

## A new *Dorcadion* of "panthericum"-group from Kazakhstan, with new records on poorly known species of the genus (Coleoptera, Cerambycidae)

Новый *Dorcadion* группы "panthericum" из Казахстана с новыми данными о малоизученных видах рода (Coleoptera, Cerambycidae)

M.L. Danilevsky  
М.Л. Данилевский

A.N. Severtzov Institute of Ecology and Evolution, Russian Academy of Sciences, Leninsky prospect, 33, Moscow 117071 Russia.

Институт проблем экологии и эволюции им. А.Н. Северцова РАН, Ленинский пр. 33, Москва 117071 Россия.

KEY WORDS: Coleoptera, Cerambycidae, *Dorcadion*, new taxa, Kazakhstan.

КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Cerambycidae, *Dorcadion*, новые таксоны, Казахстан.

ABSTRACT: *Dorcadion* (s.str.) *irinae* sp.n. is described from the northern part of the Betpak-Dala Desert. Several populations of *Dorcadion pantherinum* from the western and south-western environs of Balkhash Lake are attributed to *D. p. desertum* Danilevsky, 1995. The distribution area of *D. balchashense betpakdalense* Danilevsky, 1996 is extended to the west, and morphological diagnosis made more precise. *D. archarlense* Danilevsky, 1996 stat.n. raised to a species rank; some details in the description of males are explained more precisely, and females are described for the first time. *D. dubianskii* Jakovlev, 1906 was collected for the first time since the appearance of the original description, the species' type locality is confirmed. *D. inderiense* Suvorov, 1911 stat.rest. is regarded as a separate species.

РЕЗЮМЕ: *Dorcadion* (s.str.) *irinae* sp.n. описан из северной части пустыни Бетпак-Дала. Несколько популяций *Dorcadion pantherinum* к западу и юго-западу от озера Балхаш отнесены к *D. p. desertum* Danilevsky, 1995. Ареал *D. balchashense betpakdalense* Danilevsky, 1996 расширен к западу, уточняется морфологический диагноз подвида. *D. archarlense* Danilevsky, 1996 stat.n. возведен в ранг вида; уточнено описание самца, впервые описаны самки. *D. dubianskii* Jakovlev, 1906 впервые собран вновь после первоописания, подтверждается его типовой локалитет. *D. inderiense* Suvorov, 1911 stat.rest. рассматривается в качестве самостоятельного вида.

The present paper is dedicated to the new data obtained during my collecting trip to Kazakhstan in April-May of 1996.

*Dorcadion* (s.str.) *irinae* sp.n.  
Figs. 1-8.

DESCRIPTION. MALE: Head black, covered with dense white adpressed pubescence and short strong scattered setae; with two elongate areas beneath antennae devoid of white pubescence, bearing deep scattered punctuation and small less distinct denser punctuation; with two small triangular areas on vertex covered with dense black pubescence; labrum, mandibles and palpi black; antennae reaching to last one sixth of elytra or even to their apices, black with reddish-black basal part of 1st joint; 1st joint covered with fine white adpressed pubescence and strong pale erect setae; other antennal joints looking glabrous with indiscernible rare black pubescence and strong apical dark setae; 1st joint a little shorter than 2nd and 3rd combined, 4th joint approximately 1.1-1.2 times shorter than 3rd.

Prothorax transverse, slightly (no more than 1.1 times) shorter than its basal width, much wider anteriorly than posteriorly; lateral tubercles long and acute, slightly curved up and backwards; pronotum relatively flat, with two very contrasting black longitudinal hair stripes; posterolateral angles of pronotum with several deep dots bearing stout setae. Scutellum elongate or transverse, widely rounded apically, covered with dense white pubescence.

Elytra about 1.9 times longer than wide; more strongly narrowing posteriorly than anteriorly, or oval, widest near middle; humeral and external dorsal carinae strongly raised, internal carinae indistinct; basal portion of humeral carina coarsely sculptured, granulate or dentate, glabrous; dorsal carinae not so coarse; clytral pubescence of black ground color, each clytron with 3 longitudinal white stripes: marginal stripe very wide, nearly wholly covering lateral clytral margin, with irregular edge; humeral stripe also rather wide, always complete, never interrupted, usually with linear margins, rarely slightly corroded by black spots; joint sutural



stripe usually narrower than central white stripe of pronotum and much narrower than humeral stripe; black area between humeral and sutural stripes usually covered with numerous irregular white spots, which are sometimes arranged in more or less distinct longitudinal rows. Strong erect elytral setae indistinct.

Legs reddish with darkened last tarsal joint; covered with very dense white pubescence and strong pale suberect setae, anterior and middle tibiae with pale hair brushes; posterior tarsi with 1st joint slightly shorter than 2nd and 3rd joints combined; 1st and 2nd joints combined about as long as 3rd and 4th combined; lobes of 3rd joint of hind tarsi moderately elongate.

Abdomen, as well as ventral and lateral portions of thorax, regularly covered with dense white pubescence; abdominal cuticle black; last sternite broadly truncate or slightly emarginate; pygidium broadly rounded, postpygidium rounded or slightly emarginate.

FEMALE: Androchromal or autochromal, then white pubescence replaced by yellow-orange, and black pubescence partly (only on elytra) or totally replaced by pale-brown; longitudinal dark line along internal dorsal carinae sometimes distinct; white elytral spots sometimes so wide and numerous that they cover most part of dorsal elytral surface, and elytra look pale with dark spots and lines; central pronotal stripe usually wider than in males.

Antennae reaching to apical one third of elytra or slightly shorter; 3rd and 2nd antennal joints combined equal in length to 1st or slightly shorter; 4th joint approximately 1.2 times shorter than 3rd; 1st antennal joint often totally reddish-black or black.

Prothorax more transverse, approximately 1.4 times shorter than its basal width; lateral tubercles longer.

Elytra wider, about 1.8 times longer than broad; humeral and dorsal carinae more prominent, both with very coarse sculpture near base; strong short erect elytral setae distinct.

Last abdominal sternite and last abdominal tergite truncate or rounded apically, sometimes emarginate.

Body length in males: 16.8-23.2 mm, in females: 21.7-27.5 mm; body width in males: 6.2-8.1 mm, in females: 8.2-11.2 mm.

MATERIAL. Holotype (Fig. 1): ♂, Kazakhstan, Zhairam, 300 m, 9.5.1996, M. Danilevsky leg.; 163 paratypes: 73 ♂♂ and 28 ♀♀, same locality and date, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg.; 2 ♂♂ and 1 ♀, about 20 km to the north from Zhairam (near Togusken, 300m, 10.5.1996, M. Danilevsky leg.; 41 ♂♂ and 18 ♀♀, Kazakhstan, Monadyr, 300 m, 10.5.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg. (type specimens are deposited in author's collection and in Zoological Institute, Russian Academy of Sciences, St. Petersburg).

DISCUSSION. *Dorcadion irinae* sp.n. seems to be not very close to any other taxon of *Dorcadion* belonging to the "pantherinum"-group, which consists of three more species with several subspecies (*D. p. pantherinum* Jakovlev, 1900, *D. p. sabulosum* Danilevsky, 1995; *D. p. desertum* Danilevsky, 1995; *D. p. shamaevi* Danilevsky, 1995; *D. ninae* Danilevsky, 1995; *D. absinthium* Plavilstshikov, 1958). Being distributed inside the area of *D. pantherinum* s.l., *D. irinae* has the same characters of elytral design as *D. p. pantherinum* or *D. p. desertum*, with irregularly scattered pale spots, without dorsal pale stripes as in *D. ninae* and *D. absinthium*. No taxon of the group has such strong elytral carinae, nor such density of white pubescence on body, legs and elytra. The body of *D. irinae* is relatively wider than in other taxa of the group.

DISTRIBUTION AND BIONOMY. *Dorcadion irinae* sp.n. inhabits an isolated sandy area inside the very large clay desert in the northern part of Betpak-Dala Desert (Fig. 17). The beetles were very numerous in the beginning of May, feeding on *Carex* sp.

*Dorcadion* (s.str.) *pantherinum desertum* Danilevsky, 1995

This subspecies was described from the central part of a large sandy desert lying to the north-east from the Ili River and to the south-east from Balkhash Lake. Several separate specimens from the northern environs of Kolshengel (a sandy area southwest of the Ili River) were regarded by me [Danilevsky, 1995] as representatives of the nominative subspecies, together with a female from central Betpak-Dala.

