

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

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Key words: Coleoptera, Cerambycidae, *Dorcadion*, new subspecies, taxonomy.

Résumé. Les courtes diagnoses morphologiques et les répartitions géographiques sont donnés pour les trois espèces du groupe: *D. acutispinum* Motsh., *D. suvorovi* Jak., *D. nivosum* Suv. Quatre nouvelles sous-espèces sont décrites pour *D. suvorovi*, qui est largement répandu dans les montagnes de Dzhungarskiy Alatau. *D. nivosum* et *D. acutispinum* sont limitées dans leurs répartitions aux localités typiques.

Abstract: The short morphological diagnosis and the geographical distributions are given for all three species of the group: *D. acutispinum* Motsh., *D. suvorovi* Jak., *D. nivosum* Suv. Four new subspecies are described for *D. suvorovi*, which is widely distributed in the Dzhungarskiy Alatau mountains. *D. nivosum* and *D. acutispinum* are confined to their type localities.

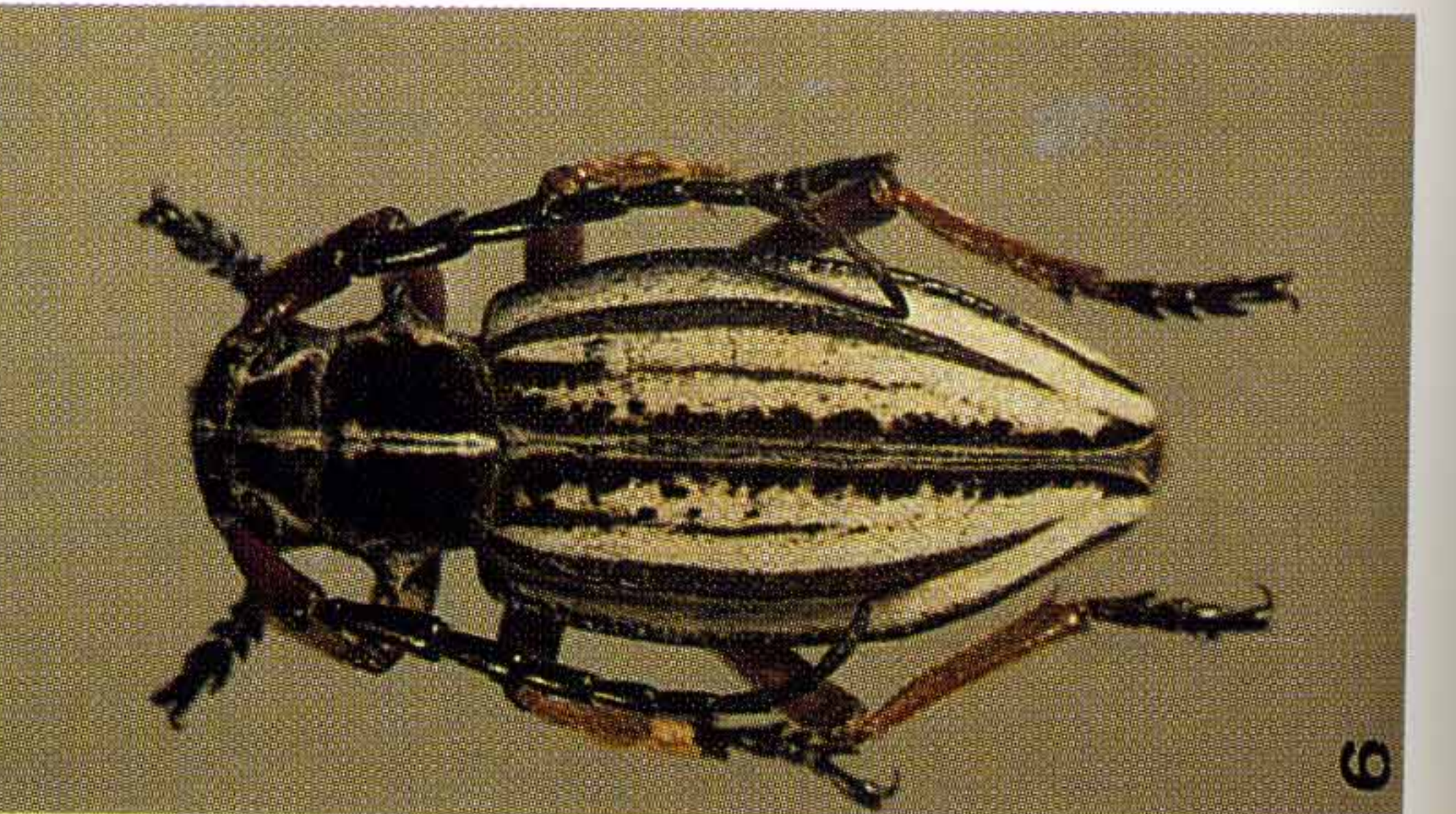
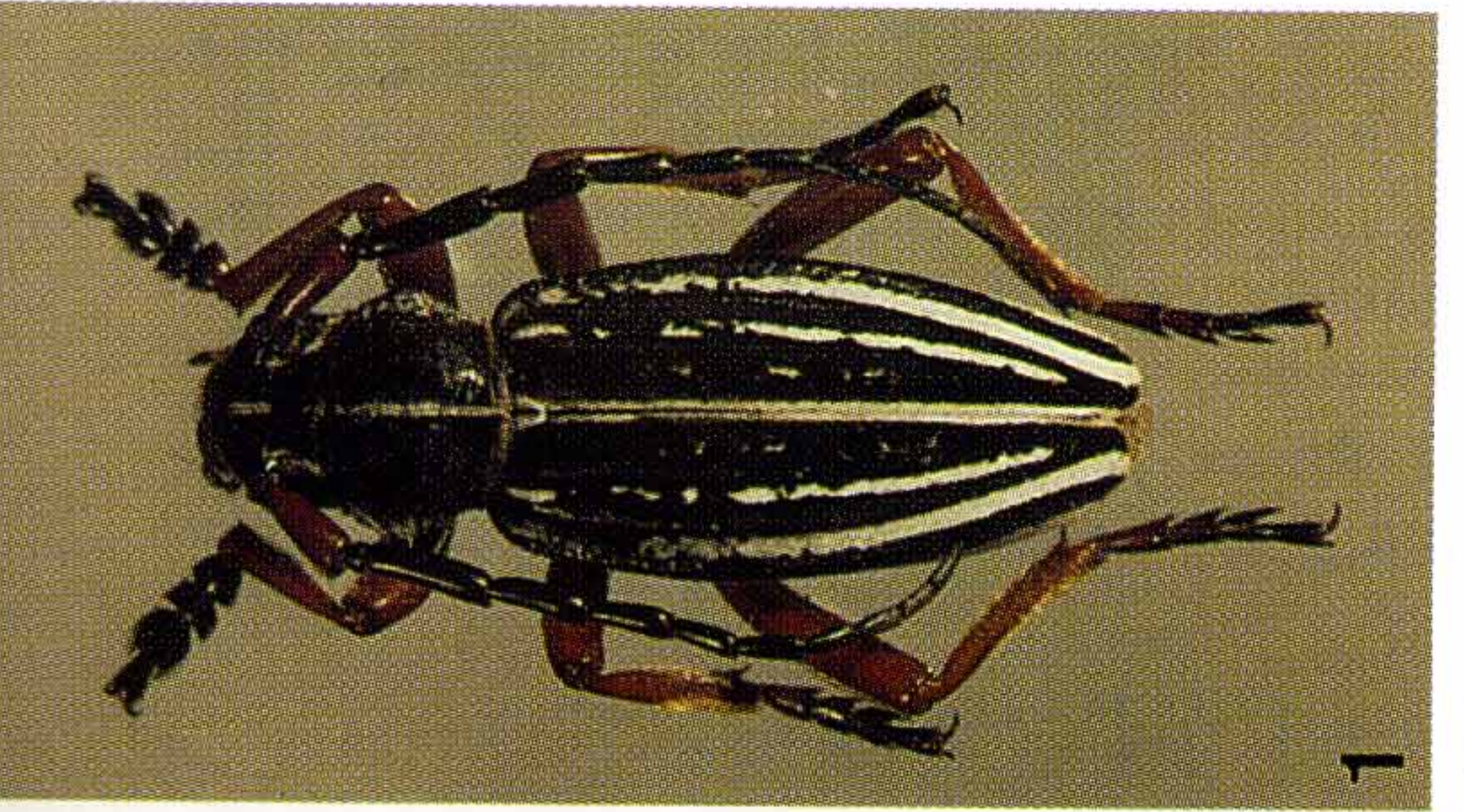
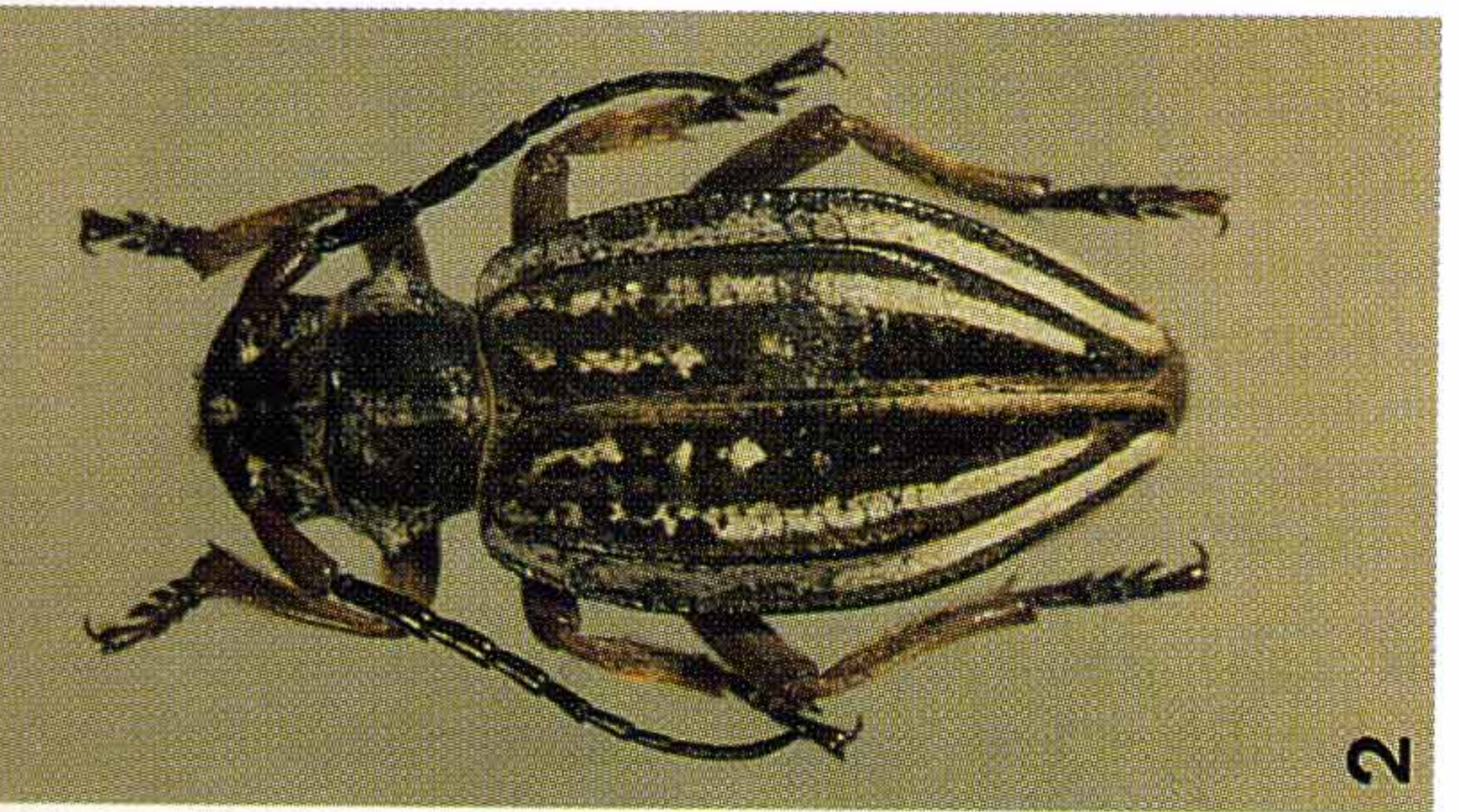
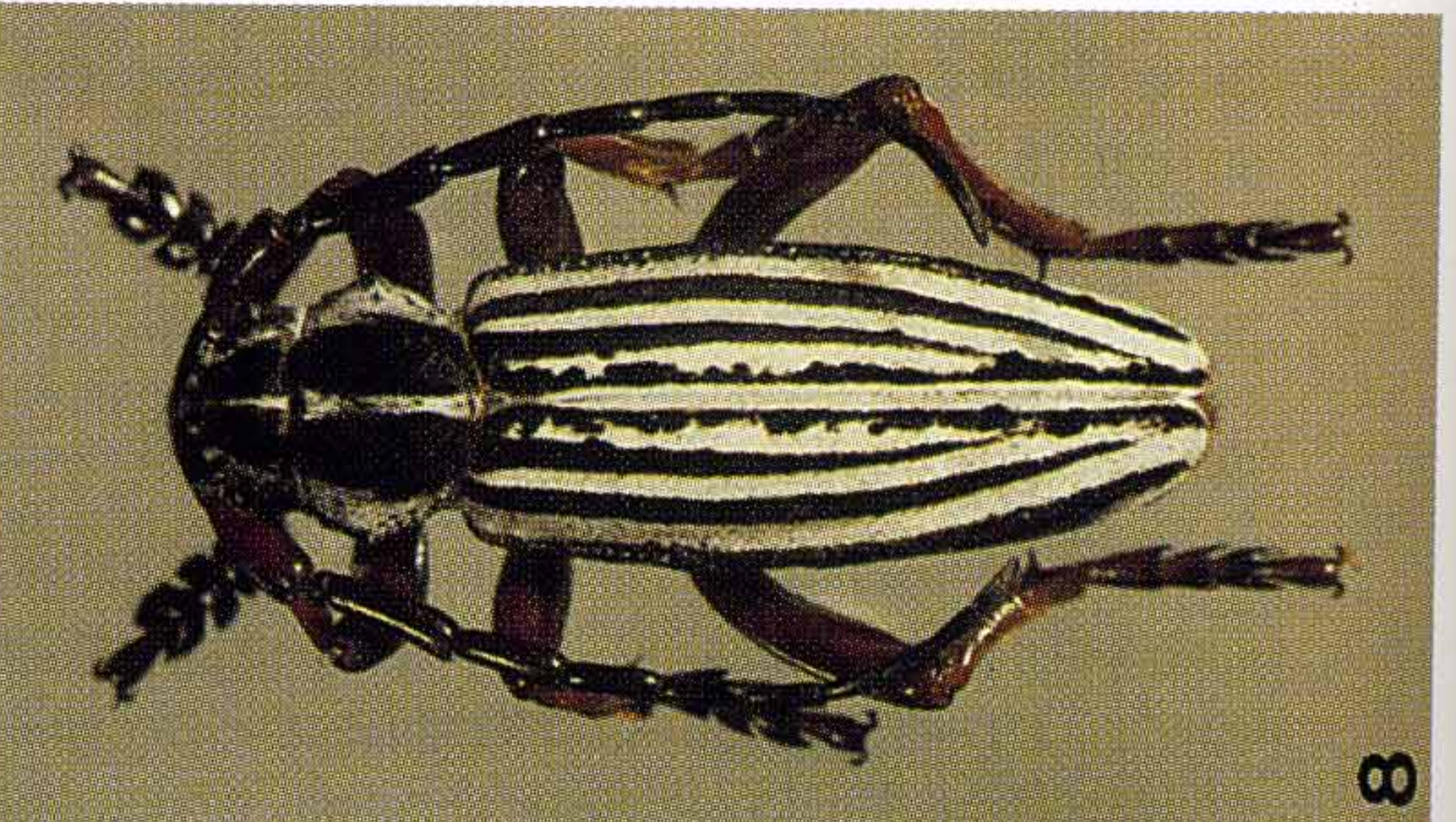
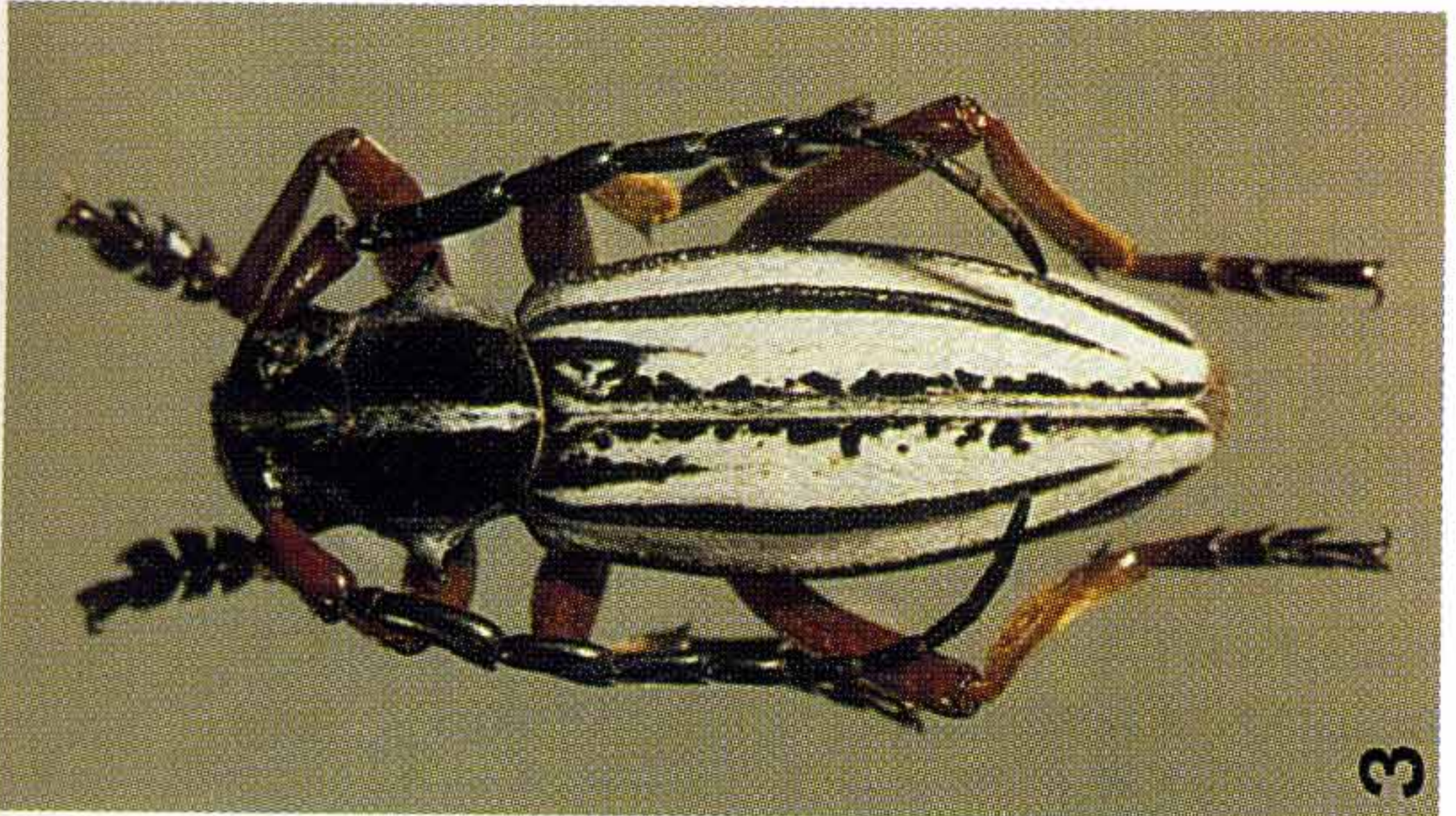
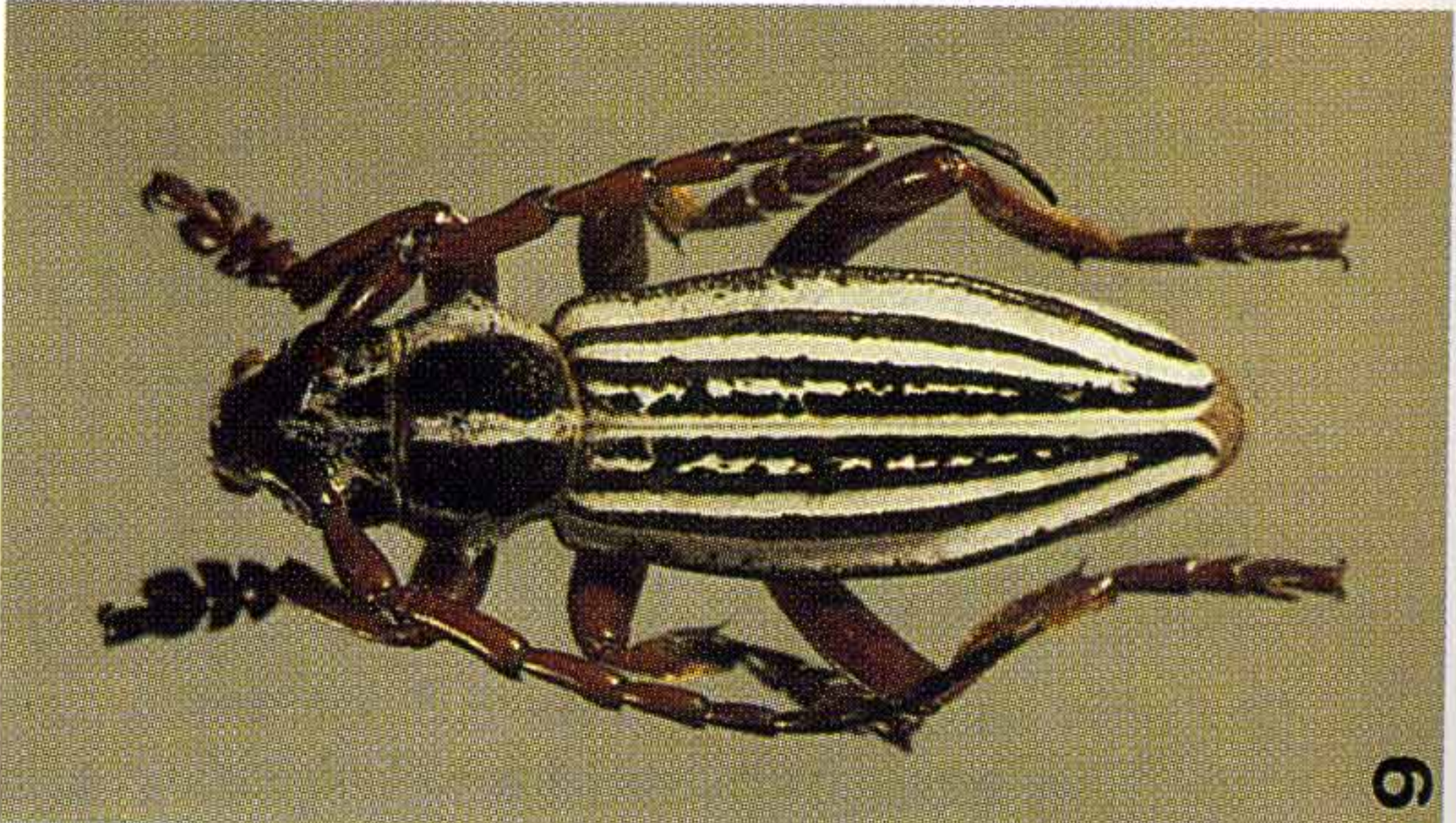
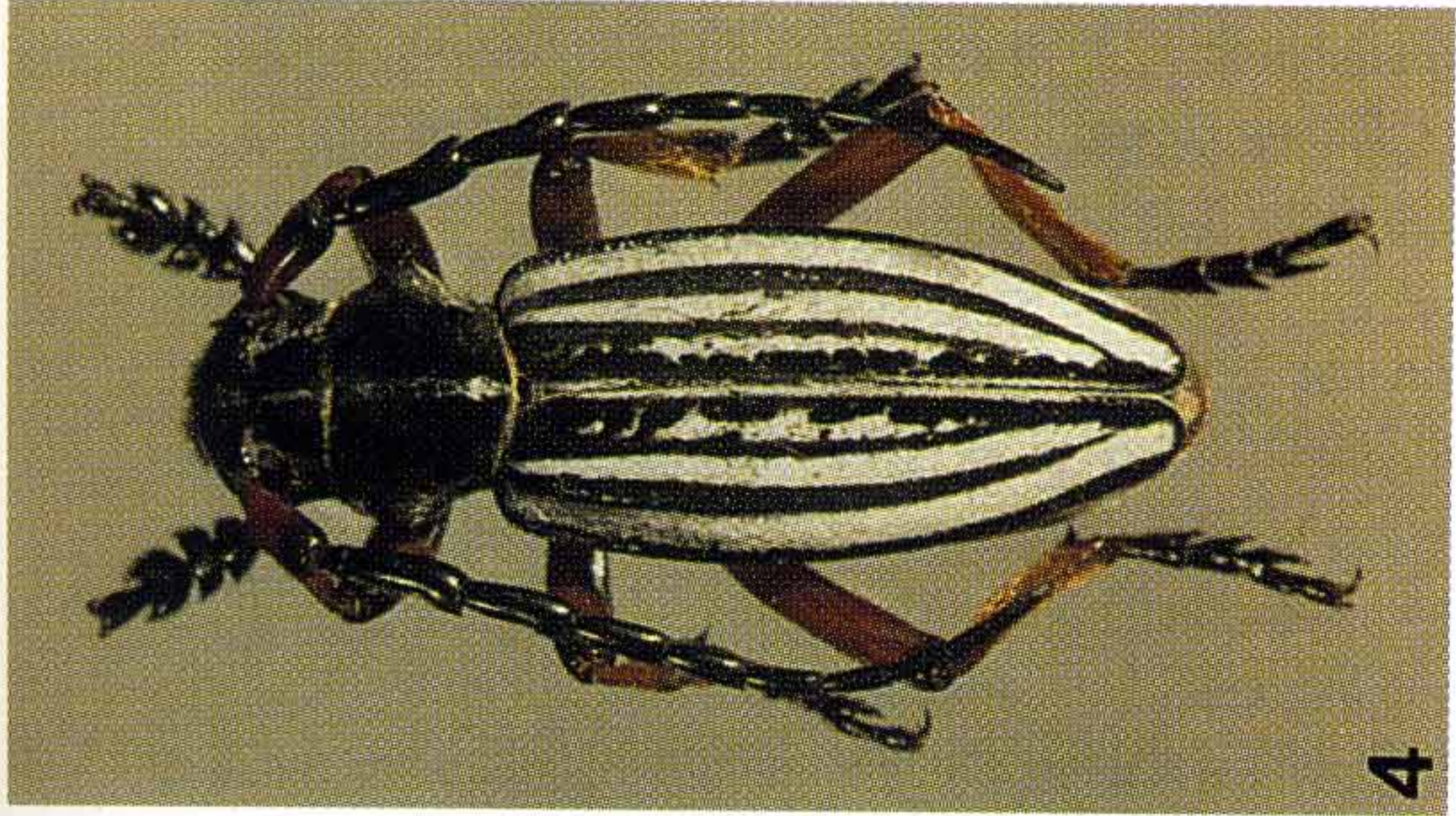
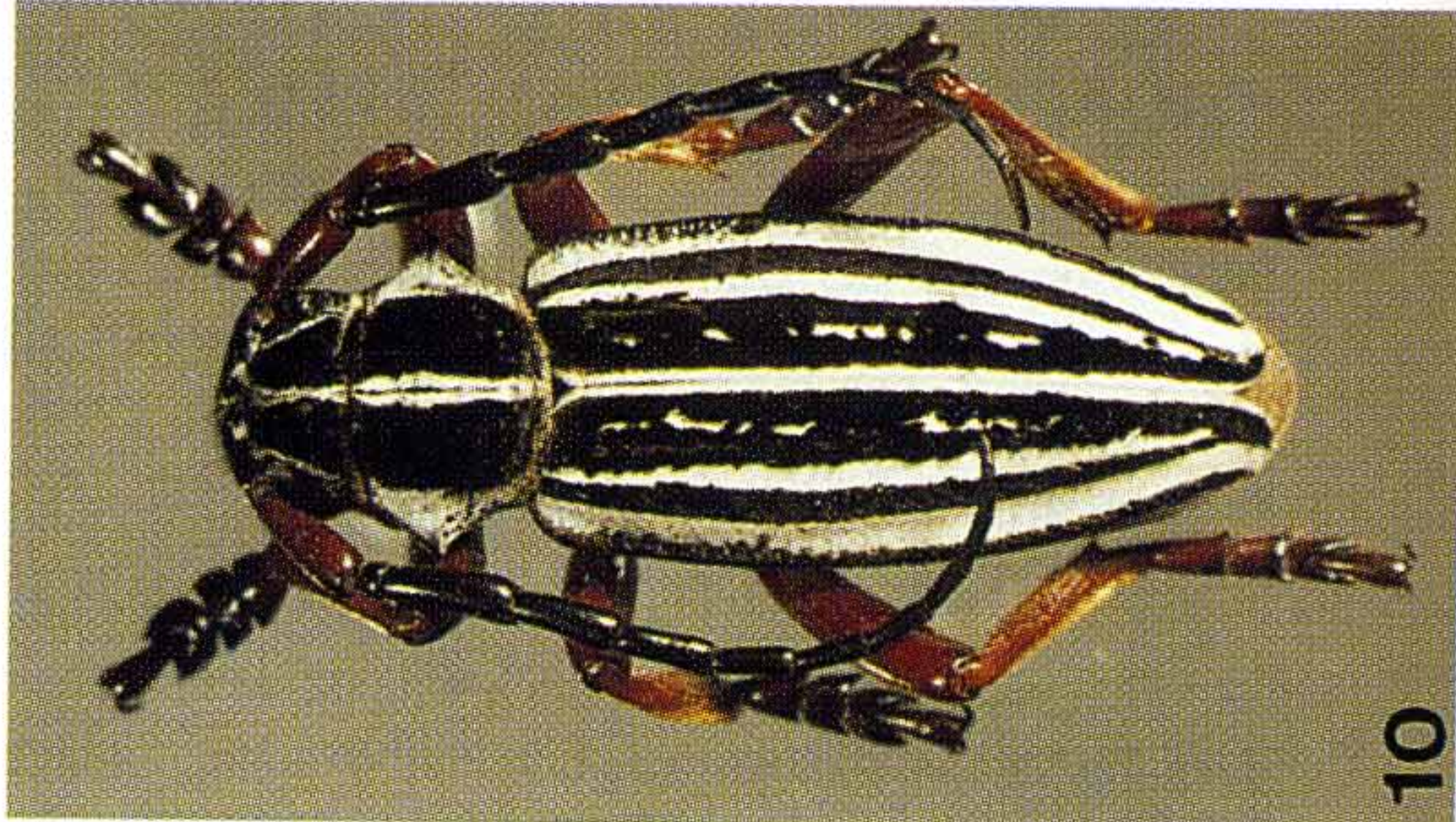
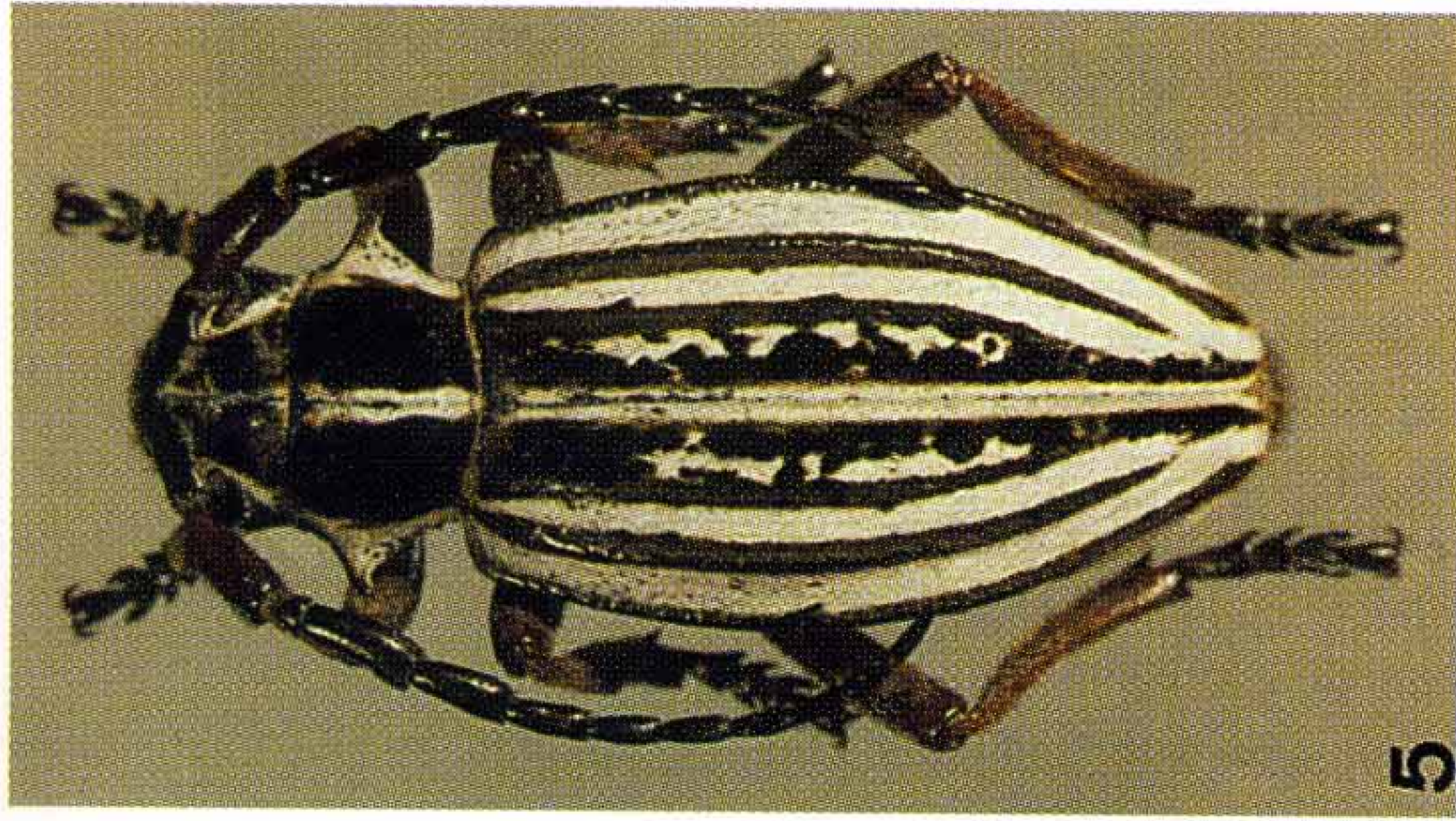
The group includes 3 species of *Dorcadion* (s. str.): *D. acutispinum* Motsh, *D. suvorovi* Jak. and *D. nivosum* Suv. They are distributed in Dzhungarskiy Alatau mountain system with allied hills and plains. For some years I had the opportunity to collect a lot of *Dorcadion* all around this region. My materials together with some other series allow me to draw some conclusions on the taxonomic positions of some populations. Now I see that a complex of rather variable populations from central, south and eastern parts of the mountains, which were traditionally regarded as forms of *D. acutispinum* (Plavilstshikov, 1958), form in fact a very good transition to typical *D. suvorovi*, but not to *D. acutispinum*, though some populations look rather different and must be regarded as separate subspecies.

