

Maciej MROCZKOWSKI

Dermestidae (Coleoptera) Kazachskiej SRR

Dermestidae (Coleoptera) Казахской ССР

Dermestidae (Coleoptera) from the Kazakh SSR

[With 18 text-figures and 1 map]

INTRODUCTION

This paper is based for the most part on the material kept at the Leningrad Zoological Institute of the Academy of Sciences of the USSR. As a result of study on that material the paper will constitute, together with the elaborations of the fauna of other parts of Soviet territory, a basis for an intended monograph of the *Dermestidae* fauna of the USSR to be published in the serial "The Fauna of the USSR". Here I wish to express my cordial thanks to Prof. L. V. ARNOLDI for having fully placed at my disposal the *Dermestidae* collection in the Zoological Institute of the Academy of Sciences of the USSR, and for his benevolent attitude with regard to my work. It is with great pleasure, too, that I express my cordial thanks to Prof. M. TER-MINASYAN, O. L. KRZYZHANOVSKI, Candidate of Biological Science, and to all remaining coleopterologists of the said Institute for their plentiful and valuable hints and advice, as well as for their cordial and friendly attitude during my visits to Leningrad in 1957, 1958 and 1959.

With a purpose to present a fuller picture of the *Dermestidae* of the Kazakh SSR fauna, this paper includes also a part of material kept in the Magyar Nemzeti Múzeum Állattára in Budapest. For having placed it at my disposal I thank cordially Dr. Z. KASZAB, the director of the Museum. Apart from this material, the material coming from the territory of the Kazakh SSR kept at the Zoological Institute of the Polish Academy of Sciences in Warsaw has also been included into this paper.

ZOOGEOGRAPHICAL PART

The Kazakh SSR covers a vast and very much variegated territory ranging from 47° to 87° Eastern Longitude and from 40° to 55° Northern Latitude. In view of the vastness of the territory, its configuration and its different climate it is impossible to discuss the fauna of Kazakhstan jointly, since it does not fall into any compact picture. This is obvious and understandable

as the fauna of, for instance, lowlands and marshes in the lower reaches of the Ural River differs from the fauna of the saline deserts, desert-like plateaux or from the mountain fauna. On the other hand, however, distinct influence of zoogeographical elements of the adjoining areas can be seen in many parts of Kazakh SSR. This calls for the zoogeographical analysis of individual parts of the Kazakh SSR to be made, as well as for the dividing of the Republic's territory into zoogeographical regions. Unfortunately due to the still scanty and insufficient material such analysis and division into regions with any degree of exactness is not yet possible. Besides, it should be performed on the basis of different groups of the animal kingdom. Basing only on the material from the *Dermestidae* family included in this paper, it is however possible to delineate tentatively several regions in Kazakhstan which show characteristic differences to one another.

The appended map shows administrative division of the Kazakh SSR into oblasts. This division was a necessity for arranging material in the systematic part. Provisional lines separating the characteristic faunistic regions have also been drawn on the map. Unfortunately, there is a complete lack of any *Dermestidae* material from the two northernmost oblasts, i.e. from the North-Kazakhstan (5) and Pavlodar (8) oblasts. The material from two further oblasts, i.e. from Guriyev (2) and Kustanai (4) oblasts is very scanty. These four oblasts, as not examined faunistically, were not entered into the subsequent table of the occurrence of species in Kazakhstan.

Following is a provisional division of the Kazakh SSR into fauna regions, based exclusively on the material of the *Dermestidae* family:

1. North-Western part of Kazakhstan, more or less down to the line I on the map. The region is characterised by the occurrence of the typically European elements which find here most eastern border in their distribution. In general, they are typically forest species or the species to greater or lesser degree dependent on the presence of forest. Typical examples of such elements from the *Dermestidae* family are *Dermestes atomarius* ER. and *Globicornis corticalis* EICHH. The carrion-feeding *Dermestes atomarius* ER. is a species of compact occurrence in the whole of Europe, on the Caucasus, in Transcaucasia and in North-Western Iran. It probably also occurs in the forest parts of Siberia, which seems to be confirmed by its occurrence in the vicinity of Yakutsk (KUZNECOVA, 1933 : 231), but material is lacking from other Siberian localities. The following localities delineate the eastern range of *Dermestes atomarius* ER.: Kuybyshev, Orenburg and localities in the West-Kazakhstan and Kustanai Oblasts of the Kazakh SSR. The single finding in the Kustanai Oblast would indicate an insular occurrence, while the West-Kazakhstan Oblast is doubtlessly situated within the limits of compact distribution, though in its most eastern part. *Globicornis corticalis* EICHH. is a typically European species, very closely connected with forests and of fairly limited distribution. Larvae of the species feed on dead insects under the bark of the trees. They can also

Table 1

Occurrence of the *Dermestidae* species in individual Oblasts

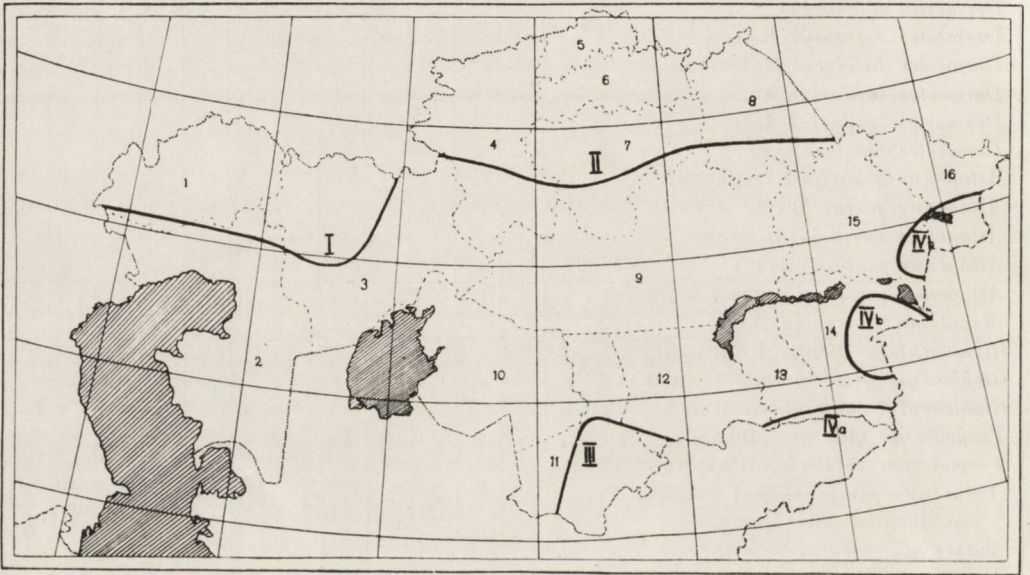
	1	3	6	7	9	10	11	12	13	14	15	16
<i>Dermestes frischi</i> KUG.							×	×				×
<i>Dermestes sibiricus</i> ER.	×						×			×		×
<i>Dermestes dimidiatus</i> STEV.	×	×	×								×	×
<i>Dermestes elegans</i> SOLS.		×				×	×	×	×	×		
<i>Dermestes coronatus</i> STEV.	×								×	×	×	
<i>Dermestes murinus</i> L.			×									
<i>Dermestes undulatus</i> BRAHM	×			×	×	×	×	×				
<i>Dermestes atomarius</i> ER.	×											
<i>Dermestes szekessyi</i> KAL.	×		×	×								
<i>Dermestes fasciventris</i> REITT.	×			×								
<i>Dermestes laniarius</i> ILL.	×		×							×		×
<i>Dermestes lardarius</i> L.					×							
<i>Dermestes bicolor</i> FABR.	×	×				×	×	×	×			
<i>Attagenus schaefferi</i> (HERBST)	×	×										
<i>Attagenus pictus</i> BALL.							×					
<i>Attagenus suspiciosus</i> SOLS.					×	×	×	×	×	×		
<i>Attagenus molitor</i> REITT.		×										
<i>Attagenus duplex</i> (REITT.)							×					
<i>Megatoma conspersa</i> SOLS.							×					
<i>Globicornis corticalis</i> EICHH.	×											
<i>Globicornis quadriguttata</i> (REITT.)				×	×							
<i>Globicornis quadrinaeva</i> REITT.	×					×						
<i>Trogoderma glabrum</i> (HERBST)	×											
<i>Trogoderma versicolor</i> (CREUTZ.)						×						
<i>Anthrenus pimpinellae</i> FABR.	×	×		×	×	×	×	×	×			
ssp. <i>latefasciatus</i> REITT.	×	×				×	×	×	×		×	
<i>Anthrenus picturatus</i> SOLS.					×	×	×		×			
ssp. <i>melanoleucus</i> SOLS.					×							
<i>Anthrenus museorum</i> (L.)				×								
<i>Anthrenus flavidus</i> SOLS.					×		×		×			
<i>Anthrenus dsungaricus</i> sp.n.										×	×	
<i>Anthrenus alatauensis</i> sp.n.								×				

Explanation of arabic figures in Map and Table 1:

- 1 — Western-Kazakhstan Oblast
- 2 — Guriyev Oblast
- 3 — Aktyubinsk Oblast
- 4 — Kustanai Oblast
- 5 — North-Kazakhstan Oblast
- 6 — Kokchetav Oblast
- 7 — Akmolinsk Oblast
- 8 — Pavlodar Oblast

- 9 — Karaganda Oblast
- 10 — Kzyl-Orda Oblast
- 11 — South-Kazakhstan Oblast
- 12 — Dzhambul Oblast
- 13 — Alma Ata Oblast
- 14 — Taldykurgan Oblast
- 15 — Semipalatinsk Oblast
- 16 — East-Kazakhstan Oblast

attack young spiders living there. The species distribution centre falls in Central Europe. In Fennoscandia it was recorded only from the southern part of Sweden and from the South of Finland. In Western Europe — on the Iberian Peninsula and in France — the species is absent. It does not occur either in Southern or in Central Italy. Its occurrence in the European part of the USSR is confirmed by specimens kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad, coming from the vicinities of Kaluga, Vyatka and Urzhum. Localities in the vicinities of Vyatka and Urzhum, as well as a locality near Uralsk in the Kazakh SSR are, out of those known, the most eastern ones and they mark the eastern limit of distribution of *Globicornis corticalis* EICHH.



