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Long progress in taxonomy: Collection of V.I. Motschulsky, family Cryptophagidae (Coleoptera). Part 2. Atomariinae and some Erotylidae

Долгий прогресс систематики: коллекция В.И. Мочульского, сем. Cryptophagidae (Coleoptera). Часть 2. Atomariinae и некоторые Erotylidae

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КЛЮЧЕВЫЕ СЛОВА: ZMMU, *Atomaria*, *Hypocoprus*, *Arrowcryptus*, *Loberus*, *Toramus*, *Xenocryptus*.

ABSTRACT. Beetles of the family Cryptophagidae (subfam. Atomariinae) from the collection of V.I. Motschulsky stored in the Zoological Museum of Moscow State University have been studied and identified. Beetles of this subfamily in the Motschulsky's collection are represented by 5 genera and 53 species. The species that were not published by Motschulsky but planned by him for description are discussed. The assessment of V. Motschulsky's "taxonomic intuition" is given: how well he distinguished the species represented in his collection. The identification key of the species of the subgenus *Atomaria* (*Anchicera*) from North America is given. Representatives of several subfamilies of the family Erotylidae counting 7 genera and 18 species, which V.I. Motschulsky assigned to the family Cryptophagidae, were detected in his collection and determined. The abundance of species in the Motschulsky collection is estimated.

РЕЗЮМЕ. Изучена и определена коллекция жуков семейства Cryptophagidae (подсем. Atomariinae) из коллекции В.И. Мочульского. Коллекция хранится в Зоологическом музее МГУ. Коллекция жуков этого подсемейства включает 5 родов и 53 вида. Обсуждается описание таксонов, не опубликованных Мочульским, но планируемых к описанию. Дана оценка «таксономической интуиции» В.И. Мочульского — насколько хорошо он видел виды, представленные в его коллекции. Приведен ключ видов *Atomaria* (*Anchicera*) С. Америки. Определены представители нескольких подсемейств семейства Erotylidae из коллекции В.И. Мочульского, которые размещались им среди Cryptophagidae: 7 родов, 18 видов. Дана оценка обилия видов в коллекции Мочульского.

Introduction

The Zoological Museum of Moscow State University houses a collection of beetles and other insects by Viktor Ivanovich Motschulsky (1810–1871), a Russian entomologist who was mainly interested in beetles, diplomat, colonel and intelligence officer of the General Staff. V.I. Motschulsky collected beetles during his travels and diplomatic trips, and also exchanged them with other collectors.

The Motschulsky's collection of beetles is one of the oldest and largest insect collections in the Zoological Museum of Moscow State University. It contains the types of species described by Viktor Ivanovich, as well as species, which he intended for description, but that were not published. A significant part of the specimens deposited in the collection has not been determined. Some materials are poorly preserved, specimens are badly damaged, destroyed or completely lost.

Motschulsky's collection of beetles contains beetles from Europe, Asia, Africa, North and South America, as well as Australia. V. Motschulsky did not publish many of the species from his collection that were planned to be described. This allows us to evaluate his "taxonomic intuition" by comparing the species planned for description with what was described a century and a half after the end of his work.

The first part of the article describes the subfamily Cryptophaginae [Lyubarsky, 2025]. The present article

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continues the study of Motschulsky's collection of silken fungus beetles (Cryptophagidae). The surviving materials on Cryptophagidae (Atomariinae) are presented. In addition to Atomariinae, this article presents materials on the family Erotylidae, which V.I. Motschulsky classified as silken fungus beetles and which was placed in his collection together with cryptophagids.

Material and methods

In the Motschulsky's collection, materials from the Palaearctic (excluding North Africa) have white labels (made of unpainted paper), materials from North Africa have light yellow or aquamarine labels, materials from North America (Nearctic) have light green labels, materials from South Asia (Oriental region) have bright yellow labels, materials from sub-Saharan Africa (Ethiopian region) have dark blue labels, materials from South America (Neotropics) have dark green labels. Materials from Russian Empire sometimes have pink labels.

All labels in the collection are handwritten. The designations of locations in the Motschulsky's collection are very general: usually only a country or a large region is indicated. Many materials do not have labels but only marked with a colored billet indicating the region of collection. In cases when material is labeled, Motschulsky's handwriting is often illegible, and locality remains undeciphered. To store his insect collections, Motschulsky used celluloid plates instead of cotton mattresses: he glued dozens of small beetles from different families onto them. In such cases, in this article, the taxonomic affiliation is indicated only to the family Cryptophagidae, while for other beetles only the family is indicated.

Taxonomy

Family Cryptophagidae Kirby, 1826
Subfamily Atomariinae LeConte, 1861

Atomaria Stephens, 1829

Many species of this genus (about 240 species in the world fauna) were described after the completion of Motschulsky's work. Species from North America were identified based on the work of [Pelletier, Hebert, 2019].

Atomaria analis Erichson, 1846

LABELS: white label "Sax", "Atomaria analis Schus Saxonia". 1 spec.

REMARKS. Germany, Saxony. The specimen is well preserved.

LABELS: white round small billet, white label "Atomaria cognata Er. Gall. mer." 1 spec.

REMARKS. France. The specimen is well preserved.

LABELS: without label. 1 spec.

REMARKS. Europe? In the collection it was placed next to specimen from France. The specimen is well preserved.

LABELS: white label "fusca Koch. Germ." 1 spec.

REMARKS. Germany. The specimen is well preserved.

LABELS: white label "Styria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: pink label "Petropol", white label "evanescens". 1 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria nigrirostris*, *A. peltata*. The specimen is well preserved.

LABELS: white label "analis Schu urtes ? Gewelktu<???> Grase in <???> Versailles". 1 spec.

REMARKS. France, Paris. On the plate together with *Atomaria fuscata.* The specimen is well preserved.

LABELS: white label "Petropol". 1 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with ?Latridiidae. The specimen is well preserved.

LABELS: white label "Samara". 2 spec.

REMARKS. Russia, Samara (Volga Federal District). The specimens are well preserved.

LABELS: white label "<?>Unmeif. Dschergain". 1 spec.

REMARKS. Kazakhstan, Tasotkel, Aqmola oblysy. On the plate together with *Atomaria fuscata* and beetles from other families: Hydrophilidae, Latridiidae, Staphylinidae, etc. The specimens is well preserved.

LABELS: without labels. 1 spec.

REMARKS. Russia, Siberia? On the plate together with *Atomaria apicalis, A. flava, A. fuscata, A. testacea* and beetles from other families: Monotomidae, Ptiliidae, Scydmaenidae etc. The specimen is well preserved.

LABELS: pink label "Petropol", white label "atra". 8 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria peltata, A. atra*. The seven specimens are well preserved, one specimen is destroyed.

LABELS: white label "St. Maurice". 2 spec.

REMARKS. Europe, Switzerland? On the plate together with *Atomaria fuscipes, A. rubricollis.* The specimens are well preserved.

LABELS: white label "fur Schlang<??> au d. fl. Ura<?> Kuluha Bäd". 1 spec.

REMARKS. Russia? On the plate together with *Atomaria basalis* and beetles from other families: Coccinellidae, Curculionidae, Mordellidae, Nitidulidae etc. The specimen is well preserved.

LABELS: white label "<??> uberig<?> Poroschino L<?>ivkau<?>aly 13 Mai". 4 spec.

REMARKS. Russia? Most villages named "Poroshino" are located in the north of the European part of Russia. On the plate together with *Atomaria fuscata, A. nitidula, Cryptophagus acutangulus* and beetles from other families. The specimens are well preserved.

LABELS: without label. 1 spec.

REMARKS. Europe? On the plate together with *Atomaria linearis, Ephistemus globulus* and beetles from other families: Scydmaenidae, Staphylinidae, and Hemiptera, Hymenoptera. The specimen is well preserved.

LABELS: white label "C". 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: pink label "Transbaikalia St. Kuli in <?????????>", white label "apicalis". 1 spec.

REMARKS. Russia, E. Siberia, Transbaikalia; Petrovsk-Zabaykalsky District in Zabaykalsky Krai. The specimen is well preserved.

Atomaria apicalis Erichson, 1846

LABELS: white label "31 juli". 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: pink label "Ju Gruticha Rossica mer.". 2 spec.

REMARKS. Russia. The specimens are well preserved.

LABELS: white label "Omsk Aprel 1840". 1 spec.

REMARKS. Russia, Omsk, southwestern Siberia. On the plate together with beetles from other families: Latridiidae, Scydmaenidae etc. The specimen is well preserved.

LABELS: white label "Irtysh?". 1 spec.

REMARKS. Russia, W Siberia, Omsk and Tyumen regions. The specimen is well preserved.

LABELS: white label “Simbirsk”. 1 spec.

REMARKS. Russia, Ulyanovsk. On the plate together with *Atomaria basalis*, *A. elongatula* and beetles from other families. The specimen is well preserved.

LABELS: white label “Kirgis Steppe”. 1 spec.

REMARKS. N Kazakhstan. On the plate together with beetles from other families. The specimen is well preserved.

LABELS: without label. 3 spec.

REMARKS. Russia, Siberia? On the plate together with *A. analis*, *A. flava*, *A. fuscata*, *A. testacea* and beetles from other families: Monotomidae, Ptiliidae, Scydmaenidae etc. The specimens are well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria angulicollis”. On the plate together with *Atomaria fuscata* and Staphylinidae. The specimen is well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria angulicollis”. On the plate together with *Atomaria fuscata*, *A. lewisi*. The specimen is well preserved.

LABELS: without label. 8 spec.

REMARKS. N America. In coll. Motschulsky near specimens with label “Am.bor.” In coll. Motschulsky near specimens with label “fusula”. The specimens are well preserved.

LABELS: light green round billet. 5 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. The specimens are well preserved.

LABELS: light green round billet. 5 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria arcuaticollis*, *A. ephippiata*, *A. fuscata*, *A. oblongula*. The specimen is well preserved.

LABELS: light green round billet. 10 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria ocularia*, *A. sodermani*. The specimens are well preserved.

LABELS: light green round billet. 5 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria fuscata*, *A. lederi*, *A. lewisi*, *Toramus pulchellus*. The specimens are well preserved.

