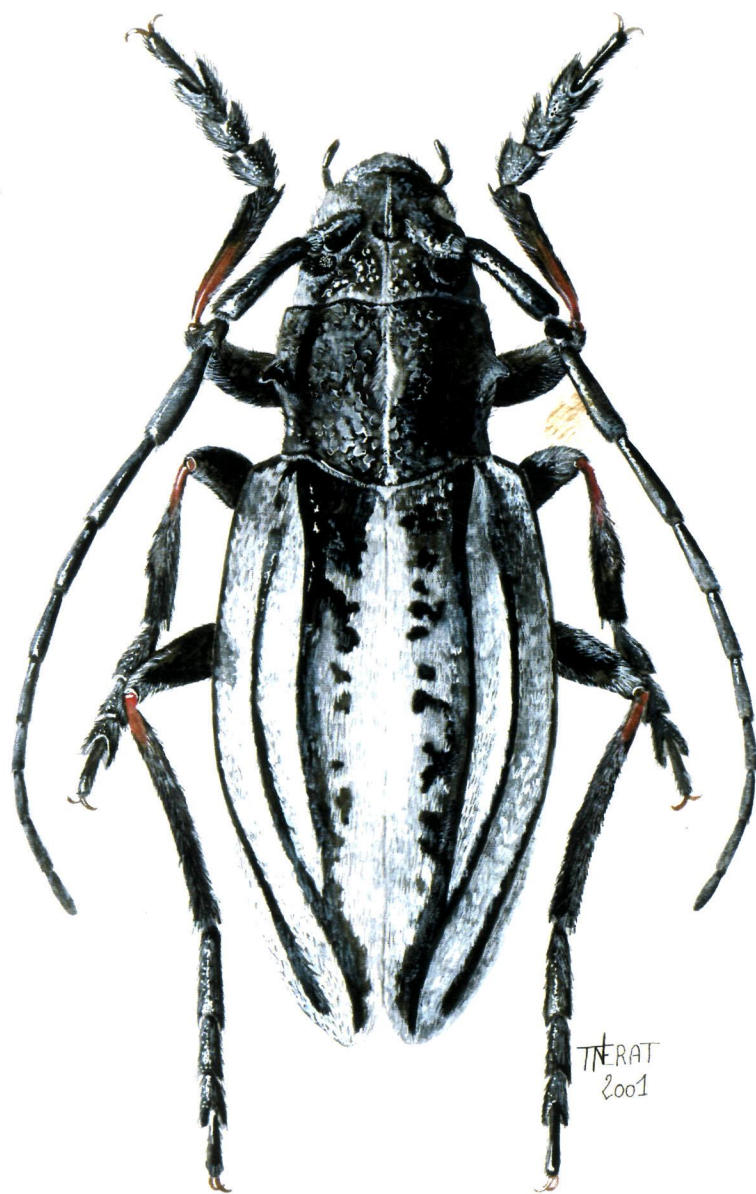


Les cahiers

Magellanes

Subspecific structure of *Dorcadion*
(*Dzhungarodorcadion*) *semenovi* Ganglbauer, 1884)
(Coleoptera, Cerambycidae)



MIKHAIL L. DANILEVSKY

№10

Subspecific structure of *Dorcadion (Dzhungarodorcadion) semenovi* Ganglbauer, 1884 (Coleoptera, Cerambycidae)

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Summary

Dorcadion semenovi is regarded as a polymorphic species consisting of 11 subspecies : *D. s. semenovi* Ganglb., *D. s. terskeicum* ssp. n., *D. s. almatensis* ssp. n., *D. s. issykkulense* Pic, *D. s. bisbicostatum* Pic, stat. n., *D. s. uriuktensis* ssp. n., *D. s. hauseri* Rtt., *D. s. flavopubescens* ssp. n., *D. s. kaiduensis* ssp. n., *D. s. kuvakensis* ssp. n., *D. s. thaisiae* ssp. n. The status of *D. s. bisbicostatum* as a separate taxon is regarded as doubtful. Morphological diagnosis, distinguishing characters and photographs are given for each taxon; areas are described.

Résumé

Dorcadion semenovi est considéré comme une espèce polymorphique composée de onze sous-espèces : *D. s. semenovi* Ganglb., *D. s. terskeicum* ssp. n., *D. s. almatensis* ssp. n., *D. s. issykkulense* Pic, *D. s. bisbicostatum* Pic, stat. n., *D. s. uriuktensis* ssp. n., *D. s. hauseri* Rtt., *D. s. flavopubescens* ssp. n., *D. s. kaiduensis* ssp. n., *D. s. kuvakensis* ssp. n., *D. s. thaisiae* ssp. n. Le statut de *D. s. bisbicostatum* comme un taxon distinct est douteux. Pour chaque taxon, on trouvera : une description avec les caractères discriminatifs, des illustrations, l'aire de répartition.

Key words

Coleoptera, Cerambycidae, *Dorcadion*, new subspecies, taxonomy, Kazakhstan, Kirgizia, China.

D. (D.) semenovi is the most variable species in the subgenus *Dzhungarodorcadion* Danilevsky, 1993. Newly collected beetles together with rich materials from various collections allow the review of its subspecific structure.

***Dorcadion (Dzhungarodorcadion) semenovi* Ganglbauer, 1884**

Type locality. - Tekes environs (2000 m) in Kazakhstan ?

D. semenovi Ganglbauer, 1884 : 479-480 (« Turkestan »); Suvorov, 1913 : 68, part. ; Gressitt, 1951 : 332 (part.); Breuning, 1962 : 432-434; Plavilstshikov, 1958 : 280-282; Kostin, 1973 : 212; Lobanov & al., 1982 : 264.

Description. - Body length in males : 10 - 17 mm; in females : 13-19 mm.

The species is characterized by pale-grey ground pubescence of body and elytra (very rarely in males - brown-yellow and in autochromal females sometimes partly replaced by brown or yellowish). Antennae always totally black. Pronotum with very rough irregular sculpture, nearly glabrous; pale central longitudinal hairy line always distinct. Humeral elytral carinae well developed. Femora usually black, very rarely slightly reddish near bases; tibiae always partly red or reddish, at least near bases.

Body form, development of dorsal elytral carinae and black elytral design are extremely variable.

Distribution. - From the beginning of Chu River Valley (at the east extremity of Kirgyzsky Ridge), Issyk-Kul depression (Kirgizia) and east half of the north slope of Zailiisky Alatau (Kazakhstan) eastwards through Ketmen Ridge (Kazakhstan) to Borokhoro Ridge (China) and Kaidu he (or Julduz) Valley (China).

The presence of the species in Dzhungarsky Alatau (according to several very old specimens) is rather doubtful, as well as in Muzart Valley. The occurrence of the species in Naryn Valley (Kirgizia) also needs to be confirmed.

D. rufogenum Reitter, 1895 seems to be not so widely distributed as it is generally accepted [Plavilstshikov, 1958; Breuning, 1962]. In all collections, known to me, the species is represented by the specimens from around Khan-Tengri Mountain System : Baiankol River Valley (near Narynkol, Kirgizia), Muzart Valley (China), Tekes Valley (China). The occurrence of the species in Kaidu he (Julduz) Valley and in Borokhoro Ridge is doubtful.