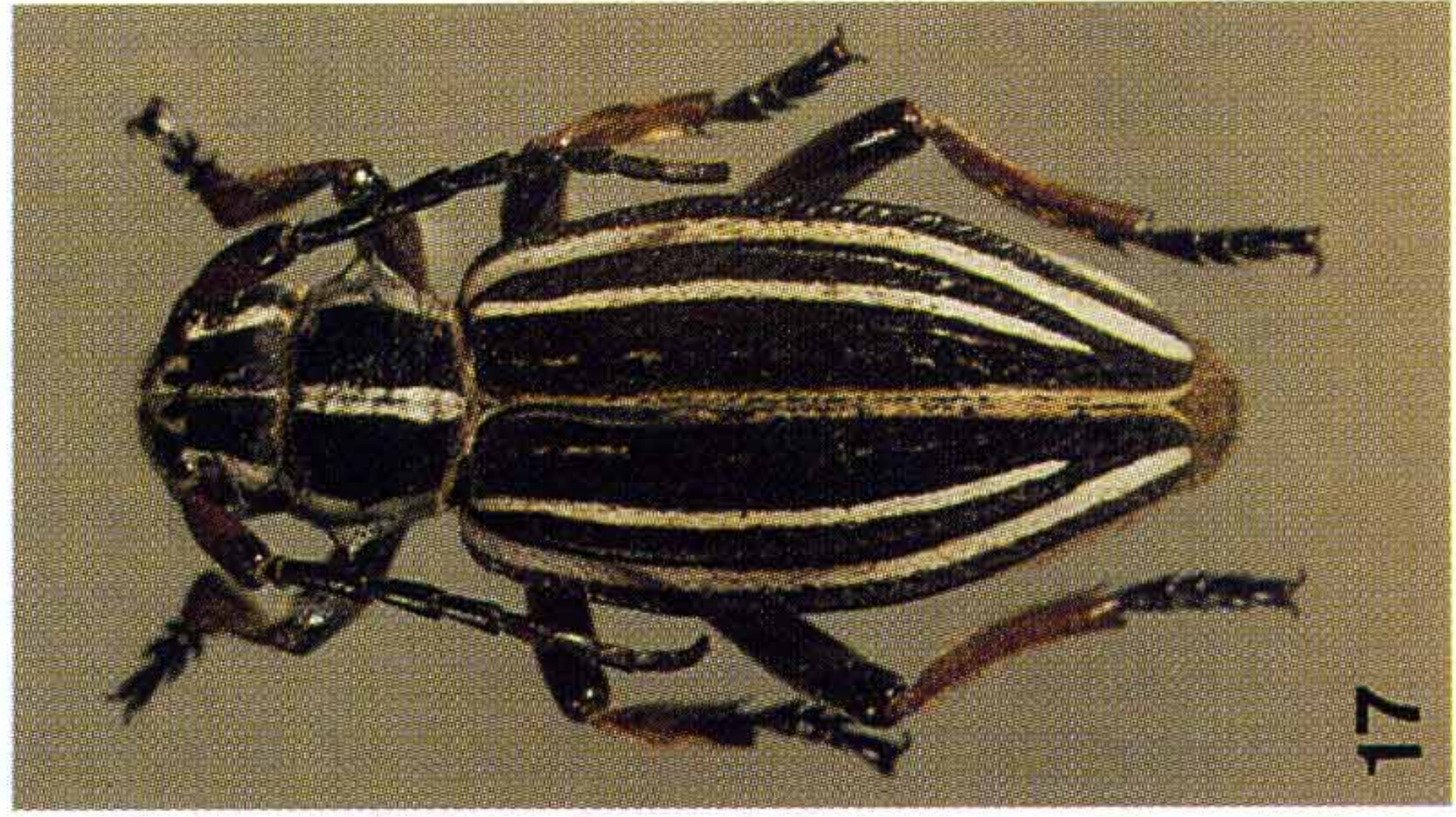
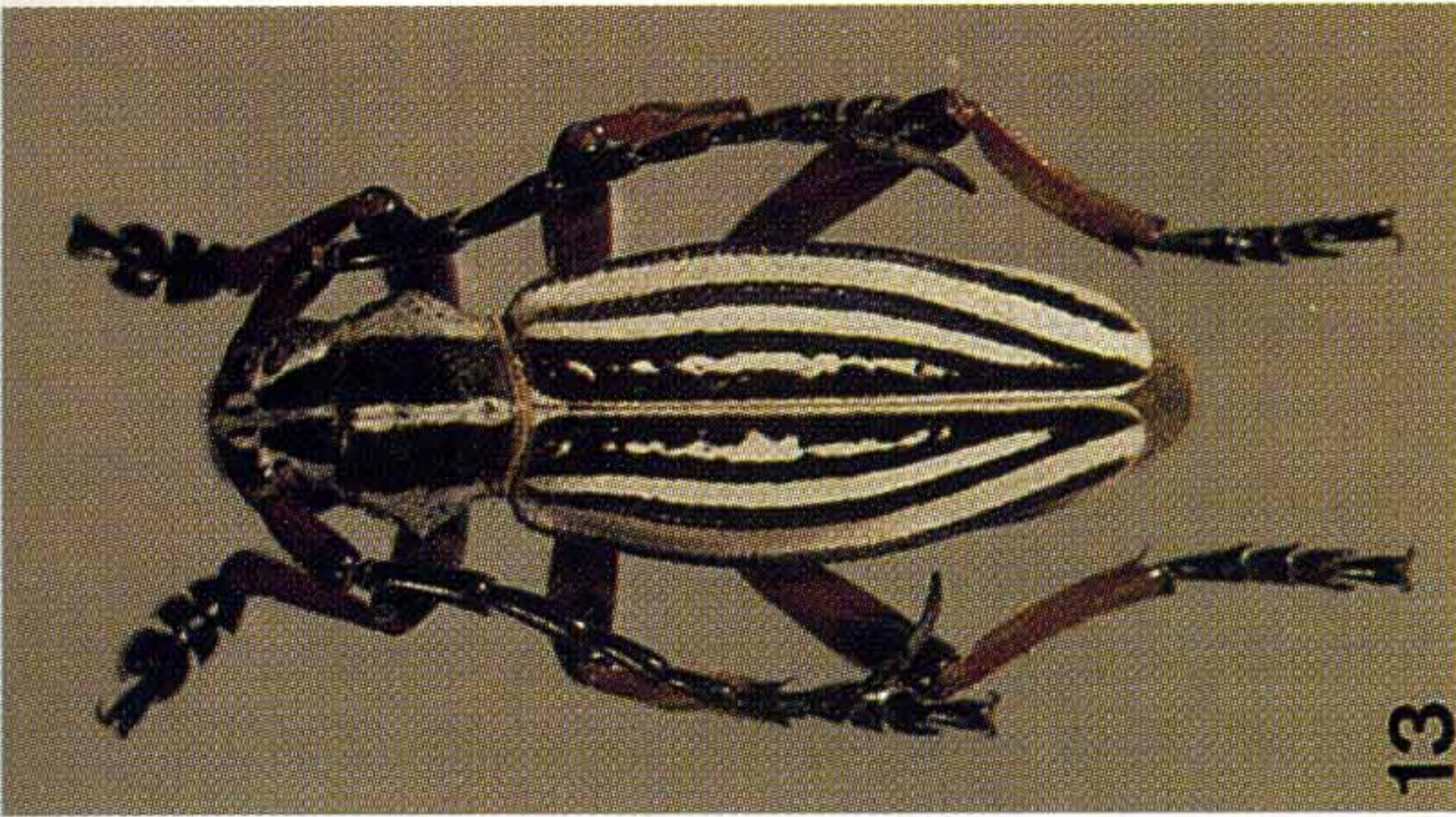
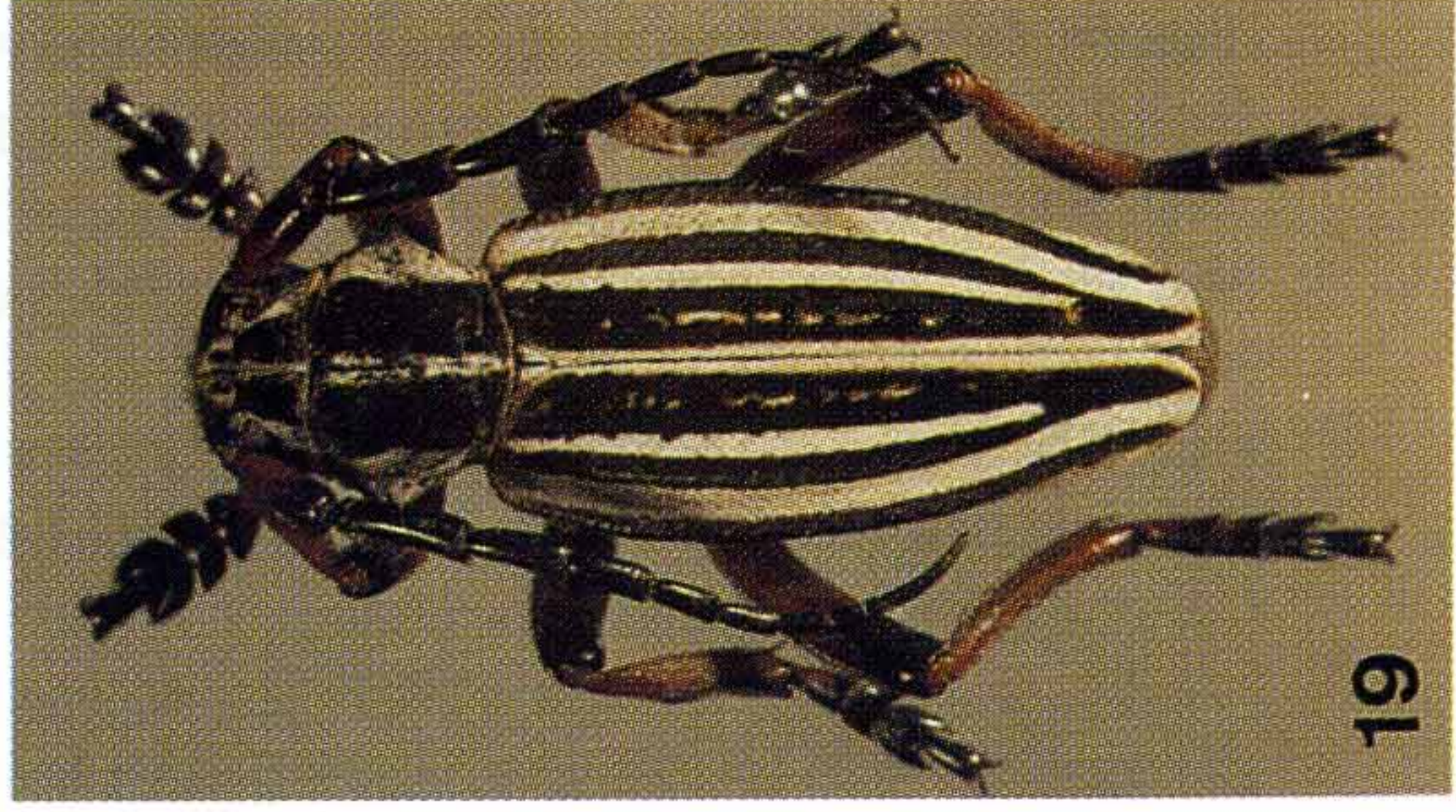
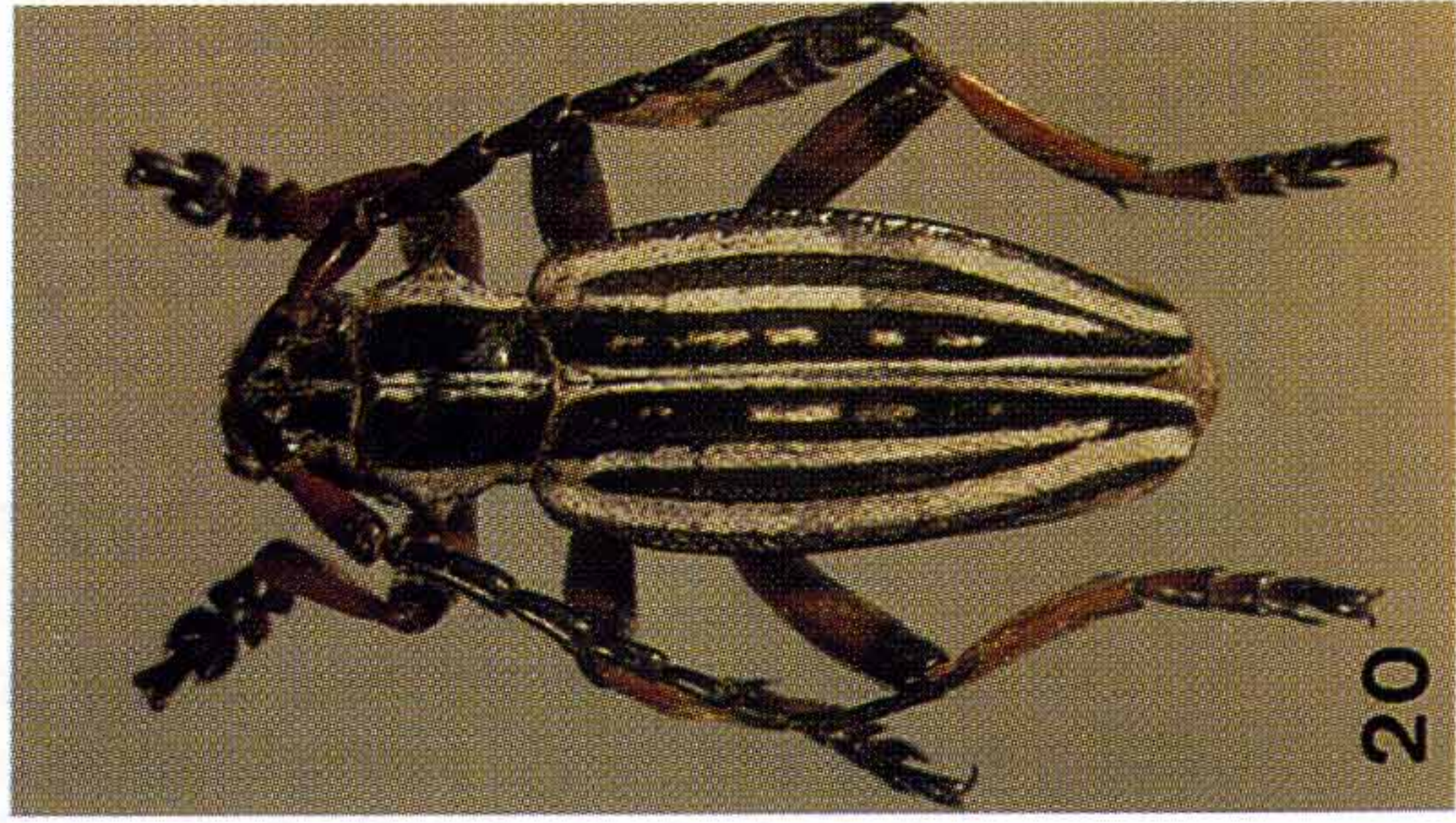
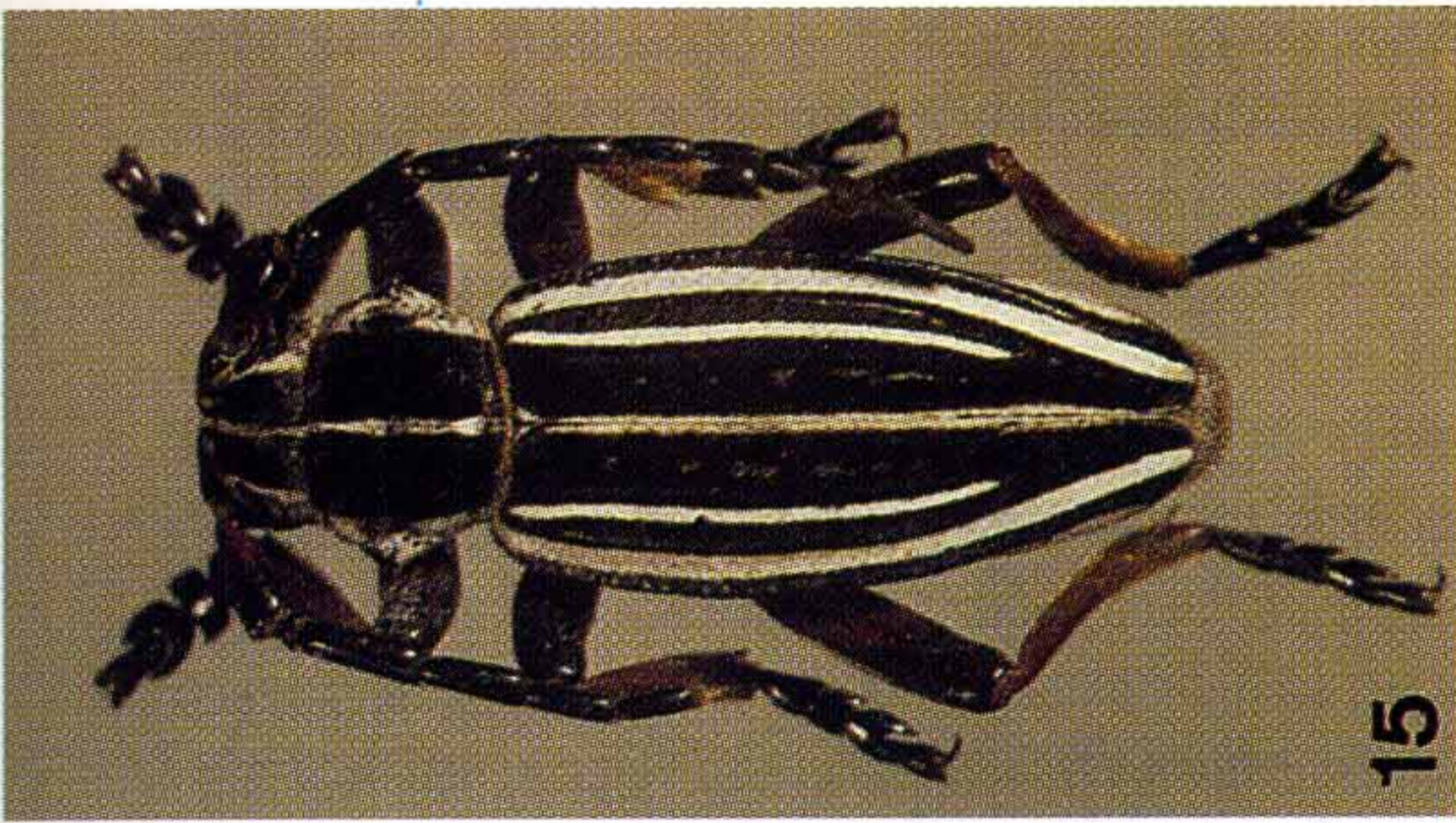
In general "*acutispinum*-group" includes *Dorcadion* species with dense pronotal and elytral pubescence; prothoracic lateral spines long or short; more or less roughly sculptured humeral carinae strongly or moderately developed; 1st antennal joint and femora red or bicolour; antennae without fine white pubescence; short erect elytral setae poorly developed; elytrae usually with 9 white stripes, humeral stripe mostly complete, internal dorsal stripe sometimes disappeared; central part of abdomen with scattered white pubescence or nearly glabrous.