LABELS: white label “Caucas”, “curta”. 3 spec.

REMARKS. Caucasus. On the plate together with *A. fuscata*. The specimens are well preserved.

LABELS: pink label “Petropolis”, white label “guttula”. 1 spec.

REMARKS. Russia, Saint Petersburg. The specimen is well preserved.

LABELS: white label “Styria”, “Atomaria impressa Mark<??> Styria”. 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: pink label “fl. Irtysh Pest<???>”. 1 spec.

REMARKS. Russia, W Siberia, Omsk and Tyumen regions. On the plate together with *Atomaria basalis*, *A. mesomela* and beetles from other families. The specimen is well preserved.

LABELS: light green round billet, light green label “Atomaria fusula Motsch. Am. Bor. New York”. 16 spec.

REMARKS. N America. The species name has not been published. On the plate together with *Atomaria fuscata*, *Toramus pulchellus*. The specimens are well preserved.

LABELS: white label “31 Juli”. 1 spec.

REMARKS. Locality: unknown. On the plate together with *Cryptophagus punctipennis*, *Atomaria pusilla*, *A. testacea*, and beetles from other families: Chrysomelidae, Ptiliidae, Scydmaenidae, Staphylinidae etc. The specimen is well preserved.

LABELS: white label “Caucasus”. 2 spec.

REMARKS. Russia, Caucasus. On the plate together with *Atomaria testacea*. The specimens are well preserved.

LABELS: white label “Keratschenskaja 15 Mar”. 2 spec.

REMARKS. Russia, Siberia? On the plate together with *A. flava* and beetles from other families: Helodidae, Latridiidae, Staphylinidae etc. The specimens are well preserved.

Atomaria arcuaticollis Pelletier, 2019

LABELS: light green round billet. 1 spec.

REMARKS. N. America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. ephippiata*, *A. fuscata*, *A. oblongula*. The specimen is well preserved.

Atomaria atra (Herbst, 1793)

LABELS: white label “Petropol”. 4 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria analis*. The specimens are well preserved.

LABELS: pink label “Petropol”, white label “atra”. 1 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria peltata*, *A. analis*. The specimen is well preserved.

Atomaria atrata Reitter, 1875

LABELS: pink label “am Baical”. 2 spec.

REMARKS. Russia, E. Siberia, lake Baikal. On the plate together with beetles from families Hydrophilidae, Latridiidae, Staphylinidae etc. The specimens are well preserved.

Atomaria atricapilla Stephens, 1830

LABELS: white label “type”, “Saxonia”, “144”, “Atomaria nigriceps Märkl. Saxonia”. 4 spec.

REMARKS. Germany, Saxony. The specimens are well preserved.

LABELS: white label “nigriceps Märk Sax.”. 2 spec.

REMARKS. Germany. The specimens are well preserved.

LABELS: white label “Versailles”. 4 spec.

REMARKS. France, Paris. The specimens are well preserved.

LABELS: white label “Creta”, “Atomaria elongatula Er. Creta”. 1 spec.

REMARKS. Greece, Crete. The specimen is well preserved.

Atomaria basalis Erichson, 1846

LABELS: white label “Atomaria mesomelas Gyll. Germania”. 1 spec.

REMARKS. Germany. The specimen is well preserved.

LABELS: white label “Laibach”. 1 spec.

REMARKS. Slovenia. The specimen is well preserved.

LABELS: white label “Crypt. ag<??>fi Ighl Paris”. 3 spec.

REMARKS. France. The specimens are well preserved.

LABELS: white label “<?????> Paris”, “fuscus Sturm Catalog”. 4 spec.

REMARKS. France. Three specimens are well preserved, one specimen is destroyed.

LABELS: white label “Lausanna”. 1 spec.

REMARKS. Switzerland. The specimen is well preserved.

LABELS: white label “Mt. Guhe<?>lin”, “dorsalis”. 1 spec.

REMARKS. Italy, Liguria. The specimen is well preserved.

LABELS: white label “Simbirsk”. 1 spec.

REMARKS. Russia, Ulyanovsk. On the plate together with *Atomaria apicalis, A. elongatula* and beetles from other families. The specimen is well preserved.

LABELS: white label "fur Schlang<??> au d. fl. Ura<?> Kuluha Bäd". 2 spec.

REMARKS. Russia? On the plate together with *Atomaria analis* and beetles from other families: Coccinellidae, Curculionidae, Nitidulidae, Mordellidae etc. The specimens are well preserved.

LABELS: pink label "Kuluha Bäder unter Moor". 1 spec.

REMARKS. Russia. On the plate together with *Atomaria elongatula*. The specimen is well preserved.

LABELS: pink label "Scatun Kuli". 1 spec.

REMARKS. Russia, Transbaikalia? On the plate together with *Atomaria elongatula* and beetles from families Scydmaenidae, Staphylinidae etc., and Hemiptera. The specimens are well preserved.

LABELS: pink label "fl. Irtysh Pest<???>". 2 spec.

REMARKS. Russia, W. Siberia, Omsk and Tyumen regions. On the plate together with *Atomaria apicalis*, *A. mesomela* and beetles from other families. The specimens are well preserved.

LABELS: white label "At<???> Von Nitidules auf <???? ????> in <???> July". 1 spec.

REMARKS. Europe? On the plate together with *Atomaria fuscata* and beetles of other families (Latridiidae, Nitidulidae, Staphylinidae etc.). The specimen is well preserved.

LABELS: white label "auf ihr <????? ??? ihr ??????? ?????> mit Byth<??> Jasis". 1 spec.

REMARKS. Europe? On the plate together with *Atomaria gutta*. The specimen is well preserved.

Atomaria basicornis Reitter, 1888

LABELS: white label "Achalzik Uravel". 1 spec.

REMARKS. Georgia, Samtskhe–Javakheti. The specimen is well preserved.

LABELS: white label "Laibach" "Atomaria contaminata? Er. Corniolia". 1 spec.

REMARKS. Slovenia. The specimen is well preserved.

Atomaria bella Reitter, 1875

LABELS: white label "Styria". 1 spec.

REMARKS. Austria. Next to the pin labeled as "Atomaria nana". The specimen is well preserved.

Atomaria coloradensis (Casey, 1900)

LABELS: dark green round billet, dark green label "Atomaria infuscata Motsch. Columbia". 1 spec.

REMARKS. S America, Panama or Colombia. The species name has not been published. The specimen is well preserved.

LABELS: dark green round billet. 2 spec.

REMARKS. S America, Panama or Colombia. Next to the pin labeled as "Atomaria infuscata". The specimens are well preserved.

LABELS: white label "Atomaria infuscata m. Columbia". 1 spec.

REMARKS. S America, Panama or Colombia. The species name has not been published. The specimen is well preserved.

Atomaria elongatula Erichson 1846

LABELS: white label "Simbirsk". 1 spec.

REMARKS. Russia, Ulyanovsk. On the plate together with *Atomaria apicalis*, *A. basalis* and beetles from other families. The specimen is well preserved.

LABELS: pink label "Turkinsk unter Daumviens". 1 spec.

REMARKS. Russia, Far Eastern Federal District, Buryatia, Goryachinsk. On the plate together with *Micrambe bimaculata*, *Henoticus serratus* and beetles from families Coccinellidae, Latridiidae etc., and Hymenoptera. The specimen is well preserved.

LABELS: pink label "Kuluha Bäd", "montanus". 1 spec.

REMARKS. Russia. The specimen is well preserved.

LABELS: pink label "Kuluha Bäder unter Moor". 2 spec.

REMARKS. Russia. On the plate together with *Atomaria basalis*. One specimen is well preserved, one specimen is damaged.

LABELS: pink label "Scatun Kuli". 1 spec.

REMARKS. Russia, Transbaikalia. On the plate together with *Atomaria basalis* and beetles from families Scydmaenidae, Staphylinidae etc., and Hemiptera. The specimens are well preserved.

LABELS: white label "Aus <???> Baicals <??> <??> Turkin. Bäd". 1 spec.

REMARKS. Russia, Far Eastern Federal District, Republic of Buryatia, Goryachinsk. On the plate together with *Atomaria fuscata* and beetles from other families. The specimen is well preserved.

LABELS: white label "Jalta". 1 spec.

REMARKS. Crimea, Yalta. The specimen is well preserved.

LABELS: dark blue round billet, dark blue label "Atomaria scutellata Motsch. Madagascar". 1 spec.

REMARKS. S Africa, Madagascar. This species is not recorded in Madagascar. Possibly confusion in Motschulsky's collection. The species name has not been published. The specimen is well preserved.

Atomaria ephippiata Zimmerman, 1869

LABELS: light green round billet, light green label "Atomaria nigrolunata Motsch. Am. bor." 2 spec.

REMARKS. N America. The species name has not been published. The specimens are well preserved.

LABELS: light green round billet. 5 spec.

REMARKS. N America. Next to the pin labeled as "A. nigrolunata". The specimens are well preserved.

LABELS: light green round billet. 2 spec.

REMARKS. N America. Next to the pin labeled as "A. nigrolunata". The specimens are well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". On the plate together with *Atomaria apicalis*, *A. arcuaticollis*, *A. fuscata*, *A. oblongula*. The specimen is well preserved.

Atomaria fimetarii (Fabricius, 1792)

LABELS: white label "Wien", "Atomaria fimetarii F. Austria". 2 spec.

REMARKS. Austria. The specimens are well preserved.

LABELS: without label. 2 spec.

REMARKS. Europe? Next to the pin labeled as *A. fimetarii* from Austria, Wien. The specimens are well preserved.

Atomaria flava C. Johnson, 1968

LABELS: without labels. 1 spec.

REMARKS. Russia, Siberia? On the plate together with *A. analis*, *A. apicalis*, *A. fuscata*, *A. testacea* and beetles from other families: Monotomidae, Ptiliidae, Scydmaenidae etc. The specimen is well preserved.

LABELS: white label "Keratschenskaja 15 Mar". 5 spec.

REMARKS. Russia, Siberia? On the plate together with *A. apicalis* and beetles from other families: Helodidae, Latridiidae, Staphylinidae etc. The specimens are well preserved.