This spring I found a very dense population of *D. pantherinum* in Sarykum Sands, on the north-western shore of Balkhash Lake (environs of Gulshad). In general, the beetles from near Gulshad are characterized by the same features as *D. p. desertum*. So this population must be joined to *D. p. desertum* and the area of the subspecies must be extended to the left bank of Ili as far as the north-western border of Balkhash Lake. I also regarded as *D. p. desertum* the population from near Kolshengel, as now I see that several known to me specimens from this locality are within the range of variation of *D. p. desertum* from Sarykum Sands.

The type locality of *D. pantherinum* s.str. rests uncertain, as now it is based on a single female from Central Betpak-Dala (Chulak-Espe).

MATERIAL. 258 ♂♂ and 81 ♀♀, Kazakhstan, Sarykum Sands, Gulshad env., 11-12.5.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg.

*Dorcadion* (*Politodorcadion*) *balchashense betpakdalense* Danilevsky, 1996

The subspecies was described basing on 5 old specimens from Central and North Betpak-Dala. This spring we collected many specimens of the subspecies in the known locality and found out one new population.

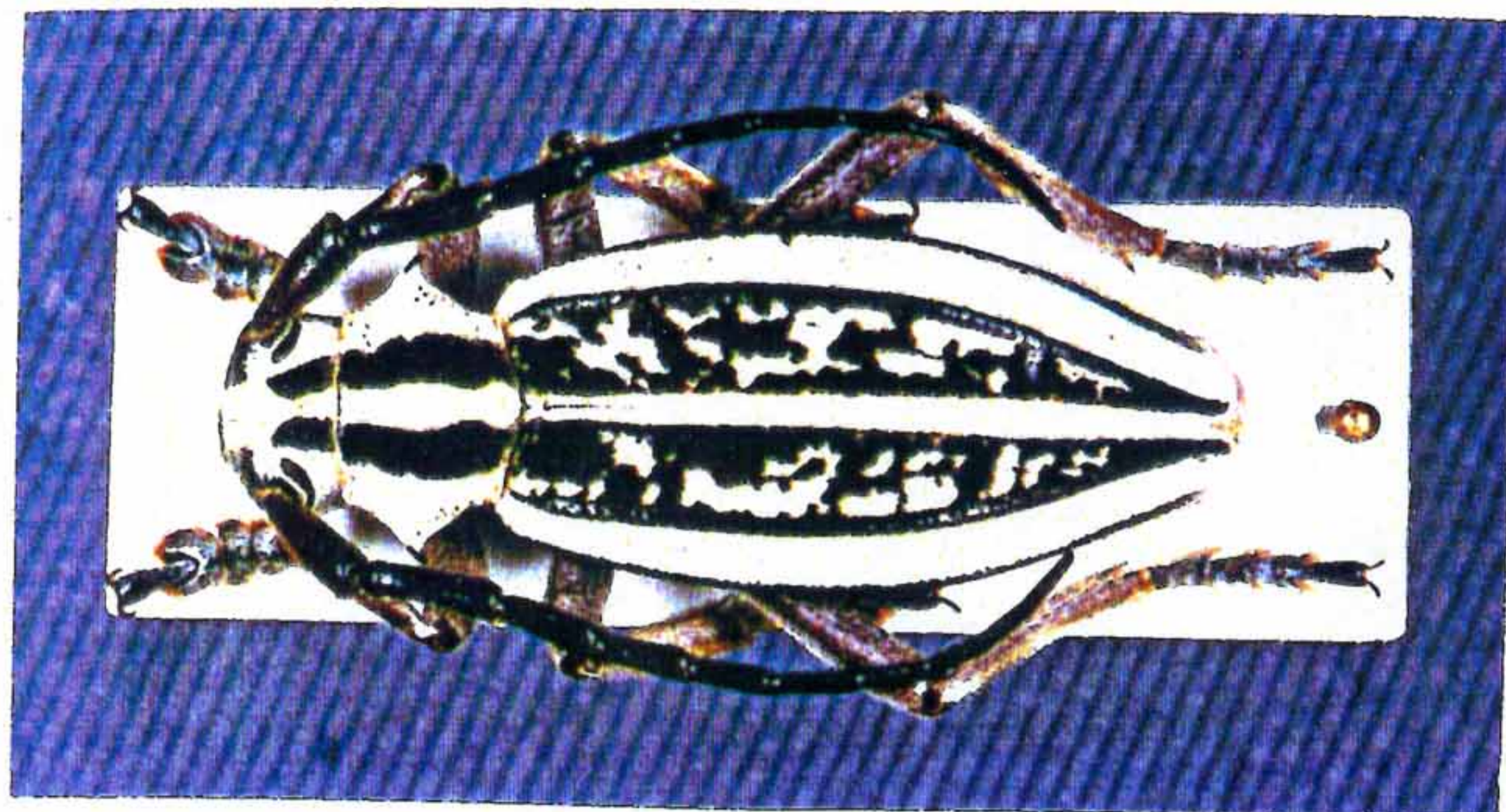
The large amount of available specimens allows me to define more exactly the characters of *D. b. betpakdalense* and to extend its distribution area to the west.

In general, *D. b. betpakdalense* is really bigger than the nominative subspecies, though rather small specimens are not rare (the length of the smallest male in my material is 16.0 mm, of the smallest female 16.2 mm); the color of antennae and legs is usually darker than in the nominative form; specimens with totally black antennae and apical halves of all femora are numerous, but sometimes 1st antennal joint and legs are totally red, as in the nominative subspecies.

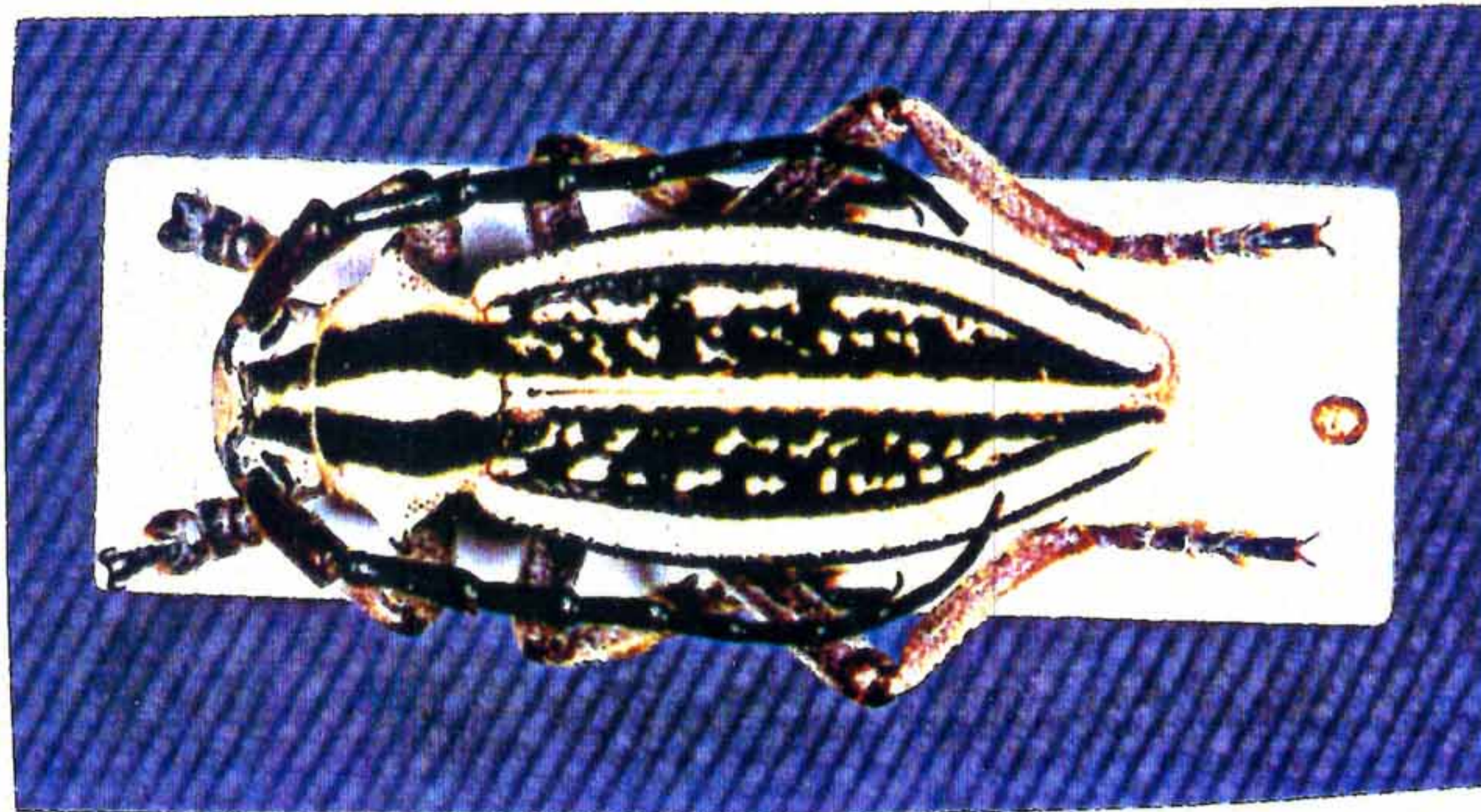
MATERIAL. 62 ♂♂, 50 ♀♀, Kazakhstan, 20 km S of Zhana-Arka, 500 m, 24-25.4.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg.; Kazakhstan, Zhairam, 300m, 9.5.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg.; 1 ♂, ca. 20 km N of Zhairam (near Togusken), 300 m, 10.5.1996, M. Danilevsky leg.

