N, 97°08'E, 2700-2800m - holotype and Altai Mts., Hara-Adzragyn, Nuru Mts., Najtvaryn-Sajr riv. Valley (upper stream), 45°50'N, 93°34'E, 2500-2850 m].

#67

A female of *Menesia* from Mongolia (Ara-Khangay aymak, Tevshrulekh, 20.6.1972, L.Medvedev leg.), identified as *M. bipunctata* by S.Murzin, is preserved in my collection. As it was noticed by A.Shapovalov, the specimen has no connection with real *M. bipunctata*, but very close to *M. sulphurata*, though has only one (apical) pair of yellow elytral spots (see "Gallery" in www.cerambycidae.net). Such form of *M. sulphurata* is well known as *M. sulphurata* ab. *bipustulata* Plavilstshikov, 1927: 109. The record of *M. bipunctata* for Mongolia by Namkhaidorz (1979: 92) from close locality ("Central aimak [in fact Ara-Khangay aymak], 30km N somon Erdene-Mandal, 1750m, 17.7.1972, L.Medvedev leg.) was undoubtedly connected with same form. So, *M. bipunctata* absent in Mongolia and no records of the species for East Siberia known.

#68

Eodorcadion (s.str.) *maurum australe* Danilevsky, 2014: 151 was described as a south most subspecies from Mongolia (Kobd aimak).

Eodorcadion (*Ornatodorcadion*) *savitskyi* Danilevsky, 2014: 152 was described from Mongolia, Gobi-Altay aimak, 4km NNE Tseel, 2106m, 45°35'40"N, 95°53'05"E. The new species is very close to *E. intermedium* (Jakovlev, 1889) and is distributed to the westwards from it.

#69

Cleroclytus (s. str.) *semirufus savitskyi* Lazarev, 2014 was described from Mongolia ["*Cleroclytus* (s. str.) *collaris savitskyi*" was a misprint].

Cleroclytus (*Obliqueclytus* Lazarev, 2014) was described for *C. (O.) banghaasi* (Reitter, 1895) - type species and *C. (O.) gracilis* Jakovlev, 1900.

#70

According to Danilevsky (2014b) two valid names are accepted:

Evodinellus subgen. *Evodinellus* Plavilstshikov, 1915: 355 type species *Leptura borealis* Gyllenhal, 1827).

Evodinellus subgen. *Brachytodes* Planet, 1924: 96 type species *Rhagium clathratum* Fabricius, 1793

#71

Euracmaeops Danilevsky, 2014b: 147)type species: *Leptura marginata* Fabricius, 1781) was described for: *Euracmaeops marginatus* (Fabricius, 1781), comb. n.; *E. angusticollis* (Gebler, 1833), comb. n.; *E. septentrionis* (C.G.Thomson, 1866), comb. n.; *E. smaragdulus* (Fabricius, 1793), comb. n.

#72

Stictoleptura (subgen. *Variileptura* Danilevsky, 2014i: 267 type species: *Leptura variicornis* Dalman, 1817) was described for a single species.

#73

Exocentrus stierlini Ganglbaur, 1883 was recorded for Mongolia by Müller et al. (2013).

#74

Rhondia placida Heller, 1923b was recorded for Inner Mongolia by Xu et al. (2007).

#75

According to Karpiński et al. (2021), *Anoplistes halodendri minutus* Hammarström, 1892 = *Anoplistes kozlovi* (Semenov & Znoiko, 1934). The conclusion is doubtful. The lectotype of *Asias kozlovi* Semenov & Znoiko, 1934 was not investigated.

#76

Chlorophorus caragana Xie & W.-K. Wang, 2012 was recorded for Mongolia by Karpiński, Enkhnasan et al. (2021).

#77

Many new *Clytus* subgenera were proposed by Özdikmen (2023) on the base of pronotal and elytral design. Generally artificial divisions often are not acceptable, sometimes are quite wrong and are here modified.

#78

According to Hass et al. (2024), traditionally accepted *Xylotrechus ibex* (Gebler, 1825) consists of two species: European *X. ibex* (Gebler, 1825) (= *angulosus* Motschulsky, 1875) - described from Altai (lectotype was designated); and Siberian *X. rectangulus* (Motschulsky, 1875) (= *fugitivus* Thieme, 1881 - Amur = *interruptus* Pic, 1902e - Sibérie, ?Japon) - described from "Daourie méridionale".

A neotype for *Clytus angulosus* Motschulsky, 1875 and lectotypes for *Clytus fugitivus* Thieme, 1881 and *Xylotrechus clarinus* Bates, 1884 were designated and illustrated.

X. ibex is distributed eastwards to Altai. *X. rectangulus* is distributed eastwards to South Korea and Japan.