LABELS: pink label “innertorkin Transbaicalia”. 1 spec.

REMARKS. Russia, Transbaikalia. On the plate together *Atomaria mongolica*, and also with beetles from families: Latridiidae, Scydmaenidae and other families, and Hymenoptera.

Atomaria fulvipennis Mannerheim, 1846

LABELS: pink label “Arganaly”, white label “laticollis”. 1 spec.

REMARKS. Kazakhstan, near Ulutau, mt. Arganaly. On the plate together with *A. lederi*, *A. mongolica.* The specimen is well preserved.

Atomaria fuscata Schönherr, 1808

LABELS: white label “Atomaria fuscata Schon Rus. Mer.”. 3 spec.

REMARKS. Russia. The specimens are well preserved.

LABELS: white label “analis Schu urtes ? Gewelktu<???> Grase in <???> Versailles”. 2 spec.

REMARKS. France, Paris. On the plate together with *Atomaria analis.* The specimens are well preserved.

LABELS: white label “<?>Unmeif. Dschergain”. 1 spec.

REMARKS. Kazakhstan, Tasotkel, Aqmola oblysy. On the plate together with *Atomaria analis* and beetles from other families: Hydrophilidae, Latridiidae, Staphylinidae, etc. The specimens are well preserved.

LABELS: white label “Caucas”, “curta”. 2 spec.

REMARKS. Caucasus. On the plate together with *Atomaria apicalis*. The specimens are well preserved.

LABELS: light green round billet, white label “30 Oct.”, light green label “Atomaria obtusa Motsch. Am. bor.” 1 spec.

REMARKS. N America. The species name has not been published. The specimen is well preserved.

LABELS: light green round billet, light green label “Atomaria fusula Motsch. Am. Bor. New York”. 1 spec.

REMARKS. N America. The species name has not been published. On the plate together with *Atomaria apicalis*, *Toramus pulchellus*. The specimen is well preserved.

LABELS: light green round billet. 3 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. The specimens are well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. arcuaticollis*, *A. ephippiata*, *A. oblongula*. The specimen is well preserved.

LABELS: light green round billet. 2 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. lederi*, *A. lewisi*, *Toramus pulchellus*. The specimens are well preserved.

LABELS: pink label “Lithuania”, white label “diluta”. 4 spec.

REMARKS. Lithuania. The specimens are well preserved.

LABELS: dark green round billet. 1 spec.

REMARKS. S America. The specimen is well preserved.

LABELS: white label “Atomaria gravidula Austria”. 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: white label “Piatigorsk”, “fragilis”. 2 spec.

REMARKS. Russia, Stavropol Krai, Pyatigorsk. The specimens are well preserved.

LABELS: white label “An Lasinewski galu Paris”. 1 spec.

REMARKS. France, Paris. The specimen is well preserved.

LABELS: white label “Gall.m.” 1 spec.

REMARKS. France. The specimen is well preserved.

LABELS: white label “Styria”. 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: white label “At<???> Von Nitidules auf <???? ????> in <???> July”. 1 spec.

REMARKS. Europe? On the plate together with *Atomaria basalis* and beetles of other families (Latridiidae, Nitidulidae, Staphylinidae etc.). The specimen is well preserved.

LABELS: white label “Aus <???> Baicals <?? ??> Turkin. Bäd”. 1 spec.

REMARKS. Russia, Far Eastern Federal District, Republic of Buryatia, Goryachinsk. On the plate together with *Atomaria elongatula* and beetles from other families. The specimen is well preserved.

LABELS: white label “Omsk am Uf. Irtysch Cryp. elongates Kind”. 1 spec.

REMARKS. Russia, southwestern Siberia, Omsk. On the plate together with beetles from families Chrysomelidae, Latridiidae, Scydmaenidae, Staphylinidae etc. The specimen is well preserved.

LABELS: white label “Omsk”. 1 spec.

REMARKS. Russia, southwestern Siberia, Omsk. On the plate together with *Atomaria peltata* and beetles from other families (Latridiidae, Staphylinidae, Curculionidae etc.). The specimen is well preserved.

LABELS: without label. 1 spec.

REMARKS. Russia, Siberia? On the plate together with *A. analis*, *A. apicalis*, *A. flava*, *A. testacea* and beetles from of other families: Monotomidae, Ptiliidae, Scydmaenidae etc. The specimen is well preserved.

LABELS: pink label “Petropol”, white label “evanescens”. 1 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria analis*, *Atomaria nigrirostris*. The specimen is well preserved.

LABELS: pink label “Petropolis”. 1 spec.

REMARKS. Russia, Saint Petersburg. The specimen is well preserved.

LABELS: white label “<??> uberig<?> Poroschino L<?>ivkau<?>aly 13 Mai”. 2 spec.

REMARKS. Russia? Most villages named "Poroshino" are located in the north of the European part of Russia. On the plate together with *Atomaria analis*, *A. nitidula*, *Cryptophagus acutangulus* and beetles from other families. The specimens are well preserved.

LABELS: white round billet. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: light green round billet, light green label “Atomaria angulicollis Motsch. Am.bor.” 2 spec.

REMARKS. N America. The species name has not been published. One specimen is destroyed, the other is well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria angulicollis”. The specimen is well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “A. angulicollis”. On the plate together with *Atomaria apicalis* and Staphylinidae. The specimen is well preserved.

LABELS: light green round billet. 5 spec.

REMARKS. N America. On the plate together with *Atomaria lewisi*, *A. apicalis.* The specimens are well preserved.

LABELS: white label “type” “Lagsel” “Atomaria salicicola Kraatz Germania Caidel”. 1 spec.

REMARKS. Germany. The specimen is well preserved.

Atomaria fuscipes (Gyllenhal, 1808)

LABELS: white label "Atomaria fuscipes Steph. Germania". 1 spec.

REMARKS. Germany. The specimen is well preserved.

LABELS: white label "St. Maurice". 1 spec.

REMARKS. Switzerland? On the plate together with *Atomaria analis*, *A. rubricollis.* The specimen is well preserved.

Atomaria gibbula Erichson, 1846

LABELS: white label "Wien The<??>ian 7 Oct 55". 2 spec.

REMARKS. Austria. The specimens are well preserved.

LABELS: white label "ater Gyll. Bii Turano unter Scheitt". 1 spec.

REMARKS. Italy? The specimen is well preserved.

LABELS: white label "St Germain aupa<???>gan <??> <????> im <?>vosn". 3 spec.

REMARKS. France. The specimens are well preserved.

Atomaria gravidula Erichson, 1846

LABELS: white label "Atomaria gravidula Er. Austria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: white label "Austria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

Atomaria gutta Newman, 1834

LABELS: white label "auf ihr <????? ??? ihr ??????? ?????> mit Byth<??> Jasis". 2 spec.

REMARKS. Europe? On the plate together with *Atomaria basalis*. The specimens are well preserved.

Atomaria kamtschatica Motschulsky, 1845

LABELS: white label "<?????? A????> in <???????> Tolsn Turkin". 1 spec.

REMARKS. Russia, Far Eastern Federal District, Buryatia, Goryachinsk. On the plate together with beetles from other families: Latridiidae, Scydmaenidae etc. The specimen is well preserved.

LABELS: pink label "Hamar". 5 spec.

REMARKS. Russia, Far Eastern Federal District, Buryatia, Khamar-Daban. On the plate together with beetles from other families: Nitidulidae, Staphylinidae, Latridiidae etc. The specimens are well preserved.

LABELS: pink label "fl. <????????>". 1 spec.

REMARKS. Russia, Siberia? On the plate together with beetles from other families: Latridiidae, Scydmaenidae, Staphylinidae etc. The specimen is well preserved.

Atomaria lederi C. Johnson, 1970

LABELS: pink label "Arganaly", white label "laticollis". 1 spec.

REMARKS. Kazakhstan, near Ulutau, mt. Arganaly. On the plate together with *A. fulvipennis*, *A. mongolica.* The specimen is well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". On the plate together with *Atomaria apicalis*, *A. fuscata*, *A. lewisi*, *Toramus pulchellus*. The specimen is well preserved.

Atomaria lewisi Reitter, 1877

LABELS: light green round billet. 1 spec.

REMARKS. N America. On the plate together with *Atomaria fuscata.* The specimens are well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". On the plate together with *Atomaria apicalis*, *A. fuscata*, *A. lederi*, *Toramus pulchellus*. The specimen is well preserved.

Atomaria linearis Stephens, 1830

LABELS: white label "Sax", "Atomaria linearis Steph. Saxonia". 2 spec.

REMARKS. Germany, Saxony. The specimens are well preserved.

LABELS: without label. 1 spec.

REMARKS. Europe? On the plate together with *Atomaria analis*, *Ephistemus globulus* and beetles from other families: Staphylinidae, Scydmaenidae, and Hemiptera, Hymenoptera. The specimen is well preserved.

LABELS: white label "Cryptophagus fimetarius Hungaria". 1 spec.

REMARKS. Hungary. The specimen is well preserved.

LABELS: white label "Mt Gulurlin? Ligurien". 2 spec.

REMARKS. Italy. The specimens are well preserved.

LABELS: white label "4 April in tro<?????> salbar<??> <?????> Mish<?>. 1 spec.

REMARKS. Europe? On the plate together with *Atomaria testacea*, *Cryptophagus cellaris*, and beetles of other families (Curculionidae, Latridiidae, Ptiliidae, Scydmaenidae, Staphylinidae etc.). The specimen is well preserved.

Atomaria lineola Notman, 1920

LABELS: light green label "Atomaria fuscofasciata Motsch. Am. bor." 2 spec.

REMARKS. N America. The species name has not been published. The specimens are well preserved.

Atomaria macra (Casey, 1900)

LABELS: white label "Holoparamecus fusculus m. Columbia". 1 spec.

REMARKS. S America. Panama or Colombia. The species name has not been published. The specimen is well preserved.

Atomaria mesomela (Herbst, 1792)

LABELS: pink label "fl. Irtysh Pest<???>". 8 spec.