D. kuldschanum Pic, 1908 though described from « Kuldza », is reliably known only from Kaidu he (Julduz) Valley in China. It is a vast region and I believe, it occurs here allopatrically with local populations of *D. semenovi*. In Kazakhstan or Kirgizia *D. kuldschanum* is surely absent. Plavilstshikov's [1958] records from the area eastwards Przhevalsk (now Karakol in Kirgizia) are not confirmed by the available materials (including his own collection).

Bionomy. - The species inhabits mountain meadows from about 1600 m above sea level and, according to the available labels, to about 3800 m. The beetles are active from the beginning of April at low elevations (if the spring is warm enough) to the end of July (in the highest localities).

Remarks. - *D. semenovi* was described from « Turkestan » without a more precise indication of locality. The holotype female (Fig. 1) preserved in the « Naturhistorischem Museum Wien » has a very short geographical label : « Turkest ». The morphology of the holotype fits well the traditional interpretation of the nominative form.

The individual features of the holotype do not make it possible to pinpoint the type locality of the species. Similar specimens could be found in various localities of the vast area of the nominative subspecies. Still such characters as : very rough pronotal sculpture, strongly convex anterior sides of rather short thoracic lateral tubercles (usually they are concave), relatively flat elytra, moderately developed external humeral carinae characterize the population from near Tekes in Kazakhstan (between Kegen and Narynkol). So I accept Tekes environs as the most probable type locality of the species.

D. semenovi is very close to *D. rufogenum* Reitter, 1895 and *D. kuldschanum* Pic, 1908b and both could be regarded as its subspecies (none of these three taxa can occur sympatrically). The main constant distinguishing character of *D. rufogenum* from *D. semenovi* is the very narrow pale interval between black dorsal elytral stripes, which are usually present. The external dorsal black stripe in *D. rufogenum* is usually wider than the pale interval or about equal to it. In *D. semenovi* the pale interval (if both dorsal stripes present) is usually much wider than external dorsal stripe.

D. kuldschanum differs by red femora with black apices; the sutural pale elytral stripe is usually lighter than other pale elytral areas; the dorsal internal black elytral stripe is accompanied by numerous black spots from inside along its whole length, which are not diffused to the wide middle area of pale sutural stripe.

***Dorcadion semenovi semenovi* Ganglbauer, 1884 (Figs. 1-3)**

Type locality. - Tekes environs (2000 m) in Kazakhstan ?

D. semenovi Ganglbauer, 1884 : 480 (« Turkestan »); Suvorov, 1913 : 68, part.; Gressitt, 1951 : 332 (part.).

Description. - Body length in males : 11.5-15.1 mm, in females : 12.1-18 mm; body width in males : 4.4-5.6 mm, in females : 4.9-7.3 mm.

Body moderately wide. Prothorax with moderately long or short lateral spines. Both dorsal elytral black stripes well developed, usually complete; humeral stripe reaches elytral apex, external dorsal stripe usually begins just from the elytral base; external and internal dorsal stripes usually fused apically. Pale sutural stripe usually without black spots or with few spots just near scutellum (Fig. 3); numerous black spots all along sutural pale area very rarely can only be found present in females. All elytral carinae poorly developed. Elytra relatively oval, in males about 1.8-1.9 times longer than wide. Females are always androchromal : pale elytral pubescence never replaced by brown.

Materials. - HOLOTYPE (monobasic), female, « Turkest. » (Naturhistorisches Museum, Wien); 1 male, Oi-Tal (North-East Issyk-Kul), 17.5.1955, L. V. Pek *leg.*; 2 males and 1 female, Kungei-Alatau, Kara-Kyr Pass, 3800 m, 21.6.1923, J. G. Promtov *leg.*; 1 male, Karkara Valley, 1.6.1910, Rückbeil *leg.*; 1 male, Kegen Valley, 30.6.; 2 males and 1 female, Kazakhstan, Kuluk-Tau Mts. (north-westwards from Kegen), Uzun-Bulak, 13.5.1969, Ler *leg.*; 4 males and 1 female, Dzsharkent env., Kyrgyz-Sai (the locality is doubtful), 2.5.1910 and 5.1916, Rückbeil *leg.* (Zoological Museum, Sankt-Petersburg); 5 males and 3 females, Kirgizia, Tiup reg., Sary-Bulak, 1800 m, 4.6.1983, Sokolov *leg.*; 1 male and 1 female, Kazakhstan, N. E. Kungei Alatau, 15 km W. Saty, Kurmetty, 11.6.1986, I. Kabak *leg.*; 4 males and 4 females, Kazakhstan, Tekes Valley near Tekes village, 2000 m, 23.5.1990, M. Danilevsky *leg.*; 1 male and 2 females, Kazakhstan, Narynkol, 15.6.1991, O. Gorbunov *leg.*; 9 males and 6 females, Kazakhstan, 25 km N. W. Kegen (Kuluk-Tau Mts.), 7.5.1983, G. Nikolaev *leg.*; 2 males, Kazakhstan, Kegen env., 1800 m, 21.5.1997, M. Danilevsky *leg.*; 3 males, 5 females, Kazakhstan, Tuiuk, 2000 m, 23.5.1990, M. Danilevsky *leg.*; 3 males and 2 females, Kazakhstan, north Ketmen slopes, M. Ak-Su Valley, 28.4.1966, A. Badenko *leg.*; 2 males, Kazakhstan, north Ketmen slopes, 13.5.1965 (author's collection).

Distribution. - The nominative subspecies is distributed from the north-east part of Issyk-Kul depression (Tiup distr., Kirgizia) eastwards to Tekes Valley (Kazakhstan) and northwards to the north slope of Kungei Alatau in Chilik Valley near Saty (Kazakhstan); Narynkol environs (Kazakhstan); all around Ketmen Ridge (Kazakhstan : Kegen, Tuiuk, M. Aksu; and China).

***Dorcadion semenovi terskeicum* ssp. n.** (Figs. 4-5)

Type locality. - Ton river valley, south bank of Issyk-Kul, north slope of Terskei Alatau Ridge, Kirgizia.

Description. - Body length in males : 13.5-14.2 mm, in females : 16.2-17.3 mm; body width in males : 5.1-5.5 mm, in females : 6.4-7 mm.

Body rather wide, lateral thoracic spines very long. Black elytral design well developed, though sometimes external black dorsal stripe considerably shortened: does not reach elytral base and not fused with internal black stripe apically. Sutural elytral area usually without black spots, very rarely single spots present just near scutellum. All elytral carinae usually well developed; the furrow between humeral carinae and external dorsal carinae in females rather deep. Elytra widened near middle, in males about 1.6-1.9 times longer than wide; in females : 1.6-1.7. Females are mostly androchromal: pale elytral pubescence is not replaced by brown, only one female with slightly yellowish ground pubescence.

