

**ON THE DISTRIBUTION OF THE TENEBRIONID TRIBE PLATYSCOLIDINI
(COLEOPTERA, TENEBRIONIDAE).**

Leonid V. EGOROV*

ABSTRACT

The world fauna of the tribe Platyscolidini (Coleoptera, Tenebrionidae) comprises 182 species from 8 genera (EGOROV, 2004). This group is found in Palaearctic area. The overwhelming majority of tenebrionid tribe Platyscolidini species inhabit Asia, while just two of them (*Oodescolis melas* (Fisch.) and *Platyscolis hungarica* Friv.) can be found in Europe only. The Platyscolidini fauna of China (50 species from 4 genera), Afghanistan (39 species from 2 similar genera *Bioramix* Bat. and *Trichomyatis* Schust.), Kazakhstan (34 species from 4 genera in the Asian part), Tadjikistan (34 species from 6 genera), North India (28 species from 2 genera) and Kyrgyzstan (25 species from 3 genera) are the most diverse. The centers of Platyscolidini species diversity are situated in the mountain regions of mentioned countries. Four species inhabit Europe, 6 are found in Russia (3 in the European part and 5 in the Asian part).

Keywords : Tenebrionidae, Platyscolidini, world fauna, distribution.

RÉSUMÉ

La faune mondiale de la tribu Platyscolidini (Coleoptera, Tenebrionidae) contient 182 espèces appartenant à 8 genres (EGOROV, 2004). Ce groupe n'est distribué que dans la région Paléarctique. L'immense majorité des espèces de la tribu Platyscolidini habitent en Asie, mais deux d'entre elles ne se rencontrent qu'en Europe (*Oodescolis melas* (Fisch.) et *Platyscolis hungarica* Friv.). Les faunes de Platyscolidini les plus variées sont celles de Chine (50 espèces de 4 genres), d'Afghanistan (39 espèces de 2 genres proches *Bioramix* Bat. et *Trichomyatis* Schust.), du Kazakhstan (34 espèces de 4 genres dans la partie asiatique), du Tadjikistan (34 espèces de 6 genres), de l'Inde du Nord (29 espèces de 2 genres) et du Kirghizistan (25 espèces de 3 genres). Les centres de diversité spécifique des Platyscolidini sont concentrés dans les régions de montagne des pays nommés. Quatre espèces se rencontrent en Europe, et six en Russie (3 espèces dans la partie européenne et 5 dans la partie asiatique).

Mots-clés : Tenebrionidae, Platyscolidini, la faune mondiale, distribution.

INTRODUCTION

The world fauna of the tribe Platyscolidini (Coleoptera, Tenebrionidae) comprises 182 species from 8 genera (EGOROV, 2004). This group is found in Palaearctic area, moreover, its southern border coincides with the part of Palaearctic southern border in the Himalayas. The mountain regions of Asia, such as the Tien Shan, the Pamirs, the Hindu Kush, the Karakorum Range, the unlun Shan, the Himalayas, as well as Northern and Central China mountains are the main centers of species diversity. The tribe representatives are the typical elements of mountain Asia surface fauna; some species are regarded as agricultural and pasturable plants vermin. The classification of the

tribe, developed in detail by KASZAB (1940), was sufficient for that time, but it has become obsolete and needs fundamental revision. In the present research, a novel approach to tribe classification is suggested. The proposals are based on our study of new extensive data from different parts of Asia, analysis of supplement morphometric features and recent species distribution information (EGOROV, 2004). The recent revision of genus *Platyscolis* Latr. (EGOROV, 1989) and *Somocoelia* Kr. (EGOROV, 1998), subgenera *Trichoplatyscolis* Rein. and subgenera *Leipopleura* Seidl. of the genus *Bioramix* Bat. (EGOROV, 1990) was done. The species distribution data was included into the 'Catalogue of Palaearctic Coleoptera' (EGOROV, in

*Chuvash State Pedagogical University, K. Marx str. 38, Cheboksary, 428000 Russia
11/525, Kadykova st., Cheboksary, Chuvashia, Russia, 428037 Russia
E-mail: rektorat@chgpu.edu.ru

litt.). The distribution data of all 8 Platyscelidini genera representatives is generalized and cited in this paper.

MATERIAL

The studied material (including type specimen) was obtained from the following collections and institutions (curators' names are given in parentheses): Zoological Institute, Russian Academy of Sciences, St.-Pet rsburg (G.S. Medvedev), Zoological Museum, Moscow State University, Moscow (N.B. Nikitsky), Zoological Museum, Odessa State University, Odessa (S. Y. Blinshteyn), Staatliches Museum fr Tierkunde, Dresden (R. Krause), Hungarian Natural History Museum, Budapest (Z. Kaszab, O. Merkl), Naturhistorisches Museum, Wien (M. Jch), Zoologische Staatssammlung, Mnchen (G. Scherer), Zoologist Museum, Copenhagen (O. Martin), Institut fr Pflanzenschutzforschung, Eberswalde (L. Zerche), Museum fr Naturkunde der Humboldt-Universitt, Berlin (F. Hieke), Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn (H. Roer), British Museum (Natural History), London (M. Kerley).