REMARKS. Russia, W Siberia, Omsk and Tyumen regions. On the plate together with *Atomaria apicalis, A. basalis* and with beetles from other families. The specimens are well preserved.

LABELS: pink label "<?>fl. ?Tersfinkan", white label "dimidiata". 11 spec.

REMARKS. Russia? The specimens are well preserved.

LABELS: white label "Atomaria dimidiata Motsch. Rus. Mer.". 1 spec.

REMARKS. Russia. The species name has not been published. The specimen is well preserved.

LABELS: white label "bicolor Dej. Bondy". 1 spec.

REMARKS. Europe? The specimen is well preserved.

Atomaria mongolica C. Johnson, 1970

LABELS: pink label "Arganaly", white label "laticollis". 1 spec.

REMARKS. Kazakhstan, near Ulutau, mt. Arganaly. On the plate together with *A. fulvipennis*, *A. lederi.* The specimen is well preserved.

LABELS: pink label "Arganaly", white label "laticollis". 1 spec.

REMARKS. Kazakhstan, near Ulutau, mt. Arganaly. The specimen is well preserved.

LABELS: pink label “Transbaikalia St. Kuli in <?????????>”, white label “apicalis”. 3 spec.

REMARKS. Russia, Transbaikalia; Petrovsk-Zabaykalsky District in Zabaykalsky Krai. The specimens are well preserved.

LABELS: white label “Duhe<?>gasn”. 4 spec.

REMARKS. Russia. On the plate together with beetles from families: Latridiidae, Ptiliidae, Staphylinidae and other families. The specimens are well preserved.

LABELS: pink label “innertorkin Transbaicalia”. 1 spec.

REMARKS. Russia, Transbaikalia. On the plate together *Atomaria flava*, and also with beetles from families Scydmaenidae, Latridiidae and other families, and Hymenoptera.

Atomaria nigripennis (Kugelann, 1794)

LABELS: white label “Cryptoph. nigripennis Aube Gallia”. 3 spec.

REMARKS. France. The specimens are well preserved.

LABELS: white label “nigripennis Fabr. Paris”. 1 spec.

REMARKS. France, Paris. The specimen is well preserved.

LABELS: white label “V Palm”, white label “nigripennis”. 2 spec.

REMARKS. Europe, Austria? The specimens are well preserved.

LABELS: white label “Atomaria nigripenis Payk Austria”. 1 spec.

REMARKS. Austria. The specimen is well preserved.

Atomaria nigrirostris Stephens, 1830

LABELS: pink label “Petropol”, white label “evanescens”. 1 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria analis*, *A. fuscata*. The specimen is well preserved.

LABELS: white label “Sax”, white label “Atomaria umbrina Gyll. Saxonia”. 3 spec.

REMARKS. Europe, Germany, Saxony. The specimens are well preserved.

LABELS: white label “Atomaria vittula Motsch. Germania <?????>. 1 spec.

REMARKS. Europe, Germany. The species name has not been published. The specimen is well preserved.

LABELS: white label “Styria”. 1 spec.

REMARKS. Europe, Austria. The specimens are well preserved.

LABELS: white label “Cryptophag. tumulorum Villa - Mili”. 1 spec.

REMARKS. Europe? The specimen is well preserved.

Atomaria nigriventris Stephens, 1830

LABELS: white label “Cryptophagus mesomelas Gyll. Musonch<??>”. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: white label “V Polen”, white label “fimetarii”. 1 spec.

REMARKS. Poland. The specimen is well preserved.

Atomaria nitidula (Marsham, 1802)

LABELS: white label “<??> uberig<?> Poroschino L<?>ivkau<?>aly 13 Mai”. 1 spec.

REMARKS. Russia. Most villages named “Poroshino” are located in the north of the European part of Russia. On the plate together with *Atomaria analis*, *A. fuscata*, *Cryptophagus acutangulus* and beetles from other families. The specimen is well preserved.

LABELS: white label “Sib. allid.” 2 spec.

REMARKS. Russia, W. Siberia. On the plate together with *Atomaria peltatula*, *Cryptophagus hexagonalis* and beetles from families: Carabidae, Staphylinidae and other families. The specimens are well preserved.

Atomaria oblongula Casey, 1900

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. arcuaticollis*, *A. ephippiata*, *A. fuscata*. The specimen is well preserved.

Atomaria ocularia Pelletier, 2019

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. sodermani*. The specimen is well preserved.

Atomaria ornata Heer, 1841

LABELS: white label “26”, “Atomaria dilutella mihi nov. sp.”. 1 spec.

REMARKS. Europe? The species name has not been published. The specimen is well preserved. The collection of the Zoological Museum also storage a type of Atomaria dilutella Solsky, 1876: Lectotype, Turkmenistan. Labels: “Atomaria dilutella n.sp. mihi”, “15”. This specimen is *A. nigrirostris*. This specimen from the Solsky’s collection is not included in the Motschulsky collection [Lyubarsky, 2006].

Atomaria peltata Kraatz, 1853

LABELS: white label “scydmenoides m. Astrachan”. 1 spec.

REMARKS. S Russia, Astrakhan. The species name has not been published. The specimen is well preserved.

LABELS: pink label “Petropol”, white label “atra”. 2 spec.

REMARKS. Russia, Saint Petersburg. On the plate together with *Atomaria analis, A. atra*. The specimens are well preserved.

LABELS: white label “Omsk”. 1 spec.

REMARKS. Russia, southwestern Siberia, Omsk. On the plate together with *Atomaria fuscata* and beetles from other families (Curculionidae, Latridiidae, Staphylinidae etc.). The specimen is well preserved.

LABELS: pink label “Iu<??>inih”, white label “pallidulus”. 1 spec.

REMARKS. Russia? The specimen is well preserved.

Atomaria peltatula Reitter, 1888

LABELS: white label “Sib. allid.” 1 spec.

REMARKS. Russia, W Siberia. On the plate together with *Atomaria nitidula*, *Cryptophagus hexagonalis* and beetles from families: Carabidae, Staphylinidae and other families. The specimen is well preserved.

Atomaria pulchra Erichson, 1846

LABELS: white label “Saxon”, white label “Atomaria nana Er. Saxonia”. 2 spec.

REMARKS. Germany, Saxony. One specimen is well preserved, one specimen is completely destroyed.

Atomaria pusilla Paykull, 1798

LABELS: white label “Saxonia”, “145”, “Atomaria pusilla Gyll. Saxonia”. 2 spec.

REMARKS. Germany, Saxony. The specimens are well preserved.

LABELS: white label “pusillus Gyll. Versailles”. 3 spec.

REMARKS. Europe, Paris. The specimens are well preserved.

LABELS: white labels “Tiflis”, “pygmaea”. 4 spec.

REMARKS. Caucasus, Georgia, Tbilisi. The specimens are well preserved.

LABELS: white label “rubescens Ill. German.” 1 spec.

REMARKS. Europe, Germany. The specimen is well preserved.

LABELS: brown triangle billet, white label “Cryptophagus pusillus Payk. Suecia”. 1 spec.

REMARKS. Europe, Sweden. The specimen is well preserved.

LABELS: white label “Cryptophagus fulvus Curtis St Maurice”. 2 spec.

REMARKS. Europe, Switzerland? The specimens are well preserved.

LABELS: white label “31 Juli”. 1 spec.

REMARKS. Locality: unknown. On the plate together with *Cryptophagus punctipennis*, *Atomaria apicalis*, *A. testacea*, and beetles from other families: Chrysomelidae, Ptiliidae, Scydmaenidae, Staphylinidae etc. The specimen is well preserved.

LABELS: white label “Stary Krim”. 1 spec.

REMARKS. Russia, Crimea. The specimen is well preserved.

LABELS: white label “B<??>chs im Wal<?> unter Moor nov.sp.”. 3 spec.

REMARKS. Europe? The specimens are well preserved.

LABELS: white label “Grau<??>ten”. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. The specimen is well preserved.

LABELS: light green round billet. 8 spec.

REMARKS. N America. The specimens are well preserved.

Atomaria rubricollis Brisout de Barneville, 1863

LABELS: white label “St. Maurice”. 1 spec.

REMARKS. Europe, Switzerland? On the plate together with *Atomaria analis*, *A. fuscipes*. The specimen is well preserved.

LABELS: white label “type”, green label “174”, white label “Atomaria rubricollis Chevrier Geneve”. 1 spec.

REMARKS. Europe, Switzerland, Geneva. The specimen is well preserved.

LABELS: white label “Geneve”. 1 spec.

REMARKS. Europe, Switzerland, Geneva. The specimen is well preserved.

LABELS: white label “rubricollis Chevrier Geneve”. 1 spec.

REMARKS. Europe, Switzerland, Geneva. The specimen is well preserved.

LABELS: white labels “Sicilia”, “type”, “Atomaria brunnea Hefler Sicilia”. 3 spec.

REMARKS. Europe, Italy, Sicilia. The specimens are well preserved.

LABELS: white label “<?>agerdass”. 2 spec.

REMARKS. Europe? On the plate together with beetles from the family Scydmaenidae. The specimens are well preserved.

Atomaria scutellaris (Motschulsky, 1849)

LABELS: “Atomaria scutellaris m. Hisp. mer.”, “Holotype ♂ Atomaria scutellaris Motsch. det. C. Johnson 1983”.

REMARKS. Spain. The specimen is well preserved. [Lyubarsky, 2006].

LABELS: white label “Cadix”, “Atomaria scutellaris m. Hisp. m.”. 1 spec.

REMARKS. Spain, Cadiz. The specimen is destroyed.

Atomaria sodermani Sjöberg, 1947

LABELS: white label “Step. Kirg.” 9 spec.

REMARKS. N Kasakhstan. The specimens are well preserved.

LABELS: light green round billet. 1 spec.

REMARKS. N America. Next to the pin labeled as “Atomaria crucifera”. On the plate together with *Atomaria apicalis*, *A. ocularia*. The specimen is well preserved.

Atomaria testacea Stephens, 1830

LABELS: white label “Atomaria terminata Heer Germania”. 2 spec.

REMARKS. Germany. One specimen is well preserved, the other is destroyed.