Materials. - HOLOTYPE, male, Kirgizia, south coast of Issyk-Kul Lake, Ton River Valley, « Collect. Hauser »; 12 PARATYPES : 1 male and 5 female with same labels; 2 males, Terskei Alatau, 6.1902, « Coll. Hauser » (Naturhistorisches Muzeum, Wien.); 3 males and 1 female, south coast of Issyk-Kul, 1889 (Zoological Institute, Sankt-Petersburg).

Distribution. - Kirgizia. Ton River Valley in the south bank of Issyk-Kul Lake and perhaps westwards of this site, as eastwards along the south coast of Issyk-Kul Lake other subspecies of *D. semenovi* are distributed. The population of *D. s. terskeicum* ssp. n. is totally isolated from the nominative subspecies.

Remark. - The new subspecies is very close to the nominative one, but on average wider, specially in females, with longer lateral tubercles.

***Dorcadion semenovi almatensis* ssp. n.** (Figs. 6-7)

Type locality. - Turgen River Valley (2300 m), north slope of Zailiisky Alatau Ridge, Kazakhstan.

Description. - Body length in males : 11.2-14.1 mm, in females : 13.5-15.4 mm; body width in males : 4.4-5.5 mm, in females : 5.5-6.4 mm.

Body relatively narrow, lateral thoracic spines usually shorter, sometimes nearly absent. Black elytral pattern a little reduced : humeral stripe usually does not reach elytral apex, external dorsal stripe usually far to be reaching elytral base, external and internal dorsal stripes usually not fused apically. Sutural elytral area usually without black spots, very rarely single spots present just near scutellum. All elytral carinae poorly developed. Elytra relatively oval, in males about 1.8-1.9 times longer than wide; in females : 1.6-1.7. Females are always androchromal : pale elytral pubescence never replaced by brown.

Materials. - HOLOTYPE, male, Kazakhstan, Zailiisky Alatau Ridge, Turgen River, 2300 m, 31.5.1992, M. Danilevsky *leg.*; 38 PARATYPES : 25 males and 11 females with same label (author's collection); 1 male, Asy River Valley, 2500 m, 7.6.1966, N. Scopin *leg.*; 1 female, Zailiisky Alatau, 19.6.1923 (Zoological Institute, Sankt-Petersburg).

Distribution. - Kazakhstan : only one population known; it occurs in alpine meadows at the upper level of Turgen River Narrow and Asy River Narrow from 2300-2500 m above sea level in north-east part of Zailiisky Alatau not far from Almaty. The taxon seems to be strongly isolated from the species area.

Remark. - The new subspecies is very close to the nominative form, but differs by usually shortened black external elytral stripe and relatively short thoracic spines.

***Dorcadion semenovi issykkulense* Pic, 1906** (Figs. 8-13)

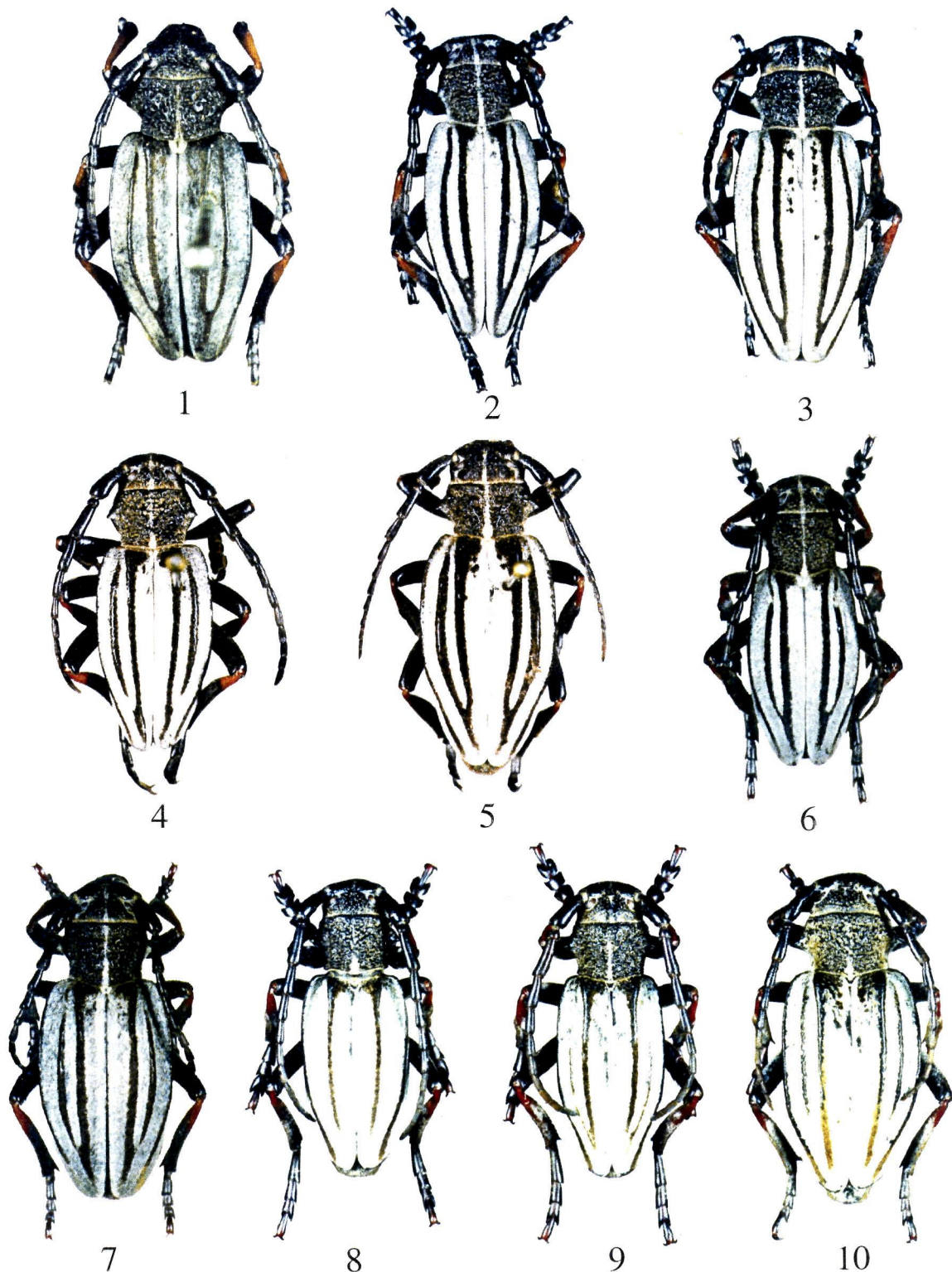
Type locality. - West part of the north bank of Issyk-Kul Lake, Kirgizia.