Map 1. Zoogeographic division of the Kazakh SSR into regions made on the basis of material from the family *Dermestidae*. Explanation of Roman figures is in the text.

Another specific trait of the region under discussion is the distribution of species which, though widely distributed in the Palearctic, do not reach into its warmer southern parts, such as e.g. *Attagenus schaefferi* (HERBST) and *Trogoderma glabrum* (HERBST). *Attagenus schaefferi* (HERBST) is a forest species widely distributed almost all over the Palearctic, but absent in the region's southern parts. *Trogoderma glabrum* (HERBST) in its distribution is similar to the foregoing species. The adults feed on the bleeding sap of the deciduous trees, the larvae were found under the bark, a fact pointing to the species strong ties with woodlands.

The region is also characterised by the absence of the Middle-Asiatic species, which occur in other parts of Kazakhstan such as e.g. *Attagenus suspiciosus* SOLS. and *Anthrenus picturatus* SOLS. Of the two species *Anthrenus picturatus* SOLS. is of widest distribution, occurring in the Caucasus, Transcaucasia, Northern Iran, Turkmenia, Afghanistan, Uzbek, Tadjik, Kirghiz and Kazakh SSR. *Attagenus suspiciosus* SOLS. is known from Northern Iran, Turkmenia, Afghanistan, Uzbek, Tadjik, Kirghiz SSR, Sinkiang (Kuldja) and Kazakh SSR. Both species occur east of the Lake Aral in the Karaganda, Kzyl-Orda, South-Kazakhstan and Alma Ata Oblasts. *Attagenus suspiciosus* SOLS. has also been recorded from the Dzhabul and Taldykurgan Oblasts.

2. Northern part of Kazakhstan situated more less north of the line II on the map. Although a very good naturalistic, and in particular botanical and geological study of this region had been carried out and its results published in a collective work entitled Prirodnoye rayonirovaniye syevyernogo Kazakhstana (Kustanaiskaya, Syevyero-Kazakhstanskaya, Kokchetavskaya, Akmolinskaya i Pavlodarskaya Oblasti), Moscow — Leningrad, 1960, Academy of Sciences of the USSR, 468 pp., 81 fig., 3 maps, this region seems to be the least investigated as far as zoological and faunistic aspects are concerned. *Dermestidae* material from the North-Kazakhstan (5) and Pavlodar (8) oblasts is totally absent and from the Kustanai oblast it is very scanty.

A certain number of European elements also occurs in this region, though no forest ones but those connected with drier and warmer territories, such as e.g. *Dermestes szekessyi* KAL. distributed in Central Europe (Poland, Germany), in Hungary, Yugoslavia and in the Byelorussian and Ukrainian SSR. In Central Europe this species inhabits rather dry and insolated areas: in Poland it was found on sand dunes under the roots of *Artemisia campestris* L. and on insolated, dry south-facing slopes of xerothermic hills in the Nida River valley.

The northern part of Kazakhstan, apart from European elements mentioned above, is also inhabited by certain characteristic species which occur in this region as well as in a small one adjacent to it from the North and West. These species are generally thermophilous and limited to dry sites but they do not reach any farther east or south. Here *Dermestes fasciventris* REITT. can be quoted as an example. It occurs first of all in the Akmolinsk Oblast (7) and was recorded from Uralsk, Krasnoarmeysk, Kuybyshev and Orenburg. All these localities are a fair illustration of distribution of this species.

3. South of Kazakhstan (South-Kazakhstan Oblast), more less south of the line III on the map. The region is a very characteristic one, with large number of strictly middle-Asiatic species that occur first of all in the Uzbek, Tadjik, Turkmen and in the Kazakh SSR. As characteristic examples of these species *Attagenus pictus* BALL., *Attagenus duplex* (REITT.) or *Megatoma conspersa* SOLS. may be quoted. The former is known from the Turkmen, Uzbek and Tadjik

SSR, from Afghanistan and Northern Iran, thus, with its typically Middle-Asiatic distribution its range is fairly vast. The second occurs on a slightly smaller area, being known only from the Turkmen, Uzbek and Tadjik SSR. The latter, i.e. *Megatoma conspersa* SOLS. occurs only in the Uzbek, Tadjik and Kirghiz SSR (of course, exclusive of the localities in the South-Kazakhstan Oblast) without reaching farther west or south, its distribution thus being limited to cover only the mountainous regions of Middle-Asia.

4. South-Eastern part of Kazakhstan within the IVa and IVb lines on the map. It is not a uniform region. Its southern part enclosed by the IVa line shows much stronger influence of the Middle-Asiatic elements, such as *Anthrenus picturatus* SOLS. or *Anthrenus flavidus* SOLS., than the eastern part hemmed in by the IVb lines, which, in its turn, shows stronger influence of Dzungarian and eastern-palaearctic elements. These parts are linked together by the occurrence of certain species distributed fairly widely over the South of the central part of the Palaearctic without penetration farther north, such as *Dermestes coronatus* STEV., which occur from the south-eastern extremity of the European USSR and the Caucasus, through out the whole of Middle Asia, Afghanistan and Sinkiang down to Hopei Province in China. Similar distribution has *Anthrenus flavidus* SOLS. and so far it has been recorded only from the eastern part of the region under discussion. To exemplify the Dzungarian elements, occurring in the eastern part of the region, *Anthrenus dsungaricus* sp. n. may be quoted; illustrative of the eastern palaearctic elements are *Dermestes dimidiatus* STEV. and *Dermestes sibiricus* ER. whose distribution ranges from Volga to Amur and the localities in Kazakhstan where these species have been found mark the southern limit of their range.

5. The central part of Kazakhstan. This region covering a greater part of the Kazakh SSR area cannot, on the basis of the *Dermestidae* material, be further divided, though its southern part (Kzyl-Orda, Dzhabul and Alma Ata oblasts) seems, by the character of the species occurring there, to differ from the remainder of the region. Many of the middle-Asiatic species have their northern limit of distribution in this region; the course taken by this limiting line is, however, different for each species and this makes the drawing of the above-mentioned division lines not possible.

The occurrence of a certain number of elements distributed vastly over the whole Palaearctic is the most characteristic feature of the area mentioned. They are: *Dermestes bicolor* F., *Dermestes laniarius* ILL. and *Anthrenus pimpinellae* F. accompanied by the occurrence of many species which are typical for Middle Asia such as e.g. *Dermestes elegans* SOLS. inhabiting Turkmen, Tadjik, Uzbek and Kirghiz Republics as well as the Altai, *Attagenus suspiciosus* SOLS. distributed from Northern Iran through Turkmen SSR, Tadjik SSR, Uzbek SSR, Kirghiz SSR, Afghanistan down to Sinkiang, and *Anthrenus picturatus* SOLS., whose distribution is similar to the foregoing species with an additional extension to the west including the Caucasus.

SYSTEMATIC PART

Dermestes frischi KUGELANN, 1792

Material:

South-Kazakhstan Oblast:

The Bet Pak Dala Steppe — 1 specimen.

Dzhambul Oblast:

Near Chu, 24 May, 1957, leg. GURYEVA — 1 specimen.

East-Kazakhstan Oblast:

Lake Zaysan — 1 specimen.

Recorded also from the Karaganda Oblast (ŽANTIEV, 1960 : 1629).

The species is very widely distributed; it occurs in the whole of Holarctic, Ethiopian and Neotropical Regions.

Dermestes sibiricus ERICHSON, 1846 : 427

Material:

West-Kazakhstan Oblast:

Uralsk — 1 specimen.

Taldykurgan Oblast:

Topolevka Village in the Dzungarian Alatau Mountains, 1 May, 1957, leg. KERZHNER — 1 specimen.

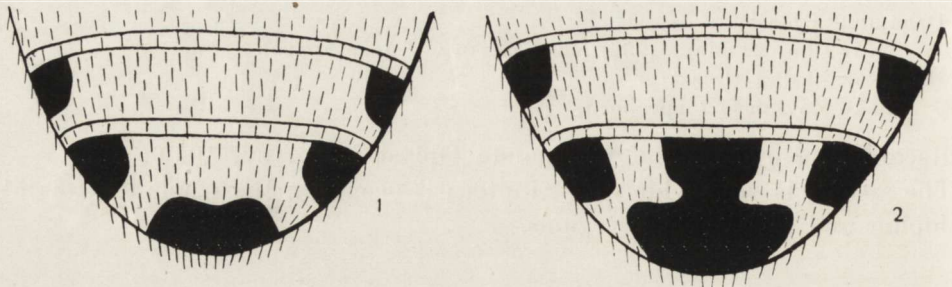
East-Kazakhstan Oblast:

Lake Zaysan — 1 specimen.

Recorded also from Chikment in the South-Kazakhstan Oblast (HEYDEN, 1890 : 355) and from Karaganda Oblast (ŽANTIEV, 1960 : 1629).

