

**REVIEW OF *DORCADION* DALMAN OF "ARIETINUM-GROUP"  
FROM KAZAKHSTAN  
WITH THE DESCRIPTIONS OF SOME NEW TAXA  
(Coleoptera, Cerambycidae)**

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**Key words:** Coleoptera, Cerambycidae, *Dorcadion*, new taxa, Kazakhstan.

**Résumé.** La localité typique, la morphologie et la distribution de *D. arietinum* Jak. sont discutés. Quatre sous-espèces nouvelles sont décrites: *D. arietinum charynensis* ssp. n., *D. arietinum chilikensis* ssp. n., *D. arietinum ketmeniensis* ssp. n., *D. arietinum zhalanash* ssp. n. Le statut de deux taxons décrits originellement comme espèces est modifié: *D. arietinum strandi* Plavilstshikov, 1931, stat. n. et *D. arietinum lucae* Pic, 1898, stat. n.

**Abstract.** The type locality, the morphology and the distribution of *D. arietinum* s. str. are discussed. Four new subspecies are described: *D. arietinum charynensis* ssp. n., *D. arietinum chilikensis* ssp. n., *D. arietinum ketmeniensis* ssp. n., *D. arietinum zhalanash* ssp. n. The status of two taxa originally described as species is modified: *D. arietinum strandi* Plavilstshikov, 1931, stat. n. and *D. arietinum lucae* Pic, 1898, stat. n.

**Acknowledgements.** I wish to express my hearty gratitude to all my friends and colleagues who provided me with the materials for the study.