D. semenovi var. *issykkulense* Pic, 1906 : 96 (Issyk-Kul Lake).

D. semenovi ab. *issykkulense* (sik!): Plavilstshikov, 1958 : 280, 282.

D. semenovi m. *issykkulense* : Breuning, 1962 : 434.

D. semenovi m. *brunneovittatum* Breuning, 1946 : 129.



Figs. 1-3. *D. s. semenovi*: 1 - female, HOLOTYPE (« Turkest »); 2 - male from Ketmen Ridge (Kazakhstan, Tuiuk, 22.5.90, M.Danilevsky leg.); 3 - female with same label. Figs. 4-5. *D. s. terskeicum* ssp. n.: 4 - male, HOLOTYPE (« Jssyk-Kul, Ton-Fluss »); 5 - female, PARATYPE with same label. Figs. 6-7. *D. s. almatensis* ssp. n.: 6 - male, HOLOTYPE (Zailiisky Alatau Ridge, Turgen River, 2300 m, 31.5.1992, M.Danilevsky leg.); 7 - female, PARATYPE with same label. Figs. 8-10. *D. s. issykkulense*: 8-9 - males (Issyk-Kul, Cholpon-Ata, 30.6.84, M.Danilevsky leg.); 10 - female with same label.

Description. - Body length in males : 12.2-16 mm, in females : 14-18.8 mm; body width in males : 4.5-6.6 mm, in females : 5.5-8 mm.

Body large and wide, lateral thoracic spines very long, often bent backwards. Black elytral design more or less reduced : humeral stripe usually reaches elytral apex; external dorsal stripe usually absent (Figs. 8, 11) or present (Fig. 9), especially in females (Figs. 10,12) in form of short, narrow stroke never reaching elytral base or apex, very rarely fused with internal stripe; internal dorsal stripes usually very distinct, though often shortened apically, sometimes absent, reduced to a pair of short basal strokes (Fig. 13). Sutural elytral area usually without black spots, sometimes single spots present just near scutellum, in females sutural area often totally covered with numerous black spots (Figs. 11-12). Humeral and internal dorsal elytral carinae strongly developed; external dorsal carinae usually totally absent (specially in males), in females often more or less distinct in central part (Figs. 10, 12). Sometimes all dorsal carinae absent, only internal dorsal carinae are represented in form of short basal keels (Fig. 13). Elytral sides more parallel anteriorly; elytra relatively flat; in males about 1.7-1.8 times longer than wide. Females are mostly androchromal, but sometimes autochromal with pale and black elytral pubescence partly (near elytral carinae) replaced by brown (m. *brunneovittatum*, Fig. 12).

Materials. - 2 males, Kirgizia, Kungei Alatau, Orto-Koisu, 3000 m, 6.7.1981, E. Tarasov *leg.*; 2 males with most probably wrong geographical labels : « Dzharkent, Ingenizky *leg.* » and « Kopal, 5.1930, Lopatin *leg.* » (Zoological Institute, Sankt-Petersburg); 9 males, 6 females, Kirgizia, Cholpon-Ata, 30.6.1984, 1800 m, M.Danilevsky *leg.*; 3 male and 2 females, Kirgizia, Kungei Alatau, Orto-Koisu, 3000 m, 5.7.1981, E. Tarasov *leg.*; 1 male and 1 female, Kirgizia, Issyk-Kul, 25 km N. Toru-Aigyr, 3000 m, 18-21.5.1970, V. Kuznetsov *leg.*; 1 male and 2 females, west part of north Issyk-Kul bank, 1.5.1956, N. Scopin *leg.*; 1 male, west Issyk-Kul bank, 5.1969, I. Kostin *leg.* (author's collection).

Distribution. - Kirgizia. West part of the north bank of Issyk-Kul Lake from about Cholpon-Ata to Balykchi environs.

Remarks. - The specimen of M. Pic's collection in the Paris Museum d'Histoire Naturelle marked as type of *D. s. var. issykkulense* Pic is not the type. It is female from « Ton-Fluss » (so belonging to *D. s. terskeicum* ssp. n., described above) without special characters of the taxon mentioned in the original description: « la bande présuturale, étant sur chaque élytre parsemée de quelques macules noires irrégulières; ». Such forms of females (Fig. 11) are rather numerous in the very common taxon distributed along the north-west bank of Issyk-Kul Lake from about Balykchi (earlier Rybachie) to Grigorievka (Kirgizia). The original type female was undoubtedly collected in this part of Issyk-Kul depression about 100 km long, so this area is the type locality of the taxon.

The subspecies is characterized by strong development of internal dorsal elytral carinae while external carinae are usually totally reduced or poorly developed; forms with all dorsal carinae reduced (Fig. 13) are very rare. Specimens similar to the typical form of *D. s. issykkulense* are known in other subspecies (*D. s. kuvakensis* ssp. n., *D. s. hauseri*, *D. s. thaisiae* ssp. n.) as rare aberrations.

***D. semenovi bisbicoatum* Pic, 1908, stat. n.** (Fig. 14)

Type locality. - Naryn Ridge, Kirgizia.

D. bisbicoatum Pic, 1908a : 52 (« Karagai-Tau »); 1908b : 4; Gressitt, 1951 : 334.

D. hauseri ab. *bisbicoatum* Suvorov, 1913 : 68.

D. semenovi ab. *bisbicoatum* : Plavilstshikov, 1958 : 280, 282; Breuning, 1962 : 433-434 (as morpha).

Description. - Body length in males : 16-16.7 mm, body width in males : 6-6.5 mm.

Only two males are known. Body big, but moderately wide, lateral thoracic spines long, not curved backwards. Pronotum with very rough sculpture, strongly convex in the middle of hind margin. Black elytral pattern as in one of the most common form of *D. s. issykkulense* : humeral stripe reaches elytral apex; external dorsal stripe totally absent; internal dorsal stripes usually very long and distinct. Sutural elytral area without black spots, but with black pubescence near scutellum. Humeral and internal dorsal elytral carinae strongly developed; external dorsal carinae totally absent. Elytral sides evenly rounded, widest near middle; elytra relatively flat; about 1.7-1.8 times longer than wide.

Materials. - 2 males, SYNTYPES, « Karagai-Tau » (Paris, Muséum d'Histoire Naturelle).

Distribution. - Kirgizia. Naryn Mountain Ridge (old name - Karagai-Tau).

Remarks. - Two syntypes (males) in bad condition are preserved in M. Pic's collection of Paris Museum d'Histoire Naturelle. Both specimens (without original type labels, but with small red squares) are marked by me as « syntypes ». First male (Fig. 34) with two labels written by M. Pic : « *Semenovi* de Karagaitau » and « *bisbicoatum* Pic»; second male with one label written by M. Pic : « Karagai-Tau ».

The locality data of the known specimens seem to be rather doubtful as Naryn Ridge is well investigated now and no forms of *D. semenovi* were found in the region, which is far from the area of the species. Both syntypes are rather close to *D. s. issykkulense*. So, the status of *D. s. bisbicoatum* as separate taxon is not evident and must be confirmed.

I prefer to regard the specimens as the representatives of a separate taxon as such special structure of pronotum with strong posterior swelling is not known in any other subspecies.

***Dorcadion semenovi uriuktensis* ssp. n.** (Figs. 15-19)

Type locality. - East part of the north bank of Issyk-Kul Lake, Chon-Uriukty River Valley (1800 m), Kirgizia.

Description. - Body length in males : 12.7-15.5 mm, in females : 14.5-16.9 mm; body width in males : 4.4-5.8 mm, in females : 5.9-6.9 mm.