The west Siberian species has not been exactly described. More exact description of the species were given i. e. in the works: SOLSKIJ, 1876 : 268; REITTER, 1881b : 72; REITTER, 1887 : 41. The larva of the species has been described in the work: ROSENHAUER, 1882 : 10. Later, however, the species was held to be a variety of *Dermestes frischi* KUG. (REITTER, 1906 : 377; DALLA TORRE, 1911 : 44; REITTER, 1911 : 149; PLAVILŠČIKOV, 1925 : 161; WINKLER, 1926 : 675 and also HINTON, 1945 : 271). KUZNECOVA, 1933 : 237 and GUSSAKOVSKIJ, 1949 : 333 consider it to be a subspecies of *Dermestes frischi* KUG. But according to the author of this paper, LEPESME, 1950 : 49 is right in treating it as a separate species though closely related to *Dermestes frischi* KUG. Such view is supported by the differences in the character of the pillary cover of the posterior abdominal sternites (cf. Fig. 1 and 2), this character being in the genus *Dermestes* L. the most reliable specific difference and showing only slight variability. General distribution of *Dermestes sibiricus* ER. is as follows: South-Eastern extremity of the European part of the USSR (lower reaches of the Volga), central and southern part of Siberia, Primorye Territory. Localities in the southern extremity of the distribution range: Uzbek SSR: Tashkent and Tskhinias (HAUSER, 1894 : 24), Turkmen SSR (PLAVILŠČIKOV, 1925 : 161).

Outside of the territory of the USSR it also occurs in Asia Minor: Sapantsa, leg. BODEMEYER (1 specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw) and in China: Peking (material kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad).



Figs. 1 — 2. Posterior abdominal sternites. 1 — *Dermestes frischi* KUG., 2 — *D. sibiricus* ER.

***Dermestes dimidiatus* STEVEN, 1808 : 89**

Synonyms: *Dermestes orientalis* KUZNECOVA, 1928 : 20, syn. nov.

Dermestes dimidiatus orientalis LEPESME, 1950 : 50, syn. nov.

Material:

Aktyubinsk Oblast:

Temir, 26 April, 1908, leg. D. BORODIN and D. UVAROV — 1 specimen.

Kokchetav Oblast:

Kokchetav, 19 May, leg. KARAVAYEV — 6 specimens.

Recorded also from Karaganda Oblast (ŽANTIEV, 1960 : 1629).

One specimen from Uralsk (West-Kazakhstan Oblast) was found in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

***Dermestes dimidiatus* ab. *rosea* KUZNECOVA, 1928 : 22**

Material:

Semipalatinsk Oblast:

Semipalatinsk, July 1911, BATH — 1 specimen.

East-Kazakhstan Oblast:

Lake Zaysan, 18 July, 1910, leg. JAKOBSON — 7 specimens.

The species described from the Caucasus. Up to 1928 it was not known that numerous authors described and quoted two different species using one name of *Dermestes dimidiatus* STEV. True, in 1855 MULSANT and GODART described one species from the Crimea under the name of *Dermestes leopardinus*, and in their description listed the differences between this species and *Dermestes dimidiatus* STEV. This last name was very quickly synonymised with *Dermestes dimidiatus* STEV. (GEMMINGER et HAROLD, 1868 : 913) and was subsequently

forgotten. It was only KUZNECOVA (1928 : 17 — 24) who showed that this single name is used to cover two species differing not only in morphology but also in distribution. One of them, for which KUZNECOVA adopted the previous name *Dermestes dimidiatus* (together with a synonym — *Dermestes leopardinus* MULS. et GOD.) is distributed, according to the material at the disposal of KUZNECOVA, in the southern part of European part of the USSR (reaching west as far as the Volga) and in the Caucasus. The other, described by KUZNECOVA as a new one under a name *Dermestes orientalis*, has a wide distribution, extending from the Volga in the west part of its areal as far east as the Amur and outside of the USSR to be found in Mongolia and Manchuria. KUZNECOVA had no specimens of the new species from the Caucasus in her disposal. The preserving of the name *Dermestes dimidiatus* for the western species was probably based on the KUZNECOVA assumption that *Dermestes dimidiatus* STEV. had been described from the Caucasus, i.e. from the region where, according to her, the eastern species (which she had described as a new one), does not occur. Unfortunately, she failed to investigate the *Dermestes dimidiatus* STEV. descriptive type, writing at the same time, "STEVEN'S Sammlung befindet sich jetzt, zufolge Literaturangaben, im Museum der Moskauer Universität, doch ist es mir nicht gelungen, den Typus zu erhalten. Wir haben leider Triftige Gründe für die Annahme, dass das Typische Exemplar verloren gegangen ist."

During my 1957 visit in Moscow I had the opportunity to acquaint myself with the STEVEN collection kept in the Zoological Museum of the Lomonosov University and I ascertained that the collection contained one female specimen of *Dermestes dimidiatus* STEV. labelled "*Dermestes dimidiatus* m.", "Cauc.". That specimen was undoubtedly a type of *Dermestes dimidiatus* STEV. and belongs to the eastern species described by KUZNECOVA in 1928 under the name *Dermestes orientalis* KUZN. That specimen does not show any difference as compared to the typical material of *Dermestes orientalis* KUZN., which is kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad, and I was given the opportunity to investigate it in 1957. The collection of the aforementioned Institute holds a good number of specimens of this species that have not been taken into account in KUZNECOVA's work. Among them there is one labelled "Yekatierinodar-Voronyezhskaya, Kavkaz, 22 May, 1903, FILIPCHENKO", which confirms the correctness of the "Cauc." label on the typical specimen and proves that there are two species to be found in the Caucasus.

It follows from the above that the name *Dermestes orientalis* KUZN. is a synonym of the earlier name *Dermestes dimidiatus* STEV. and that both names refer to the eastern species, while the western one was first described by MULSANT and GODART in 1855 under the name *Dermestes leopardinus*, and it is this name that should be used for the species, the synonym for the species being as follows:

Dermestes leopardinus MULSANT et GODART, 1855 : 273

Synonyms: *Dermestes dimidiatus* KUZNECOVA, 1928 : 17, HINTON, 1945 : 274, MROCZKOWSKI, 1954a : 14, nec STEVEN, 1808.

Dermestes dimidiatus dimidiatus LEPESME, 1950 : 50, nec STEVEN, 1808.

Dermestes elegans SOLSKIJ, 1876 : 269

Material:

Aktyubinsk Oblast:

Temir, Ak-Buta Mountains, 31 May, 1908, leg. D. BORODIN and B. UVAROV — 1 specimen.

Kzyl-Orda Oblast:

Baigakum near Dzhulek, 17 June, 1907, leg. D. GLAZUNOV — 8 specimens.

Dzhambul Oblast:

Muyunkum, March, 1901, leg. E. FISCHER — 1 specimen; Chu-Ak-Kultuk, March 1901, leg. E. FISCHER — 1 specimen; Anrakhai Mountains, 10 — 14 May, 1909, leg. NIEDZWIECKI — 2 specimens.

Alma Ata Oblast:

The Ili River Valley, May-June, 1878, leg. REGEL — 6 specimens.

Taldy-Kurgan Oblast:

The Kopala River Gorge, 19 May, 1909, leg. NIEDZWIECKI — 10 specimens.

Recorded also from the Karaganda Oblast (ŽANTIEV, 1960 : 1630).

The species was described on the basis of one specimen from the Zeravshan Valley (Tadjik SSR). It was subsequently recorded from four localities in the Turkmen SSR (MROCZKOWSKI, 1960b : 210). Apart from the aforesaid, some others specimens were found in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad: Tadjik SSR: Kondara, altitude 1100 metres, the Varzob River valley, 27 June, 1937 and 23 July, 1939, leg. GUSSAKOVSKIJ — one specimen each time; Budali, Faizabad Region, 10 July, 1938, on the turtle carrion, leg. LUPPOVA — 1 specimen; upper reaches of the Tupalanga River, Hissar, 1898, leg. WILBERG — 2 specimens; Iskander Kul, Mura Pass., 1892, leg. GLASUNOV — 1 specimen; the Uzbek SSR: Zeravshan, 1892, leg. GLASUNOV — 5 specimens; the Kirghiz SSR: The Aksai Valley, 18 July, 1930, leg. V. KIZYERITSKIJ — 1 specimen; Arslanbob, Bazarkurgan, June 1936, leg. Kirghiz. Eksp. L. G. U. — 1 specimen and one specimen from the Altai without closer data. As its distribution shows *Dermestes elegans* SOLS. is a typical representative of the middle-Asiatic species.

Dermestes coronatus STEVEN, 1808

Material:

West-Kazakhstan Oblast:

The Ural River at Kharkin, 4 June 1951, leg. ROMADINA — 14 specimens; Kharkin, 19 May, 1951, leg. GURYEVA — 6 specimens; Kharkin, 2 June, 1951, leg. ROMADINA — 1 specimen; Yanvartsevo, The Ural's right bank, 3 July, 1950,

leg. ROMADINA — 1 specimen; Chapayevo-Kharkin, 25 — 26 April, 1951, leg. L. ARNOLDI — 1 specimen; Uralsk — 1 specimen in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Alma Ata Oblast:

Alma-Ata — 1 specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Taldy-Kurgan Oblast:

Ush-Tobe, Turksib, 9 June, 1930, leg. V. KIZYERITSKIY — 1 specimen.

Semipalatinsk Oblast:

Sargyopol (Ayaguz) — 1 specimen.

The species was recorded from the south-eastern extremity of the European part of the USSR, from the Caucasus and from the whole of Middle Asia, Afghanistan and Sinkiang. One specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw was found to be from Kalgan (Changchiakou) in Hopei Province, China.

***Dermestes murinus* LINNAEUS, 1758**

Material:

Kokchetav Oblast:

Koturkul, 18 km South-East of Borovoye, 26 July, 1937, leg. L. ZIMIN — 1 specimen.

Widespread species distributed all over the Palearctic Region.

***Dermestes undulatus* BRAHM, 1790.**

Material:

West-Kazakhstan Oblast:

Kharkin, The Ural River's left bank, 2 May, 1951, leg. L. ARNOLDI — 1 specimen.