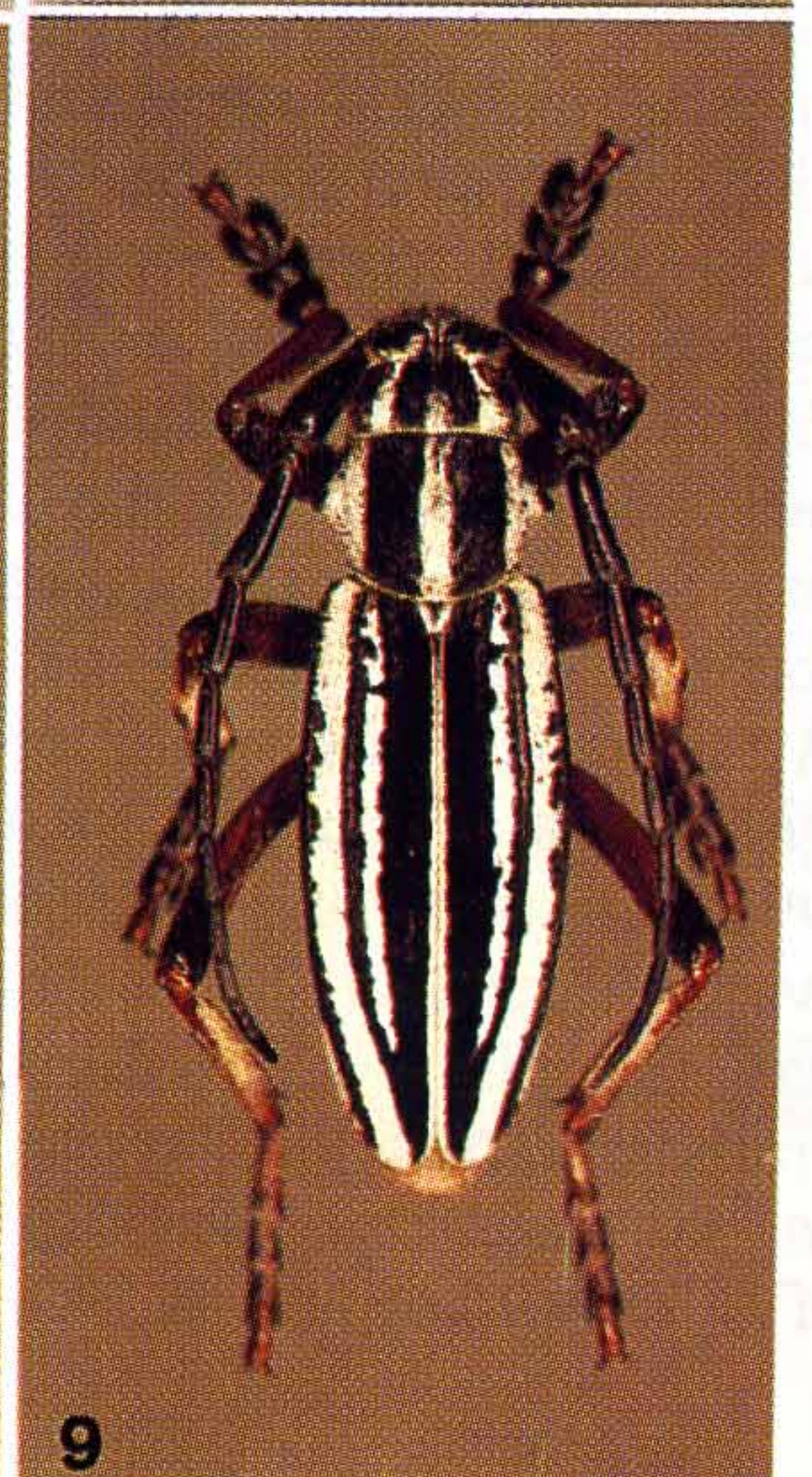
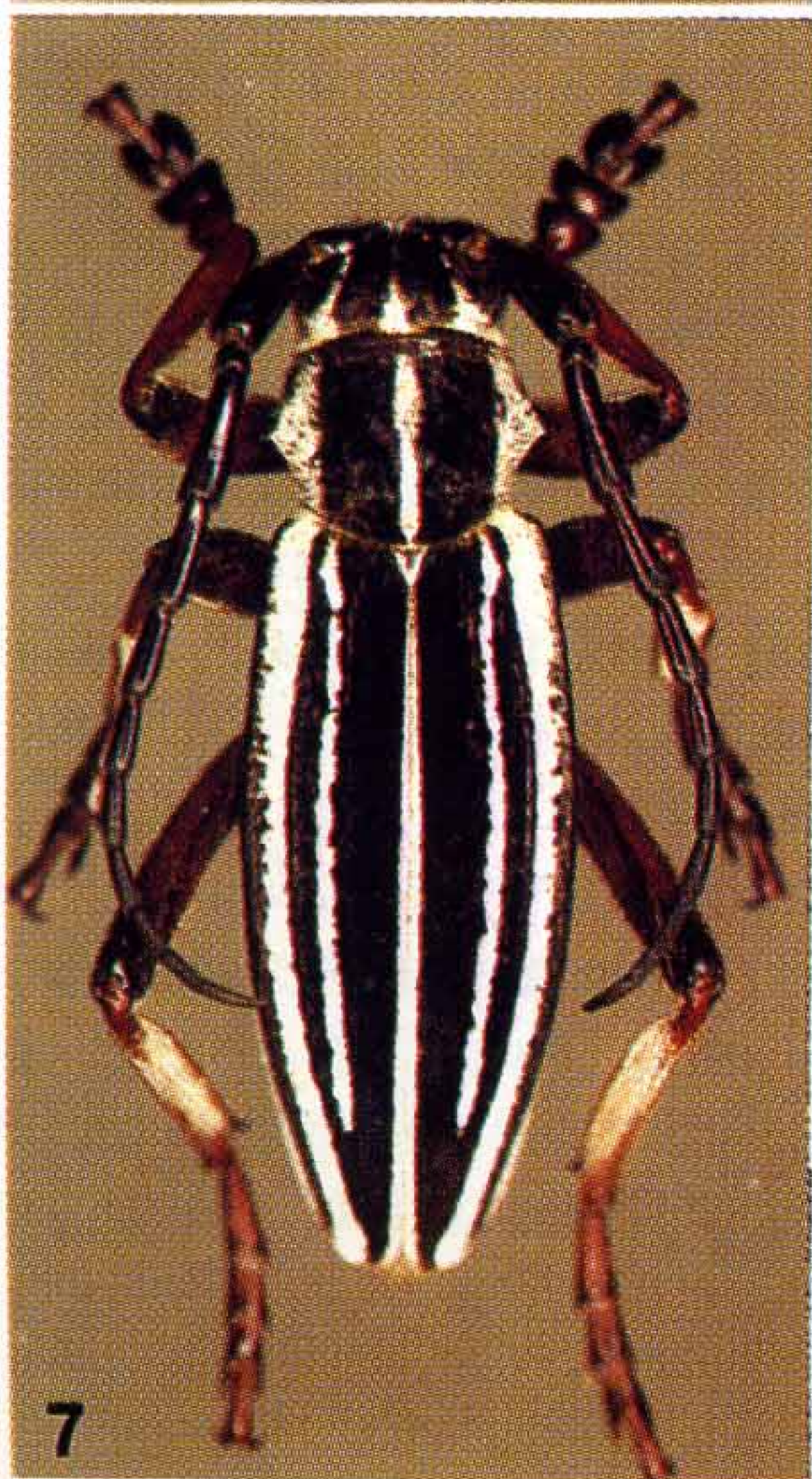
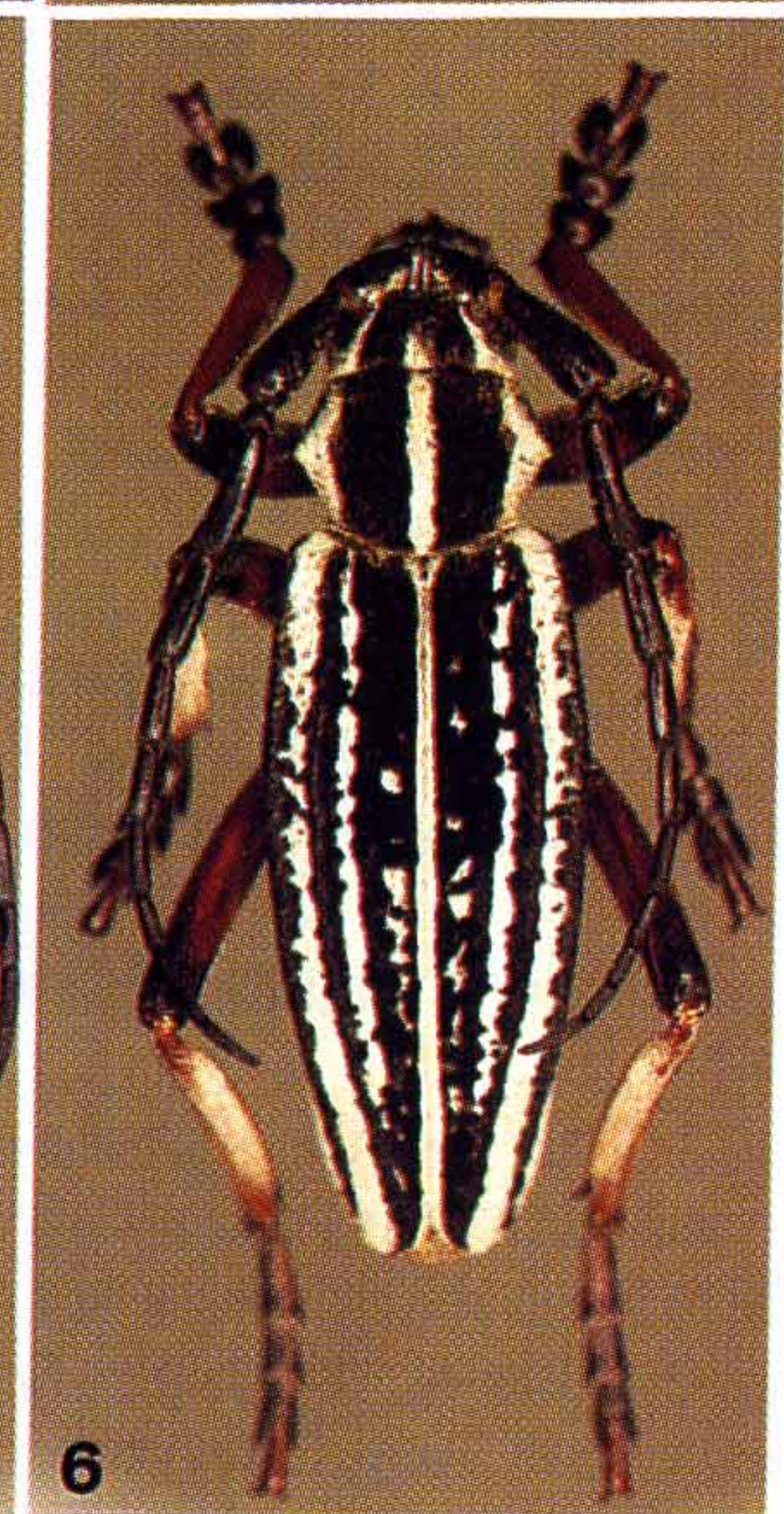
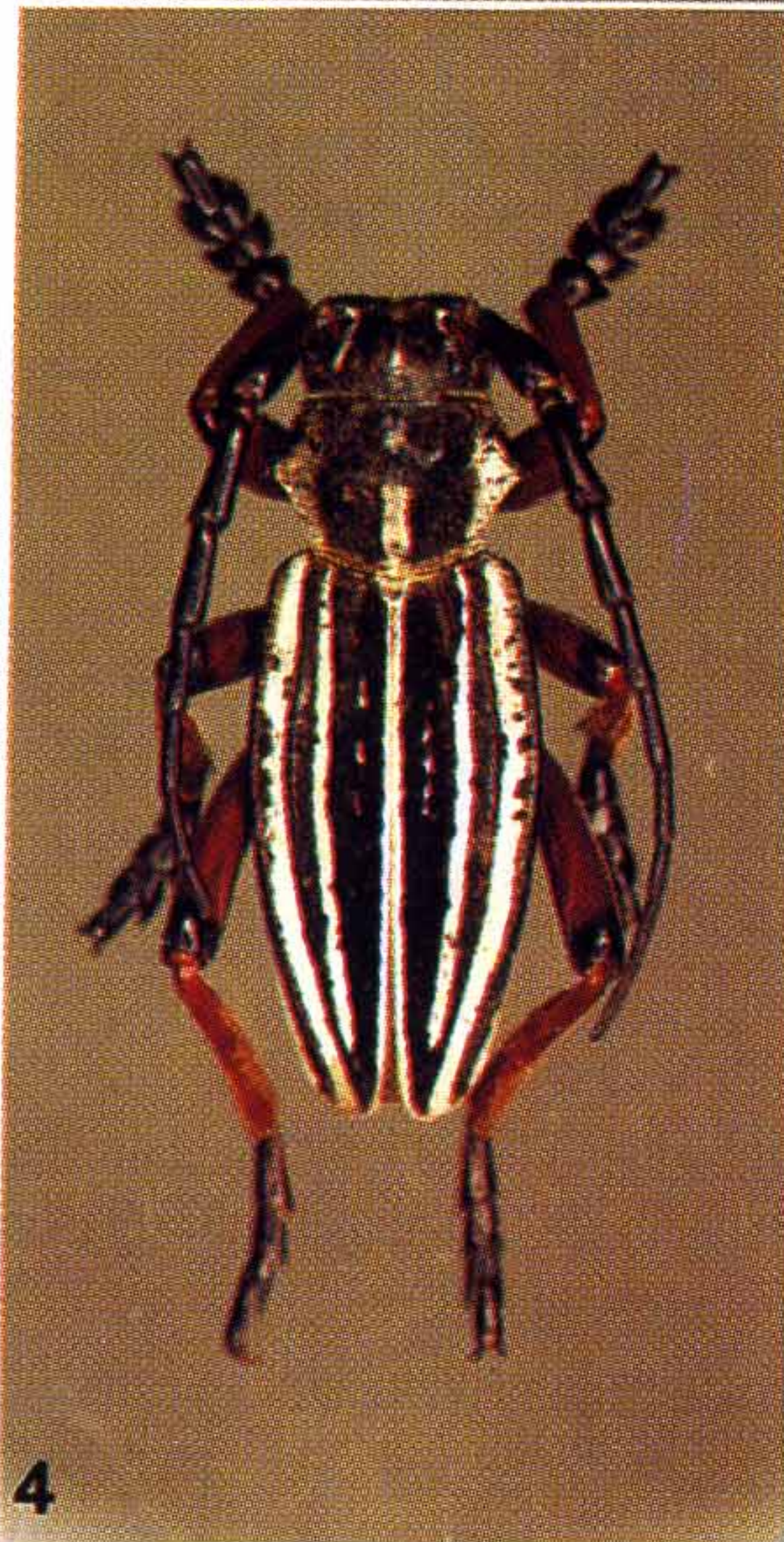
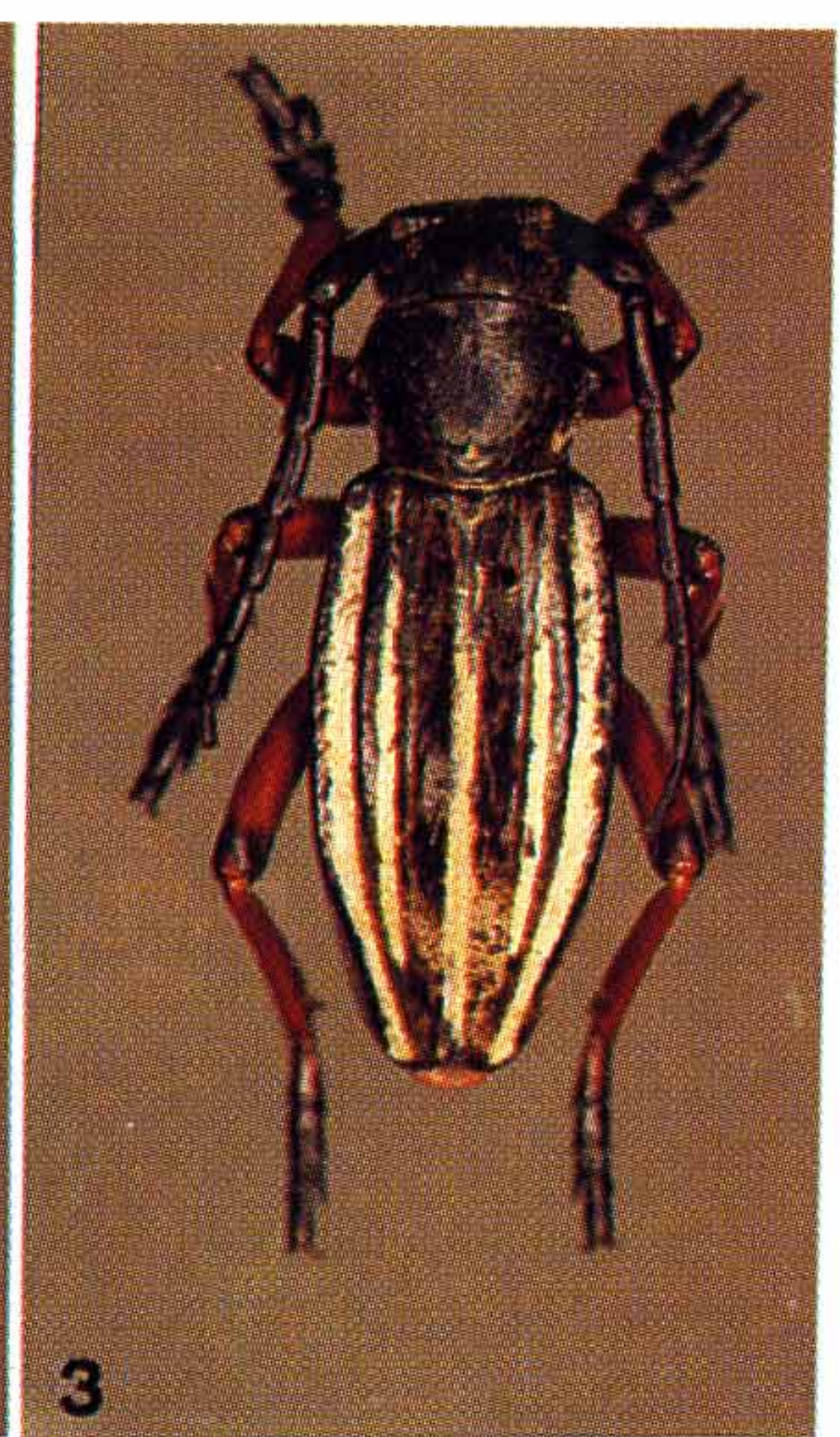
The new investigations of some old materials allow me to adjust the type locality of *D. arietinum* Jak. and to regard all taxa of "arietinum-group" as subspecies as well as to describe some new subspecies.