Body relatively narrow, lateral thoracic spines long, usually bent backwards. Black elytral pattern usually strongly reduced: humeral black stripe narrow, complete, reaching elytral apex; external dorsal black stripe usually present, but strongly shortened to a narrow medial fragment (Figs. 15, 17) or totally absent (Fig. 16), sometimes in females it can be long and wide, nearly complete (Figs. 18-19); internal dorsal stripe usually reduced to a short basal stroke, sometimes a poor trace of internal stripe can be seen in the middle or posterior part of elytron; external stripes, if present, are always more developed than internal; black spots of sutural pale area sometimes present near scutellum in females, but in males always absent. Humeral elytral carinae moderately developed; external dorsal carinae well developed only in central part or absent; internal carinae always reduced to a short basal keel. Elytra convex, relatively oval, in males about 1.8-1.9 times longer than wide. Females are androchromal (Fig. 17) or autochromal (Figs. 18-19) with pale pubescence partly or totally replaced by brown.

Materials. - HOLOTYPE, male, Kirgizia, east part of north bank of Issyk-Kul Lake, Chon-Uriukty River Valley, 1800 m, 10.5.1998, A. Subankulov *leg.*; 22 PARATYPES : 12 males and 10 females, with same label (author's collection and collection of A. Klimenko, Tver). Specimens from Klimenko's collection were wrongly marked as « A. Klimenko *leg.* »

Distribution. - Kirgizia. Only one population known. It occurs in the east part of the north bank of Issyk-Kul Lake at the lowest level of Chon-Uriukty River (1800 m) about 80 km from Przhewalsk (now Karakol).

Remark. - The new subspecies is close to *D. semenovi hauseri*. The body form is similar, but black elytral design is rather peculiar, though corresponding forms are known as rare aberrations in *D. s. hauseri*.

***Dorcadion semenovi hauseri* Reitter, 1895** (Figs. 20-24)

Type locality. - Karakol env., east part of Issyk-Kul Lake depression (1800 m), Kirgizia.

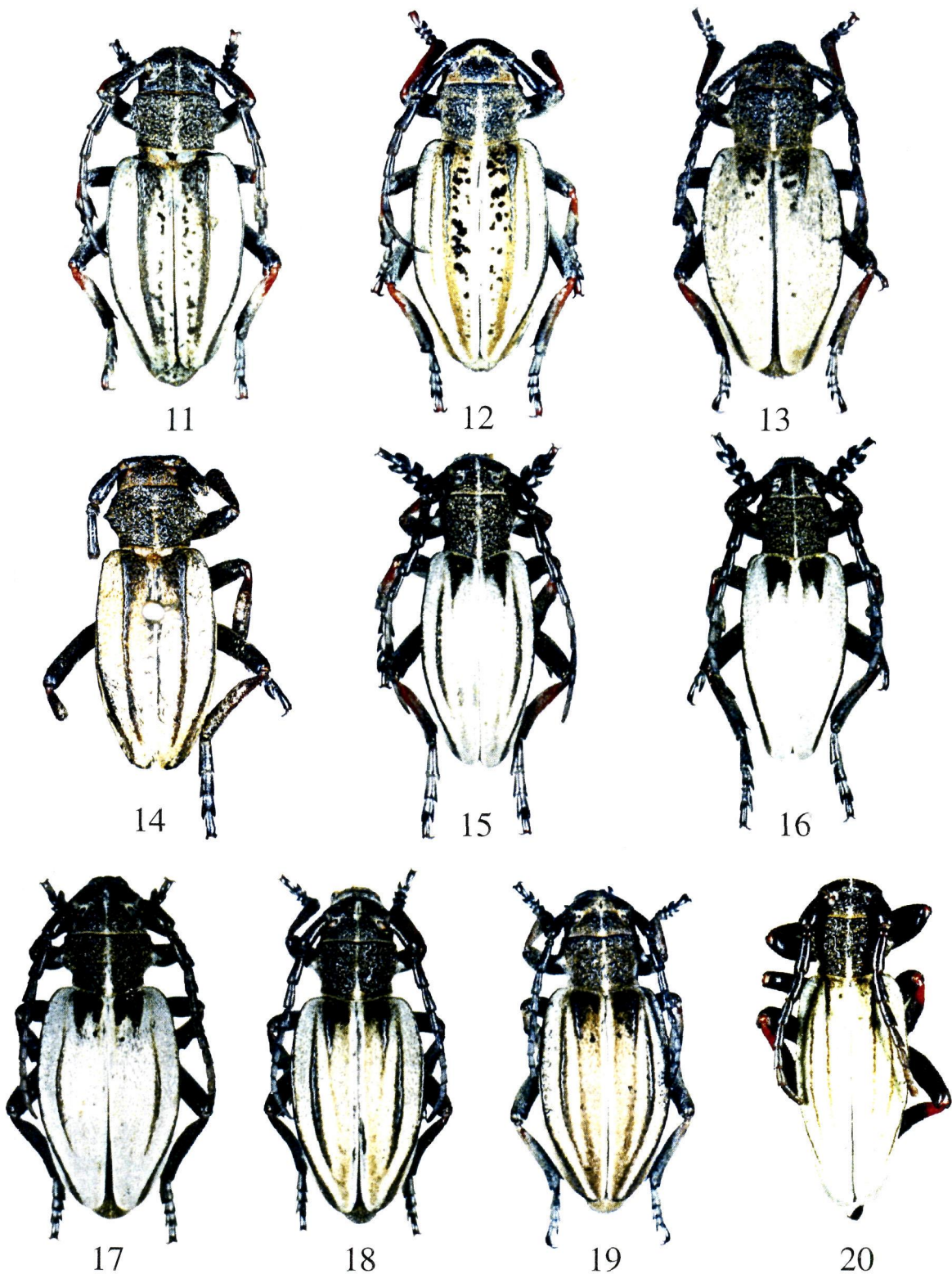
D. hauseri Reitter, 1895 : 160-161 (« Thian-Schan, im südöstlichen Turkestan »); Suvorov, 1913 : 68, part.; Gressitt, 1951 : 335.

D. hauseri ab. *obliteraticostum* Suvorov, 1913 : 67-69 (« Umgegend von Prshewalsk »); Gressitt, 1951 : 335; Plavilstshikov, 1958 : 280,282.

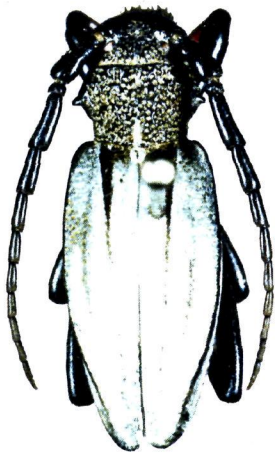
D. semenovi ab. *hauseri* : Plavilstshikov, 1958 : 280, 282; Breuning, 1962 : 433 (as morpha), part.

D. semenovi m. *obliteraticostatum* (sic!) : Breuning, 1962 : 434, part.

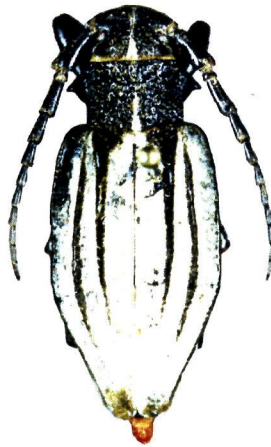
D. semenovi hauseri : Danilevsky, 1993 : 48.