DISTRIBUTION AND BIONOMY. The area of the subspecies extends from south-western environs of Karaganda Town to the south through Zhana-Arka (Atasu) as far as to the Koksengir Mountains, and to the west as far as to Zhairam and Togusken (new locality). The popula-

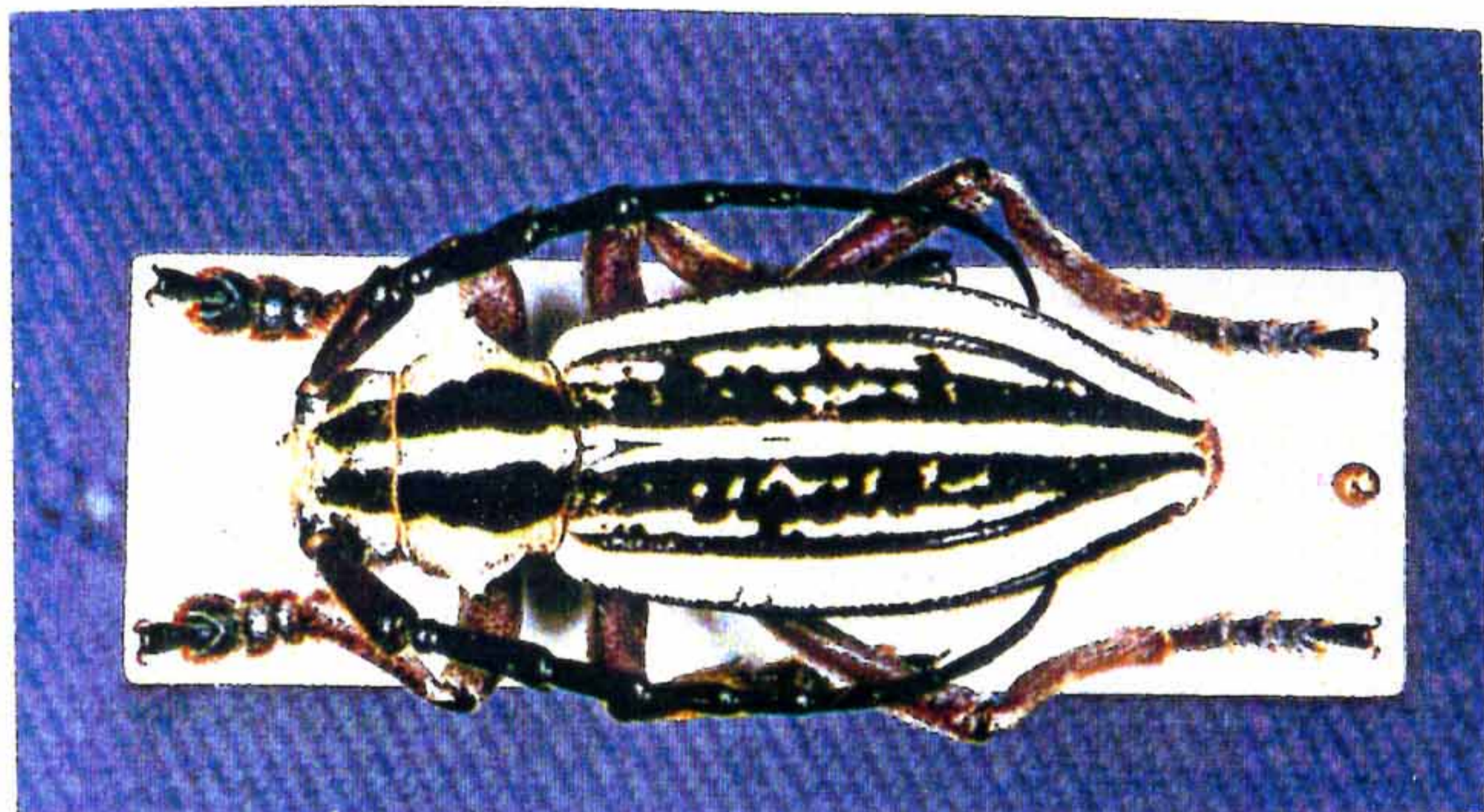




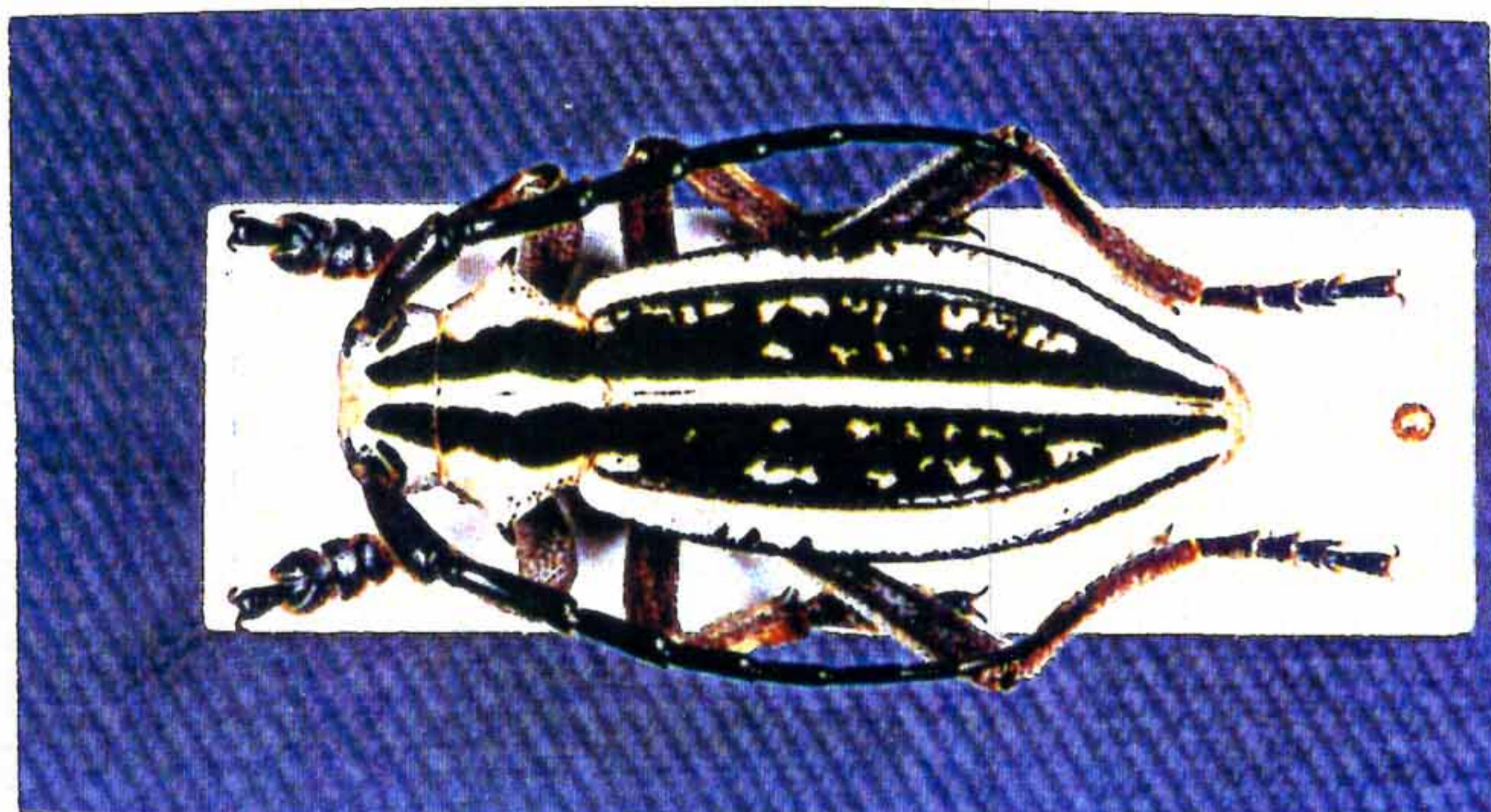
1



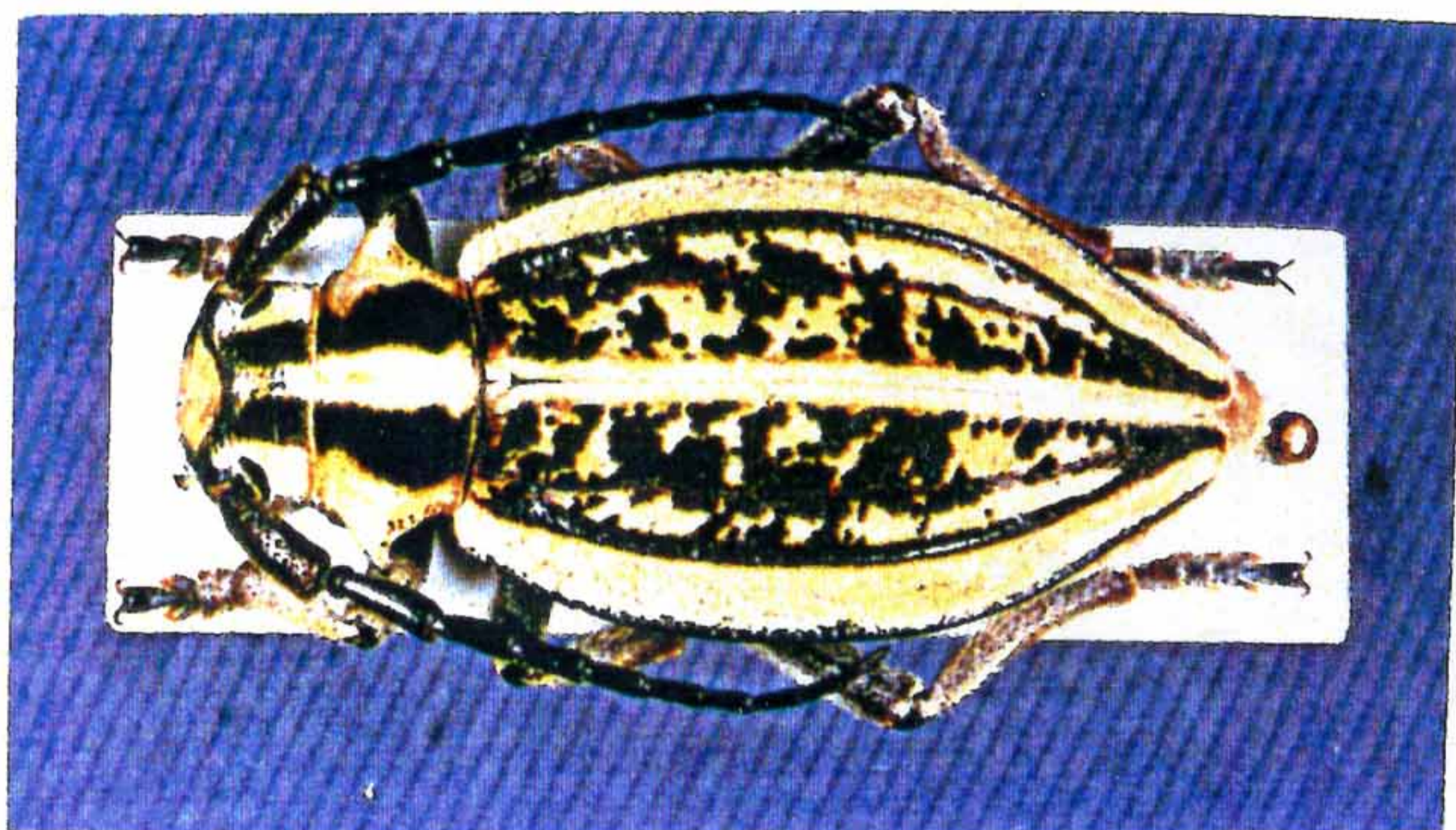
2



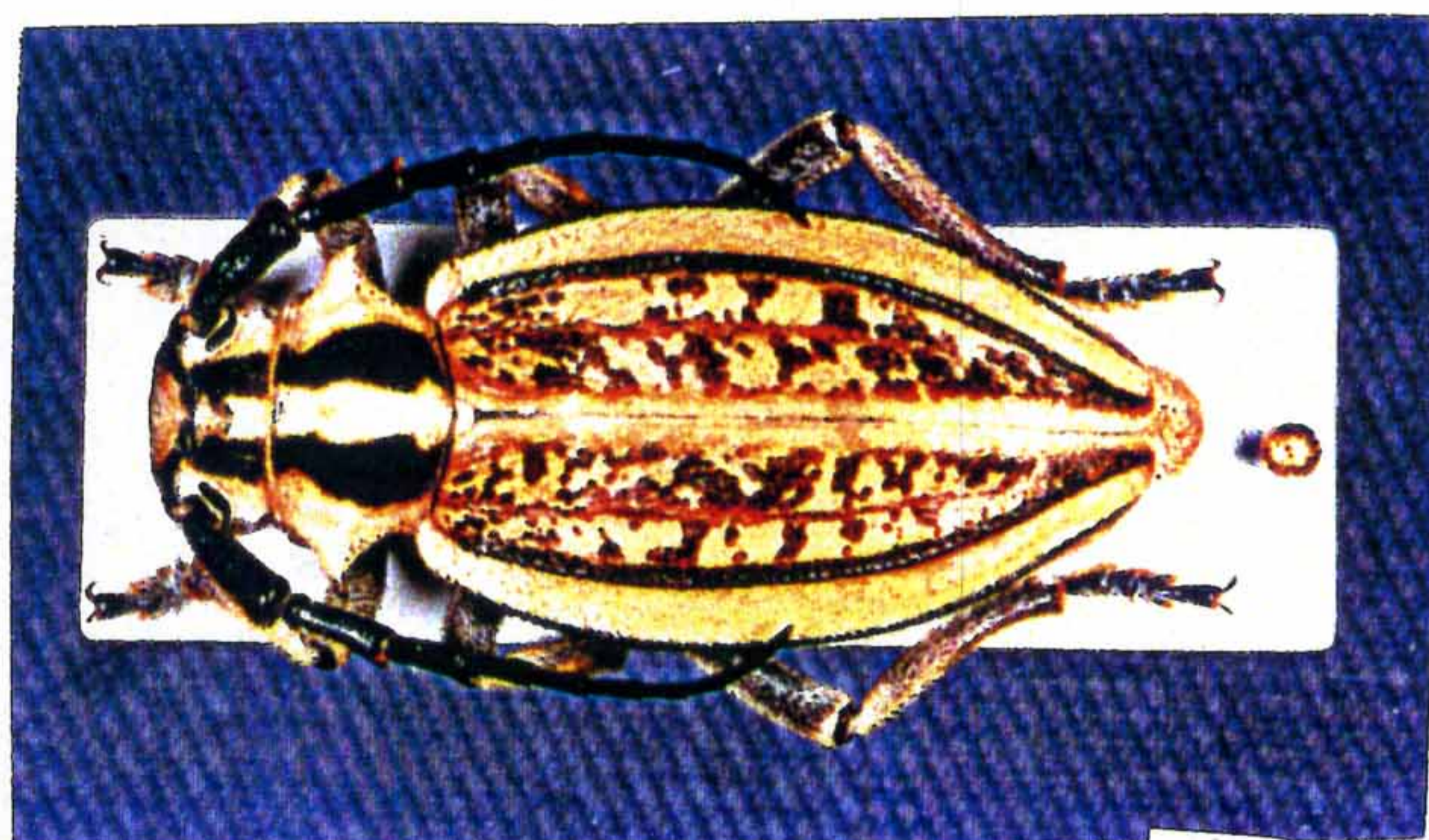
3



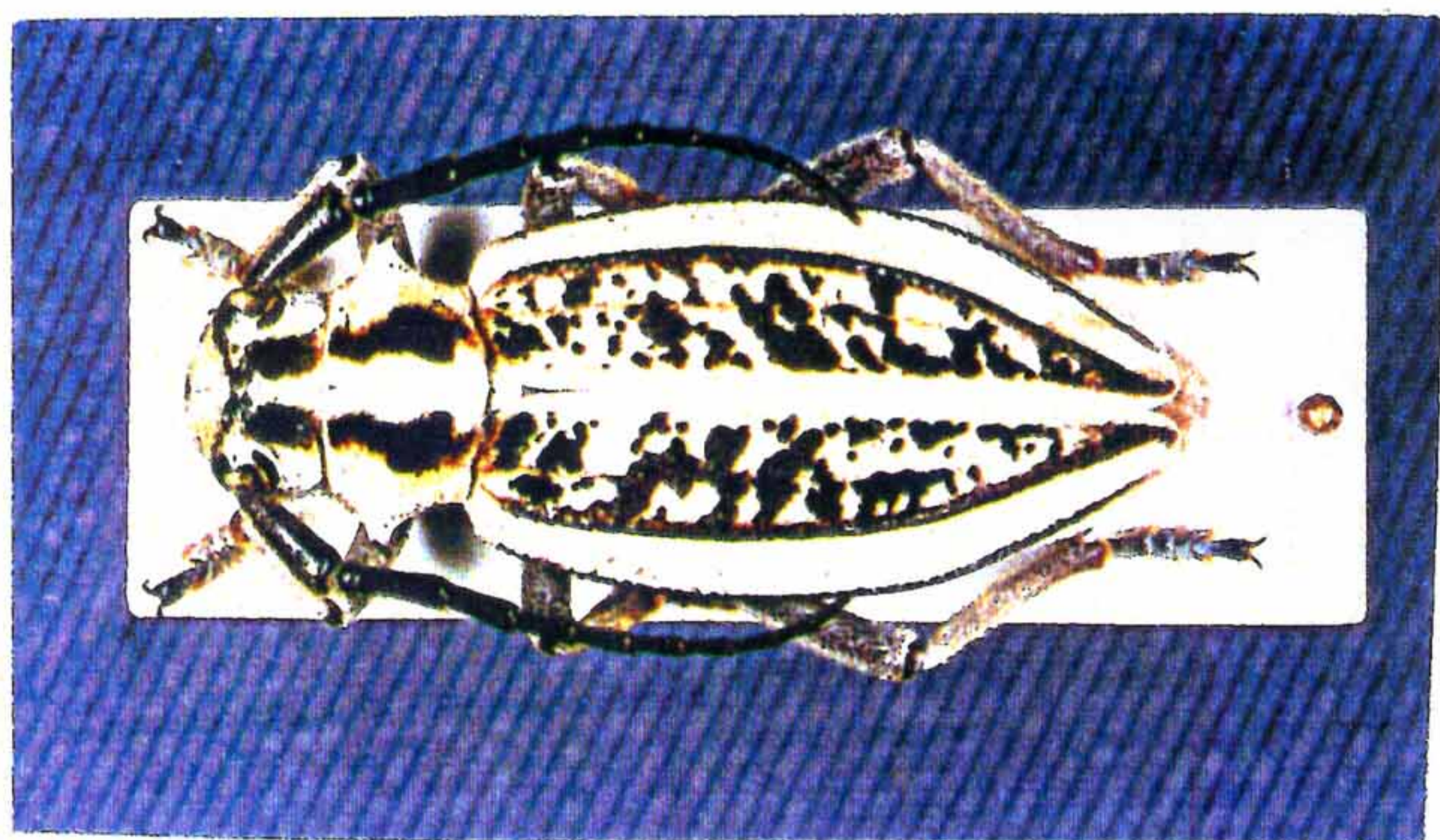