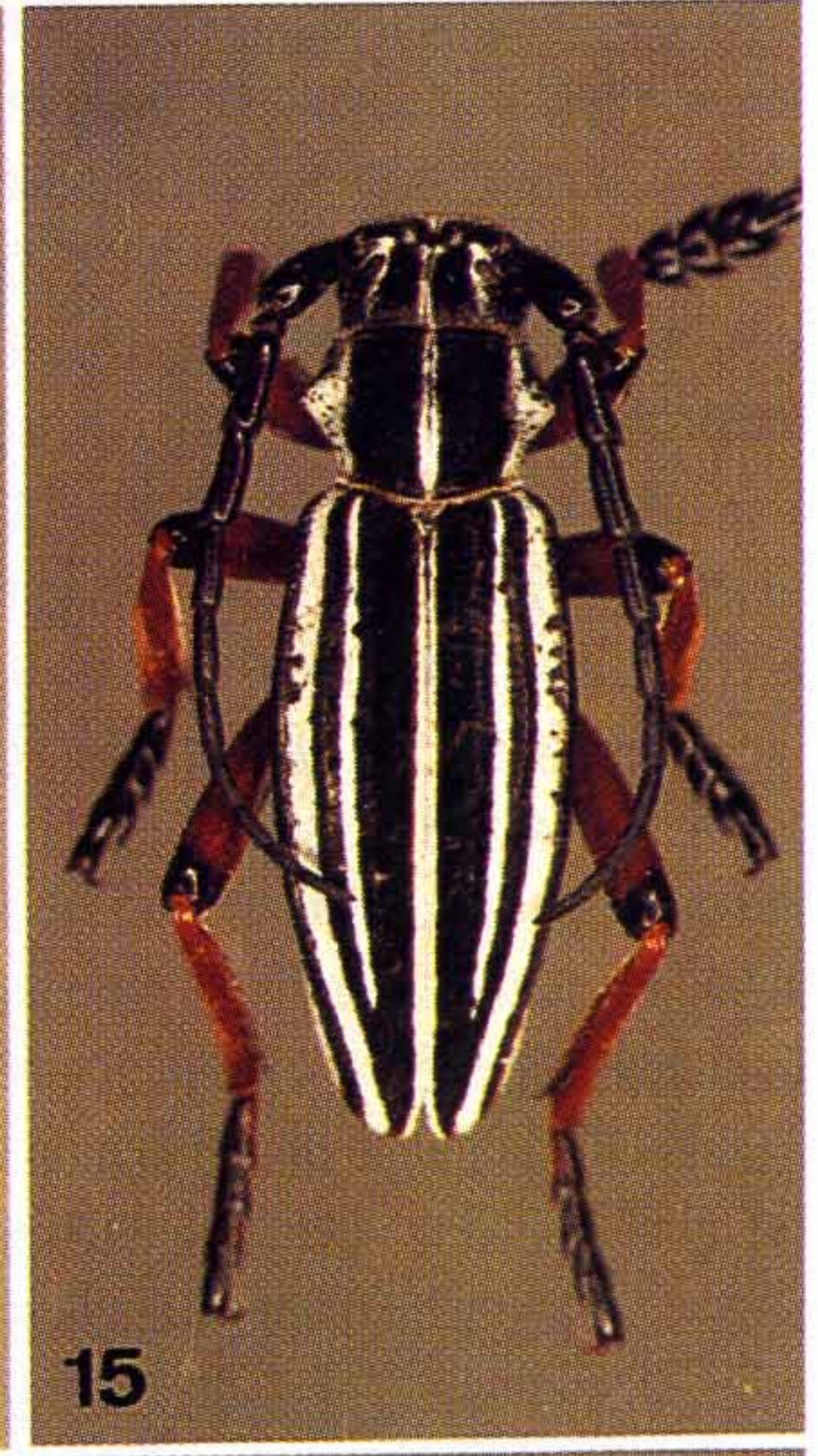
*Dorcadion* (s. str.) *arietinum* Jakovlev, 1897 (Figs. 1-4).