***Dorcadion acutispinum* Motshoulski, 1860 (Figs. 1-2)**

D. acutispinum Motshoulski, 1860 (pp: 310-311) was described from "Songarie" without precise indication of locality. The type specimens is still unknown to me. Only one population fits exactly to the original description. This population is strongly morphologically definite and geographically limited. So I regard as *D. acutispinum* only the beetles inhabiting Kapal valley and surroundings in northern Dzhungarskiy Alatau (Fig. 31a). Kapal valley must be treated as the type locality of *D. acutispinum*. No transitional forms to neighbour populations are known.

Only the beetles from Kapal region always possess totally red 1st antennal joint (others black) and legs (excluding tarsi), and narrow elytral stripes, as it was mentioned by MOTSHOULSKI.





The dimensions of Motschulski's specimens: "Long. 6 l. - lat. 2 1/6 l." (about 12.6mm and 4.55mm respectively) also agree with specimens from Kopal (length in males: 12.5-17.2mm, width: 4.6-6.2mm; length in females: 14.9-17.4mm, width: 6.1-7.4mm). The specimens from other populations of "*acutispinum*-group" are in general bigger and narrower.

Elytrae of *D. acutispinum* are usually with 7 narrow white strips: lateral stripes are very narrow, humeral stripes are often interrupted or at least corroded anteriorly, external dorsal stripes are always interrupted and corroded anteriorly, internal dorsal stripe sometimes totally absent, but if present then in form of separate small white spots; very narrow sutural stripe as wide as central pronotal stripe. Femora of males covered with strong yellow setae, without fine white pubescence; in females femora covered both with fine white pubescence and strong yellow setae. Humeral carinae with rough sculpture. Females are mostly androchromal.

Material: 15 ♂♂, 4 ♀♀, Kazakhstan, Dzhungarskiy Alatau, Kapal, 22.5.1983, M. Danilevsky leg.

Distribution: Strongly geographically limited species, only Kapal valley and surroundings in north Dzhungarskiy Alatau (Fig. 31a). Inside this region the beetles are very numerous.

Dorcadion suvorovi suvorovi Jakovlev, 1906 (Figs. 3-6)

D. suvorovi Jakovlev, 1906 (pp: 274-276) was described from Dzharkent environs - the southmost part of Dzhungarskiy Alatau. The types are deposited in Zoological Institute of Russian Academy of Sciences (Saint Petersburg). My friend A. SHAMAEV found near Dzharkent in the middle level of Usek river valley a population of *Dorcadion* which is quite conspecific to type specimens.

The typical form of this variable species can be easily recognized by conjugation between external and internal dorsal strips forming a large white dorsal area (Figs. 3,6). Sometimes, more often in females, external and internal stripes are separate (Figs. 4-5). Lateral prothoracic spines are very long. Humeral carinae with very rough sculpture. Legs red with black tarsi; apices of femora usually darkened; 1st antennal joint red, more or less darkened epically; other joints black; femora of males covered with strong yellow setae, without fine white pubescence; in females femora covered both with fine white pubescence and strong yellow setae. Females always androchromal. Body length in males: 14.5-19.8mm; width: 4.7-6.4mm; length in females: 14.6-24.1mm; width: 6.1-8.8mm.

Material: 3 ♂♂ and 3 ♀♀, Kazakhstan, Usek river valley near Enbekshi, 1200m, 1-6.5.1993, A. Shamaev and N. Tzelikov leg.; 87 males and 44 females, same locality, 7-8.5.1994, M. Danilevsky leg.

Distribution: Middle level of Usek river valley (Fig. 31b). The beetles are very numerous on plain terraces along right bank of the river.

Dorcadion suvorovi konyrolenus ssp. n. (Figs. 7-12)

Similar to the nominative form in body size and proportions, but dorsal strips nearly always separate (Fig. 8-12), very rarely fused (Fig. 7). Antennae and legs often completely red or apical antennal joints and tarsi darkened, or only 1st antennal joint red, sometimes 1st antennal joints epically and apices of all femora blackened. Sometimes frons red or reddish (Fig. 9). Lateral prothoracic spines shorter. Sculpture of humeral carinae mostly not so rough as in nominative subspecies. Femora always

without fine white pubescence. Body length in males: 15.0-19.2mm, width: 4.5-6.2mm; length in females: 15.3-20.1mm, width: 6.1-7.9mm.

Material: Holotype (Fig. 8): ♂, Kazakhstan, Konyrolen, 1250m, 8.5.1994, M. Danilevsky leg.; paratypes: 123 ♂♂ and 55 ♀♀, with same labels; 20 ♂♂ and 3 ♀♀, same locality, 14.5.1986, A. Shamaev leg.

Distribution: Very numerous on the plain to the east from the Altynemel mountain ridge (Fig. 31c).

***Dorcadion suvorovi karachokensis* ssp. n. (Fig. 13-18)**

Similar to *D. s. konyrolenus* ssp.n., but all elytral stripes relatively narrower; dorsal stripes never fused; internal dorsal stripes mostly interrupted, often in form of poor pale traces or totally absent; external dorsal stripe rarely wide, usually narrow or many times interrupted. Lateral prothoracic spines sometimes very short. Humeral carinae with rough sculpture. 1st antennal joints and femora always with black apices, frons always black. Femora in males without fine white pubescence, in females both with strong setae and fine white pubescence. Females mostly androchromal, but sometimes autochromal - black pubescence replaced with brown, white pubescence replaced with greyish or yellowish. Body length in males: 14.6-19.2mm, width: 4.8-6.2mm; length in females: 17.4-19.2mm, width: 7.3-7.7mm.