Akmolinsk Oblast:

Kokshetau Mountains, 28 May, 1957, leg. L. ARNOLDI — 2 specimens; Kokshetau Mountains, 13 June, 1958, leg. FALKOWICH — 1 specimen; Kokshetau Mountains, near Terisakkan River, 17 May, 1957, leg. L. ARNOLDI — 1 specimen; 10 km north of Lake North Zharkol, 2 June, 1957, leg. L. ARNOLDI — 1 specimen.

Karaganda Oblast:

Bassaga, 28 May, 1957, leg. GRUNIN — 2 specimens; Bassaga, Karashoky, 24 May, 1957, leg. GRUNIN — 1 specimen.

South-Kazakhstan Oblast:

Turkestan Mountains, 20 May, 1910, leg. MINKWITS and KNORRING — 1 specimen.

Kzyl-Orda Oblast:

Baigakum, 18 June, 1907, leg. ANTONOV — 1 specimen.

Dzhambul Oblast:

Anrakhaiskiya Mountains, 10 — 14 May, 1909, leg. NIEDZWIECKI — 6 specimens.

The species is very widely distributed, probably occurring throughout Holarctic.

Dermestes atomarius ERICHSON, 1846

Material:

West-Kazakhstan Oblast:

Yanvartsevo, right bank of the Ural River, 22 May, 1949, leg. L. ARNOLDI — 4 specimens; Bank of the Ural River, south of Yanvartsevo, 24 May, 1949, leg. L. ARNOLDI — 1 specimen; vicinity of Uralsk, 18 April, 1906, leg. B. UVAROV — 1 specimen; Kruglyi, north of Kalmykovo, 24 May, 1951, leg. L. ARNOLDI and 6 July, 1951, leg. ROMADINA — 1 specimen each; Kharkin, 23 May, 1951, leg. GURYEVA — 1 specimen.

Kustanai Oblast:

Lake Sary-kopa, 1 and 4 May, 1898, leg. SUSHKIN — 1 specimen each time.

The species occurs in compact distribution throughout Europe, in the Caucasus, Transcaucasia and in North-Western Iran (Kara-su River valley). Recorded from the environs of Yakutsk on the basis of 1 specimen (KUZNECOVA, 1933 : 231). Two more specimens from the environs of Yakutsk were found in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad. The following specimens kept in the mentioned Institute come from the localities situated in the south-eastern extremity of the species' range: Samara (Kuybyshev) — 2 specimens, Orenburg — 2 specimens. These two localities, and localities in the Kazakh SSR as well, mark the south-eastern border of distribution of this species.

Dermestes szekessyi KALIK, 1950 : 61

Material:

West-Kazakhstan Oblast:

Yanvartsevo, right bank of the Ural River, 22 May, 1949, leg. L. ARNOLDI — 1 specimen.

Kokchetav Oblast:

Zeredinskoye Lake, 20 May — 10 July 1902, leg. RUBIO — 1 specimen.

Akmolinsk Oblast:

Lake Southern Zharkol, 24 May, 1958, leg. L. ARNOLDI — 12 specimens.

The species was described from three localities in Hungary, later recorded (MROCKOWSKI, 1952 : 26; 1954b : 189) from Poland and from the Byelorussian SSR, and subsequently (MROCKOWSKI, 1960a : 249) from Germany, Yugoslavia, the Ukrainian SSR, and from a number of further localities in Hungary. This species is undoubtedly very widely distributed, but to know exactly what its distribution is, field research is still required. Apart from the enumerated specimens from the Kazakh SSR in the collection of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad, there is one more specimen coming from the Novosybirsk Oblast of the Russian FSSR, labelled: Yarkul, SW of Lake Chany, Baraba, 25 June, 1931, leg. FORMOZOV.

Dermestes fasciventris REITTER, 1881a : 28

Synonym: *Dermestes fasciiventris* REITTER, 1891 et auctorum.

Material:

West-Kazakhstan Oblast:

Uralsk — 5 specimens in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Akmolinsk Oblast:

Akmolinsk, leg. V. POPOV, 15 June, 1932, — 5 specimens, and 20 June, 1932 — 2 specimens; slopes of Kokshetau, at the 355 m. mark, 17 June, 1958, leg. L. ARNOLDI — 1 specimen; Steppe near the Southern Zharkol Lake, 26 May, 1958, leg. L. ARNOLDI — 1 specimen.

Recorded also from the Karaganda Oblast (ŽANTIEV, 1960 : 1629).

Species described on the basis of one female specimen from "Ostsibirien", but REITTER (1891 : 167) subsequently gives distribution as "Rossia meridionalis", and JAKOBSON, 1913 : 82, mentions "Amur". These data were subsequently repeated in later catalogues and elaborations (REITTER, 1906 : 377; DALLA TORRE, 1911 : 43; WINKLER, 1926 : 675; LEPESME, 1950 : 51), but no exact data on the distribution of this species were available till this day. Apart from the enumerated material from the Kazakh SSR, the collection of the Zoological Institute of the Academy of Sciences of the USSR in Lenin-

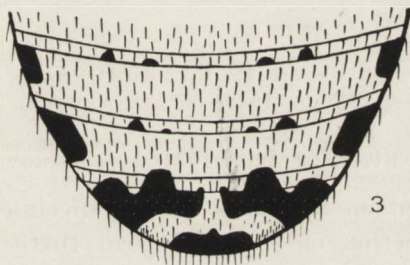


Fig. 3. *Dermestes fasciventris* REITT. — Posterior abdominal sternites.

grad contain other specimens from the following localities: Sarepta (Krasnoarmyensk) — 3 specimens; Samara (Kuybyshev) — 1 specimen; Orenburg — 2 specimens. Besides, there is one specimen labelled „Gusevka, 13 May, 1896” in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

LEPESME (1950 : 51) gave more exact and completed description as well as a good drawing of the adult form of the species. The pattern of black spots on the posterior abdominal sternites is shown on Fig. 3.

Dermestes laniarius ILLIGER, 1802

Material:

West-Kazakhstan Oblast:

Kharkin, 28 April, 1951, leg. GURYEVA — 1 specimen, 22 June, 1951, leg. ROMADINA — 1 specimen; Yanvartsevo, right bank of the Ural River, 23 May, 1950,

leg. ROMADINA — 1 specimen; Sandy steppe north of Yanvartsevo, 21 August, 1949, leg. L. ARNOLDI — 1 specimen; Flood area of the Ural River, 28 August, 1949, leg. L. ARNOLDI — 1 specimen; Aksuat, left bank of the Ural River, 26 July, 1949, leg. L. ARNOLDI — 1 specimen; Pogodayev, 60 km NW of Uralsk, 12 June, 1951, leg. L. ARNOLDI — 1 specimen; Uralsk — 1 specimen in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Kokchetav Oblast:

Kokchetav, 11 — 26 May, leg. KARAVAYEV — 12 specimens; Eastern part of the Kokchetav district, 1907, leg. BURYGIN — 2 specimens; Zyeryedinskoye Lake, 20 May — 10 July, 1902, leg. RUBIO — 2 specimens.

Taldy-Kurgan Oblast:

6 km W of Topolevka, Dzungarian Alatau, 4 May, 1957, under *Thymus* sp., leg. KERZHNER — 1 specimen.

East-Kazakhstan Oblast:

Environs of the Zaysan Lake, the Dzhemeni River, 8 June, 1910, leg. JAKOBSON — 1 specimen; Between Kendyrlík and Little Kapchagay, 31 May, 1903 — 1 specimen.

Also recorded from the Karaganda oblast (ŽANTIEV, 1960 : 1630).
Species of common distribution throughout Palearctic.

Dermestes lanarius ab. *subfulvicollis* KALIK, 1951 : 155

Material:

West-Kazakhstan Oblast:

Kharkin, 6 June, 1931, leg. RUDOLF — 1 specimen; Yanvartsevo, right bank of the Ural River, 21 May, 1949, leg. ROMADINA — 1 specimen; Petrov at the Embulatovka River, 3 June, 1949, leg. L. ARNOLDI — 1 specimen.

Guryev Oblast:

Delta of the Ural River, 29 July, 1934, leg. PETROV — 1 specimen.

The variety described on the basis of two specimens labelled "Ural" and "Sarepta". In the collection of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad, apart from the above enumerated specimens from the Kazakh SSR, also the following ones were found: Krim (The Crimea), Kertch, 9 April, 1906 — 1 specimen; Orenburg — 3 specimens; Sarepta (Krasnoarmyeisk) — 1 specimen. Another specimen labelled "Frankreich" is kept in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw. It is possible that this variety occurs only in the southern parts of the species' range.

Dermestes lardarius LINNAEUS, 1758

Material:

Karaganda Oblast:

Bassaga, 28 May, 1957, leg. GRUNIN — 3 specimens.

Cosmopolitan species, extremely common, widely known pest of stored products.

Dermestes bicolor FABRICIUS, 1781

Material:

West-Kazakhstan Oblast:

Environs of Uralsk, leg. B. UVAROV, May, 1902 — 1 specimen; 28 April, 1906 — 1 specimen; 9 May, 1906 — 1 specimen; 25 May, 1907 — 5 specimens; Uralsk — 1 specimen in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Aktyubinsk Oblast:

Koilibai, north of Malye Barsuki, 1 June, 1931, leg. LUPPOVA — 1 specimen.

Kzyl-Orda Oblast:

Kazalinsk, 21 May, 1874, leg. DORANDT — 1 specimen.

South-Kazakhstan Oblast:

Bet Pak Dala Steppe, 20, 21 and 31 May, 1903, leg. G. JAKOBSON — 1 specimen each time.