The species was described after one male from "Turkestan" with no more precise indication of locality. The type (Fig. 1), deposited in the Zoological Museum (Saint Petersburg), does not completely fit to any known population.

**Description of the type:** Body wide and short; deep frons puncturation sparse and not coarse; antennae completely black, 1st joint about as long as 3d; prothorax slightly wider than long, lateral spines very small and short, but acute, pronotum smooth; scutellum abnormally long and narrow; elytrae about 1.9 times longer than wide, with coarsely sculptured humeral carinae; external dorsal carinae poorly developed; 7 white elytral stripes present: marginal stripe with linear internal edge, covers about a half of the elytral margin, humeral and external dorsal stripe complete, slightly corroded; legs red with black tarsi, apices of all femora and darkened apices of middle and hind tibiae; hair brushes on internal surface of middle and hind tibiae absent; epical brushes of fore and middle tibiae yellow. Pale abdominal pubescence sparsed medially; last abdominal sternite truncate epically, pygidium and postpygidium widely rounded. Body length 18.5mm, width 6.3mm.

**Discussion:** Among a lot of *Dorcadion* populations known from the area of *D. arietinum* auct. only one seems to be more or less close to the type specimen. Ten available males (Figs. 2-3) from near Kegen (Fig. 28, 1) have about the same body size (length: 16.5-18.5mm, width: 5.8-6.1mm), the same form of elytrae and prothorax and white elytral and thoracic design. So I regard these specimens as well as four males from near Sarydzhaz (Fig. 28, 2) as representatives of the typical form of *D. arietinum* Jak. and Kegen as its typical locality.





The type specimen is still quite exceptional by the very special form of the short and narrow lateral thoracic spines, by the narrow long scutellum (which was specially mentioned by Motshulski in the original description) and the wider blackened femora apices; but in general the type male looks slightly teratic.

**Material:** Type (♂) with labels: "Haberhauer, Turkestan, 89; coll. B. Jakovlev; *arietinum* m.; Ganglb.; Type; *arietinum* B.Jakov., B.Jakovlev det."; 4 ♂♂ with labels: "Kegen, 30.VI., coll. B. Jakovlev; *D. arietinum* Jak., G. Suvorov det."; 6 ♂♂ with labels: "Kegen, 1/2.VI.1910, Rukbeil leg.; *D. arietinum* Jak., G.Suvorov det."; 4 ♂♂ with labels: "Sarydzhaz, 1/2.VII.1910, Rukbeil leg.; *D. arietinum* Jak., G. Suvorov det." [all labels partly in Russian] (my collection and collection of Zoological Museum of Saint Petersburg).

***Dorcadion (s. str.) arietinum charynensis* ssp. n. (Figs. 5-12)**

**Description.** Male: Head black; frons with very deep and irregular coarse contiguous puncturation which becomes rare on vertex and small less distinct dense puncturation in the middle of frons and on vertex; frons peripherally and in the middle covered with dense white hairs, with two black stripes in shallow impression between antennae; white hairs also cover genae, lateral portions of vertex, and wide vertex median line; vertex with two black wide longitudinal hair blotches. Numerous strong semierect setae present on frons; labrum black; mandibles black or reddish basally; palpi reddish with black last joints, lightened basally and epically. Antennae long, surpassing or nearly attaining elytral apices, mostly totally black, very rare 1st antennal joint reddish in basal half; 1st joint with dense semierect strong black setae without fine pubescence, coarsely punctate, in large specimens with more or less distinct internal carina; 1st joint slightly longer than 3d, 4th joint 1.1-1.2 times shorter than 3d.

Prothorax about as long as its basal width, slightly wider anteriorly, without posterior swelling; lateral tubercles long and acute, slightly recurved up- and backwards; pronotum with relatively broad (rare narrow) longitudinal medial white stripe, wide lateral white areas and black areas in between, which are usually about 1.6 times wider than the central white stripe (very rare 2 or 3 times); posterolateral angles of pronotum with several deep dots bearing stout setae; lateral prothoracic portions below lateral tubercles glabrous. Scutellum small, triangular with white pubescence, glabrous medially.

Elytrae 2.0 - 2.2 times longer than wide; slightly more narrowed posteriorly than anteriorly, oval, widest near the middle; humeral carinae distinct, with coarsely sculptured basal portion, granulate or dentate, glabrous; external dorsal carina more or less distinct, relatively smooth, in fresh specimens tomentod (in old specimens often glabrous); ground elytral pubescence black, each elytron with 4 longitudinal white: marginal stripe narrow, covers less than a half of the lateral elytral margin, with regular internal edge; humeral stripe nearly always complete, very rarely interrupted basally, but usually more or less corroded by black spots; wide or narrow external dorsal stripe - complete, with linear margins, or strongly corroded by black, or interrupted, sometimes fused epically with humeral stripe; internal dorsal stripe mostly totally absent, rarely present in the form of more or less distinct white spots; humeral stripe from 1.2 to 2.0 times wider than external dorsal stripe; joint sutural stripe often yellow, mostly much narrower than central pronotal stripe, usually narrower than external dorsal stripe; strong erect setae poorly visible. Ventral portions of thorax regularly covered with white pubescence.

Legs with strong suberect black setae; fine white pubescence on posterior portions of middle and hind femora, on anterior portions of fore femora and on outer surface of hind tibiae; very dense pale hair brushes formed by semierect setae and

fine pubescence present on internal surface of middle and hind tibiae and on hind surface of fore tibiae; epical brushes on posterior surface of middle tibiae mostly black; all femorae red with black apices; all tibiae entirely red or often middle and posterior tibiae darkened epically; tarsi entirely black or reddish; posterior tarsi with 1st joint from about 1.4 to about 1.1 times shorter than 2nd and 3d joints combined; 1st and 2nd combined about 1.4-1.5 times longer than 3d and 4th combined.

Abdomen black or reddish, with sparsed medially white pubescence; last abdominal sternite broadly truncate or slightly emarginate; pygidium broadly rounded, postpygidium narrowly rounded.

Female: Only androchromal, of about the same colour and pubescence patterns as in males, but central pronotal stripe always wide; antennae reaching epical third of elytrae; 1st antennal joint about as long as 2nd and 3d combined, 4th joint about 1.2-1.3 times shorter than 3d. Prothorax more transverse, about 1.3-1.4 times shorter than basal width. Elytrae regularly oval or more narrowed epically, about 1.7-1.8 times longer than broad; elytral carinae moderately prominent, not much stronger than in males; last abdominal sternite broadly truncate epically, last abdominal sternite broadly rounded.

Body length in males: 15.2 - 21.3 mm, in females: 15.1 - 22.6 mm; body width in males: 4.9 - 6.7 mm, in females: 6.0 - 8.2 mm.

**Material.** Holotype (Fig. 5): ♂, Kazakhstan, north-east Turaigyr Mts near Charyn river, 1200m, M. Danilevsky leg.; paratypes: 241 ♂♂ and 89 ♀♀, same locality, 1.5.1991 and 3.5.1994, M. Danilevsky leg.; a ♀ with a label: "mountains of the left bank of Charyn river, 19.5.1969, I. Kostin and A.Badenko leg." (all type specimens are deposited in author's collection).