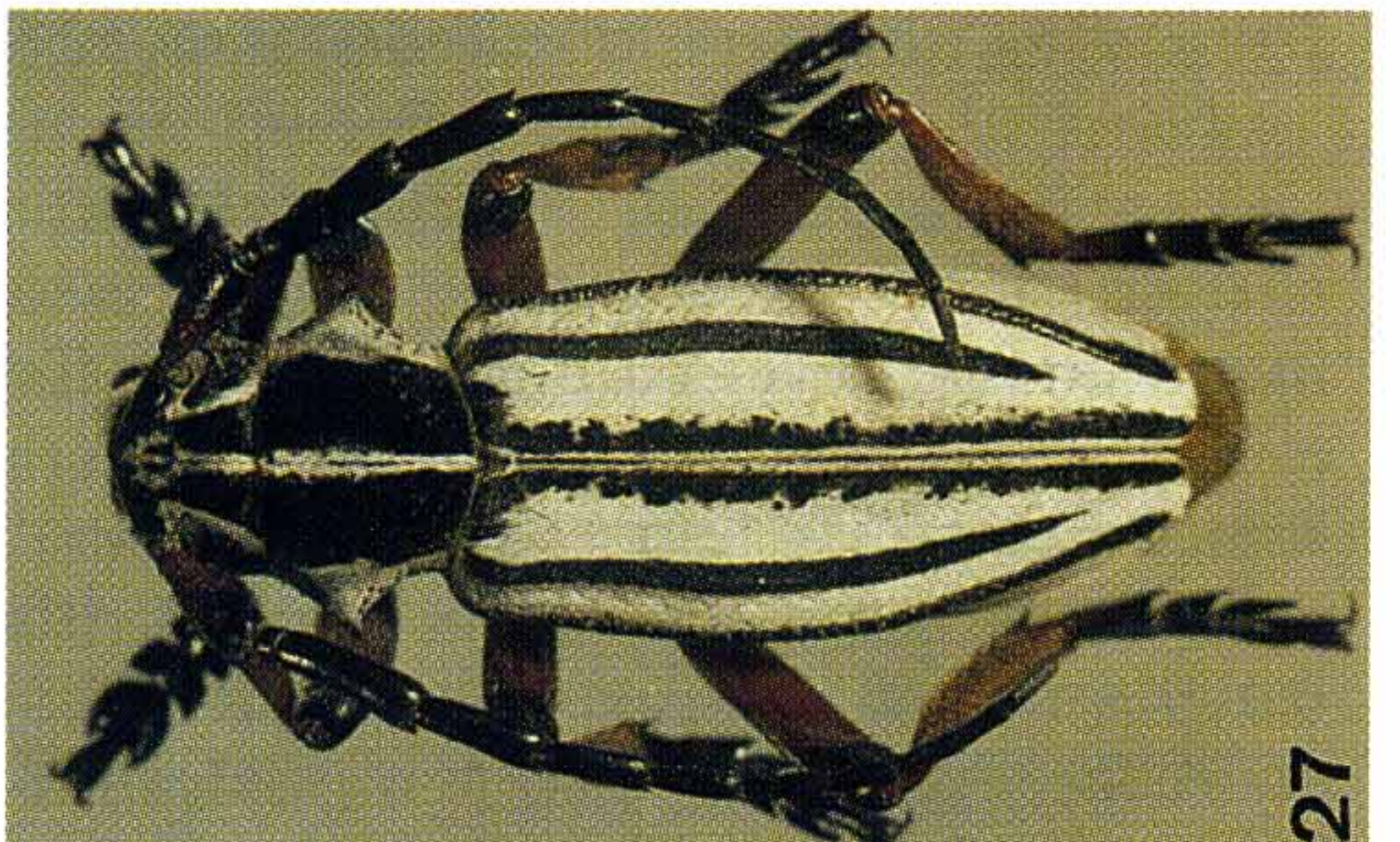
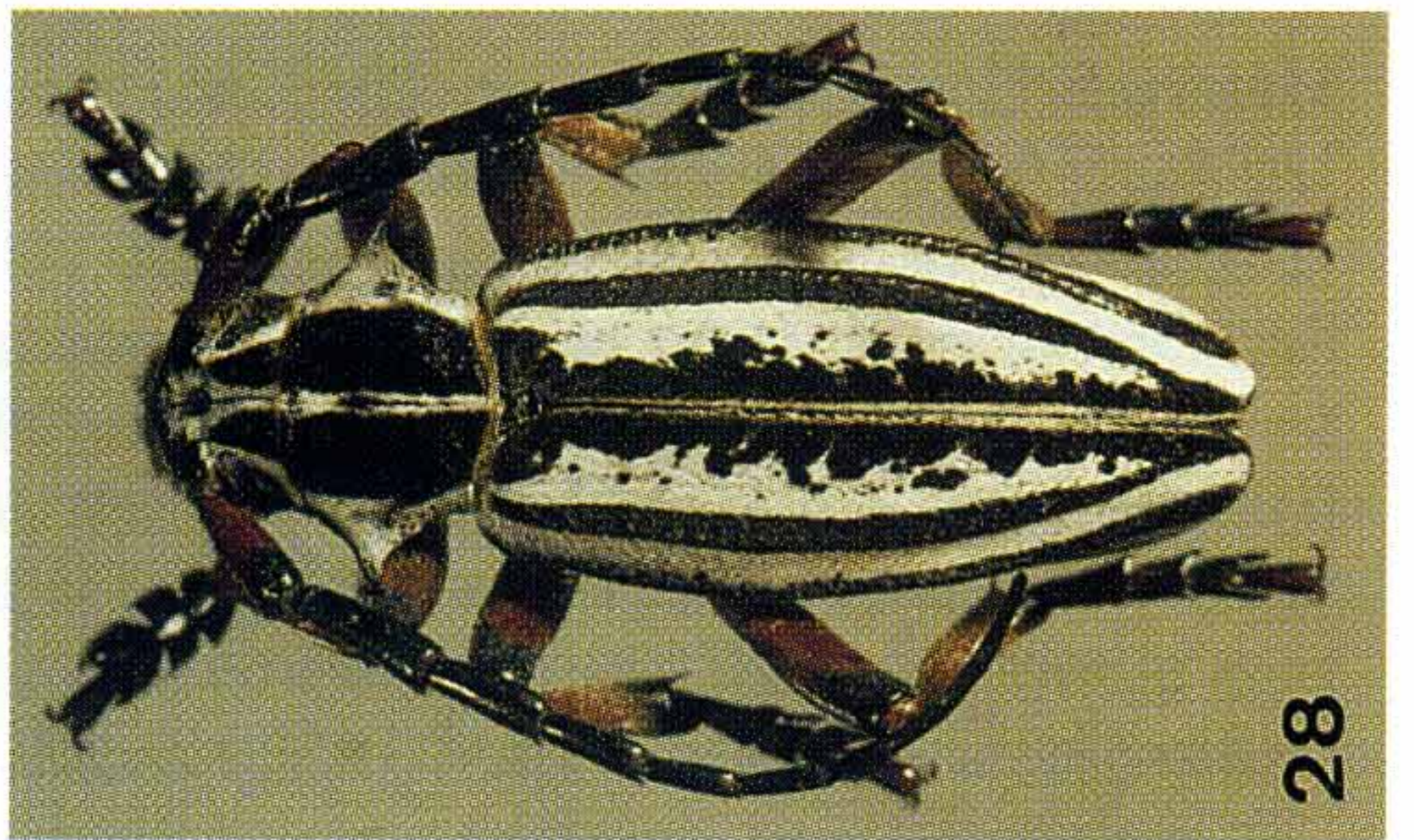
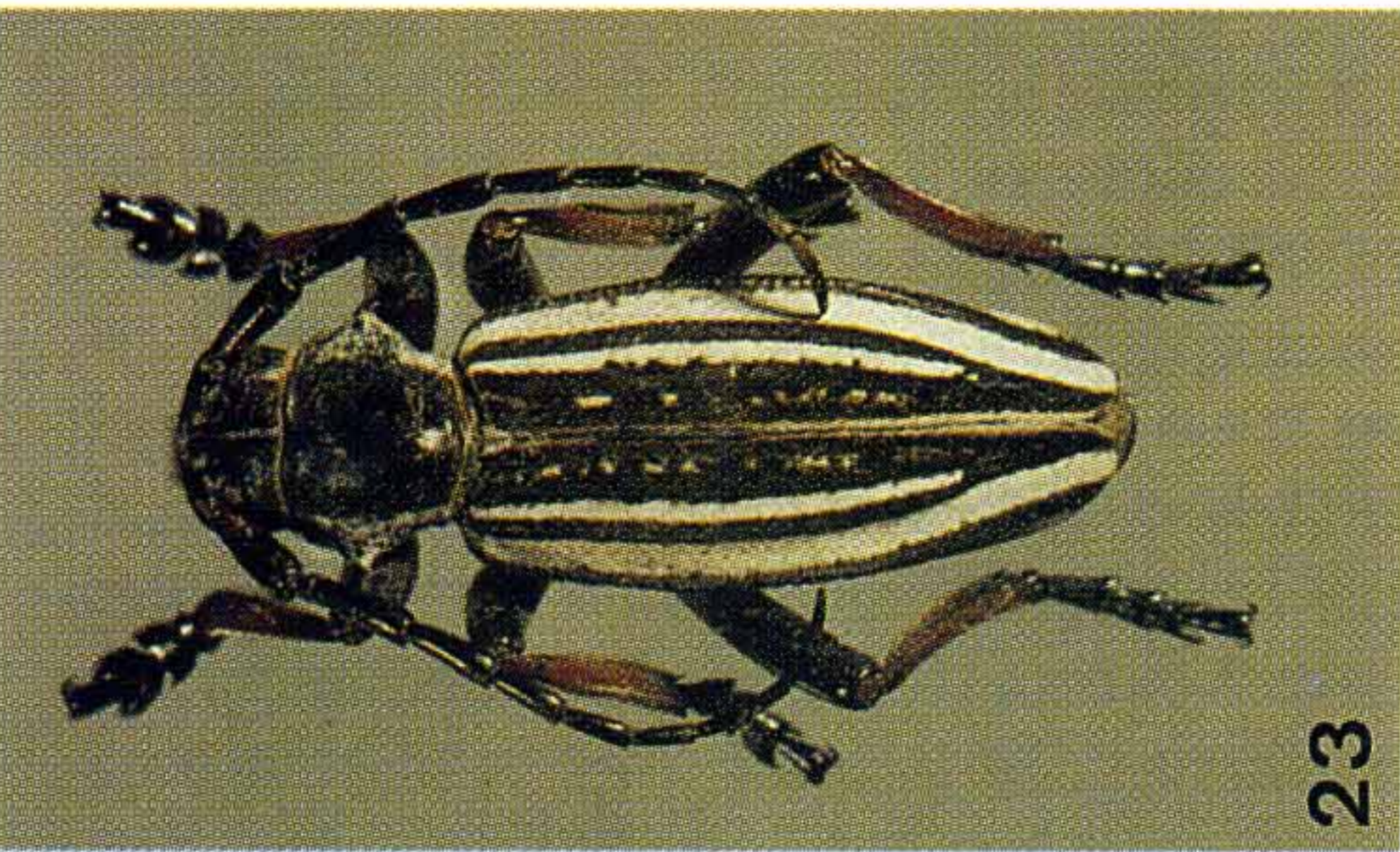
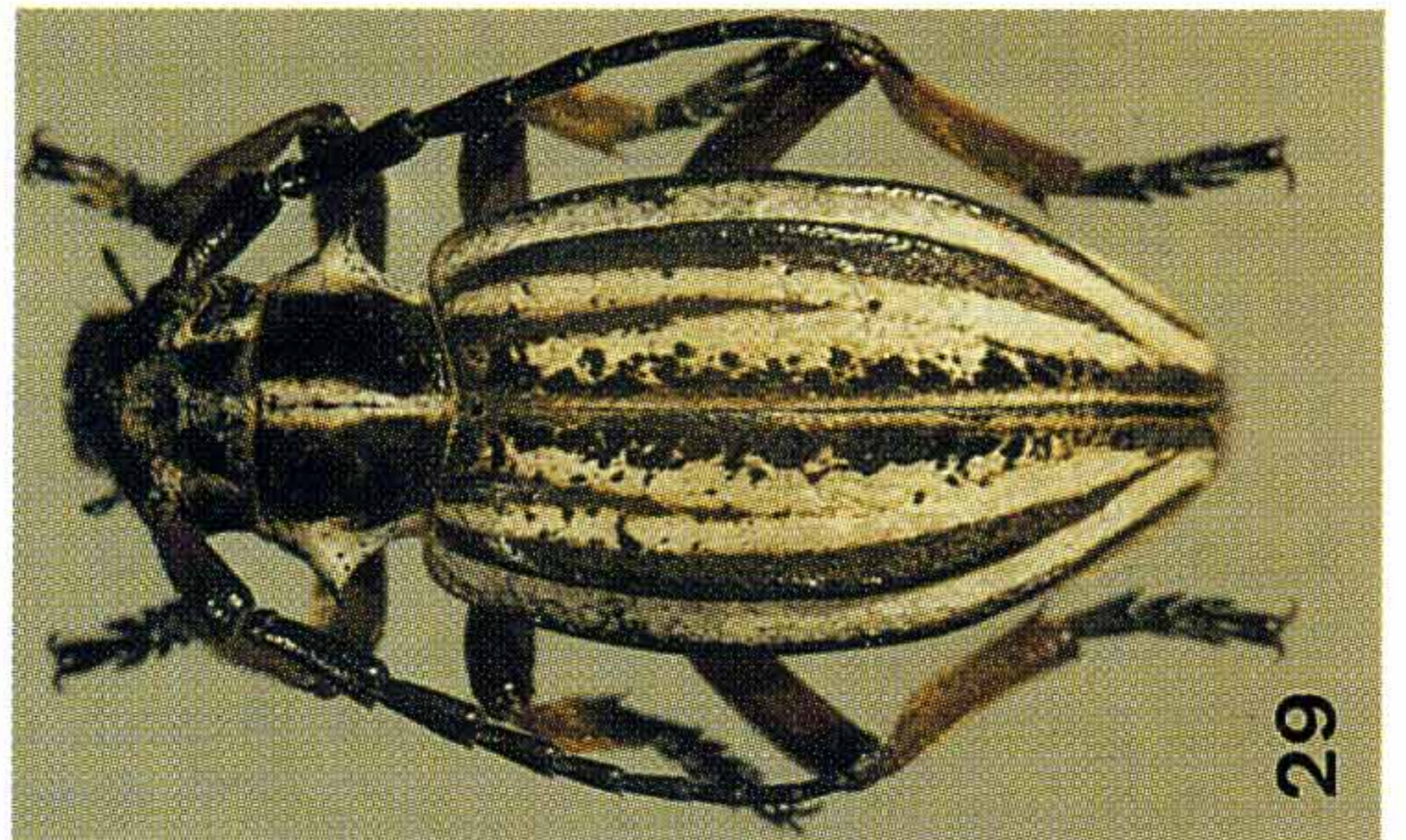
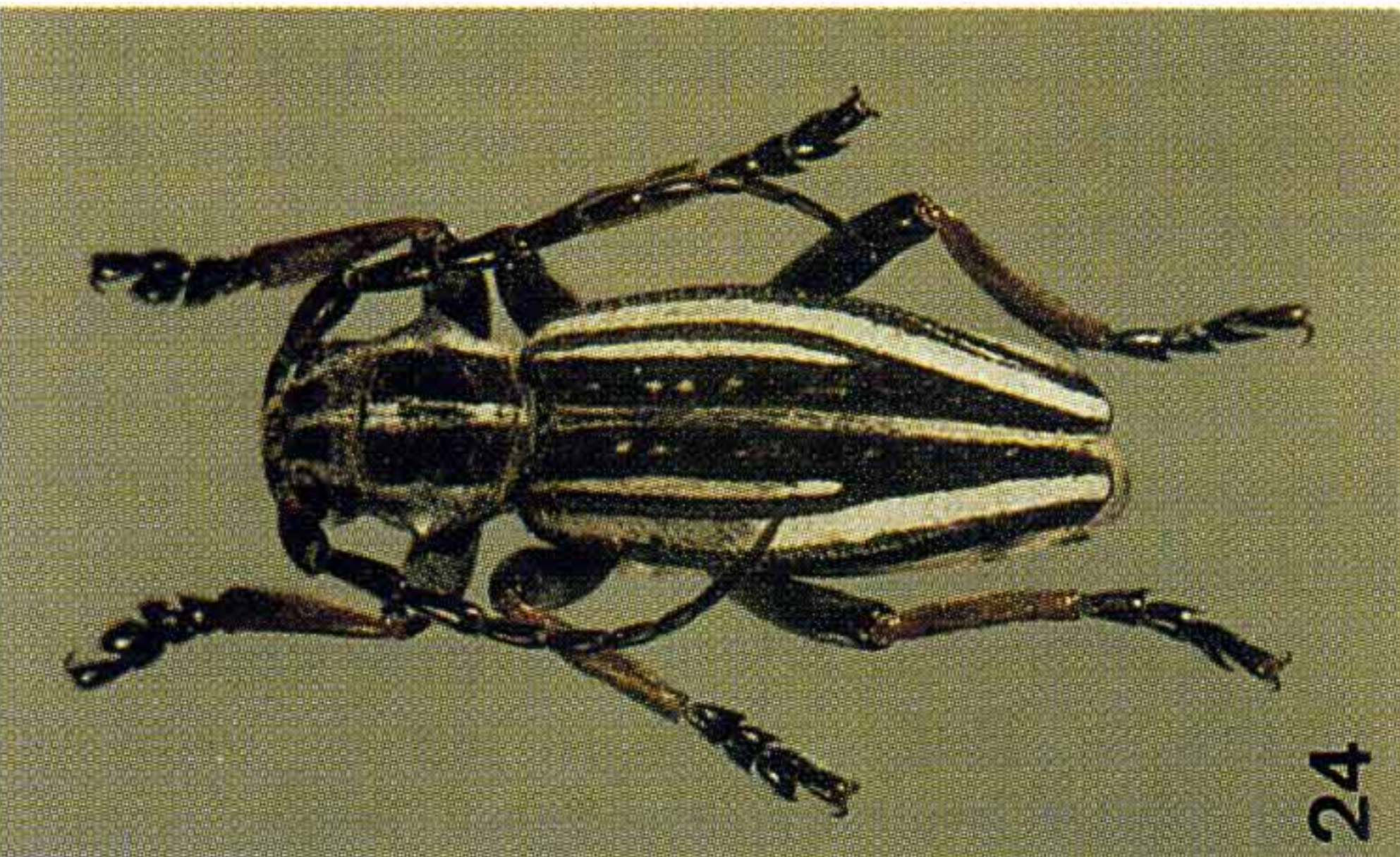
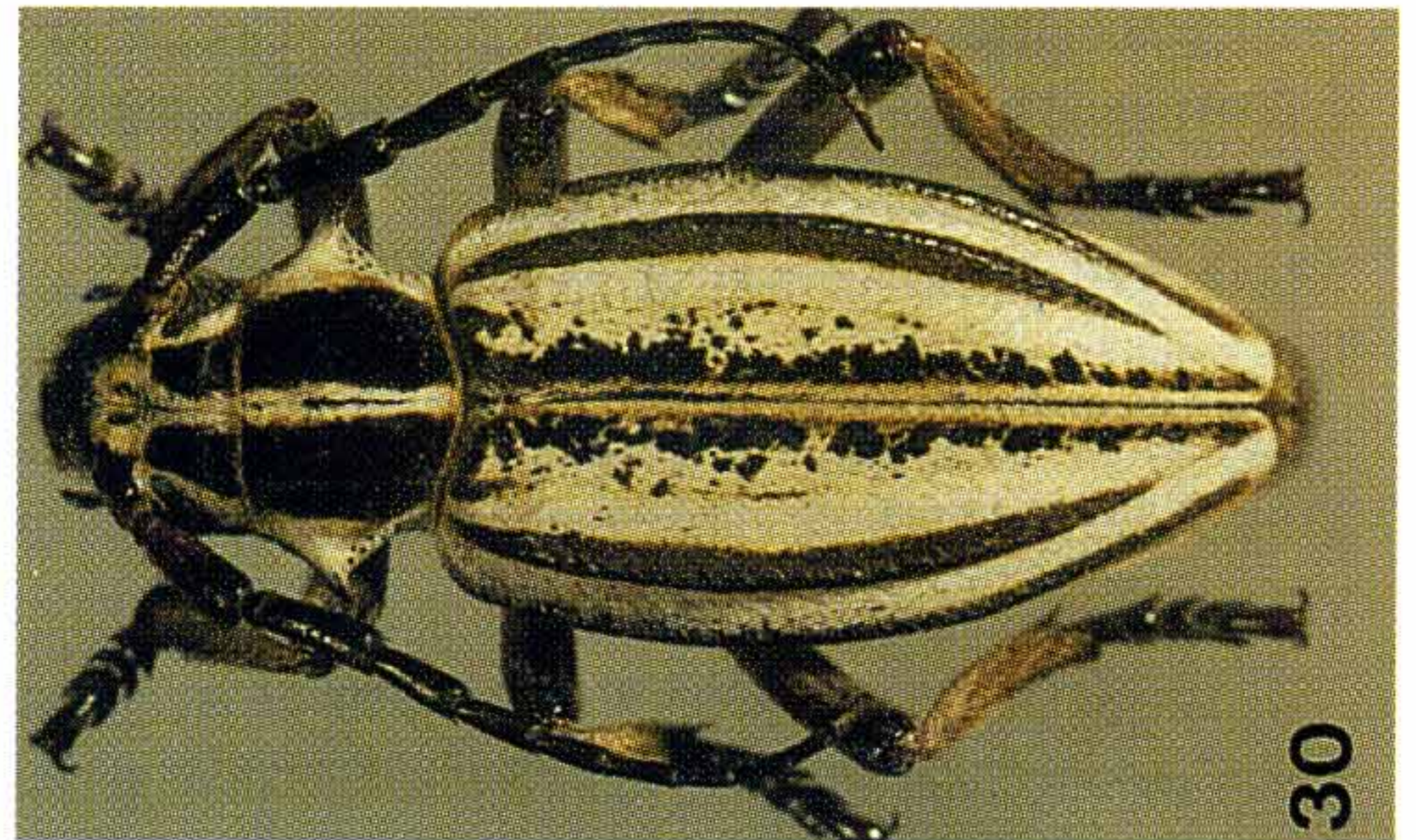
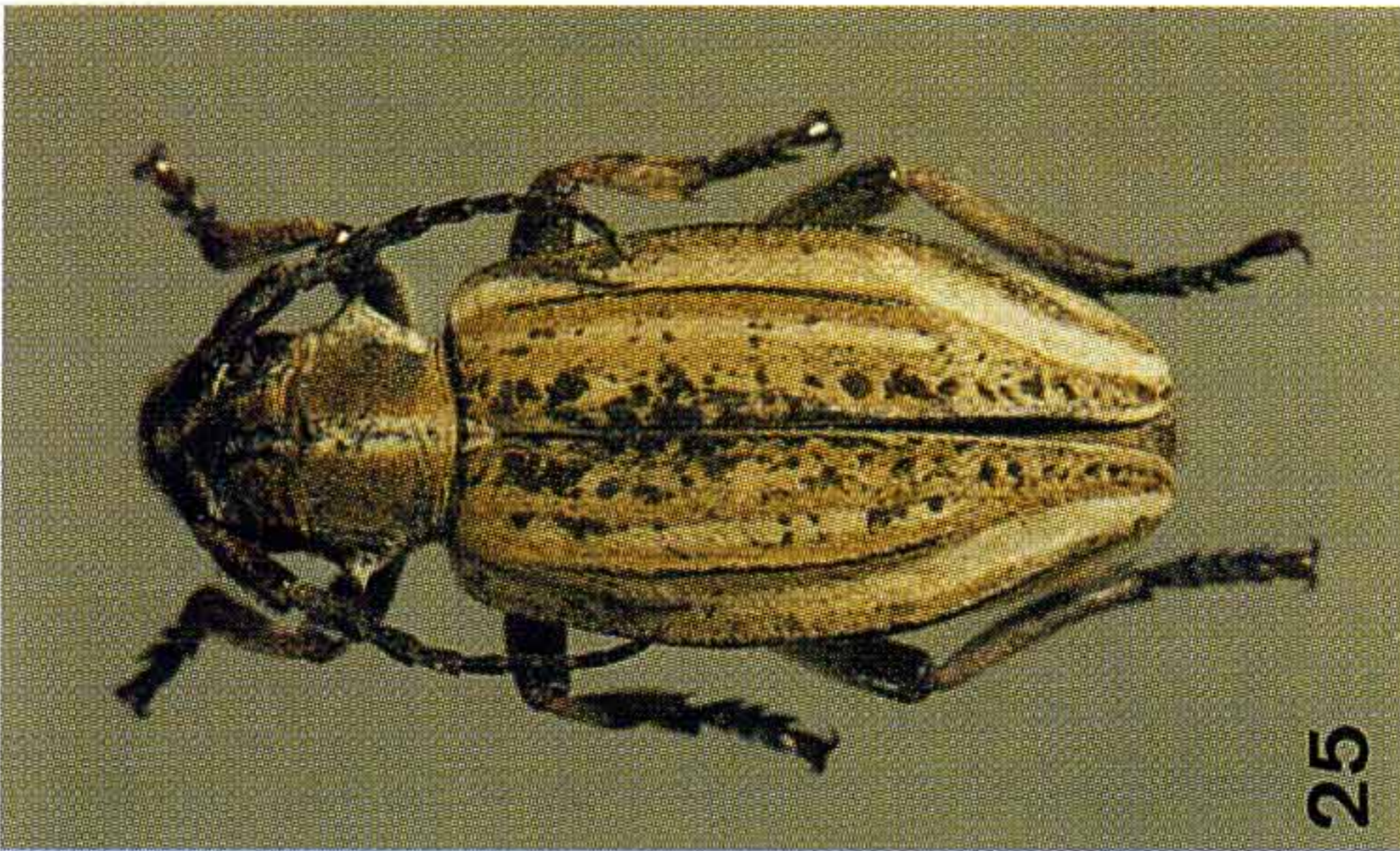
Material: Holotype (Fig. 14): ♂, Kazakhstan, Karachok to the north from Sholak Mts., 1300m, 5.5.1984, M. Danilevsky leg.; paratypes: 33 ♂♂ and 9 ♀♀ with same labels; 34 ♂♂ and 1 ♀♀, Kazakhstan, Saryozek, 900m, 27.4.1991, M. Danilevsky leg.; 4 ♂♂, Kazakhstan, north slope of Altynemel mountain ridge, 7.5.1974, A.S. Badenko leg; 8 ♂♂ and 2 ♀♀, south slope of Altynemel ridge, 1200m, 21.4.91, M. Danilevsky leg.