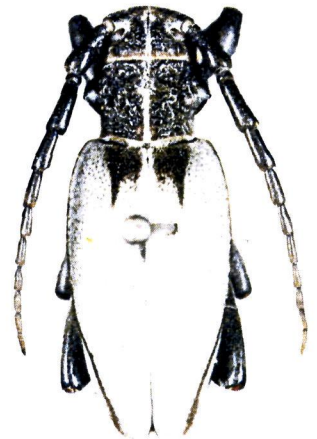
Figs. 11 -13. *D.s.issykkulense* : 11 -female (Issyk-Kul, Cholpon-Ata 30.5.84, M. Danilevsky leg.) 12 - female (Issyk-Kul, 25 km N Toru-Aigyr, 18.5.70, V.Kuznetzov leg.); 13 - female (NW Issyk-Kul, 1.5.56, N.Scopin leg.). Fig. 14. *D. s. bisbicoatum*, SYNTYPE, male (« de Karagaitau »).Figs. 15-19. *D. s. uriuktensis* ssp. n., HOLOTYPE and PARATYPES (Kirgizia, east part of north bank of Issyk-Kul Lake, Chon-Uriukty River Valley, 1800 m, 10.5.1998, A. Subankulov leg.): 15 (HOLOTYPE)-16 - males; 17-19 - females. Fig. 20-24. *Dorcadion s. hauseri* : 20 - male, LECTOTYPE (« Thianshan »).-21 - male (Przhevalsk env., 4.08, D. D. Pedashenko leg.); 22 - female (Przhevalsk env., Karakol Narrow, 19.4.08, D. D. Pedashenko leg.);



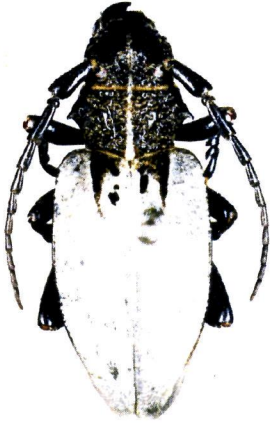
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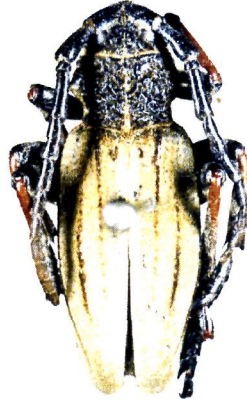
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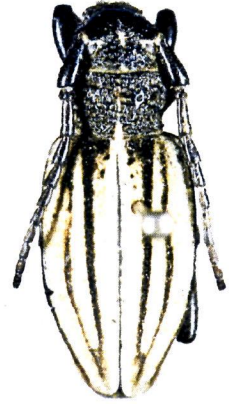
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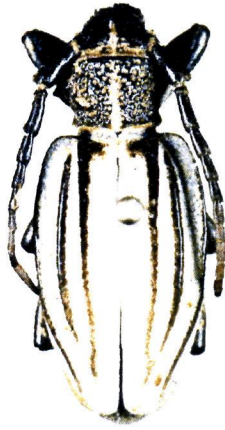
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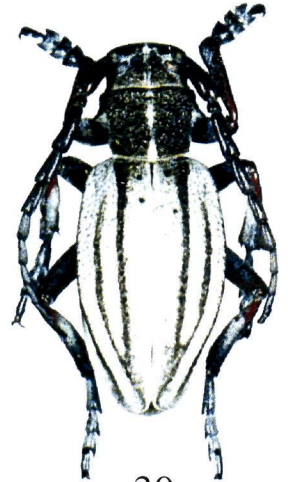
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23 - male, SYNTYPE of *D. hauseri* ab. *obliteraticostum* (Przhevalsk env., 30.3.1908, D. D. Pedashenko leg.); 24 - female, SYNTYPE of *D. hauseri* ab. *obliteraticostum* Suv. (Przhevalsk env., Karakol Narrow, 7.4.1908, D. D. Pedashenko leg.) Figs. 25-26. *Dorcadion* s. *flavopubescence* ssp. n. : 25 - male, HOLOTYPE, type of *Dorcadion* s. m. *flavopubescence* (« Kuldja, Turkestan »); 26 - female, paratype, type of *Dorcadion* s. m. *subflavovittatum* (with same label). Figs. 27-28. *Dorcadion* s. *kaiduensis* ssp. n. : 27 - male, HOLOTYPE, (« Julduz, Kuldsha »); 28 - female, PARATYPE with same label. Figs. 29-30. *D. s. kuvakensis* ssp. n., HOLOTYPE and PARATYPE, Kirgizia, East Kirgizsky Ridge, Kuvaki Pass, 2300 m, 20.5.1998, S. Toropov leg. : 29 (HOLOTYPE)- 30 males.

Description. - Body length in males : 11.1-15 mm, in females : 13-17 mm; body width in males : 4-5.8 mm, in females : 5.1-6.9 mm.

Body relatively narrow, ground pubescence is usually normal, grey-white, but in population from Dzhergalan body pubescence is very often yellowish. Prothorax with rough sculpture; lateral thoracic spines long, bent backwards or short, sometimes (in population from Dzhergalan) reduced to small tubercles. Elytral carinae more or less reduced : usually internal carinae more developed anteriorly and external carinae - near middle (Figs. 20-21); often internal carinae in form of short basal stroke and external - as short, narrow line in the middle, or external totally absent (ab. *obliteraticostum*, Figs. 23-24), or very rarely (only in population from Dzhergalan) external carinae strongly raised near middle like in *D. s. uriuktensis* ssp. n.; sometimes both carinae nearly complete and more or less strongly raised, but posteriorly reduced (Fig. 22); or sometimes only internal carinae complete and external - absent or feebly developed; very rarely only internal carinae well developed (like in *D. s. issykkulense*) and external carinae totally absent or feebly developed; sometimes all elytral carinae well developed like in *D. s. semenovi* (only in population from Dzhergalan); humeral elytral carinae moderately developed; humeral black stripe usually very narrow. Black elytral pattern usually strongly reduced, covering raised portions of elytral carinae; black spots of sutural pale area usually absent or sometimes several spots present just near scutellum. Elytra convex, relatively oval, in males about 1.7-1.9 times longer than wide, in females : 1.6-1.7 times. Females are always androchromal.

A unique male from Dzhetty-Oguz River Narrow has complete, narrow internal dorsal stripe and very narrow external stripe reduced in anterior half.