LABELS: white label “Caucasus”. 3 spec.

REMARKS. Russia, Caucasus. Two specimens are well preserved, one is destroyed.

LABELS: white label “Laibach unter <?????>. 1 spec.

REMARKS. Slovenia, Ljubljana. The specimen is well preserved.

LABELS: white label “Laibach”. 1 spec.

REMARKS. Slovenia, Ljubljana. The specimen is well preserved.

LABELS: white label “Laibach”. 1 spec.

REMARKS. Slovenia, Ljubljana. The specimen is well preserved.

LABELS: white label “Laibach”. 1 spec.

REMARKS. Slovenia, Ljubljana. The specimen is well preserved.

LABELS: white round billet. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: white triangular billet. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: white label “31 Juli”. 34 spec.

REMARKS. Locality: unknown. On the plate together with *Cryptophagus punctipennis*, *A. apicalis*, *Atomaria pusilla*, and beetles from other families: Chrysomelidae, Ptiliidae, Scydmaenidae, Staphylinidae etc. The specimens are well preserved.

LABELS: white small square, white label “in <??>avbrowth hingar 26 Septemb”, “Abraeus fimetarius m”. 1 spec.

REMARKS. Europe? On the plate together with beetles from other families: Carabidae, Histeridae, Monotomidae, Latridiidae, Ptiliidae, Scydmaenidae, Staphylinidae, and Hymenoptera. The specimen is well preserved.

LABELS: white small square, white label “30 Septemb.”. 1 spec.

REMARKS. Europe? On the plate together with *Ephistemus globulus* and beetles from other families: Cerylonidae, Curculionidae, Latridiidae, Ptiliidae etc. The specimen is well preserved.

LABELS: without labels. 3 spec.

REMARKS. Russia, Siberia? On the plate together with *A. analis*, *A. flava*, *A. fuscata*, and beetles from other families: Monotomidae, Ptiliidae, Scydmaenidae etc. The specimens are well preserved.

LABELS: white label “Caucasus”. 2 spec.

REMARKS. Russia, Caucasus. On the plate together with *Atomaria apicalis*. The specimens are well preserved.

LABELS: white label “4 April in tro<?????> salbar<??> <?????> Mish<?>. 3 spec.

REMARKS. Europe? On the plate together with *Atomaria linearis*, *Cryptophagus cellaris*, and beetles of other families

(Curculionidae, Latridiidae, Ptiliidae, Scydmaenidae, Staphylinidae etc.). The specimens are well preserved.

Atomaria turgida Erichson, 1846

LABELS: white label "Atomaria turgida Er. Saxonia". 1 spec.

REMARKS. Germany, Saxony. The specimen is well preserved.

LABELS: white label "Styria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: white label "Styria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

Atomaria umbrina (Gyllenhal, 1827)

LABELS: white label "Styria", white label "Atomaria fumata Er. Styria". 1 spec.

REMARKS. Austria. The specimen is well preserved.

LABELS: white label "Cryptophagus umbrinus Gyll. Germania". 1 spec.

REMARKS. Germany. The specimen is well preserved.

Atomaria unifasciata Erichson, 1846

LABELS: white label "Atomaria unifasciata Er. Germania". 1 spec.

REMARKS. Germany. The specimen is well preserved.

LABELS: white label "Atomaria unifasciata Sturm. Gal. mer.". 1 spec.

REMARKS. France. The specimen is well preserved.

LABELS: white label "Atomaria apicalis Er. Germania". 3 spec.

REMARKS. Germany. The specimens are well preserved.

LABELS: white label "Venetia". 1 spec.

REMARKS. Italy, Venice. The specimen is well preserved.

Atomaria vespertina Máklin, 1853

LABELS: white label "Hamar-Daban". 2 spec.

REMARKS. Russia, Buryatia, Khamar-Daban. The specimens are well preserved.

LABELS: white label "L. Baical". 1 spec.

REMARKS. Russia, E Siberia, lake Baikal. The specimen is well preserved.

LABELS: white label "baicalicus m. Sib. or." 2 spec.

REMARKS. Russia, E Siberia. The species name has not been published. The specimens are well preserved.

LABELS: white label "Laybach". 3 spec.

REMARKS. Slovenia. The specimens are well preserved.

LABELS: without label. 1 spec.

REMARKS. Europe? In the collection it was placed next to specimens labeled as "Laybach". The specimen is destroyed.

LABELS: without label. 1 spec.

REMARKS. Europe? In the collection it was placed next to specimens labeled as "Laybach". The specimen is well preserved.

LABELS: white label "<?>eister im <?>asn", white label "Turkinsk". 1 spec.

REMARKS. Russia, Republic of Buryatia, Goryachinsk. On the plate together with *Henoticus serratus* and beetles of other families: Histeridae, Latridiidae, Nitidulidae, Staphylinidae etc. The specimen is well preserved.

LABELS: pink label "fl. Arakaline<?>". 1 spec.

REMARKS. Russia? On the plate together beetles of other families: Curculionidae, Nitidulidae, Staphylinidae etc. The specimen is well preserved.

LABELS: pink label "L. Baical". 2 spec.

REMARKS. Russia, Siberia, lake Baikal. On the plate together with *Henoticus serratus*, *Caenoscelis ferruginea* and beetles from other families (Coccinellidae, Latridiidae, Nitidulidae, Staphylinidae etc.). The specimens are well preserved.

Curelius Casey, 1900

The genus consists of 6 species. Most of the species of this genus were described after the end of Motschulsky's scientific work. Motschulsky assigned specimens of this genus to the genus *Ephistemus*. He designated five species for description, but the species names were not published.

Curelius dilutus (Reitter, 1883)

LABELS: pink label with typographic font "Fl. Ischim", white label with handwritten font "Epistemus steppensis Motsch. Des. Kirg." 1 spec.

REMARKS. Ishim river, running through Kazakhstan and Russia. The species name has not been published. The specimen is well preserved.

Curelius exiguus (Erichson, 1846)

LABELS: white label "190", white label "Epistemus exiguus Er. Ital. bor." 1 spec.

REMARKS. N Italy. The specimen is well preserved.

LABELS: aquamarine label "Epistemus flavipennis Motsch. Aegiptus". 1 spec.

REMARKS. Egypt. The species name has not been published. The specimen is well preserved.

LABELS: white round billet. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: white round billet. 1 spec.

REMARKS. Europe? The specimen is well preserved.

LABELS: white label "Daghestan Epistemus fulvus Motsch. Transcauc." 1 spec.

REMARKS. Russia, Dagestan. The species name has not been published. The specimen was completely destroyed.

Curelius japonicus (Reitter, 1878)

LABELS: light green round billet, light green label "Epistemus flavus Motsch. Am. B. New York". 13 spec.

REMARKS. USA. The species name has not been published. The specimens are well preserved.

LABELS: light green square billet. 1 spec.

REMARKS. N America. In the collection it was placed to specimens labeled as "Epistemus flavus". The specimen is well preserved.

LABELS: light green square billet. 1 spec.

REMARKS. N America. In the collection it was placed next to specimens labeled as "Epistemus flavus". The specimen is well preserved.

LABELS: yellow round billet, yellow label "Epistemus testaceus Motsch. Ind. Or". 2 spec.

REMARKS. S Asia, Sri Lanka? The species name has not been published. The specimens are well preserved.

Ephistemus Stephens, 1829

The genus consists of 6 species. Most of the species of this genus were described after the end of Motschulsky's scientific work. Motschulsky designated the name of this genus as "Epistemus". He designated one species for description, but this species name was not published.

Ephistemus globulus (Paykull, 1798)

LABELS: white label "Epistemus globulus Payk. Saxonia Paris". 1 spec.

REMARKS. Europe. The specimen is well preserved.

LABELS: white label “30 Septemb.” 1 spec.

REMARKS. Europe? On the plate together with *Atomaria testacea* and beetles from other families: Ptiliidae, Curculionidae, Cerylonidae, Latridiidae etc. The specimen is well preserved.

LABELS: without label. 2 spec.

REMARKS. Europe? On the plate together with *Atomaria analis*, *A. linearis* and beetles from other families: Staphylinidae, Scydmaenidae, and Hemiptera, Hymenoptera. The specimens are well preserved.

LABELS: white label “330.”, “Epistemus dimidiatus Sturm. Bavaria Paris”. 1 spec.

REMARKS. Europe. The specimen is well preserved.

LABELS: white label “331.”, “ovulum Rosenh. Erlangen”, “Epistemus globulus? Waltl. Bavaria”. 1 spec.

REMARKS. Germany, Bavaria. The specimen is well preserved.

LABELS: white label “332.”, white label “globulus Rosenh. Erlangen”. 1 spec.

REMARKS. Germany, Bavaria. The specimen is destroyed.

LABELS: white label “Erlangen”. 1 spec.

REMARKS. Germany, Bavaria. The specimen is destroyed.

LABELS: white label “Paris unter modern den Pflanzen”. 5 spec.

REMARKS. France, Paris. The specimens are well preserved.

LABELS: light green label “Epistemus americanus Motsch. Am.bor.” 23 spec.

REMARKS. N. America. The species name has not been published. The specimens are well preserved.

LABELS: light green round billet. 7 spec.

REMARKS. N America. In the collection these specimens were placed next to specimens labeled as “Epistemus americanus”. The specimens are well preserved.

LABELS: red square billet, light green round billet. 1 spec.

REMARKS. N America. In the collection it was placed next to specimens labeled as “Epistemus americanus”. The specimen is well preserved.

LABELS: white label “Paris unter modern den Pflanz”. 17 spec.

REMARKS. France, Paris. 16 specimens are well preserved, 1 specimen is completely destroyed.

LABELS: white label “gyrinoides Westw im malum”, white label “Epistemus ovulum ? Er. Anglia”. 1 spec.

REMARKS. England. The specimen is damaged.

LABELS: white label “Paris”, white label “Epistemus confinis Steph. Bavaria Gallia”. 1 spec.

REMARKS. Europe, Paris. The specimen is well preserved.

LABELS: white label “T<???????>”. 1 spec.

REMARKS. Europe. The specimen is well preserved.

LABELS: white label “Laibach”. 1 spec.