Distribution: Altynemel mountain ridge, Sholak mountains and plains to the west and north-west (Fig. 31d), may be as far to the west as Kapchagai. The beetles are very numerous in all known localities; in the west part of the area often together with *D. kapchagaicus* Danilevsky, 1966 in each locality.

***Dorcadion suvorovi tekeliensis* ssp. n. (Figs. 19-21)**

Similar to *D. s. karachokensis* ssp.n., but considerably bigger. Elytral stripes narrow; dorsal stripes never fused; humeral and external dorsal stripe without interruptions, never corroded; internal dorsal stripes often interrupted, often in form of poor pale traces or totally absent. Lateral prothoracic spines sometimes very short, sometimes rather long. Humeral carinae with rough sculpture. 1st antennal joints and femora always with black apices, frons always black. Femora in males and in females with fine white pubescence, though in males it can be partly lost. Female androchromal. Body length in males: 16.1-21.5mm, width: 5.5-7.3mm; length in female: 21.5mm; width: 8.7mm.

Material: Holotype (Fig. 19): ♂, Kazakhstan, Dzhungarskiy Alatau, Tekeli, Sarnakoi Mt., 1800m, 24.5.1984, M. Danilevsky leg.; paratypes: 3 ♂♂ and 1 ♀ with same label; 10 ♂♂, Kazakhstan, Dzhungarskiy Alatau, Rudnichnyi, 3.6.1979, G. Nikolaev leg.; 1 ♂, same locality, 8.6.1982, V. Prasolov leg.; 2 ♂♂, Kazakhstan, Dzhungarskiy Alatau, Koksus river, 7.5.1965, I.A. Kostin and A.S. Badenko leg.



Distribution: Middle high mountains in west Dzhungarskiy Alatau near Tekeli and Rudnichnyi and along Koxsu river valley (Fig. 31e). The beetles were not very numerous, but it could be due to the late collecting period.

***Dorcadion suvorovi taldykurganus* ssp. n.** (Figs. 22-26)

Similar to *D. s. karachokensis* ssp. n., but dorsal stripes often poorly developed while the humeral stripe are relatively wide; internal dorsal stripe often totally absent or in form of small white spots, external dorsal stripe sometimes complete, but more often interrupted or considerably shortened, sometimes nearly disappeared. Lateral prothoracic spines relatively short. Humeral carinae with rough sculpture. 1st antennal joints and femora blackened for about a half or more; sometimes 1st antennal joint totally black; often middle and hind tibiae also darkened, specially near apices. Femora in males and in females with fine white pubescence, though in males it can be partly lost. All females autochromal, black pubescence replaced by light-brown; white elytral stripes mostly with dark-brown spots. Body length in males: 14.3-17.2mm, width: 4.5-5.6mm; length in female: 14.7-19.4mm; width: 6.2-7.5mm.

Material: Holotype (Fig. 22): ♂, Kazakhstan, Kyzylzhar Mts (3km to the north from Taldy-Kurgan), 29.4-6.5.1985, V. Cherkasov leg.; paratypes: 35 ♂♂ and 15 ♀♀ with same labels; 12 ♂♂ and 2 ♀♀, Kazakhstan, left bank of Koxsu river, about 15 km to the South from Taldy-Kurgan, 29.4.1985, V. Cherkasov leg.

Distribution: Low dry hills around Taldy-Kurgan (Fig. 31f) - the most north-western population of the species.

***Dorcadion nivosum* (Suvorov, 1913)** (Figs. 27-30)

D. nivosum (Suvorov, 1913: 66-67) was described (as *Compsodorcadion*) from near Dzharkent - south-east of Dzhungarskiy Alatau. The type specimens are deposited in Zoological Museum of Moscow State University and in Zoological Institute of Russian Academy of Sciences. It is the biggest species in the group, well defined morphologically and strongly geographically limited, though close to *D. suvorovi* s.str. Up to now I found only one population to the north from Dzharkent near Sarybel. All my specimens are similar to each other and to the type series.

Elytrae always with fused external and internal dorsal white stripes forming large white area. Humeral carinae with very rough sculpture. First antennal joint always bicolour, tibiae red, femora with black apices; femora of males covered with strong yellow setae, without fine white pubescence; in females femora covered both with fine white pubescence and strong yellow setae. Females usually androchromal; very rare white pubescence is partly replaced by brownish. Body length in males: 16.7-21.4mm, width: 5.7-7.2mm; length in females: 19.2-25.5mm, width: 7.6-9.7mm.

Material: 7 ♂♂ and 7 ♀♀, Kazakhstan, Sarybel, 1500m, 23-26.4.1983, M. Danilevsky leg.; 12 ♂♂ and 9 ♀♀, same locality, 5.5.1994, M. Danilevsky leg.

Distribution: Very local species; stony slopes of deep ravines to the south of Tyshkan stow (Fig. 31g) - the most southeastern part of Dzhungarskiy Alatau. The beetles were not abundant in all parts of the locality.

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 SUVOROV G. 1913. Beschreibung neuer Ceramb.-Arten (Coleoptera). - *Revue Russe d'Entom.*, 13, 1: 66-81.

Descriptions for figures

Figs. 1-2. *Dorcadion acutispinum*: 1 - ♂, 2 - ♀.

Figs. 3-6. *Dorcadion suvorovi suvorovi*: 3-4 - ♂♂, 5-6 - ♀♀

Figs. 7-12. *Dorcadion suvorovi konyrolenus* ssp. n.: 7-10 - ♂♂ (8 HT), 11-12 - ♀♀.

Figs. 13-18. *Dorcadion suvorovi karachokensis* ssp. n.: 13-15 - ♂♂ (14 HT), 16-17 - androchromal females, 18 - autochromal female.

Figs. 19-21. *Dorcadion suvorovi tekeliensis* ssp. n.: 19 (HT)-20 - ♂♂, 21 - ♀♀.

Figs. 22-26. *Dorcadion suvorovi taldykurganus* ssp. n.: 22 (HT)- 24 - ♂♂, 25-26 - ♀♀.

Figs. 27-30. *Dorcadion nivosum*: 27-28 - ♂♂, 29-30 - ♀♀

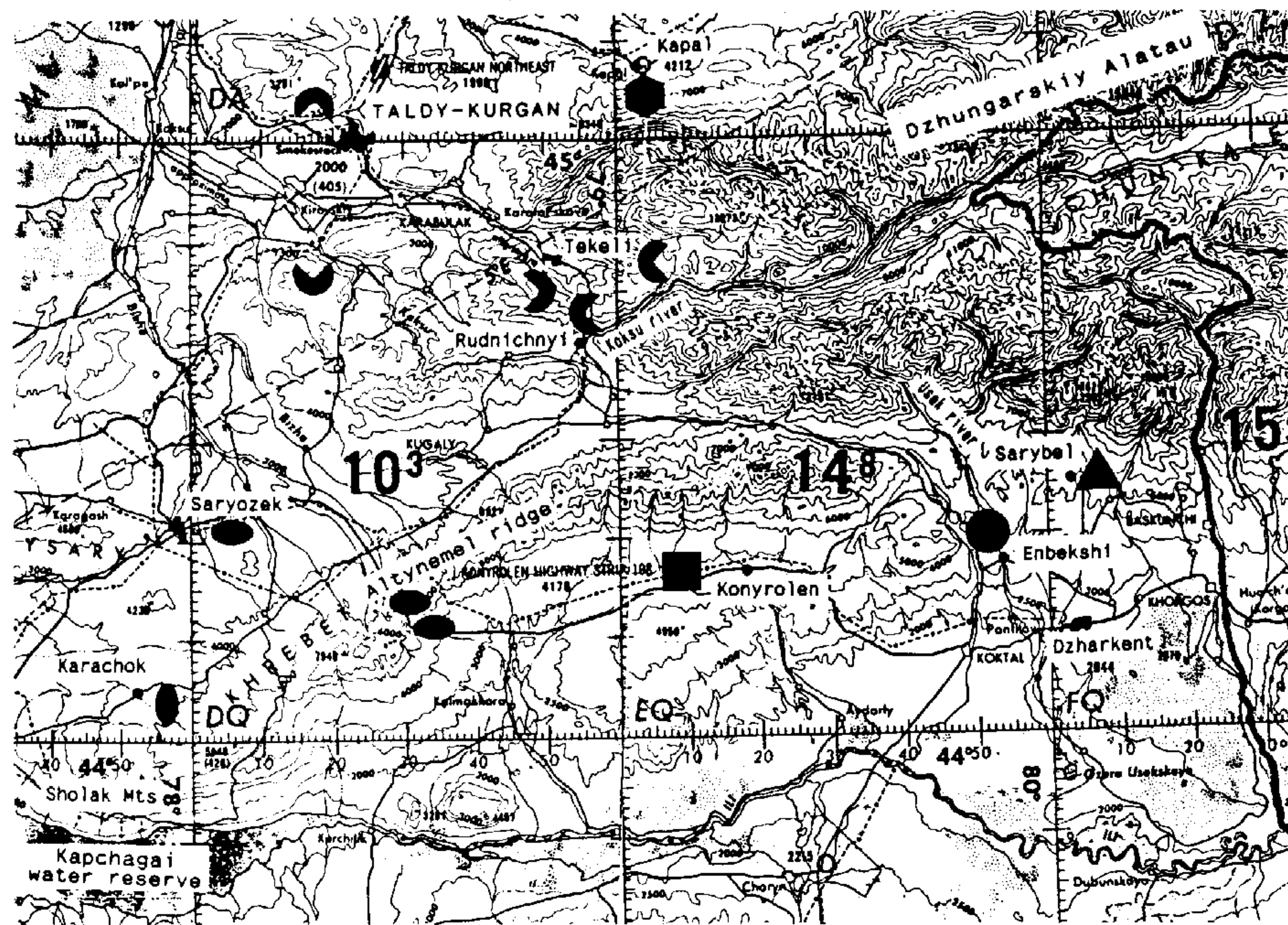


Fig. 31. Map of Dzungarskiy Alatau mountain system with marked localities.

a - *D. acutispinum* Motsh.: ● - near Kapal; b - *D. suvorovi* Jak.: ● - near Enbekshi;

c - *D. suvorovi konyrolenus* ssp. n.: ■ - near Konyrolen; d - *D. suvorovi karachokensis* ssp. n.: ● - near Karachok (type locality), ● - near Saryozek and along Altynemel ridge;

e - *D. suvorovi tekeliensis* ssp. n.: ☾ - near Tekeli (type locality), ☾ - along right bank of Koksuyul;

f - *D. suvorovi taldykurganus* ssp. n.: ☾ - near Taldy-Kurgan (type locality), ☾ - left bank of Koksuyul;

g - *D. nivosum* Suv.: ▲ - near Sarybel.