Materials. - LECTOTYPE, male with 6 labels : « *D. hauseri* m. », « Thianschan », « Coll. Reitter », « Holotypus, *Dorcadion hauseri* Reitter, 1895 », « *Dorcadion semenovi hauseri* Rtt., Breuning det. », « *Dorcadion semenovi hauseri* Rtt., det. Breuning 1955 », (Naturhistorisches Museum, Wien); 4 SYNTYPES of *D. hauseri* ab. *obliteraticostum* : 1 female, Przhevalsk env., Karakol Narrow, 7.4.1908, Pedashenko leg. and 3 males, Przhevalsk env. (most probably also from Karakol Narrow), 30.3.1908 and 4.1908, D. D. Pedashenko leg.; 1 male and 2 females, Przhevalsk env., Karakol Narrow, 4.4.1908, 7.4.1908 and 19.4.1908, D. D. Pedashenko leg.; 1 male and 1 female, Przhevalsk env. (most probably also from Karakol Narrow), 4.1908 and without date, D. D. Pedashenko leg.; 1 male, Dzhetty-Oguz River near Przhevalsk, 14.9.1907 (possibly a dead specimen was collected), Korolkov leg. (Zoological Institute, Sankt-Petersburg); 3 males and 3 females, Kirgizia, Issyk-Kul, Karakol env., 1700 m, 7.5.2000, S. Toropov leg. - I've seen about hundred specimens of this series in S. Toropov's collection (Bishkek); 7 males and 8 females, Kirgizia, E Issyk-Kul, Dzhergalan (about 50 km eastwards Karakol), 2000 m, 20.5.2000, A. Subankulov leg. (author's collection); 46 males and 19 females with same label (collection of S. Toropov, Bishkek).

Distribution. - Kirgizia, south-east part of Issyk-Kul depression: Karakol (earlier Przhevalsk) environs, Karakol River Valley, Dzhergalan environs (about 50 km eastwards Karakol) and Dzhetty-Oguz River Valley (about 40 km westwards Karakol).

Remark. - The original description was based on at least two specimens (male and female). One of the types (male) is preserved in the Hungarian Natural History Museum (with the label « holotype », but in fact it must be regarded as lectotype, Fig. 20).

There are several populations in the species area, which can include specimens similar to the lectotype, but only one of them (near Przhevalsk, now Karakol) includes the males which are nearly identical to it. So, I regard Karakol environs as the type locality of the taxon. The typical population (like the whole subspecies) is characterized by greatest degree of individual variability known in the species. The form similar to the lectotype is represented by a big part of known specimens. Another (also big) part of the population consists of specimens with totally reduced dorsal elytral carinae and black stripes, described later as *Dorcadion hauseri* ab. *obliteraticostum* Suv. (Figs. 23-24). Transitional forms with hardly pronounced carinae and black stripes are also very numerous (Fig. 21).

Another population which can be attributed to *D. s. hauseri* (near Dzhergalan) is characterized by smaller average size and higher degree of individual variability, including numerous specimens with both dorsal carinae well developed (like in *D. s. semenovi*) and with only external dorsal carinae developed like in *D. s. uriuktensis* ssp. n. (both forms are unknown from the Karakol population).

The third population (Dzhety-Oguz) of the subspecies is represented by only one specimen and can not be adequately characterized.

D. s. hauseri is similar to *D. s. uriuktensis* ssp. n. by body form and differs by greater variability. Certain specimens can be absolutely similar, but in general, internal dorsal elytral stripes are more pronounced, which are nearly always more developed than external elytral stripes, while in *D. s. uriuktensis* ssp. n. on contrary, the external stripe is more developed than internal. The specimens with reduced elytral carinae of *D. s. hauseri* (Figs. 23-24) can be very similar to related specimens of *D. s. uriuktensis* ssp. n. (Fig. 16), but usually bigger and wider. The populations of both subspecies are separated by a population of *D. s. semenovi* in Tiup region.

***Dorcadion semenovi flavopubescens* ssp. n.** (Figs. 25-26)

Type locality. - Yining environs, China.

D. semenovi m. *flavopubescens* Breuning, 1962 : 435 (« Kuldja »).

D. semenovi m. *subflavovittatum* Breuning, 1962 : 435 (« Kuldja »).

Description. - Body length in male : 14 mm, in females : 13.6-14.7 mm; body width in male : 5.1 mm, in females : 5.5-6.3 mm.

Body in male rather narrow, covered with brown-yellow pubescence (*m. flavopubescens*, Fig. 25); in females - pale pubescence partly slightly yellowish (Fig. 26), or normal - pale-grey; lateral thoracic spines in male very long and thin (a unique pattern in the species), straight, not bent backwards; in females from moderately long and slightly bent

backwards to very short, nearly obliterated. Pronotum with very rough sculpture. Dorsal elytral carinae in male nearly obliterated, internal carinae slightly raised only anteriorly, external carinae - only near middle; dorsal black elytral stripes in male strongly reduced, covering raised portions of carinae; humeral black stripe narrow, complete, reaching elytral apex; in females dorsal carinae well developed; internal carinae always complete, internal - nearly complete or slightly reduced only anteriorly or anteriorly and posteriorly; one female with slightly yellowish pale elytral pubescence (m. *subflavovittatum*, Fig. 26); sutural pale area in females with several black spots. Elytra moderately convex.

Materials. - HOLOTYPE, male, type of *D. semenovi* m. *flavopubescens*, « Kuldja, Turkestan »; 3 PARATYPES : 1 female, type of *D. semenovi* m. *subflavovittatum* with same label; 1 female, « Kuldja, Mont. bor. »; 1 female, « Dsungaria, Borocho Gb., 6.05. » (Naturhistorisches Museum Basel).

Distribution. - China, Yining environs.

Remarks. - The new subspecies according to male characters must be very close to *D. s. hauseri*; it differs by prothorax with rather long lateral spines and yellow pubescence of body and elytra. All three females considerably differ from *D. s. hauseri* by nearly complete elytral carinae and black stripes.

Undoubtedly the new subspecies must be rather variable, and full description of its morphology needs new materials.

Dorcadion semenovi kaiduensis ssp. n. (Figs. 27-28)

Type locality. - Kaidu he River Valley, China.

Description. - Body length in male : 14 mm, in female : 14.6 mm; body width in male : 5.2 mm, in female : 6.1 mm.

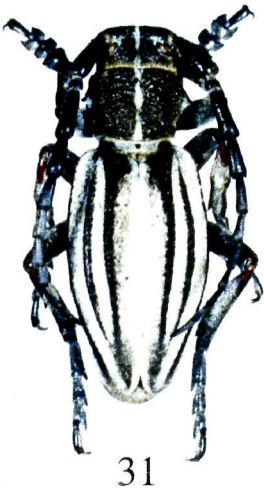
Body moderately narrow; covered with pale-grey pubescence; lateral thoracic spines moderately long; pronotum with very rough sculpture. Humeral and dorsal elytral carinae well developed, strongly raised; internal carinae reaching elytral base and obliterated behind middle; external carinae not reaching elytral base and also obliterated behind middle; black dorsal elytral stripes in female a little longer than in male; sutural pale area without black spots. Elytra moderately convex.

Materials. - HOLOTYPE, male, « Julduz, Kuldscha »; PARATYPE, female, with same label (Naturhistorisches Museum Basel).

Distribution. - China, Kaidu he River Valley.