4



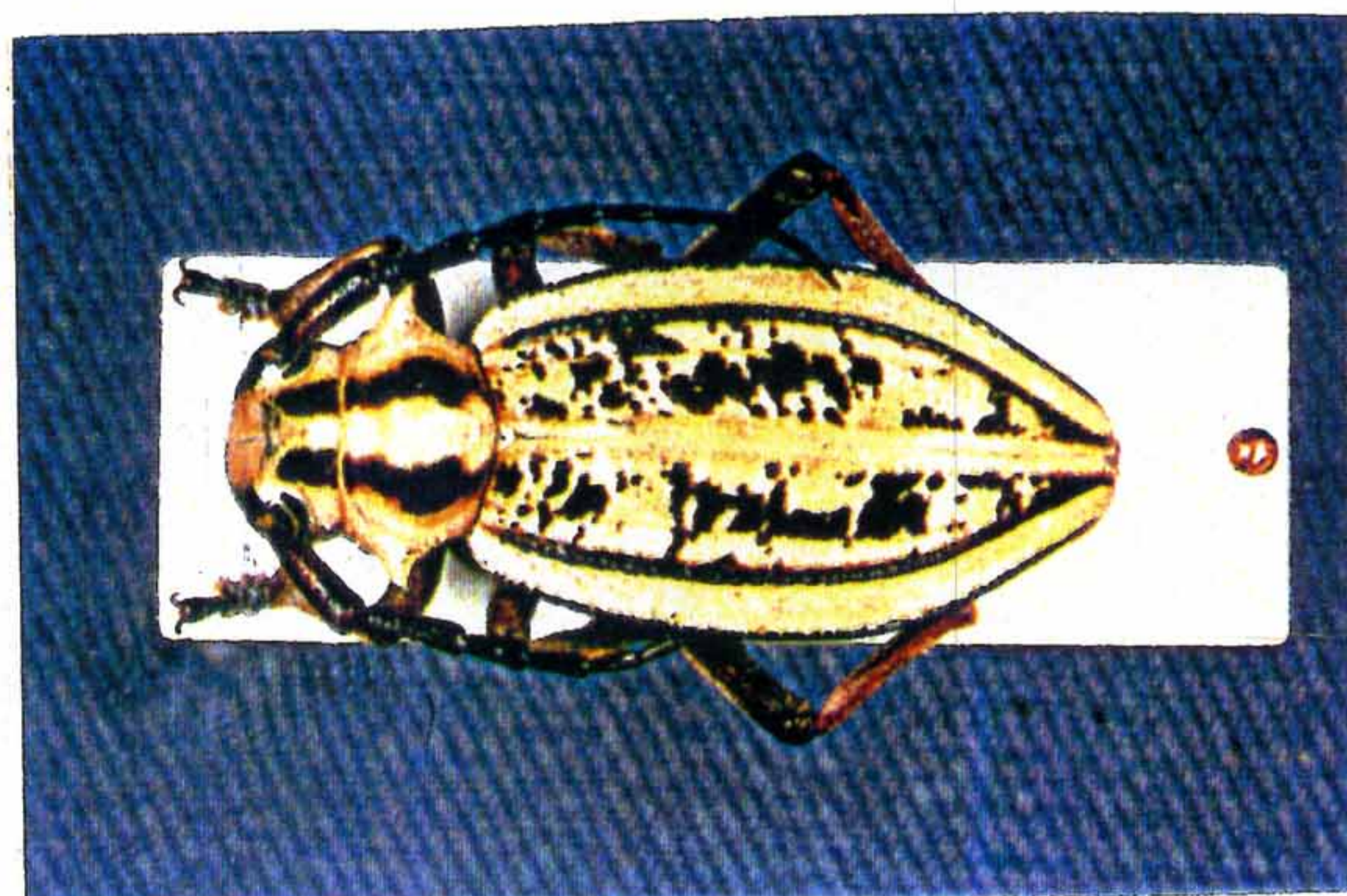
5



6



7



8

Figs 1-8. *Dorcadion irinae* sp.n.: 1-4, males (1, holotype); 5-8, females.  
Рис. 1-8. *Dorcadion irinae* sp.n.: 1-4, самцы (1, голотип); 5-8, самки.