Dzhambul Oblast:

Aulie-Ata (Dzhambul) — 1 specimen in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Alma Ata Oblast:

Viernyenski Uyezd, Karaturuk Gorge, 10 July, 1907, leg. NIEDZWIECKI — 1 specimen.

Also recorded from the Karaganda Oblast (ŽANTIEV, 1960 : 1631).

Species widely distributed almost in the whole of Palearctic.

Attagenus schaefferi (HERBST, 1792)

Material:

West-Kazakhstan Oblast:

Environs of Uralsk, 21 May, 1906, leg. B. UVAROV — 2 specimens; 26 May, 1907, leg. B. UVAROV — 1 specimen; 17 June, 1903, leg. D. BORODIN — 1 specimen; Uralsk — 1 specimen in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest; Yanvartsevo, in house, 9 June, 1949, leg. YARMOLA — 1 specimen; Petrov, at the Embulatovka River, 3 June, 1949, leg. L. ARNOLDI — 1 specimen.

Aktyubinsk Oblast:

Kara-Chokat, Malye Barsuki, 20 June, 1930, leg. BIANKI — 1 specimen.

Widely distributed species, occurring almost in the whole of Holarctic.

Attagenus pictus BALLION, 1871

Material:

South-Kazakhstan Oblast:

Lake Tus-Kane, 1892, leg. GLASUNOV — 3 specimens.

Middle-Asiatic species so far known from the Turkmenian SSR, Uzbek SSR, Tadjik SSR (GUSSAKOVSKIJ, 1949 : 334), from Afghanistan (HEYDEN, 1894 : 82; MROCZKOWSKI, 1960c : 52) and from Northern Iran: Shahrud (ZAJCEV, 1919 : 167). From the Kazakh SSR it has not been recorded yet.

Attagenus suspiciosus SOLSKIJ, 1876

Material:

Karaganda Oblast:

Bassaga, 3 June, 1957, on a yellow umbelliferous plant, leg. GRUNIN — 3 specimens; Bassaga, Karaszoky, 20 May, 1957, leg. GRUNIN — 1 specimen; Koksenghir, 40 km south of Zhana-Arka, 5 June, 1958, leg. L. ARNOLDI — 1 specimen; Koksenghir, south of Zhana-Arka, 14 June, 1958, leg. TOBIAS — 2 specimens; Akmau Mountains, 80 km south of Zhana-Arka, 8 June, 1958, leg. TOBIAS — 2 specimens; Flood area of the Taldy-Manak River, 17 June, 1958, leg. LOGINOVA — 1 specimen.

Kzyl-Orda Oblast:

Steppes on the Syr-Daria, April 1909, leg. E. FISCHER — 3 specimens.

South-Kazakhstan Oblast:

Kyzyl-Kum — 1 specimen; Balamurun, Karatau, leg. V. KOSHANCHIKOFF — 1 specimen.

Dzhambul Oblast:

Aulie-Ata (Dzhambul) — 3 specimens in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Alma Ata Oblast:

Koskuduk, 25 April, 1957, leg. GRUNIN — 1 specimen.

Taldy-Kurgan Oblast:

The Ili River, Dzharkyentskiy Uyezd, 1906, leg. RÜCKBEIL — 1 specimen.

The Middle-Asiatic species described on the basis of specimens from the Uzbek SSR ("v okryestnostyakh Samarkanda; bliz Tashkenta" = environs of Samarkand; near Tashkent), from the Tadjik SSR ("bliz Ura-Tyube" = near Ura-Tyube), and from the Kazakh SSR ("v Kizyl-kumakh" = in Kizyl-kums). In the Tadjik SSR also recorded from Stalinabad by GUSSAKOVSKIJ (1949 : 335). Also recorded from the Turkmenian SSR (MROCKOWSKI, 1960b : 212) and from Afghanistan (MROCKOWSKI, 1959 : 100).

One specimen from Northern Iran (Shahrund) is kept in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw. Three specimens from the Kirghiz SSR (Taras Kapka, 23 April, 1906, leg. E. FISCHER), one specimen from Sinkiang (Kuldja, Tallik, 12 — 13 May, 1879, leg. E. REGEL) and numerous specimens from the Tadjik SSR and Uzbek SSR are in the possession of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad. The localities mentioned delineate the distribution area of the species.

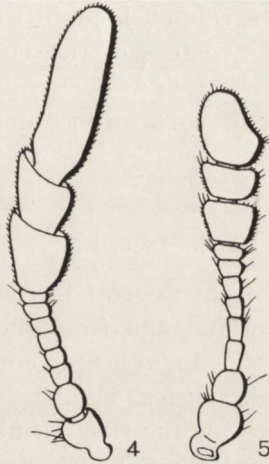
Attagenus molitor REITTER, 1889 : 557

Material:

Aktjubinsk Oblast:

Kara-Chokat, Malye Barsuki, 22 June, 1930, leg. BIANKI — 8 specimens; Koilibai Sands, north of Malye Barsuki, leg. E. LUPPOWA, 15 July, 1930 — 1 specimen; 30 May 1931 — 1 specimen; 2 June, 1931 — 1 specimen, 10 June, 1931 — 1 specimen; 15 June, 1931 — 5 specimens; 29 June, 1931 — 4 specimens.

Species described from Central Mongolia and nothing more was known about its distribution. The aforesaid specimens coming from the Kazakh SSR were compared to 8 syntypes of this species kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad. To complete the description drawings of the antennae of male (Fig. 4) and of female (Fig. 5) of the species are presented.



Figs. 4 — 5. *Attagenus molitor* REITT. — Antennae. $\times 80$. 4 — male, 5 — female.

Attagenus duplex (REITTER, 1890 : 359)

Material:

South-Kazakhstan Oblast:

Balamurun, Karatau, leg. KOSHANCHIKOFF — 2 specimens.

The species described from Dzhizak in the Uzbek SSR and later recorded from the Turkmen SSR (MROCKOWSKI 1960b : 211). Four specimens from Tadjik SSR (Tugalan, the Vakhsh River Valley, 26 June, 1936, leg. V. GUSSAKOVSKIJ) were found in the collection of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad.

Megatoma conspersa SOLSKIJ, 1876

Synonym: *Approgramme maculosa* REITTER, 1887.

Material:

South-Kazakhstan Oblast:

Bet Pak Dala Steppe, 2 April, 1903, leg. N. IVANOV — 1 specimen; 9 April, 1903, leg. G. JAKOBSON — 1 specimen; 3 May, 1903, leg. G. JAKOBSON — 1 specimen.

Recorded also from Karaganda Oblast (ŽANTIEV, 1960 : 1635).

This species so far was known from the Uzbek SSR and Tadjik SSR. It was also quoted from the Caucasus: Borshom (REITTER, 1890b : 15) and this

information was subsequently repeated many times (REITTER, 1891:169; REITTER, 1906:379; DALLA TORRE, 1911:61; JAKOBSON, 1913:830; ZAJCEV, 1919:170; WINKLER, 1926:678), but most probably it had originated from a mistake* and should not be taken into consideration until it is really corroborated with relevant specimens.

The species also occurs in the Kirghiz SSR: Baktyenski Region, October, 1951, leg. V. YALTSEVA — 1 specimen kept in the collection of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad.

Globicornis corticalis EICHHOFF, 1863

Material:

West-Kazakhstan Oblast:

Environs of Uralsk, 27 March, 1906, leg. B. UVAROV — 1 specimen.

The species known so far from Central Europe, south of Northern Europe and from North Italy, Switzerland and from the Balkan Peninsula (Yugoslavia, Greece). Its discovery in the Kazakh SSR considerably enriched our knowledge of the distribution of this species. The Uralsk locality is the most eastern finding of the species and confirms the strong links existing between the West-Kazakhstan and the European fauna. In the Zoological Institute of the Academy of Sciences of the USSR in Leningrad one shall find the following specimens from the European part of the USSR: environs of Kaluga, 5 April, 1913, leg. CHERNYSHEV — 1 specimen; Berditsyno, Yaroslavl Uyezd, 15 May, 1897, 30 April, 1898, 11 May, 1898 — 1 specimen each time; environs of Vyatka, summer 1903, leg. I. M. MAKAROV — 1 specimen; Urzhum, leg. L. KRÓLIKOWSKI, 12 — 15 May, 1902 — 1 specimen; 11 July, 1902 — 2 specimens; 1 — 4 May, 1905 — 2 specimens; 20 — 24 April, 1906 — 1 specimen; 25 — 30 April, 1906 — 1 specimen; 10 — 29 May, 1907 — 5 specimens.

Globicornis quadriguttata (REITTER, 1878)

Material:

Akmolinsk Oblast:

Kokshetau Mountains, near the Terisakhan River, 26 May, 1957, on a rocky massif, under *Artemisia frigida* leg. L. ARNOLDI — 1 specimen.

Karaganda Oblast:

Koksenghir, south of Zhana-Arka, leg. LOGINOVA, 9 May, 1958 — 2 specimens; 2 June, 1958 — 1 specimen; 6 June, 1958, on *Artemisia sublessingiana* — 1 specimen; 12 June, 1958 — 2 specimens; 15 June, 1958 — 5 specimens; Flood area of the Taldy-Manaka River, 12 June, 1958, leg. LOGINOVA — 2 specimens.

The species distributed from the Caucasus through Transcaucasia, Asia Minor, Turkmen SSR, Afghanistan, reaching as far as the Uzbek SSR and the

* The mistake was already pointed out by ZAJCEV (1919:171).

Tadjik SSR. Detailed discussion concerning the synonymy of this species can be found in the paper: MROCKOWSKI, 1960b : 212. The localities in the Kazakh SSR mark the northern limit of the species distribution area.

Globicornis quadrinaeva REITTER, 1908 : 213

Synonym: *Globicornis quadrinaeva* DALLA TORRE, 1911 : 64.