REMARKS. Slovenia. The specimen is well preserved.

LABELS: white label “Genova”. 1 spec.

REMARKS. Italy, Genoa. The specimen is well preserved.

Tisactia Casey, 1900

There is only one species in the genus, described after the completion of Motschulsky's work.

Tisactia subglabra Casey, 1900

LABELS: light green round billet. 1 spec.

REMARKS. N America. The only specimen was found among the American representatives of the genus *Ephistemus*. The specimen is well preserved.

Hypocoprus Motschulsky, 1839

Motschulsky described the only species of this genus. He designated two more species for description and published one of them. Currently, the genus includes one species, widespread in the Holarctic.

Hypocoprus latridioides Motschulsky, 1839

LABELS: white label “Hypocoprus formicetorum Mots. R. mer.”, “Simbirsk cum F. rufa major”, “Upocoprus formicetorum cum For. rufa major Simbirsk”. 1 spec.

REMARKS. Lectotype, Russia, Ulyanovsk. The specimen is well preserved. [Lyubarsky, 2006].

LABELS: pink label “Piatigorsk Ustar? Trosda? Usanforde? Unisse?”, white label “Upocoprus latridioides m. Ustor? Trosdan? Rfamsuisi? Auf unissiasan Piatigorsk”, red label “Paralectotypus J.C. Otero des.”, 1 spec.

REMARKS. Lectotype, S Russia, Stavropol Krai, Pyatigorsk. The specimen is well preserved [Lyubarsky, 2006].

LABELS: pink label “Bel Agatish im Bobakmish”, white label “Urocoprus simplex mihi unter Bobakmish Bel Agatish Camp. Kirg.”, white label “Hypocoprus latridioides Motsch. Khnzorian det.” 26 spec.

REMARKS. N Kazakhstan, Borodulikha District, Abai region. The species name has not been published. The specimens are well preserved.

LABELS: without label, 1 spec.

REMARKS. N Kazakhstan? Next to the pin labeled as “Urocoprus simplex”. The specimen is well preserved.

LABELS: white label “type”, “Monotoma caucasica Kolent Caucas.”. 1 spec.

REMARKS. Caucasus. The specimen is well preserved.

LABELS: gold metallic shiny square billet, white label “Hypocoprus caucasicus Kolent. non Monotoma”, white label “Monotoma caucasica Kolenati”. 1 spec.

REMARKS. Caucasus? The specimen is well preserved.

LABELS: pink label “Turkinsk Form. rufa”. 19 spec.

REMARKS. Russia, Far Eastern Federal District, Buryatia, Goryachinsk. The specimens are well preserved.

LABELS: pink label “Step. Kirg.” and without labels. 32 spec.

REMARKS. N Kazakhstan. The specimens are well preserved.

LABELS: gold metallic shiny square billet, pink label “Rus. Mer.”, white label “formicetorum Motchul. Russ.mer.” 1 spec.

REMARKS. Russia. The specimen is well preserved.

LABELS: white label “Simbirsk cum F rufa major”, “Upocoprus formicetorum cum For. rufa Simbirsk”. 7 spec.

REMARKS. Russia, Ulyanovsk. On the plate together with *Formica* sp. 5 specimens are well preserved, 2 specimens completely destroyed.

LABELS: pink label “Camp. Kirgis.” 3 spec.

REMARKS. N Kazakhstan. The specimens are well preserved.

LABELS: white label “Duhexgana”. 2 spec.

REMARKS. Unknown locality. The specimens are well preserved.

Family Erotylidae Latreille, 1802

At the time of Motschulsky, a significant part of the species of the family Erotylidae belonged to the family Cryptophagidae and were located in Motschulsky's collection along with other Cryptophagidae. A detailed overview of these species is not included in this article, however the species will be listed.

Subfamily Xenoscelinae Ganglbauer, 1899

Macrophagus Motschulsky, 1845

Motschulsky described the genus and species. Currently this genus includes 2 species [Leschen, Wergzinowicz, 1998].

Macrophagus robustus Motschulsky, 1845

LABELS: white label "Macrophagus robustus Des. Kirg. Motsch.", "Lectotype Macrophagus robustus Mots. det. Lyubarsky". 1 spec.

REMARKS. N Kasakhstan. Lectotype. The specimen is well preserved. [Lyubarsky, 2006].

LABELS: white label "Macrophagus robustus m. Des. Kirg.", 1 spec.

REMARKS. N Kasakhstan. The specimen is well preserved.

Arrowcryptus Leschen et Wegrzynowicz, 2008

This genus was recently described [Leschen, Wegrzynowicz, 2008]. Motschulsky assigned specimens of this genus to the genus *Antherophagus*. Both species of this genus were described after the completion of Motschulsky's scientific work.

Arrowcryptus skelleyi Leschen et Wegrzynowicz, 2008

LABELS: dark blue round billet, dark blue label "Antherophagus rufotestaceus Motsch. Cap. b. sp.", 1 spec.

REMARKS. S Africa, Republic of South Africa. The species name has not been published. The specimen is well preserved.

LABELS: dark blue round billet, dark blue label "Antherophagus subparallelus Motsch. Cap. b. sp.", 1 spec.

REMARKS. S Africa, Republic of South Africa. The species name has not been published. The specimen is well preserved.

Arrowcryptus jucundus (Arrow, 1936)

LABELS: dark blue round billet, dark blue label "Antherophagus capensis Motsch. Cap. b. sp.", 1 spec.

REMARKS. S Africa, Republic of South Africa. The species name has not been published. The specimen is well preserved.

LABELS: dark blue round billet, 1 spec.

REMARKS. S Africa. In the collection it was placed next to specimen labeled as "A. capensis". The specimen is well preserved.

LABELS: white label "Cap", 1 spec.

REMARKS. S Africa, Republic of South Africa. In the collection it was placed next to specimen labeled as "A. capensis". The specimen is well preserved.

Xenocryptus Arrow, 1929

This genus was described from Australia, and an African species has recently been discovered [Wegrzynowicz, 2000]. Both species of this genus were described after the completion of Motschulsky's scientific work. Motschulsky assigned specimens of this genus to the genus *Antherophagus*.

Xenocryptus africanus Wegrzynowicz, 2000

LABELS: dark blue label "Antherophagus Dragii Chevr. Cap". 1 spec.

REMARKS. S Africa, Republic of South Africa. The specimen is well preserved.

LABELS: dark blue round billet. 1 spec.

REMARKS. S Africa, Republic of South Africa. In the collection it was placed next to specimen labeled as "A. Dragii". The specimen is well preserved.

Subfamily Cryptophilinae Casey, 1900

Cryptophilus Reitter, 1874

Most species of this genus (about 25 species) were described after the end of Motschulsky's scientific work. Two of the species he described are still valid today, one was synonymized, and two names (he assigned them to the genus *Atomaria*) have not been published.

Cryptophilus angustus (Rosenhauer, 1856)

= *Cryptophilus simplex* Wollaston, 1857; = *Cryptophilus integer* Heer, 1841 [Esser, 2016, 2017; Gimmel *et al*., 2019].

LABELS: yellow label "Cryptophagus *ceylonicus* Motsch. Ceylan", white label "Lectotype Cryptophagus *ceylonicus* Motsch." 1 spec.

REMARKS. Lectotype, Sri Lanka, probably Nuwara Eliya resort. The specimen is well preserved [Lyubarsky, 2006].

LABELS: yellow round billet, yellow label "Atomaria striatopunctata Motsch. Ind. or." 1 spec.

REMARKS. S Asia. The species name has not been published. The specimen is well preserved.

LABELS: yellow round billet, yellow label "Atomaria curvicollis Motsch. Ind. or." 4 spec.

REMARKS. S. Asia. The species name has not been published. The specimens are well preserved.

Cryptophilus quadrisignatus Motschulsky, 1860

LABELS: white label "Cryptophagus 4signatus Motsch Japan", white label "Lectotype Cryptophagus quadrisignatus Motsch." 1 spec.

REMARKS. Japan. The specimen is well preserved. [Lyubarsky, 2006].

LABELS: orange square billet, red rectangular billet. 2 spec.

REMARKS. Japan? The specimens are well preserved.

LABELS: orange square billet, red rectangular billet. 2 spec.

REMARKS. Japan? One specimen is well preserved, one specimen is slightly damaged.

LABELS: orange square billet, red rectangular billet. 1 spec.

REMARKS. Japan? In the collection it was placed next to the specimen labeled as *Cryptophilus quadrisignatus*. On the plate together with *Cryptophagus decoratus* Reitter, 1874. The specimen is well preserved.

Toramus Grouvelle, 1916

This genus and most of the species of this genus (43 species) were described after the end of Motschulsky's scientific

work. Motschulsky classified representatives of this genus within the genus *Atomaria*. He designated five species for description, but the names of these species were not published. A key for the genus *Toramus*, which includes many species, is available in [Sen Gupta, 1967].

Toramus pulchellus (LeConte, 1863)

LABELS: light green round billet, white label "New York", light green label "Atomaria crucifera Motsch. Am. Bor." 8 spec.

REMARKS. N America. The species name has not been published. The specimens are well preserved.

LABELS: light green round billet. 6 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". On the plate together with *Atomaria apicalis*, *A. fuscata*, *A. lederi*, *A. lewisi*. The specimens are well preserved.

LABELS: light green round billet. 2 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". The specimens are well preserved.

LABELS: red square, light green round billet. 7 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". The specimens are well preserved.

LABELS: red square, light green round billet. 18 spec.

REMARKS. N America. Next to the pin "Atomaria crucifera". The specimens are well preserved.

LABELS: light green round billet. 3 spec.

REMARKS. N America. Next to the pin labeled as "Atomaria crucifera". The specimens are well preserved.

LABELS: light green round billet, light green label "Atomaria fusula Motsch. Am. Bor. New York". 2 spec.

REMARKS. N America. The species name has not been published. On the plate together with *Atomaria apicalis*, *A. fuscata*. The specimens are well preserved.

Toramus discoideus (Sharp, 1900)

LABELS: dark-green label "Atomaria bifasciata Motsch. Am. Centr. Obispo". 3 spec.