9



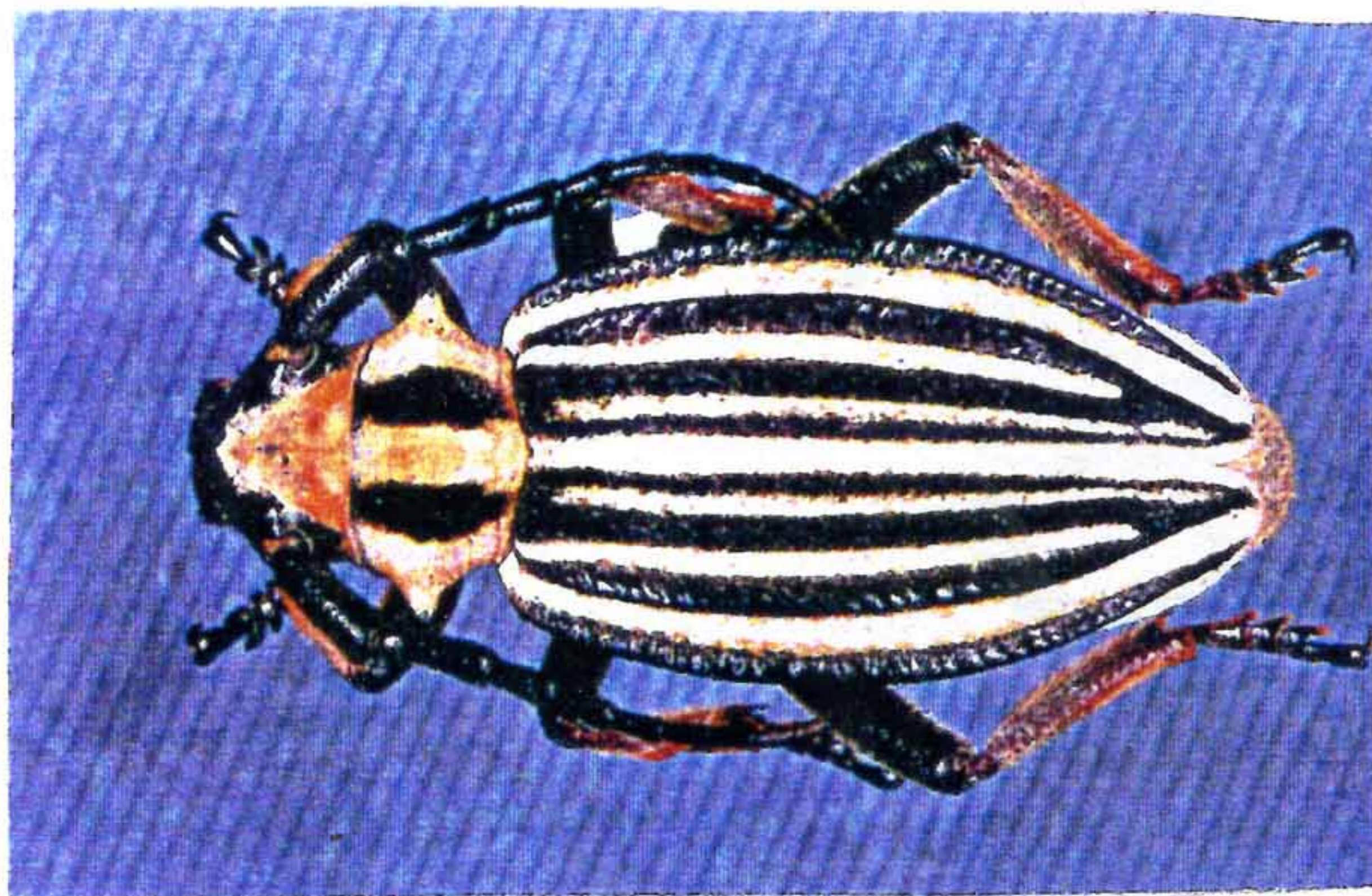
10



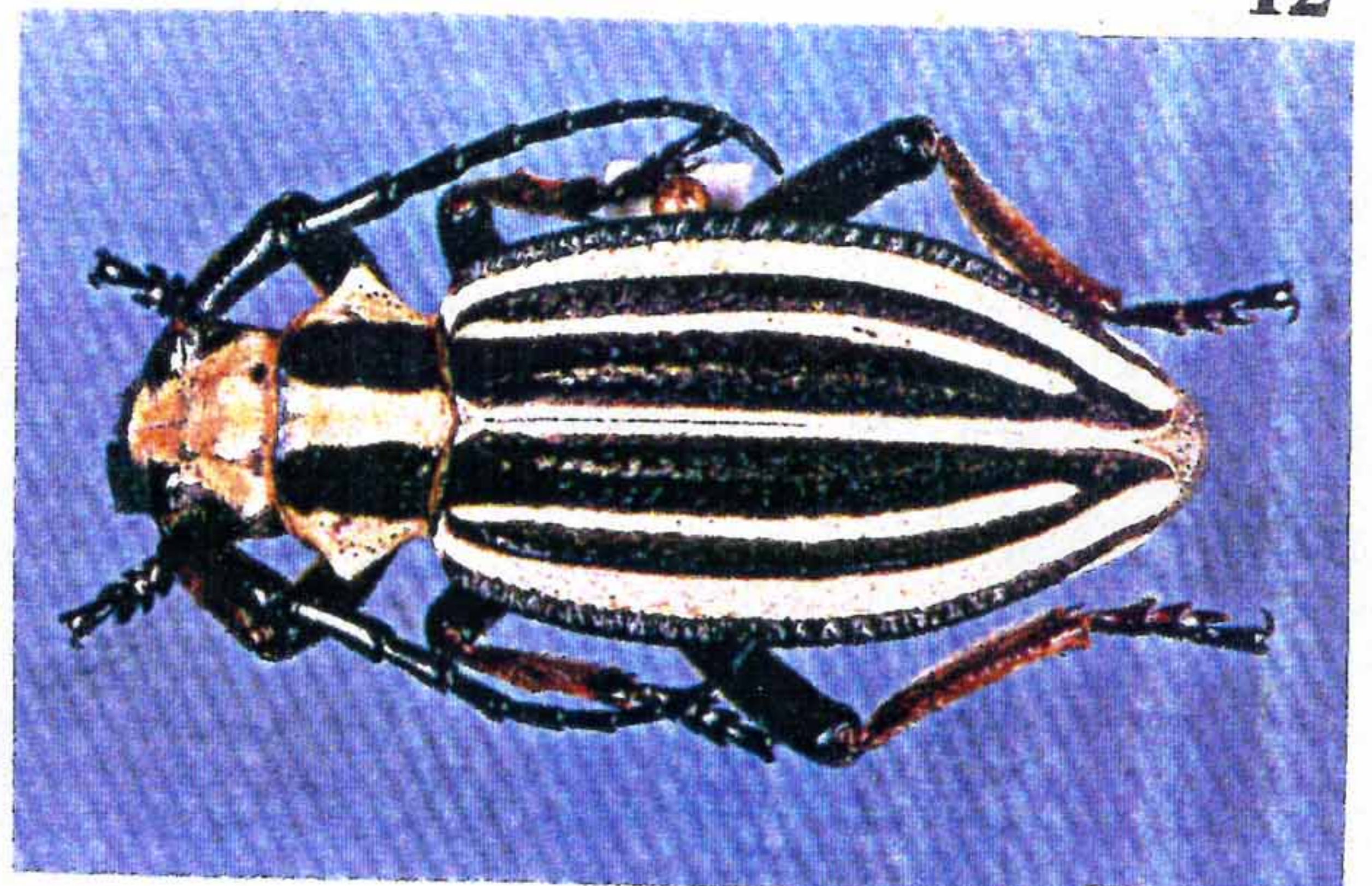
11



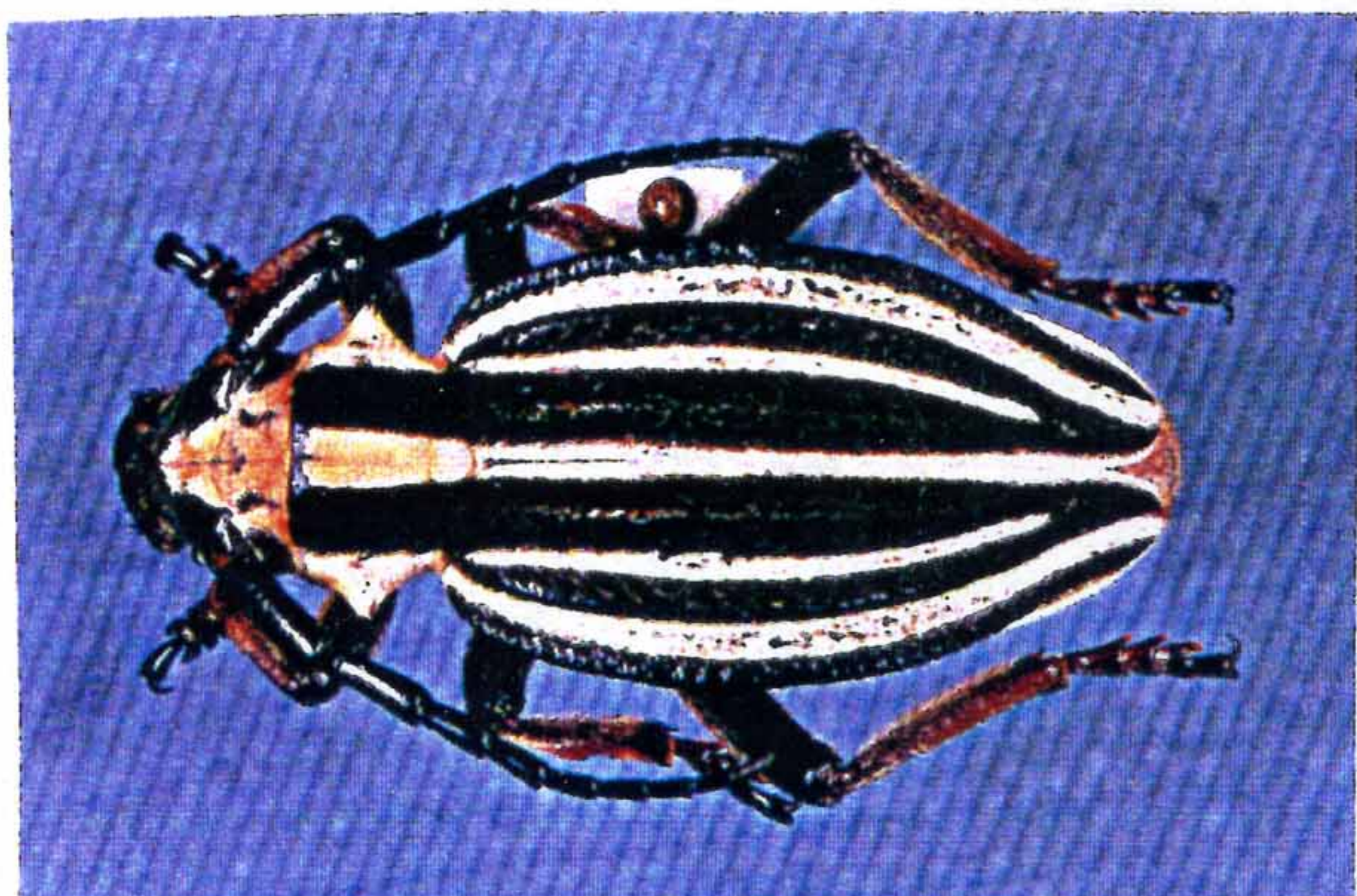
12



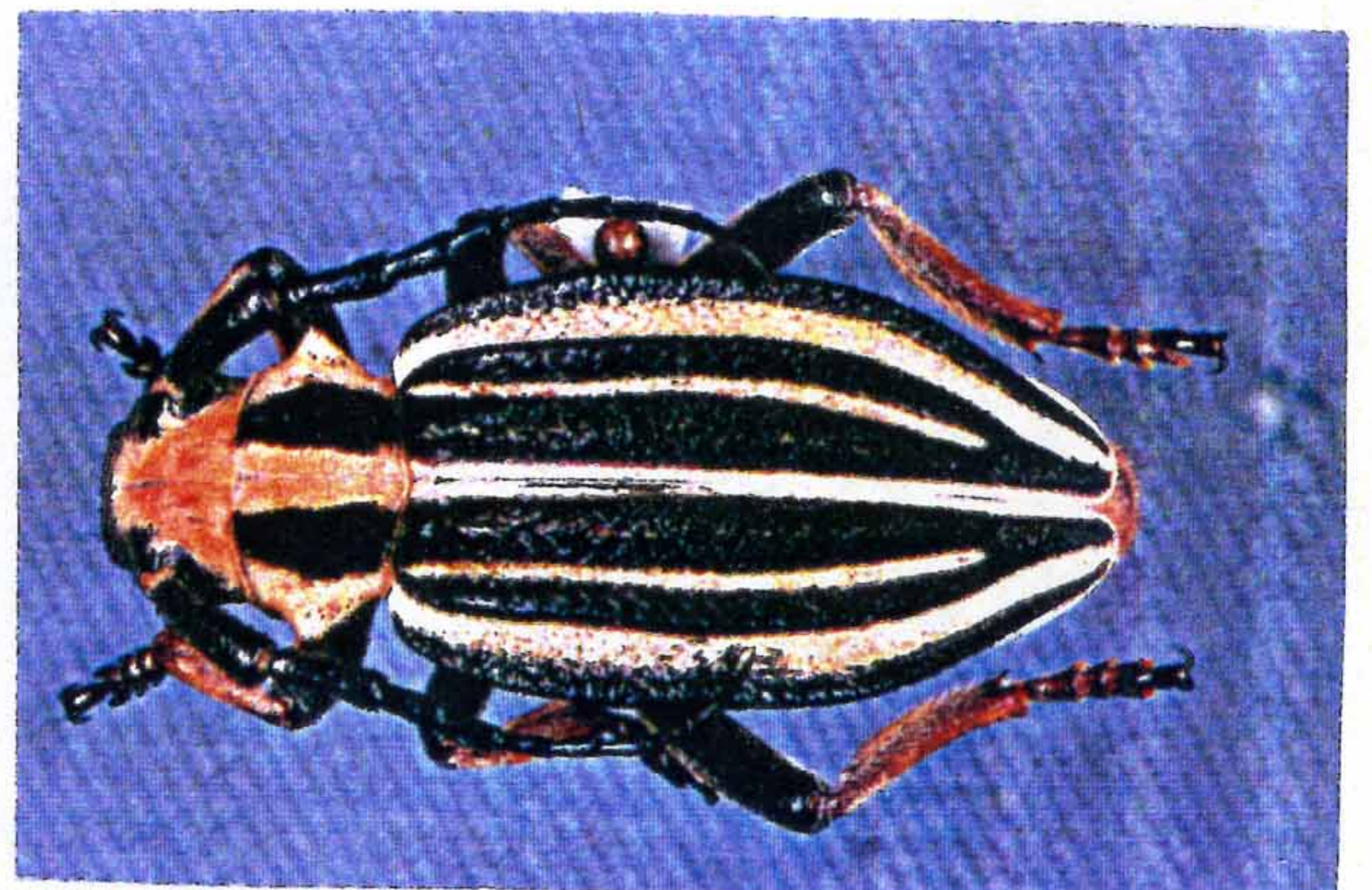
13



14



15



16

Figs 9-16. *Dorcadion archarlense* Danilevsky, 1996 stat.n.: 9-12, males; 13-16, females.  
 Рис. 9-16. *Dorcadion archarlense* Danilevsky, 1996 stat.n.: 9-12, самцы; 13-16, самки.