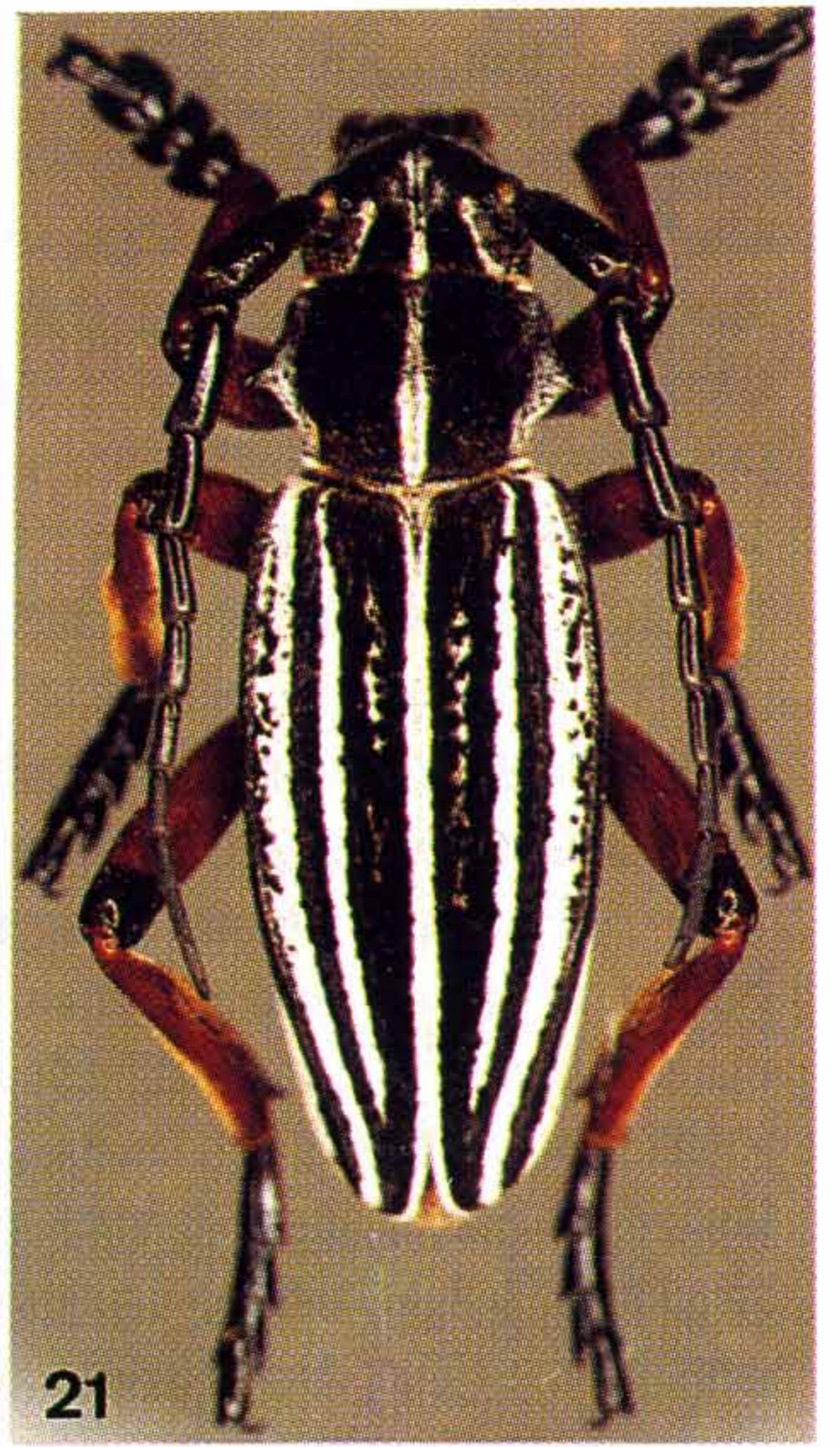
**Distribution:** Only one population known; it is distributed along north foot of the east part of Turaigyr mountains (Fig. 28, 3).

**Discussion.** *Dorcadion arietinum charynensis* ssp. n. is of about the same average body length as *D. a. arietinum* Jak., but in general narrower with longer antennae; frons puncturation much more rough and dense. Very dense hair brushes, which are always present on inner surface of middle and fore tibiae in *D. a. charynensis* ssp. n., are always absent in *D. a. arietinum* Jak.

#### *Dorcadion arietinum chilikensis* ssp. n. (Figs. 13-14)

**Description:** Very similar to *D. arietinum charynensis* ssp. n., but considerably smaller: average body size like the smallest specimens of *D. a. charynensis*; 1st antennal joint always black; internal dorsal elytral line always absent; a population from west Turaigyr Mts. with abdomen pubescence sparsed medially like in nominative subspecies, in populations from Siugaty Mts. abdomen with uniform pubescence. Body length in males: 15.0-18.3mm, in females: 15.8-18.9mm; body width in males: 4.7-5.3mm; in females: 5.6-6.6mm.

**Material:** Holotype (Fig. 13): ♂, Kazakhstan, Siugaty Mts, Kokpek canyon, 9.5.1983, G. Nikolaev leg; paratypes: 5 ♂♂ and 3 ♀♀ with same label; a ♂, Siugaty Mts., Kokpek, 20.5.1989, I. Kabak leg.; 12 ♂♂ and 2 ♀♀, Kazakhstan, west Turaigyr Mts., 25.4.1985, G. Nikolaev leg.; a ♂ and a ♀, west Turaigyr Mts, 8 km to the east from Bartogai, 21.5.1989, I. Kabak leg.; 2 ♂♂, right bank of Chilik river, 24.4.1985, G. Nikolaev leg. (all type specimens are deposited in author's collection)



**Distribution:** The subspecies occurs in the middle part of Chilik river valley in west Turaigyr and Siugaty Mts (Fig. 28, 4-5).

*Dorcadion arietinum ketmeniensis* ssp. n. (Figs. 15-19)

**Description:** Male. Frons puncturation dense and coarse; antennae long, reaching epical elytral fifth, completely black, sometimes 1st joint reddish basally, 1st joint a little longer than 3d; prothorax slightly longer or shorter than its basal width, convex, lateral spines long or short, acute or rounded; scutellum triangular elongate or transverse; elytrae oval, widest near middle, about 2.0 times longer than wide; white elytral hair stripes complete, more or less narrow, slightly corroded; internal stripes usually totally absent or present as a row of white spots; legs red with black tarsi, apices of all femora and darkened apices of middle and hind tibiae; hair brushes on internal surface of middle and hind tibiae absent or present; epical brushes of fore and middle tibiae yellow. White abdominal pubescence medially sparsed or not.