The total amount of studied specimen exceeded 25000, including 150 type ones.

RESULTS

The literature review and the study of collection material makes it possible to obtain more specific information on distribution the tenebrionid tribe Platyscelidini. The results are presented in table 1. The abbreviations correspond to the ones used in the * Catalogue of Palaearctic Coleoptera * (L BL, 2003).

DISCUSSION

On the basis of table 1, the following conclusions can be drawn. The overwhelming majority of tenebrionid tribe Platyscelidini species inhabit Asia, while just two of them (*Oodescelis melas* (Fisch.) and *Platyscelis hungarica* Friv.) can be found in Europe only. The Platyscelidini fauna of China (50 species from 4 genera), Afghanistan (39 species from 2 similar genera *Bioramix* and *Trichomyatis*), Kazakhstan (34 species from 4 genera in the Asian part), Tadjikistan (34 species from 6 genera), North India (28 species from 2 genera) and Kyrgyzstan (25 species from 3 genera) are the most diverse. The centers of Platyscelidini species diversity are situated in the mountain regions of mentioned countries. Four species inhabit Europe, 6 are found in Russia (3 in the European part and 5 in the Asian part).

There are several reasons to explain the largest Platyscelidini species diversity in China. First of all, China occupies vast territory with mountain ranges of different origin (the Tibet, the Tien Shan, the Kunlun Shan and others). Second, the historical beginnings of the taxon can, perhaps, be bound up with one of China regions. It should be noted, that tenebrionid tribe Platyscelidini species weren't revealed in the south-eastern part of China (provinces Anhui, Fujing, Guandong, Guanxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Shanghai, Taiwan, Yunnan, Zhejiang) as well as in the north-eastern provinces (Heilongjiang, Ilin).

The highest diversity of tribe genera is found in Tajikistan fauna. This fact can be explained by the close location of several uplands in Tajikistan (the Gissaro-Darvas, the  lay, the Pamirs, northern spurs of the  rakorum and the unlun Shan) and the south-western Tien Shan spurs, in which Platyscelidini fauna differs markedly in comparison with the other nearby regions.

From the present-day distribution of tribe representatives one can establish that during evolution adaptive radiation occurred mostly in Asian mountain conditions. The Platyscelidini winglessness conditioned the great amount of endemic species of individual uplands and even mountain ridges. Just several species settled European and Asian steppes and occupy vast area at present time.

The presented results are not comprehensive. Undoubtedly, Platyscelidini fauna composition and distribution will be given more exact estimation, when new species are revealed, presumably in Afghanistan and China.

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	Bioramix Bat.	Microplatyscelis Kasz.	Myatis Bat.	Oodescelis Motsch.	Platyscelis Latr.	Somcoelia Kr.	Somcoeloplatus Skop.	Trichomyatis Schust.	Altogether
On the world	109	1	2	41	20	2	1	6	182
Europe				2	2				4
AB				1					1
AU				1					1
BU				1					1
CZ				1					1
GG				1	1				2
HU				2	1				3
KZ				2	1				3
LT				1					1
MD				1					1
PL				1					1
RO				2					2
RU (CT, ST)				2	1				3
SK				1					1
SL				1					1
UK				2	1				3
Asia	109	1	2	40	19	2	1	6	180
AF	36	1						2	39
India (HP, KA, SD, UP)	27		1						28
CH	20		2	14	14				50
IN	1								1
KI	8			13	4				25
KZ		1		24	8		1		34
MG	1				1				2
NP	6								6
PA	6								6
RU (ES, WS)	1			1	3				5
TD	24	1	1	2		1		5	34
TM	1	1				2			4
UZ	2	1		6		1			10
?	2			1					3

Comment: **Europe:** AB - Azerbaijan, AU - Austria, BU - Bulgaria, CT - Russia: Central European Territory, CZ - Czech Republic, GG - Georgia (incl. Abkhazia), HU -Hungary, KZ -Kazakhstan, LT -Lithuania, MD - Moldavia, PL - Poland, RO - Romania, RU - Russia, SK - Slovakia, SL - Slovenia, ST - Russia: South European Territory, UK - Ukraine. **Asia:** AF - Afghanistan, CH - China, ES - Russia: East Siberia, HP - India: Himachal Pradesh, IN - Iran, KA - India: Kashmir, KI - Kyrgyzstan, KZ - Kazakhstan, MG - Mongolia, NP - Nepal, PA - Pakistan, RU - Russia, SD - India: Sikkim, Darjeeling District, TD - Tajikistan, TM - Turkmenistan, UP - India: Uttaranchal, Uttar Pradesh, UZ - Uzbekistan, WS - Russia: west Siberia.

The line “?” displays the number species, which distribution should be defined more accurately: Bioramix gebieni (Kaszab, 1940) (type locality - “Karabutak”), Bioramix setosa L. Egorov, 1990 (type locality - “Ost Buchar”), Oodescelis longisterna Kaszab, 1940 (type locality - “Turkestan”).

The information on Platyscelis provostii Fairmaire, 1888 wasn't included, as long as its systematical status is unclear due to the impossibility of type specimen study.

TABL. 1 - The number of tenebrionid tribe Platyscelidini species in the distribution areas.