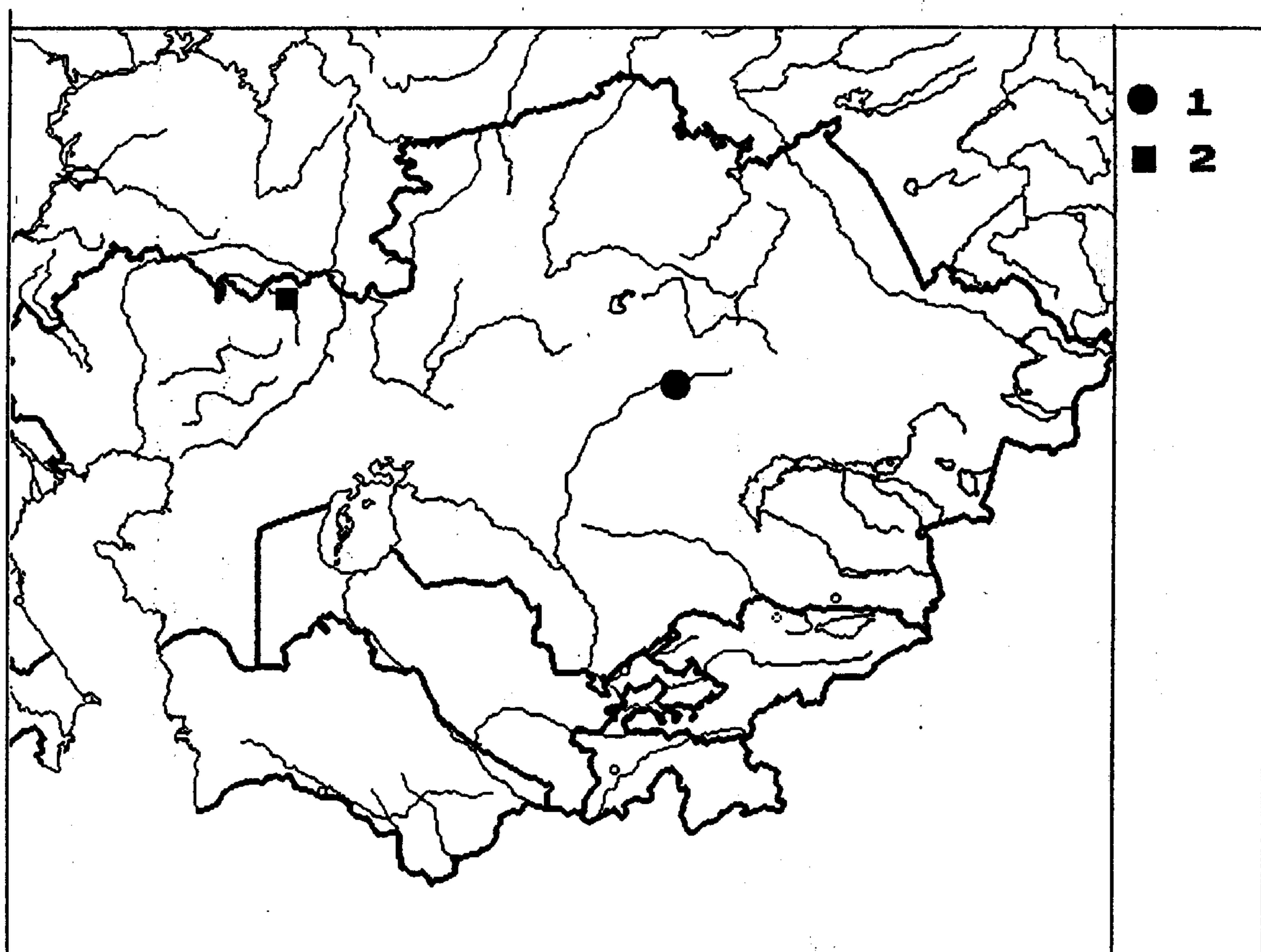


Fig. 17. A map of Kazakhstan localities: 1 — type locality of *Dorcadion irinae* sp.n.; 2 — type locality of *D. dubianskii* Jak.

Рис. 17. Карта местонахождений в Казахстане: 1 — типовое местонахождение *Dorcadion irinae* sp.n.; 2 — типовое местонахождение *D. dubianskii* Jak.

tions in Zhairam and Toguskem share their habitats with *D. irinae*.

*Dorcadion (Politodorcadion) archarlense* Danilevsky, 1996 stat.n.

Figs. 9-16.

The taxon was described as a subspecies of *D. balchashense* Suvorov, 1911 basing on 3 males from Arkharly Mountains (about 80 km to the south from Karazhal in Dzhezkazgan Area of Kazakhstan).

The main distinguishing characters of the taxon were tomented dark areas of prothorax and elytrae, while in *D. b. balchashense* and in *D. b. betpakdalense* such areas are always glabrous and shining. Having only three males I was not sure if this character is constant in the population, but still guessed that females had to be also tomented.

This season we collected many specimens of this form just in the type locality, situated inside the distribution area of *D. b. betpakdalense*. Both males and females were tomented. No forms transitional to *D. b. betpakdalense* were found, and no natural limits were observed in the region. Therefore, I must regard the taxon as a good species, *D. archarlense* stat.n.

Several characters could be added to the description of males of *D. archarlense*.

MALE. Vertex sometimes totally covered with dense white pubescence, without two small black stripes; internal dorsal stripe sometimes long and large, often almost fused with sutural stripe and separated by narrow dark line, sometimes totally absent; external dorsal stripe wide or narrow, but always present. Sometimes white pubescence partly or totally replaced by yellowish or orange.

FEMALE. Only androchromal: body color and pubescence just as in males, but yellowish or orange pubescence present more often; prothorax relatively wider, with longer lateral spines; clytra usually widened near middle; humeral and external dorsal elytral carinae strongly raised.

Body length in males: 16.2-21.2 mm, in females: 20.0-25.5; body width in males: 5.7-7.8 mm, in females: 7.6-10.4 mm.

MATERIAL. 58 ♂♂ and 36 ♀♀, Kazakhstan, planes around Arkharly Mountains, near Shalgiiia in Dzhezkazgan Area, 4-8.5.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg; 3 ♂♂ and 1 ♀, Kazakhstan, Karazhal, 30.4.1996, G. Danilevskaia, M. Danilevsky leg; 3 ♂♂, 40 km N of Shalgiiia, 9.5.1996, M. Danilevsky leg.

DISTRIBUTION. The population of *D. archarlense* occurs in hilly plane between Karazhal and Arkharly Mountains, within an area which is about 100 km long.

REMARK. *D. archarlense* is in nearly the same relation to *D. balchashense* as *D. eurygyne* Suvorov, 1911 (with tomented females) is to *D. politum* Dalman, 1823. The taxonomic status of *D. eurygyne* m. *oblomovi*

Plavilstshikov, 1958 (with both males and females tomentated) described from near Samarka in East Kazakhstan remains uncertain. The described specimens are present neither in Plavilstshikov's collection in Moscow nor in Zoological Museum of St. Petersburg. In the environs of Samarka I could not find the tomentated form, only males with glabrous dark areas on elytra were collected.

*Dorcadion* (s.str.) *dubienskii* Jakovlev, 1906

The species was described basing on one pair (male and female) from Kara-Tugai (to the north from Aktyubinsk). Later on, N.N. Plavilstshikov [1958] supposed a wrong indication of type locality and synonymized *D. dubienskii* with *D. inderiense* Suvorov, 1911, described from the environs of Inder Lake (about 500 km to the south-west from Kara-Tugai).

This spring we collected a lot of males and only two females of *D. dubienskii* in the northern environs of Kara-Tugai (Fig. 17). Besides live specimens, several pairs of female elytra were found.

For several years I could not find any *Dorcadion* in the nearest environs of Inder Lake. However, I collected many specimens of *Dorcadion* in about 100 km to the north-east from Inder, which fitted well with the type specimens of *D. inderiense* (Zoological Museum of the Moscow State University). I also obtained several specimens of *D. inderiense* from different localities situated along the Ural River valley north of Inder Lake. In fact, the difference between *D. dubienskii* and *D. inderiense* is nearly the same as between *D. rufifrons* (Motschulsky, 1860) and *D. glycyrrhizae* (Pallas, 1774): *D. inderiense* looks very much like small *D. glycyrrhizae*, and *D. dubienskii* looks like small *D. rufifrons*.

So now I prefer to regard *D. inderiense* Suvorov, 1911, stat.rest. as a separate species, distributed near Inder Lake and to the north and reaching (or not?) the City of Uralsk.

*D. dubienskii* differs from *D. inderiense* in general by more black color. All white stripes (and specially the pronotal white stripe) of *D. dubienskii* are much narrower. Legs red, head and basal half of antenna often also red.

Females only autochromal, with black pubescence replaced by brown.

Body length in males: 16.0-19.9mm, in females: 15.0-20mm; body width in males: 5.0-7.0mm; in females: 5.5-9.0mm.

MATERIAL. 71 ♂♂ and 2 ♀♀, Kazakhstan, Kara-Tugai, 25-26.5.1996, G. Danilevskaia, I. Danilevskaia, M. Danilevsky leg.

REMARK. The natural bounds between all four species mentioned above are not clear, and new collecting efforts are necessary to determine the exact limits of their distribution areas and the true taxonomic status of each. This year we collected several *Dorcadion* specimens along the Ural River valley east of the City of Uralsk (Yanvar-tsevo, Bykovka River, Rannee), which can not be easily attributed to any of these taxa. To the south of Aktyubinsk, the area of *D. uvarovi* Suvorov, 1911 begins, and some transitional populations may exist there. Maybe in future it will prove preferable to regard all taxa of "*glycyrrhizae*" group as subspecies, including such marginal forms as *D. turgaicum* Suvorov, 1915 and *D. dostojevskii* Semenov, 1899.

ACKNOWLEDGEMENTS. I wish to express my hearty gratitude to my wife Galina Danilevskaia and to my youngest daughter Irina Danilevskaia, whose participation in the expedition provided its success; both of them personally collected a lot of very interesting beetles.

## References

- Danilevsky M.L. 1995. New *Dorcadion* Dalman, 1817 from Kazakhstan (Coleoptera, Cerambycidae) // *Lambillionea*. Annee 95. No.3. P.420-428.
- Danilevsky M.L. 1996. New taxa of the genus *Dorcadion* Dalman from Asia (Coleoptera, Cerambycidae) // *Lambillionea*. Annee 96. No.2. P.405-420.
- Jakovlev V.E. 1906. [New species of *Compsodorcadion* of Russian fauna (Coleoptera, Cerambycidae)] // *Russkoe Entomol. Obozr.* No.3-4. P.274-280 [in Russian].
- Plavilstshikov N.N. 1958. Timber-Beetles. Part 3. Subfamily Laminae, Part 1 // *Fauna SSSR. Coleoptera*. Moscow-Leningrad: AN SSSR Publ. House. T.23. Pt.1. 592 pp. [in Russian]