Female. Mostly autochromal with brown ground pubescence; lateral thoracic spines long and acute; humeral and dorsal carinae strongly developed. Autochromal forms with distinct pale spots along internal dorsal lines, external dorsal lines and humeral lines often interrupted; middle and hind tibiae with dense hair brushes. Androchromal females with complete linear humeral and external dorsal hair stripes, internal stripes absent, tibiae hair brushes less developed or absent.

Body length in males: 14.3-17.7mm, in females: 15.3-19.5mm; body width in males: 4.5-5.9mm, in females: 5.8-7.6mm.

**Material:** Holotype (Fig. 15): ♂, Kazakhstan, Ketmen Mts, Malyi Aksu, 28.4.1966, A. Badenko leg.; paratypes: 7 ♂♂ and 6 ♀♀ with same labels; 2 ♂♂ and 2 ♀♀, north slope of Ketmen ridge, 13.5.1965, A. Badenko leg.; 2 ♂♂ and 3 ♀♀, Ketmen, Kenes, 18.5.69, I. Kostin and A. Badenko leg.; ♂ and ♀ 5 km to the south from Bolshoi Ketmen, 1500m, 14.5.89, I. Kabak leg.; ♂, Ketmen Mts., 24.4.66, N. Skopin leg. (all type specimens are deposited in author's collection)

**Distribution:** North slope of Ketmen mountain ridge (Fig. 28, 6-7).

**Remark:** *D. a. ketmeniensis* ssp. n. is very close to *D. a. chilikensis* sp.n.: it has similar size and body form; but the hair brushes on internal surface of middle and hind femora are often absent; females are usually autochromal. I never collected this rather variable subspecies personally. May be, in fact, several subspecies occur in the region. More materials wanted.

*Dorcadion arietinum strandi* Plavilstshikov, 1931, stat. n. (Fig. 20)

**Diagnosis:** Differs from the nominative form by: large body size (length of males up to 23mm; in females up to 24mm), well developed prothoracic lateral spines, rough and dense puncturation of head and prothorax.

**Remark:** The taxon was described as a species from China (Kashgaria, Zhinishke river). The location of the type area is doubtful, as a river with such name exists in Kazakhstan, very close to the area of allied forms (see Fig. 28). Type specimens are deposited in Moscow Zoological Museum. I also attribute to the taxon three males (Fig. 20; north slope of Khan-Tengri, 2000m, 15.6.91, O. Gorbunov leg.) from near Narynkol (Fig. 28, 8). Earlier I regarded *D. strandi* as a synonym of *D. lucae* Pic, 1898 (not *D. lucae*, Breuning, 1962 = *D. jacobsoni* Jakovlev, 1899, see Danilevsky,

1992). *D. lucae* Pic, 1898, was described from Kuldzha (now Yining; Fig. 28, 9) after one female which was deposited in Deutsche Entomologisches Institute (Eberswalde). In fact, Kuldzha is very far from the species area, so if the type female was really found in this region it must represent a separate subspecies *D. arietinum lucae* Pic, 1898, stat.n. A single known female (24.5mm long) differs from females of *D. a. strandi* by strongly prominent elytral carinae.

***Dorcadion arietinum zhalanash* ssp. n. (Figs. 21-27)**

**Description.** Very close to *D. a. charynensis* ssp.n., but much bigger, body size about the same as in *D. a. strandi*. Frons puncturation deep and distinct, but not so dense as in *D. a. charynensis*; antennae shorter, 1st joint slightly longer than 3d, never reddish, with moderately coarse puncturation, without internal carina; prothorax with very long lateral spines, pronotum with moderately fine puncturation, never so rough as in *D. a. strandi*, medial white stripe always very narrow, while in *D. a. charynensis* often rather wide; scutellum small triangular, slightly transverse or slightly elongate; elytrae with strongly prominent carinae, often with distinct traces of internal dorsal white stripe, external dorsal and humeral stripes wide or narrow, usually free but sometimes fused epically, usually strongly corroded by black; legs with internal hair brushes of middle and hind tibiae poorly developed: in males usually absent, in females more or less visible only on the middle tibiae, while in *D. a. arietinum* and *D. a. strandi*, they are always absent, but in *D. a. charynensis* ssp. n. always well developed; abdomen black with slightly sparsely medially pale pubescence; females only androchromal.

Body length in males: 17.2 - 22.4mm, in females: 19.2 - 24.3mm; body width in males: 5.8 - 7.5mm, in females: 7.1 - 9.4mm.

**Materials:** Holotype (Fig. 21), ♂, Kazakhstan, 26 km to the north from Zhalanash city, 1300m, 15.4.1991, M. Danilevsky leg.; paratypes, 394 ♂♂ and 247 ♀♀ with same labels; 4 ♂♂ and 4 ♀♀, same locality, 26.5.1987, S. Murzin leg. (all type specimens are deposited in author's collection).

**Distribution:** Zhalanash val. between Charyn river and Turaigyr Mts. (Fig. 28, 10).

**Remarks:** I preliminary attribute to *D. a. zhalanash* ssp. n. a single female 20.3mm long (13.5.1965, A.Badenko leg.) from near Chundzha (Fig. 28, 11), which differs from the type series by a more rough sculpture of the pronotum. The true taxonomic status of Chundzha population needs further investigations.

*D. arietinum zhalanash* ssp. n. was previously identified by me as *D. lucae* Pic (DANILEVSKY, 1992)

## References

- BREUNING S., 1962. Revision der *Dorcadionini* (Coleoptera, Cerambycidae). Entomologische Abhandlungen und Berichte aus dem Staatl. Museum für Tierkunde in Dresden 27. 665 pp. Leipzig.
- DANILEVSKY M.L., 1992. New and little known *Dorcadion* Dalman, 1817 from Soviet Union (Coleoptera, Cerambycidae).- *Lambillionea*, XCII, 1: 92-98.
- JAKOVLEV B.E., 1897. Espèces nouvelles ou peu connues du sous-genre *Compsodorcadion* Ganglb.- *Horae Soc. ent. Ross.*, 31: 675-681.
- JAKOVLEV B.E., 1900. Quelques nouvelles espèces du sous-genre *Compsodorcadion* Ganglb.- *Horae Soc. ent. Ross.*, 33: 147-155.
- PIC, M. 1898. *Compsodorcadion* Gglb. Matériaux pour servir à l'étude des longicornes 2: 36-47.
- PLAVILSTSHIKOV N. N. 1931. Eine neue *Dorcadion*-Art aus Kashgarien. *Folia Zool. et Hydrobiol.* 3: 274-277.