REMARKS. N America, Central Coast of California? The species name has not been published. One specimen is well preserved, the other is destroyed.

Toramus lateralis (Sharp, 1900)

LABELS: dark-green round billet, dark-green label "Atomaria tessellata Motsch. Am. Centr. Obis." 4 spec.

REMARKS. N America, Central Coast of California? The species name has not been published. The specimens are well preserved.

Toramus fuscicornis (Champion, 1913)

LABELS: dark-green round billet, dark green label "Atomaria nitida Motsch. Am. centr. Obis". 2 spec.

REMARKS. N America, Central Coast of California? The species name has not been published. The specimens are well preserved.

Toramus taprobanae Grouvelle, 1919

LABELS: yellow label "Atomaria bipunctata Motsch. Ind. Or.". 2 spec.

REMARKS. S Asia. The species name has not been published. The specimens are well preserved.

Toramus sp.1

LABELS: dark green triangular billet, dark green label "Atomaria picta Motsch. Brasil N. hib." 3 spec.

REMARKS. S America, Brazil. The species name has not been published. The specimens are well preserved.

LABELS: white label "Atomaria picta Motsch. Columbia." 1 spec.

REMARKS. S America, Panama or Colombia. The species name has not been published. The specimen is well preserved.

Subfamily Loberinae Bruce, 1951

Loberus LeConte, 1861

This genus and almost all species of this genus (75 species) were described after the end of Motschulsky's scientific work. Motschulsky described the genus *Glisonotha* Motschulsky, 1863, which is synonymized under *Loberus* [Leschen, Wergzinowicz, 1998]. Motschulsky described 2 species in this genus and identified 2 more for further description.

Loberus setosus (Motschulsky, 1863)

LABELS: yellow round billet, white label "type", yellow label "Glisonotha setosa Motsch. Ind.Or. Birma, Ceylon". 7 spec.

REMARKS. S Asia: Myanmar, Sri Lanka. The type species of the genus is designated by Leschen, Wergzinowicz [Leschen, Wergzinowicz, 1998]. 6 specimens are well preserved, one is partially damaged.

Loberus nigripennis (Motschulsky, 1863)

LABELS: yellow round billet, white label "type", white label "Tarsen 5, 5, 4", yellow label "Glisonotha nigripennis Motsch. Ceylon". 1 spec.

REMARKS. Sri Lanka, probably Nuwara Eliya resort. The specimen is well preserved.

Loberus sp.1

LABELS: yellow round billet, yellow label "Glisonotha castanea Motsch. Ind.or. Birma". 1 spec.

REMARKS. Myanmar. The species name has not been published. The specimen is well preserved.

Loberus sp.2

LABELS: yellow round billet, yellow label "Glisonotha umbratica Motsch. Ind.or. Birma". 6 spec.

REMARKS. Myanmar. The species name has not been published. The specimens are well preserved.

LABELS: yellow round billet. 2 spec.

REMARKS. S Asia. Next to the pin labeled as "Glisonotha umbratica". The specimens are well preserved.

Loberus sp.3

LABELS: dark green triangular billet. 2 spec.

REMARKS. S America? The specimens are well preserved.

Subfamily Languriinae Crotch, 1873

Hapalips Reitter, 1877

This genus and all species of this genus (57 species) were described after the end of Motschulsky's scientific work. Motschulsky classified representatives of this genus into the genus *Telmatophilus*. He designated one species for description, but the name of this species was not published.

Hapalips cephalotes Grouvelle, 1919

LABELS: dark-green round billet, dark green label "Telmatophilus columbinus Motsch. Columbia". 2 spec.

REMARKS. S America, Panama or Colombia. The species name has not been published. The specimens are well preserved.

Discussion

The vast majority of specimens of the genus *Atomaria* in the Motschulsky's collection are from the Holarctic region. Currently, about 240 species of the genus *Atomaria* have been described. The Motschulsky's collection contains 47 species of this genus (20% of the world's species diversity). Motschulsky described two species of this genus (*A. kamtschatica* Motschulsky, 1845, *A. scutellaris* (Motschulsky, 1849)), and planned to describe, but did not publish, 14 species.

In general, Motschulsky did not identify the species of the genus *Atomaria* very well. Many species in the collection were identified incorrectly. Among the species planned for description, there would have been many new ones, if the description had taken place. New species from the Nearctic would have appeared, since the fauna of North America was completely unstudied. Thus, Motschulsky was able to correctly designate several species of North American fauna: prepared for description "Atomaria infuscata" = *Atomaria coloradensis* Casey, 1900; prepared for description "Atomaria fuscofasciata" = *A. lineola* Notman, 1920; prepared for description "Atomaria fusculus" = *A. macra* (Casey, 1900). But there were many mistakes. For example, among the species planned for description as "Atomaria crucifera", the following specimens are presented: *Toramus pulchellus*, *Atomaria apicalis*, *A. arquaticollis*, *A. ephippiata*, *A. oblongula*, *A. ocularia*, *A. sodermani* (if we include in this species planned for description all the pins standing in the collection after the designated label "crucifera", then these pins are without labels). Among the species planned for description as "Atomaria fusula", the following specimens are presented: *Toramus pulchellus*, *Atomaria apicalis*, *A. fuscata*.

The identification of European species is also not very good. For example, among the species planned for description as "Atomaria obtusa" = *Atomaria fuscata*, "Atomaria angulicollis" = A. *fuscata*, "Atomaria dimidiata" = *A. mesomela*, "Atomaria vittula" = *A. nigrirostris*, "A. dilutella" = *A. ornata*, "A. scydmenoides" = *A. peltata*, "A. sp. nov." = *A. pusilla*, "A. baicalicus" = *A. vespertina*. Motschulsky planned to describe 14 species of the genus *Atomaria*, of which only 4 would be considered valid if published. Most of the European species that Motschulsky intended to describe ended up being synonyms; his "taxonomic instinct" failed him with the genus *Atomaria*.

Currently, about 6 species of the genus *Curelius* have been described. Motschulsky's collection contains 3 species of this genus (50% species diversity). Motschulsky planned to describe, but did not publish, 5 species. The two species ("Epistemus flavipennis", "Epistemus fulvus") would probably become synonyms of the species *Curelius exiguus*, described in 1846. The species that "Epistemus steppensis" should has been described is *Curelius dilutus*, which was only described in 1883. The species that "Epistemus flavus" and "Epistemus testaceus" should have been described are *Curelius japonicus*, described only in 1878.

Currently, about 6 species of the genus *Ephistemus* have been described. In Motschulsky's collection there is only one species of the genus. The species of "Epistemus americanus" intended for description is *Ephistemus globulus* (Paykull, 1798).

Motschulsky described the genus *Hypocoprus* Motschulsky, 1839 and in it described and proposed for description three species ("Hypocoprus formicetorum, Upocoprus latridioides, Urocoprus simplex"), but they all apparently belong to the same species (*Hypocoprus latridioides* Motschulsky, 1839).

The following genera of the family Erotylidae were determined in the Motschulsky's collection: *Macrophagus* — 1 species, *Arrowcryptus* — 2 species, *Xenocryptus* — 1 species, *Cryptophilus* — 2 species, *Toramus* — 6 species, *Loberus* — 5 species, *Hapalips* — 1 species.

The genera *Arrowcryptus* and *Xenocryptus* were described from South Africa quite recently, and their presence in Motschulsky's collection is particularly interesting. Motschulsky identified these genera as *Antherophagus*. Motschulsky allocated three species for description, which now belong to the genus *Arrowcryptus*; the latter was only described in 2008. Species "Antherophagus rufotestaceus" and "Antherophagus subparallelus" are *Arrowcryptus skelleyi*, which was only described in 2008, and "Antherophagus capensis" = *Arrowcryptus jucundus*, which was only described in 1936. Motschulsky rightly singled out these species for description, since the fauna of South Africa in his time was completely unstudied, and he would have described good species.

Motschulsky had a poor ability to differentiate between the species of the genus *Cryptophilus*. Several species that he planned to describe and had already described belong to the very common species *Cryptophilus angustus*: "Cryptophagus ceylonicus", "Atomaria striatopunctata", "Atomaria curvicollis". His species "Cryptophagus 4signatus" is valid, it is *Cryptophilus quadrisignatus* Motschulsky, 1860. Of the entire diversity of species of the genus *Cryptophilus* (about 25 species), only 2 species are represented in Motschulsky's collection.

Of the entire diversity of species of the genus *Toramus* (43 species), Motschulsky's collection contains 6 species (14% of the world's fauna). Motschulsky identified this genus as *Atomaria*. "Atomaria crucifera" = *Toramus pulchellus* (LeConte, 1863); "Atomaria bifasciata" = *Toramus discoideus* Sharp, 1900; "Atomaria tessellata" = *Toramus lateralis* Sharp, 1900; "Atomaria nitida" = *Toramus fuscicornis* Champion, 1913; "Atomaria bipunctata" = *Toramus taprobanae* Grouvelle, 1919; "Atomaria picta" = *Toramus* sp.1. Thus, with the exception of *Toramus pulchellus*, all the species planned by Motschulsky for description would have been new

species if they had been described. This is due to the lack of study of the entomofauna of North America.

The diversity of the genus *Loberus* is very large (75 species); Motschulsky's collection contains 5 species (7% of the world's fauna). These species he described or planned to describe.

The diversity of the genus *Hapalips* is very large (57 species); Motschulsky's collection contains 1 species. Motschulsky identified this genus as *Telmatophilus*. "Telmatophilus columbinus" = *Hapalips cephalotes* Grouvelle, 1919. This means that the species Motschulsky intended to describe would have been a new species, and it was not described until half a century later.

We can check the "intuition of a taxonomist" by V. Motschulsky. His collection includes 21 species of Atomariinae that have been confidently identified, as well as those that have been described and correctly planned for description. 11 species are represented in the collection, but have not been identified. These species may not be taken into account when assessing the intuition of a taxonomist. 15 species of Atomariinae in the collection were incorrectly identified. "Intuition" can be expressed as 21:15 (= 1.4). To correctly assess his intuition, it is necessary to take into account the complexity of the group and the low technical equipment.