Material:

West-Kazakhstan Oblast:

The Ural River at Kharkin, 16 May, 1951, leg. ROMADINA — 1 specimen.

Kzyl-Orda Oblast:

Pyerovsk, 26 May, 1905, leg. SUMAKOV — 1 specimen.

The species described on the basis of the specimens from Uralsk. So far known only from the Kazakh SSR.

Trogoderma glabrum (HERBST, 1783)

Material:

West-Kazakhstan Oblast:

Environs of Yanvartsevo, the Ural River flood area, 26 June, 1949, leg. YARMOLA — 1 specimen; Left bank of the Solyanka River, Ural's tributary, 3 — 5 July, 1949, leg. L. ARNOLDI — 1 specimen; Uralsk — 1 specimen kept in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest.

Species of wide distribution throughout Palearctic, without, however, extending into its southern parts.

Trogoderma versicolor (CREUTZER, 1799)

Material:

Kzyl-Orda Oblast:

Environs of Pyerovsk, 9 June, 1925 — 1 specimen.

Also recorded from the Dzhambul Oblast (BERESNEVA, 1960 : 107).

Extremely wide distribution, nearly cosmopolitan species.

Anthrenus pimpinellae FABRICIUS, 1775

Material:

West-Kazakhstan Oblast:

Environs of Uralsk, 19 April, 1903, leg. B. UVAROV — 1 specimen; 19 April, 1903, leg. A. BORODIN — 1 specimen; 30 May, 1906, leg. A. BORODIN — 1 specimen; 11 May, 1907, leg. A. BORODIN — 1 specimen; Myerghyenyevski, 30 May, 1907, leg. B. UVAROV — 1 specimen; Kharkin, 16, 17, 19 May and 2 June, 1951, leg. ROMADINA — 1 specimen each time; 25 April, 1951, leg. GURYEVA — 2 specimens; 30 April, 1951, leg. GURYEVA — 21 specimens; The Ural River at Kharkin, 12 May, 1951, leg. L. ARNOLDI — 8 specimens; 16 May, 1951, leg. ROMA-

DINA — 2 specimens; 17 May, 1951, leg. ROMADINA — 1 specimen; Environs of Kharkin, 29 April, 1951, leg. GURYEVA — 1 specimen; Yanvartsevo, right bank of the Ural River, 21 May, 1949, leg. L. ARNOLDI — 1 specimen; 22 May, 1950, leg. RUDOLF — 1 specimen; 3 June, 1950, leg. ROMADINA — 1 specimen; Yanvartsevo, Stari Forpost (Ancient Outpost), 22 May, 1950, leg. ROMADINA — 2 specimens; 6 June, 1950, leg. ROMADINA — 1 specimen; Embulatovka River near Yanvartsevo, 20 May, 1950, leg. ROMADINA — 1 specimen; Lake Dobovye, Yanvartsevo, 6 June, 1950, leg. ROMADINA — 1 specimen; Flood area of the Ural River (right bank), south of Kolovyertnoi, 6 June, 1951, leg. ROMADINA — 1 specimen; 22 km SE of Ushtagan, 26 May, 1952, leg. L. ARNOLDI — 1 specimen.

Guriyev Oblast:

Tuk Sands, Eltast, environs of Guriyev, 4 May, 1951, leg. L. ARNOLDI — 1 specimen.

Aktyubinsk Oblast:

Chalkar, Bolshiye Barsuki, 18 May, 1932, leg. LUPPOVA — 2 specimens.

Kustanai Oblast:

Kokszetau Mountains, near the Terisakkan River, 16 May, 1957, caught on *Spiraea* sp., leg. GURYEVA — 1 specimen; 12 May, 1958, leg. L. MYEDVYEDYEV — 2 specimens; 10 June, 1958, leg. FALKOVICH — 2 specimens; 27 June, 1958, leg. L. ARNOLDI — 1 specimen; Terisakkan River flood area, 21 June, 1958, leg. BURROV — 1 specimen.

Karaganda Oblast:

Bassaga, 26 May, 1957, on *Spiraea* sp., leg. GRUNIN — 1 specimen; 31 May, 1957, leg. GRUNIN — 1 specimen; 3 June, 1957, on yellow umbellifera, leg. GRUNIN — 2 specimens; Koksenghir, south of Zhana-Arka, 11 and 14 June, 1958, leg. TOBIAS — 1 specimen each time; 9 May, 1958, leg. LOGINOVA — 1 specimen; 40 km south of Zhana-Arka, 2 June, 1958, leg. LOGINOVA — 1 specimen; Aktau Mountains, 80 km south of Zhana-Arka, 8 June, 1958, leg. TOBIAS — 6 specimens; 30 km. SE of Dzheskazachan, dry bed of the Karagansau River, 24 June, 1958, leg. TOBIAS — 1 specimen.

Kzyl-Orda Oblast:

Pyerovsk, 26 May, 1905, leg. SUMAKOV — 1 specimen; Solo-Tyube, 2 August, 1928, leg. MISHCHENKO — 1 specimen; Ay-Darly, near Dzulek, April — 7 May, 1909, leg. V. KOZHANCHIKOV — 1 specimen.

South-Kazakhstan Oblast:

Between Kyzyl-Kum and the Bet Pak Dala Steppe, 10 May, 1903, leg. JAKOBSON — 1 specimen.

Dzhambul Oblast:

Nikolaipol, 11 April, 1906, leg. E. FISCHER — 2 specimens; 10 June, 1907, leg. SUMAKOV — 1 specimen.

Alma Ata Oblast:

Environs of Alma Ata, 22 May, 1928, leg. K. TITOV — 1 specimen.

Species of extremely wide distribution, nearly cosmopolitan.

Anthrenus pimpinellae latefasciatus REITTER, 1892: 134, stat. nov.

Material:

West-Kazakhstan Oblast:

Environs of Uralsk, 23 and 25 April, 1903, leg. B. UVAROV — each time 1 specimen; 28 April and 11 May, 1907, leg. A. BORODIN — 1 specimen each time.

Aktyubinsk Oblast:

Chalkar, Malye Barsuki, 18 May, 1932, leg. LUPPOVA — 1 specimen.

Kzyl-Orda Oblast:

Baigakum, 10 June, 1911, leg. V. KOZHANCHIKOV — 2 specimens.

South-Kazakhstan Oblast:

The Bet Pak Dala Steppe, 19 April — 7 May, 1903, leg. B. JAKOBSON — 21 specimens.

Dzhambul Oblast:

Aulie Ata (Dzhambul) — 2 specimens in the collection of the Magyar Nemzeti Múzeum Állattára in Budapest and 1 specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Alma Ata Oblast:

Viernyi (Alma Ata) — 1 specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Semipalatinsk Oblast:

East of the Lake Ala-kol, 1891, leg. A. KHOKHLOV — 1 specimen.

The subspecies described as a "varietas" and so treated up to present day. In view of its limited distribution — to be discussed presently — it is with no doubt a geographical subspecies of the widely distributed *Anthrenus pimpinellae* FABR., differing considerably by morphological characters that have been described a number of times. On the basis of material investigated by the author (collections kept in Warsaw, Leningrad and Budapest) the general distribution of this subspecies is as follows: south-eastern tip of the European part of the USSR, the Caucasus, Northern Iran, Turkmen SSR, Uzbek SSR, Kazakh SSR, Tadjik SSR, Kirghiz SSR, Syria. The material from Manchuria and North China kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad still requires checking. The subspecies has been recorded from Tunisia (NORMAND, 1936 : 300) but this last data also call for the verification and corroboration. The data in the literature concerning Japan refer to another, so far undescribed species, whose description and distribution will be given in a different paper dealing with the *Dermestidae* of the Far East and Japan.

Anthrenus picturatus picturatus SOLSKIJ, 1876

Material:

Karaganda Oblast:

Sary-su River, Togushan Hills, 9 August, 1903, leg. PYETROVSKI — 1 specimen.

Kzyl-Orda Oblast:

Pyerovsk (Kzyl-Orda), 15 May, 1928, leg. N. OLENYEV and V. POPOV — 1 specimen; 18 May, 1928, leg. N. OLENYEV and V. POPOV — 3 specimens.

South-Kazakhstan Oblast:

Bet Pak Dala Steppe, 3 and 7 May, 1903, leg. N. IVANOV — 1 specimen each time; 10 May, 1903, leg. VALNYEV — 3 specimens.

Alma Ata Oblast:

Environs of Alma Ata, 22 May, 1928, leg. K. TITOV — 3 specimens.

The subspecies recorded from the whole of the Caucasus, Transeaucasia, North Iran, Turkmen SSR, Afghanistan and the Uzbek SSR. It also occurs in Tadjik SSR and Kirghiz SSR where it was found in numerous localities. The material is kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad and will be published in separate papers concerning the fauna of these republics. The localities in the Kazakh SSR, as presented above, mark the northern border of this subspecies distribution area.

Anthrenus picturatus melanoleucus SOLSKIJ, 1876

Material:

Karaganda Oblast:

Bassaga, leg. GRUNIN, 2 June, 1957 — 4 specimens; 3 June, 1957 — 5 specimens; Koksenghir, south of Zhana-Arka, 14 June, 1958, leg. TOBIAS — 1 specimen.

The subspecies occurring in the mountains of Uzbek SSR, Tadjik SSR and Afghanistan. Its systematic position has been discussed in the paper: MROCKOWSKI, 1961b : 224, in which it was proved that it is not a separate species. One specimen was collected in the Kirghiz SSR: Talass Thal, May 1908, by E. FISCHER and is to be found in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad. Recorded (GUSSAKOVSKIJ, 1949 : 335) from the Turkmen SSR, but its occurrence there also requires verification and corroboration with specimens which unfortunately were found lacking from the collections in Leningrad, Moscow, Budapest and Warsaw.