**Descriptions for figures:**

**Figs. 1-4.** *Dorcadion arietinum* Jak.: 1, ♂, holotype; 2-3, ♂♂ from near Kegen; 4, ♂ from Sarydzhas.

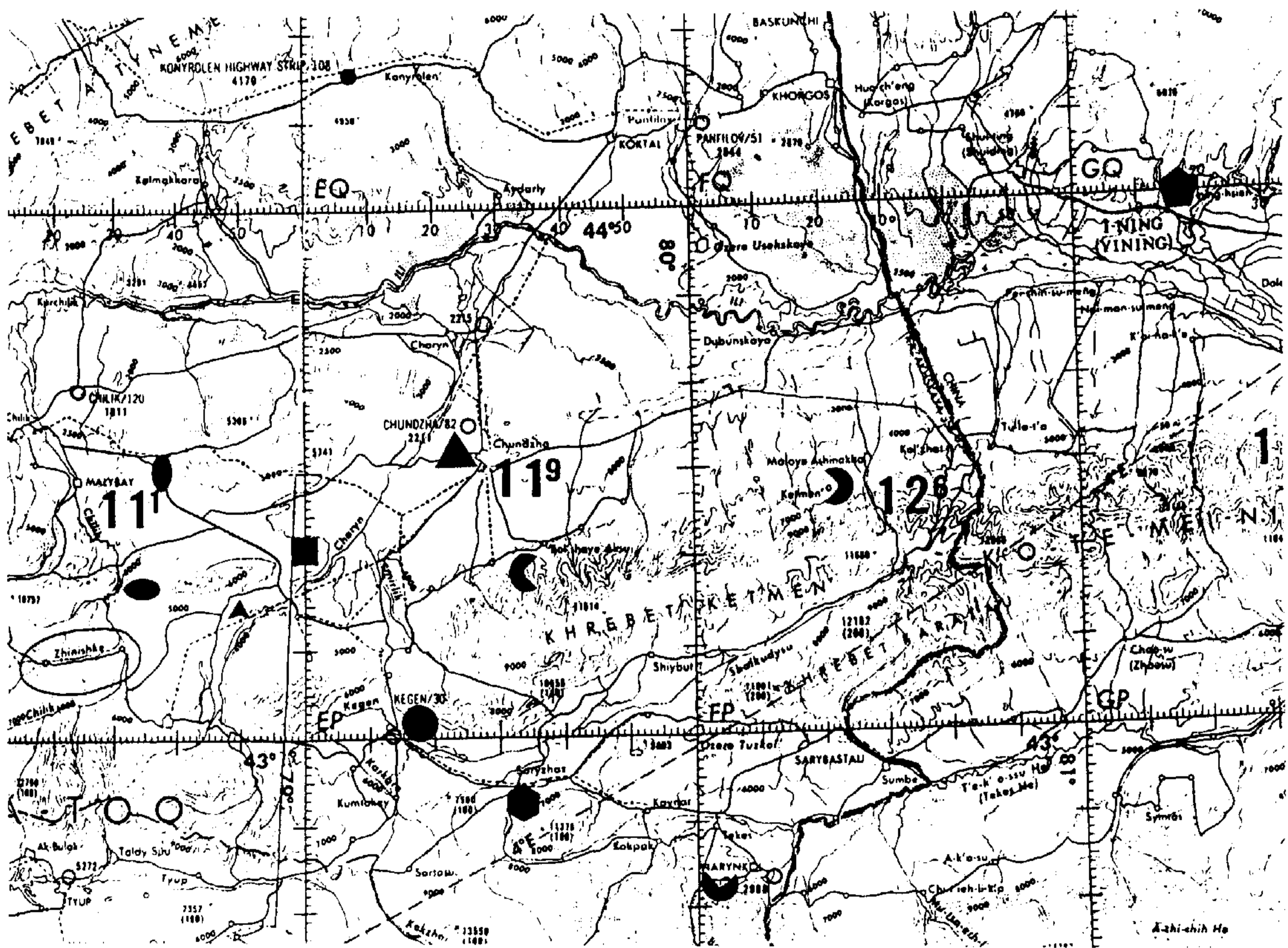
**Figs. 5-12.** *Dorcadion arietinum charynensis* ssp. n.: 5, (holotype)-9, ♂♂; 10-12, ♀♀.

**Figs. 13-14.** *Dorcadion arietinum chilikensis* ssp. n.: 13, ♂, holotype; 14, ♀ from Kokpek canyon.

**Figs. 15-19.** *Dorcadion arietinum ketmeniense* ssp. n.: 15, ♂, holotype; 16, ♂ from north slope of Ketmen ridge; 17, ♀ from same locality; 18-19, ♀♀ from Malyi Aksu.

**Fig. 20.** *Dorcadion arietinum strandi* Flav., stat. n. - ♂ from near Narynkol.

**Figs. 21-27.** *Dorcadion arietinum zhalanash* ssp. n.: 21 (holotype)-24, ♂♂; 25-27, ♀♀.



**Fig. 28.** A map of Ketmen mountain ridge and allied regions:

- 1. possible type locality of *D. arietinum* Jak. near Kegen;
- 2. another locality of *D. arietinum* Jak. near Sarydzhas;
- 3. type locality of *D. arietinum charynensis* ssp. n., north-east Turaigyr mountains;
- 4. type locality of *D. arietinum chilikensis* ssp. n., Kokpek canyon;
- 5. another locality of *D. a. chilikensis* ssp. n., west part of Turaigyr mountains;
- ☾ 6. type locality of *D. arietinum ketmeniense* ssp. n. near Malyi Aksu;
- ☾ 7. another locality of *D. a. ketmeniense* ssp. n. near Bolshoi Ketmen;
- ☾ 8. locality of *D. a. strandi* Flav. stat. n. near Narynkol;
- 9. type locality of *D. arietinum lucae* Pic, stat. n. near Kuldzha;
- ▲ 10. type locality of *D. a. zhalanash* ssp. n., val. between Turaigyr mts and Charyn riv.;
- ▲ 11. another locality of *D. a. zhalanash* ssp. n. near Chundzha.