Remarks. - The new subspecies is also close to *D. s. hauseri*; similar elytral structure is unknown in males of *D. s. hauseri* (or in any other subspecies), one female of *D. s. hauseri* from Karakol Valley has similar elytral design, but it is much bigger with very long thoracic spines.

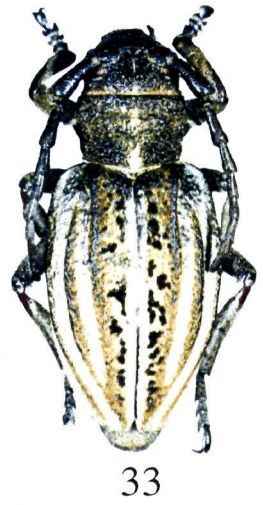
The new subspecies also can be variable, and full description needs new materials.



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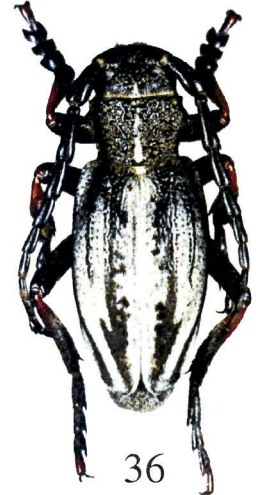
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Figs. 31-34. *D. s. kuvakensis* ssp. n., PARATYPES, Kirgizia, East Kirgizsky Ridge, Kuvaki Pass, 2300 m, 20.5.1998, S. Toropov leg. : 31 - male; 32-34 - females. Figs. 35-39. *D. s. thaisiae* ssp. n., HOLOTYPE and PARATYPES, Kirgizia, S Issyk-Kul, Kadzhi-Sai, 23-28.5.2000, A. Smoliannikov leg.: 35 (HOLOTYPE)-36 - males; 37-39 - females.

***Dorcadion semenovi kuvakensis* ssp. n.** (Figs. 29-34)

Type locality. - Kuvaki Pass (2300 m), the easternmost part of Kirgizsky Ridge, Kirgizia.

Description. - Body length in males : 13-17.3 mm, in females : 14.3-19.5 mm; body width in males : 4.8-6.6 mm, in females : 5.6-8.2 mm.

Body usually large and wide, lateral thoracic spines very long, often bent backwards. Black elytral design rather variable. Usually it is strongly developed. Full set of dark elytral stripes present. All stripes wide and long (very rarely narrow like in *D. s. semenovi*), though external dorsal stripe usually not reaching elytral base, usually fused apically with internal dorsal stripe. Sutural pale area (even in males, Fig. 29) often with numerous black spots. Very rarely elytral pattern is similar to pattern of *D. s. issykkulense* : external elytral dark stripe totally reduced. Forms with both dorsal stripes reduced or with reduced internal elytral stripes unknown. Humeral, external and internal dorsal elytral carinae usually strongly developed, though external dorsal carinae not reaching elytral base. Elytra usually oval, or in forms with reduced external carinae elytral sides more parallel anteriorly; elytra in males about 1.5-1.8 times longer than wide, in females : 1.5-1.7 times. Females are mostly autochromal with pale and black elytral pubescence partly (near elytral carinae) replaced by brown (Figs. 33-34), but sometimes androchromal (Fig. 32); very rarely sutural area is nearly totally black with only a narrow pale sutural stripe.

Materials. - HOLOTYPE, male, Kirgizia, East Kirgizsky Ridge, Kuvaki Pass, 2300 m, 20.5.1998, S. Toropov leg. (author's collection); 152 PARATYPES : 64 males and 25 females with same label (author's collection and collection of A. Klimenko, Tver); 53 males and 10 females, Kuvaki Pass, 2000 m, 14.5.2000, M. Danilevsky leg. (author's collection). Paratypes from A. Klimenko's collection were wrongly marked as « A. Klimenko leg. »

Distribution. - Kirgizia. Only one population known. It occurs in the eastern most point of Kirgizsky Ridge on Kuvaky Pass (2300 m) not far from Issyk-Kul Lake (to the north from Kochkorka).

Remarks. - *D. s. kuvakensis* ssp. n. morphologically and geographically is close to *D. s. issykkulense*, but differs first of all by usual presence of external elytral dark stripes, as in *D. s. semenovi*. But *D. s. semenovi* is much narrower with very thin dark elytral stripes. Specimens of *D. s. kuvakensis* ssp. n. with reduced external dark stripe like in *D. s. issykkulense* are very rare and usually small and narrow. Males of *D. s. kuvakensis* ssp. n. can have black spots along sutural area. Males of all other subspecies, excepting *D. s. thaisiae* ssp. n., can have such spots only just near scutellum.

***Dorcadion semenovi thaisiae* ssp. n.** (Figs. 35-39)

Type locality. - Central part of south Issyk-Kul bank in Kadzhi-Sai environs, Kirgizia.

Description. - Body length in males : 11.5-14.3 mm, in females : 13-16.5 mm; body width in males : 4.2-5.5 mm, in females : 5.3-6.4 mm.

Body small, but wide, lateral thoracic spines very long, often bent backwards. Black elytral design strongly developed. Full set of dark elytral stripes present; all stripes usually wide and long, only external dorsal stripe sometimes shortened anteriorly or posteriorly, or reduced to narrow medial stroke (Figs. 36, 39). Internal dorsal stripe usually widened internally with uneven internal margin; sutural pale area always with numerous black spots; sometimes sutural area (in males and in females) nearly totally black with only narrow pale sutural stripe. Humeral, external and internal dorsal elytral carinae usually moderately developed, though internal dorsal carinae often obliterated, but still bearing wide black stripe. Elytra always evenly oval; in males about 1.7-1.8 times longer than wide; in females 1.6 - 1.7 times. Females are mostly androchromal (Figs. 38-39) or very rarely autochromal with black pubescence partly replaced by pale-brown (Fig. 37, 39).

Materials. - HOLOTYPE, male, Kirgizia, S Issyk-Kul, Kadzhi-Sai, 23-28.5.2000, A. Smoliannikov *leg.* (author's collection); 100 PARATYPES with same label : 9 males and 5 females, author's collection; 72 males and 14 females, collection of S. Toropov, Bishkek.

Distribution. - Kirgizia. Central part of south Issyk-Kul bank in Kadzhi-Sai environs.

Remarks. - *D. s. thaisiae* ssp. n. is very close to *D. s. kuvakensis* ssp. n., but strongly isolated from it by huge distance and populations of other subspecies. *D. s. thaisiae* ssp. n. differs first of all by considerably smaller size : the smallest specimens of *D. s. kuvakensis* ssp. n. are about as long as the biggest specimens of *D. s. thaisiae* ssp. n. In general *D. s. thaisiae* ssp. n. is narrower and less variable : forms with reduced external carinae (like in *D. s. issykkulense*) are unknown here, as well as forms with narrow well developed dorsal carinae (as in *D. s. semenovi*). Sutural pale area much more often strongly darkened, specially in males.

Derivatio nominis. - I am glad to accomplish the appeal of my good friend Mr. Sergei Toropov (Bishkek, Kirgizia) - a well known collector of Central Asian insects - and name a new taxon in honour of his mother Thaisia Toropova.

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