Anthrenus museorum (LINNAEUS, 1761)

Material:

Akmolinsk Oblast:

15 km. from the Kokshetau Mountains, near the Terisakkan River, 25 June, 1957, leg. GURYEVA — 1 specimen; Pritabdarsk. Myelkosopochnik, 4 July, 1958, leg. M. LOGINOVA — 1 specimen on *Artemisia marsheliana*.

Recorded also from the Dzhambul Oblast (BERESNEVA, 1960 : 107). The species is widely distributed throughout almost whole Holarctic.

Anthrenus flavidus SOLSKIJ, 1876

Material:

Karaganda Oblast:

Sary-shagan Bay, on the shore of Lake Balkhash, 7 August, 1903, leg. A. BERG — 1 specimen.

South-Kazakhstan Oblast:

Bet Pak Dala Steppe, 15 May, 1903, leg. G. JAKOBSON — 1 specimen.

Alma Ata Oblast:

Viernyi (Alma Ata) — 1 specimen in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Species occurring in the Caucasus (Armenia), Turkmen SSR, Uzbek SSR, Tadjik SSR and in North China. Brought also to Warsaw where it acclimatized. In the collection of the Zoological Institute of the Academy of Sciences of the USSR in Leningrad there is one specimen from the Kirghiz SSR: Talass Thal, June 1908, leg. E. FISCHER.

Anthrenus (Solskinus) dsungaricus sp. nov.

Holotype. Sex not established since copulatory organ could not be examined. Length of body 3.0 mm. Body oval, slightly elongated, black. Upper labium, antennae and legs brown. Dorsal side of body thickly covered with triangle-like, white, yellow-orange and dark brown scales. Ventral surface of body covered with white scales among which, on four posterior abdominal sternites, there is an admixture of yellow-orange scales. The middle of last sternite bears also a small cluster of dark brown scales.

Head round. Eyes oval, not emarginate. Middle of frons provided with well developed ocellus. Antennae 7-jointed; the first two globular, joints from third to sixth small; third and fourth joints narrow, their length exceeding their width; fifth and sixth joints gradually broadening terminally; length of fifth joint equal to the joint's terminal width, length of sixth joint smaller than the joint's terminal width. Joints from third to sixth of equal length. Seventh joint large, oviform. Its length slightly exceeds the combined length of joints from third to sixth.

Posterior angles of pronotum widely covered with white scales. Small spot formed by white scales occurring on pronotum just above scutellum. Remainder of pronotum covered with yellow-orange and dark brown scales, the latter concentrated rather along the middle line of pronotum. Scutellum very small, hardly perceptible, glabrous. White scales on the elytra grouped into spots usually hemmed by yellow-orange scales and forming together three irregular bands. A certain number of yellow-orange scales visible, apart from the bands, at the interior half of anterior margin of each elytron and it also surrounds spots of white scales on the posterior half of elytra.

Paratypes. 23 specimens. Length of body 2.3 — 3.6 mm. Difference in the shape of antennae very feeble, sexual dimorphism only very slightly marked (Figs. 11 and 12). Thus, without examination of genital armature the specimen sex cannot be established, all the more so in view of absence of sexual differences in the shape of antennal grooves situated on the sides of pronotum. Variability of pattern and colouring of the dorsal part of body quite considerable, consisting in lesser or greater reduction of dark brown scales whose place is taken by yellow-orange ones. In an extreme case dark brown scales are very few so that most of the dorsal surface is covered with yellow-orange scales. Generally the pattern of the dorsal surface and the colour of scales is extremely similar to the pattern of the dorsal surface and the colour of scales in the cos-

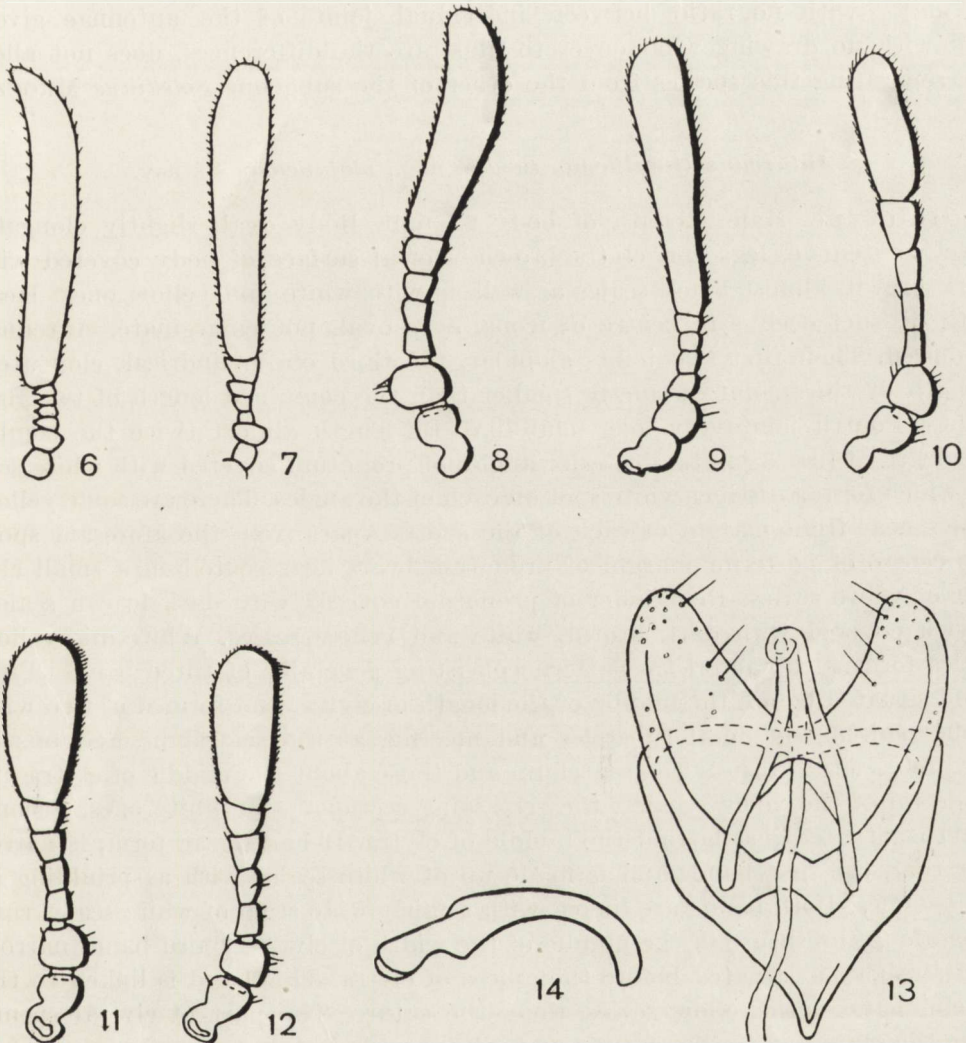
mopolitan and common species *Anthrenus (Nathrenus) verbasci* (L.), so that it is virtually impossible to distinguish the two species without resorting to optical instruments. The only difference in the pattern of their dorsal surface of body is the course taken by the middle band which in *Anthrenus (Nathrenus) verbasci* (L.) shows a slight, forward bent near the suture, while in *Anthrenus (Solskinus) dsungaricus* sp. nov. it is bent backward. Variability of colouring and of pattern of dorsal surface in both species shows the same tendency, but in *Anthrenus (Solskinus) dsungaricus* sp. nov. no such extreme forms are known as in the case with *Anthrenus (Nathrenus) verbasci* (L.). Differences between these two species are mainly the sub-generic ones: *Anthrenus (Nathrenus) verbasci* (L.) has black, 11-joint antennae with 3-joint club, their scales are very narrow and elongate; *Anthrenus (Solskinus) dsungaricus* sp. nov. has brown, 7-joint antennae with 1-joint club, their scales being triangle-like. Copulatory apparatus of the species under discussion is shown in Figs. 13 and 14.

Holotype and 15 paratypes come from Semipalatinsk Oblast and are labelled as follows: Tarbagatai, Mt. Atpas, N. Urdzhara, 1000 m., 23 June, 1957, on yellow *Ferula*, leg. GRUNIN; all these specimens are kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad (Holotype and 12 paratypes) and in the Institute of Zoology of the Polish Academy of Sciences in Warsaw (3 paratypes). Further paratypes come from Taldy-Kurgan Oblast. Two of them, labelled: "6 km. S. of Topolevka village, Dzungarsk. Alatau, gorge of the Bisimas river, 17 June, 1957, leg. KERZHNER" and "g. Chatyrbai, okr. (environs) s. (village) Topolevki, Dzungar. Alatau, 16 June, 1957, styepniye sklony (steppe slopes), leg. KERZHER" are also kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad. Next paratype labelled "8 km. O. s. Topolevki, Dzhungarsk. Alatau, 24 June, 1957, yablon. les, leg. KERZHNER" is kept in the collection of the Institute of Zoology of the Polish Academy of Sciences in Warsaw, four of the remaining 5 paratypes labelled "Kyzyl-Agach, ok. Kopala, 12 May, 1938 (2 paratypes), and 13 May, 1938 (3 paratypes), leg. B. TSVYETKOV" are kept in the Zoological Museum of the Lomonosov University in Moscow, while the fifth (of 13-th May) — in the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

In view of the characteristic structure of the antennae (7-jointed) the species under discussion belongs to the not long ago described subgenus *Solskinus* (MROCKOWSKI, 1951 : 258), to which also belong such species as *Anthrenus leucogrammus* SOLSKIJ, 1876 : 282, described upon the specimens from the Tadjik SSR ("bliz Varzaminora i v okrestnosti Obburdena"), which I designate here as a type of the subgenus (when describing the subgenus the type was, due to error, not designated); *Anthrenus tadzhicus* MROCKOWSKI, 1961a : 592 also occurring in the Tadjik SSR; *Anthrenus sinensis* ARROW, 1915 : 445, inhabiting North China; *Anthrenus armeniacus* ZAJCEV, 1919 : 177, 180, occurring

in the Transcaucasia in the Araks River valley, and *Anthrenus heptamerus* PEYERIMHOFF, 1924 : 62, occurring in Morocco.