It is extremely difficult to assess the abundance of species in nature based on their representation in the collection, but such attempts have been made [Panfilov, 1976]. In general, with reservations about the specifics of a particular species, it can be concluded that the rich representation in the collection indicates a sufficient abundance in nature. Panfilov studied collections numbering many thousands of specimens and divided the species into classes according to their representation in the collection, but our material is not extensive enough. Therefore, we can select only the most represented species in the collection, which can be assumed that 150 years ago they were quite numerous in nature.

The following species of Atomariinae are most abundant: *Atomaria analis*, *A. apicalis*, *A. basalis*, *A. elongatula*, *A. fuscata*, *A. pusilla*, *A. testacea*, *A. vespertina*; *Ephistemus globulus*; *Hypocoprus latridioides*. Many of these species are synanthropic, inhabiting homes and food supplies, which may explain their high representation in collections [Lyubarsky, 2019; Inventory on alien beetles of European Russia, 2019]. The relatively low level of representation in the collections of the following species is interesting: *A. atra*, *A. atrata*, *A. lewisi*, *A. linearis*, *A. nigrirostris*. As for Cryptophaginae, the following species are the most abundant: *Cryptophagus acutangulus*, *C. denticulatus*, *C. punctipennis*; *Henoticus serratus*; *Paramecosoma melanocephalim* [Lyubarsky, 2025]. Many of these species are synanthropic [Lyubarsky, 2019].

The relatively low level of representation in the collections of the following species is interesting: *Cryptophagus labilis*, *C. quadrimaculatus*, *C. reflexus*, *C. scanicus*, *S. schmidtii*, *C. setulosus.*

It is quite difficult to find out the reasons for the particularly abundant or, conversely, relatively small representation in the collection of a particular species. These may be features related to the location or the collectibles of this particular collector. As far as is known, V. Motschulsky collected insects in the vicinity of settlements: at resorts, in city parks and suburbs, etc. The representation of a species may be related to its economic history. For example, the currently very common *Atomaria linearis* is relatively poorly represented in the Motschulsky collection. Perhaps this is due to the fact that industrial sugar production from beetroot began to develop particularly actively in Russia in the second half of the 19th century [Gorobets, 2022]. *Atomaria linearis* is phytophage, its larvae develop on beetroot.

Until recently, it was extremely difficult to identify species of the genus *Atomaria* from North America. However, a book appeared [Pelletier, Hebert, 2019], which describes many new species and indicates the distribution of those already described. Unfortunately, this work does not provide identification keys.

Identification key to species of the subgenus *Atomaria* (*Anchicera*) from North America

1. Body black (sometimes elytra dark brown) 2
— Body red, brown or two-color 4
2. Lateral margin of pronotum not visible from above. 1.6–1.8 mm ..... *atra* (Herbst)
— Lateral margin of pronotum visible from above 3
3. Body longer. Length of 3rd antennomere equal to length of 5th. 1.5–2 mm ..... *morio* Kolenati
— Body shorter. Length of 3rd antennomere greater than length of 5th. 1.2–1.3 mm ..... *nigritaria* Pelletier
4. Body two-color 5
— Body red or brown 10
5. Pronotum red 6
— Pronotum dark-brown to black 8
6. Elytra black at base. 1.4–1.5 mm ..... *distincta* Casey
— Elytra with an indistinctly defined transversal band in the middle 7
7. Body shorter. 7th antennomere significantly elongated, 6th and 8th antennomeres slightly elongated, club not transverse. 1.2–1.5 mm ..... *laetula* LeConte
— Body longer. 7th antennomere slightly elongated, 6th and 8th antennomeres subquadrate, club transverse. 1.5–2.0 mm ..... *ornata* Heer
8. Elytra with black transversal band in middle. 1.5–1.6 mm ..... *ephippiata* Zimmerman
— Elytra black at base 9
9. Black coloration on elytra gradually turns into red. 1.5–1.7 mm ..... *basalis* Erichson
— Black coloration on elytra sharply demarcated from red. 1.5–1.7 mm ..... *mesomela* (Herbst)
10. Pronotum not narrowed basally 11
— Pronotum narrowed basally 18
11. Lateral margin of pronotum visible from above along its entire length, from base to anterior corners. 1.6 mm ..... *neomunda* Pelletier
— Lateral margin of pronotum not visible from above along its entire length, visible only in basal part 12
12. 1st antennomere very elongated, 2x as long as wide 13
— 1st antennomere not very elongated, 1.5x as long as wide 15
13. 5th and 7th antennomeres strongly elongated. 1.8 mm ..... *parallelicollis* Pelletier
— 4–8th antennomeres subquadrate. 1.3–1.6 mm 14

14. 1st antennomere straight basally, strongly expanded apically. 9th antennomere strongly transverse. Pronotum with more pronounced middle angulation on sides and punctures large and dense. 1.3–1.6 mm ..... *turgida* Erichson
— 1st antennomere curved basally, slightly expanded apically. 9th antennomere subquadrate or weakly transverse. Pronotum with less pronounced middle angulation on sides and punctures small and sparse. 1.3–1.6 mm ..... *apicalis* Erichson
15. 4–8th antennomeres transverse, 9th and 10th antennomeres transverse. 15
— 5th and 7th antennomeres not transverse..... 16
15. Pronotum dark brown to black, slightly transverse, about 1.3x as wide as long. 1.3–1.6 mm ..... *testacea* Stephens
— Pronotum red, strongly transverse, about 1.5–1.6x as wide as long. 1.3–1.4 mm..... *inepta* Casey
16. Pronotum red, weakly transverse, about 1.4x as wide as long. 5th and 7th antennomeres weakly elongate 17
— Pronotum dark-brown, strongly transverse 1.5x as wide as long. 5th and 7th antennomeres strongly elongate. 1.4–1.7 mm ..... *postpallens* Casey
17. 9th and 10th antennomeres transverse, 4th antennomere subquadrate. 1.3–1.6 mm ..... *lederi* Johnson
— 9th and 10th antennomeres subquadrate, 4th antennomere elongate. 1.7 mm ..... *nubipennis* Casey
18. Lateral margin of pronotum visible from above along its entire length, from base to anterior corner 19
— Lateral margin of pronotum not visible from above along its entire length, it visible only in basal part..... 22
19. Body light red. 5th antennomere strongly elongate, more than 2x as long as wide. 1.5–1.9 mm .... *arcuaticollis* Pelletier
— Pronotum darker than elytra..... 20
20. Sides of pronotum strongly rounded, maximum width of pronotum in front of middle of length. Pronotum darker than elytra. 1.5 mm ..... *hudsonica* Pelletier
— Sides of pronotum slightly rounded, maximum width of pronotum in middle of length 21
21. Pronotum darker than elytra, elytra light brown. 1.5 mm ..... *aleutica* Casey
— Pronotum and elytra dark brown to black. 1.5–1.8 mm.... ..... *kamtschatica* Motschulsky
22. 1st antennomere strongly elongated, about 1.5-2x as long as wide 23
— 1st antennomere shorter 24
23. 1st antennomere straight, not curved basally. Elytral pubescence simple, short and appressed. 1.7 mm .... *gilvipennis* Casey
— 1st antennomere curved basally. Elytral pubescence double, suberect. 1.3–1.6 mm..... *lewisi* Reitter
24. 9th and 10th antennomeres transverse..... 25
— 9th and 10th antennomeres subquadrate or elongate..... 27
25. Body length less than 1.0–1.2 mm ..... *pusilla* (Paykull)
— Body length greater than 1.2 mm..... 26
26. Pronotum red. 1.4–1.8 mm ..... *munda* Erichson
— Pronotum dark brown. 1.5–1.8 mm ..... *peltata* Kraatz
27. 3rd antennomere approximately equal to 5th 28
— 3rd antennomere longer to 5th 29
28. Elytra about 2.6x as long as pronotum. 1.5–1.8 mm .... *brevicollis* Casey
— Elytra about 2.2x as long as pronotum. 1.6 mm .... *nigrirostrisoides* Pelletier
29. Pronotum dark brown. 30
— Pronotum red or light brown..... 31
30. Body smaller, length 1.2–1.4 mm ..... *sodermani* Sjöberg
— Body larger, length 1.6–1.7 mm..... ..... *fulvipennis* Mannerheim
31. Sides of pronotum strongly convex and strongly convergent apically and basally, forming angle near middle of length 32
— Sides of pronotum weakly rounded, not forming angle.... 33
32. Maximum width of pronotum in middle of length. 1.3–1.7 mm ..... *fuscata* Schönherr
— Maximum width of pronotum in front of middle of length. 1.5–1.6 mm ..... *oblongula* Casey
33. Eyes large, about 40% width of head. Pronotal punctures moderately large and dense. Maximum width of elytra in middle. 1.5–1.6 mm..... *ocularia* Pelletier
— Eyes smaller, about 25% width of head. Pronotal punctures moderately small and sparse. Maximum width of elytra in front of middle. 1.3–1.7 mm..... *salicicola* Pelletier

Conclusion

In total, Motschulsky's collection contains 60 species from 9 genera of the subfamily Cryptophaginae and 53 species from 5 genera of the subfamily Atomariinae; in total, 113 species from 14 genera belong to the family Cryptophagidae in the collection. The collection contains 293 specimens of Cryptophaginae and 635 specimens of Atomariinae. In total, 928 specimens in the collection belong to the family Cryptophagidae.

Among the Atomariinae, Motschulsky prepared 23 species for description: 14 *Atomaria*, 5 *Curelius*, 1 *Ephistemus*, and 3 *Hypocoprus*. For the genus *Atomaria*, 5 species have been correctly prepared for description, and for the genus *Curelius*, 2 species.

Thus, about a third of the species he prepared for description would have been valid if they had been described.

Of considerable interest is the Motschulsky's collection, which includes representatives of fauna from almost all biogeographic regions. It is possible to trace the slow progress in the study of the world fauna of the Cryptophagidae family and raise questions about changes in the entomofauna over the past 150 years, focusing on the comparative abundance and occurrence of species, as well as evaluate changes in the understanding of species caused primarily by advances in microscopic technology.

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