Anthrenus (Solskinus) dsungaricus sp. nov. differs very considerably from *A. (S.) leucogrammus* SOLSK., from *A. (S.) sinensis* ARR. and from *A. (S.) heptamerus* PEYER. not only in the pattern of the dorsal surface of the body and the



Figs. 6 — 14. (Fig. 6 — after PEYERIMHOFF, Fig. 7 — after SOLSKIJ). 6 — *Anthrenus heptamerus* PEYER. — Antenna of male, 7 — *A. leucogrammus* SOLSK. — Antenna of male, 8 — *A. leucogrammus* SOLSK. — Antenna of female, $\times 105$, 9 — *A. sinensis* ARR. — Antenna of male, $\times 105$, 10 — *A. sinensis* ARR. — Antenna of female, $\times 105$, 11 — *A. dsungaricus* sp. n. — Antenna of male, $\times 105$, 12 — *A. dsungaricus* sp. n. — Antenna of female, $\times 105$, 13 — *A. dsungaricus* sp. n. — Male copulatory apparatus, $\times 150$, 14 — *A. dsungaricus* sp. n. — Side view of penis, $\times 150$.

colouring of scales, but also in the structure of the antennae particularly in males (cf. Figs. 6 — 12). Compared to *A. (S.) tadzhicus* MRO CZK. it differs first of all by the shape of the body which is oval in case of *A. (S.) dsungaricus* sp. nov. while being extraordinarily elongated in the former species. The antennae in both species are very similarly built. Unfortunately inexact and very insufficient description of *A. (S.) armeniacus* ZAJCEV (which is a specimen unknown to me) — with no ratio between individual joints of the antennae given, and with no drawing whatsoever to illustrate the differences, does not allow for separating this species from the other of the subgenus *Solskinus* MRO CZK

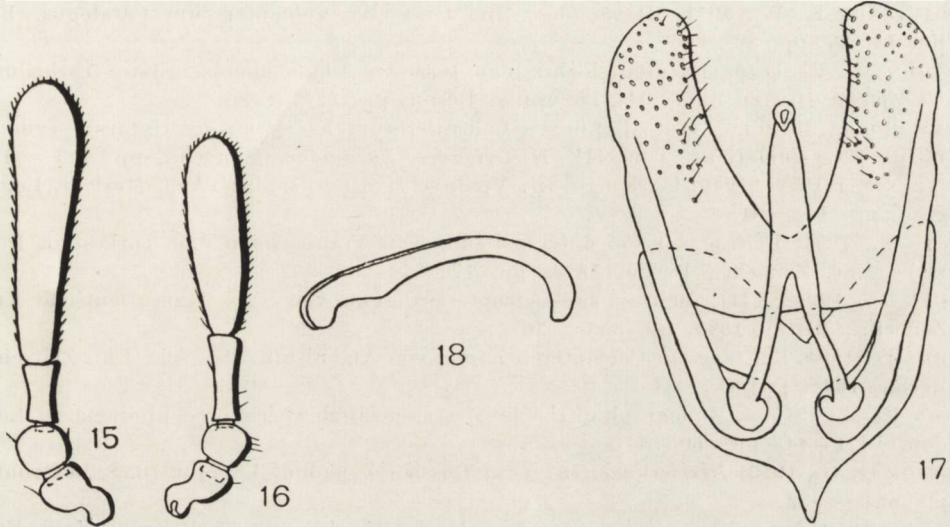
Anthrenus (Ranthenus subgen. nov.) *alatauensis* sp. nov.

Holotype. Male. Length of body 2.5 mm. Body oval, slightly elongate, black; antennae, legs and elytra brown. Dorsal surface of body covered with dark brown, almost black scales as well as with white and yellow ones. Head with distinct ocellus in centre of frons, eyes oval, not emarginate. Antennae 4-jointed. Their first two joints globular, the third one cylindrical, elongated. Length of third joint distinctly smaller than the combined length of two first joints. Fourth joint very long, club-like. Its length almost twice the combined length of first 3 joints. Posterior angles of pronotum covered with white scales which form a distinct white spot on each of the angles. There are some yellow scales near front margin of each of the spots. Apart from the aforesaid spots the centre of posterior margin of pronotum bears near scutellum a small cluster of white scales. Remainder of pronotum covered with dark brown scales. Elytra covered with dark brown, white and yellow scales. White and yellow scales form a characteristic pattern consisting generally of three bands. First band situated before the middle of the length of elytra, and formed of two wide arches skirting humeral tubercles and meeting at the scutellum. Sections of the arches situated near the scutellum and those about the middle of elytra are made up of the yellow scales, the remaining sections — of white ones. Second band is situated just behind the middle of elytra. It has zigzag form, is narrower than the first band, and is made up of white scales with a sprinkling of yellow ones. Both bands are linked with a fairly wide strip of white scales running along the suture in the middle of the width of elytra. Third band, narrow and straight, is situated before the apices of elytra. This band is linked to the second band with yellow scales along the suture. The part of elytral suture from the scutellum to the second band is lined with dark brown scales, the remaining part from the second band to the white spots on the apices of elytra — with yellow scales. Underside of body has a uniform cover of white scales.

Allotype. Female. Length of body 2.6 mm. Similar to holotype, but the ratio between individual joints of antennae is different. Length of third joint is equal to combined lengths of first two joints, while the length of fourth joint only slightly exceeds the combined lengths of first three joints (Fig. 16).

Paratypes. Two males. Lengths of body 2.4 mm and 2.6 mm. Very similar to holotype, variations of the dorsal surface pattern being very slight. Copulatory apparatus as shown in Figs. 17 and 18.

The holotype and allotype are labelled in the following way: "Talass Thal, VI 08, E. FISCHER" and are kept in the Zoological Institute of the Academy of Sciences of the USSR in Leningrad together with one of the paratypes that



Figs. 15 - 18. *Anthrenus alatauensis* sp. n. 15 - Antenna of male, $\times 105$, 16 - Antenna of female, $\times 105$, 17 - Male copulatory apparatus, $\times 150$, 18 - Side view of penis, $\times 150$.

comes from the Dzhabul Oblast (labelled "Nicolaipol, 3 June, 1907, E. FISCHER"). Another paratype labelled "Talass Thal, E. FISCHER" is kept in the Institute of Zoology of the Polish Academy of Sciences in Warsaw.

Owing to the characteristic structure of antennae made up of four joints only, the described species is not related in a closer way with any of the heretofore known, and a new subgenus should be formed for him:

Ranthenus subgen. nov.

characterized by the 4-jointed antennae [type species: *Anthrenus* (*Ranthenus* subgen. nov.) *alatauensis* sp. nov.].

Owing to the similarities in the structure of the body and in the pattern on the dorsal surface of the body between *Anthrenus* (*Solskinus*) *leucogrammus* SOLS. and *Anthrenus* (*Ranthenus* subgen. nov.) *alatauensis* sp. nov. it should be assumed that subgenus *Ranthenus* subgen. nov. originated from subgenus *Solskinus* MROCZK. through merging of the antennal joints from third to sixth, these joints being counterpart to the third joint in the antennae in subgenus *Ranthenus* subgen. nov.

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STRESZCZENIE

Praca składa się z dwu zasadniczych części, poprzedzonych wstępem. W części zoogeograficznej, opierając się o analizę rozmieszczenia poszczególnych gatunków, autor rejonizuje prowizorycznie Kazachską SRR na pięć rejonów zoogeograficznych, charakteryzujących się odrębnym składem gatunkowym i występowaniem specyficznych elementów. W części szczegółowej podano wykaz gatunków występujących w Kazachskiej SRR, wymieniając przy każdym z nich stanowiska w Kazachstanie oraz ogólne rozmieszczenie. Przy poszczególnych gatunkach podano także w pracy nowe dane rozmieszczeniowe nie dotyczące Kazachstanu oraz w niektórych przypadkach omówiono sprawy nomenklatoryczne i taksonomiczne, uzupełniając często niedostateczne opisy gatunków. Dwa gatunki opisano w pracy po raz pierwszy, a mianowicie *Anthrenus (Solskinus) dsungaricus* sp. n. oraz *Anthrenus (Ranthenus* subgen. n.) *alatauensis* sp. n., tworząc dla tego ostatniego nowy podrodzaj *Ranthenus* subgen. n. Podrodzaj ten powstał prawdopodobnie z podrodzaju *Solskinus* MROZK.

РЕЗЮМЕ

Настоящая работа состоит из двух основных частей и вступления. В зоогеографической части автор районирует предварительно Казахскую ССР на пять зоогеографических районов характеризующихся отдельным видовым составом и встречаемостью специфических элементов. В части подробной дано сводку видов живущих в Казахской ССР, указы-

вая при каждом из них местообитания в Казахстане и общее географическое распространение. При отдельных видах приведено также новые данные размещения не относящиеся к Казахстану и в некоторых случаях рассмотрено номенклатуру и таксономию, дополняя часто недостаточные видовые описания. В работе описано два новых вида, а именно: *Anthrenus (Solskinus) dsungaricus* sp. n., и *Anthrenus (Ranthenus subgen. n.) alatauensis* sp. n., образуя для этого последнего новый подрод *Ranthenus subgen. n.* Этот подрод возник вероятно из подрода *Solskinus* MROSCZK.

Redaktor pracy — prof. dr J. Nast

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