http://www.humanityspace.net
http://www.humanityspace.ru
http://www.гуманитарноепространство.рф

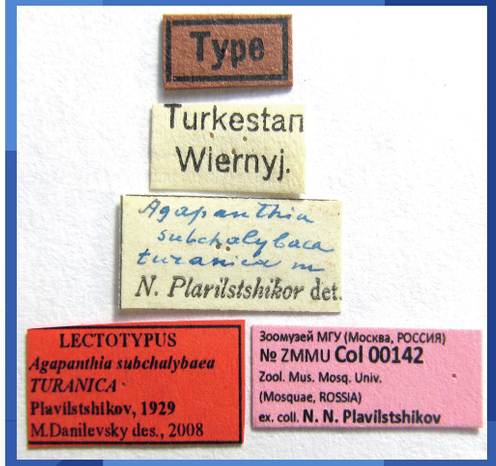
ISSN 2226-0773

Volume 13, No 6 Том 13, № 6 2004

ISSN 2226-0773

HUMANITY SPACE
INTERNATIONAL ALMANAC

ГУМАНИТАРНОЕ ПРОСТРАНСТВО
МЕЖДУНАРОДНЫЙ АЛЬМАНАХ



Volume 13, No 6
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Volume 13, No 6
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БИОЛОГИЧЕСКИЕ НАУКИ / BIOLOGICAL SCIENCES

2024

Гуманитарное пространство. ***Международный альманах*** **ТОМ 13, № 6, 2024**
Humanity space. ***International almanac*** **VOLUME 13, No 6, 2024**

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Веб-сайт / Website: **http://www.humanityspace.net**
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http://www.гуманитарноепространство.рф

Издательство / Publishers:
Международная академия образования / International Academy of Education
121433, Россия, г. Москва, ул. Большая Филёвская, 28, корп. 2
Bolshaya Filevskaya str., 28, building 2, Moscow 121433 Russia

Напечатано / Printed by:
ООО «АЕГ Груп» / A.E.G. Group
125009, г. Москва, Тверская улица, 27, строение 1, подъезд 2
Tverskaya str., 27, building 1, approach 2, Moscow 125009 Russia
Постер-МГУ / Poster-MSU
119296, г. Москва, ул. Молодежная, 3
Molodezhnaya, 3, Moscow 119296 Russia

Дата выпуска / Date of issue: **26.07.2024**
Реестр / Register: **ISSN 2226-0773**
DOI: 10.5281/zenodo.12934271
EDN: AFJDHH

Фото на обложке / Cover photo: *Agapanthia* (*Epoptes*) *turanica* Plavilstshikov, 1929: Lectotype was designated by Danilevsky in 2009 (*Agapanthia subchalybaea turanica* Plavilstshikov, 1929). Collection of Zoological Museum of the Moscow State University. Photo by Maxim Lazarev.

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Humanity space *International almanac* VOL. 13, No 6, 2024: 432-439

http://zoobank.org/urn:lsid:zoobank.org:pub:4CFEBA79-FC45-4C72-A67E-04781DC64553
DOI: 10.24412/2226-0773-2024-13-6-432-439
EDN: GNXEZV

Новый вид *Byrrhus* (Coleoptera: Byrrhidae) с Дальнего Востока России♣

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Ключевые слова: Coleoptera, Byrrhidae, *Byrrhus*, новый вид, Россия.
Key words: Coleoptera, Byrrhidae, *Byrrhus*, new species, Russia.
Резюме: Жук-пилюльщик *Byrrhus ivanovi* **sp. n.** описан из России.
Abstract: A pill beetle *Byrrhus ivanovi* **sp. n.** is described from Russia.
[Gusakov A.A.[1], Smirnov M.E.[2] A new species of *Byrrhus* (Coleoptera: Byrrhidae) from the Russian Far East♣**]**

Согласно последнему изданию каталога жуков Палеарктики, в фауне России выявлено 13 видов рода *Byrrhus* Linnaeus, 1767 (Jäger, Pütz, 2016). Ещё один, оказавшийся новым для науки, вид этого рода найден на Дальнем Востоке и описывается ниже.

Byrrhus ivanovi **sp. n.**
Рис. 1-2, 5

Byrrhus (s. str.) *sochondensis*: Чернышёв, 2005: 154 (Лазовский заповедник и его окрестности); Чернышёв, 2006: 291 (partim, Южное Приморье); Чернышёв, 2009: 137.

♣ Работа выполнена в рамках государственного задания Московского государственного университета им. М.В. Ломоносова (тема № 121032300105-0).
The work was carried out within the framework of the state assignment of Moscow State University. M.V. Lomonosov (topic No. 121032300105-0).

Типовая местность. Россия, Приморский край, село Каменушка (~ 43°37'23" с. ш., 132°13'50" в. д.) близ Уссурийска.
Диагноз. Маленький, нелетающий *Byrrhus*, покрытый сверху многочисленными полуприлегающими дуговидно изогнутыми волосками.
Описание. Самец (Рис. 1-2). Тело широкоовальное, чёрное; кутикула придатков головы и ног большей частью светлее, от тёмно-бурой до коричневой. Верх в многочисленных полуприлегающих дуговидно изогнутых волосках чёрного, коричневого и белого цвета. Низ в редких коротких светлых прилегающих волосках. Длина, измеренная от середины переднего края переднеспинки до вершин надкрылий: 3.9-4.1 мм. Ширина: 2.8-3.0 мм.

Глаза удлиненно-овальной формы, не выпуклые, их длина (высота) в 1.87 раза превосходит максимальную ширину и в 6 раз больше длины щеки. Верхняя губа грубо пунктированная, за исключением гладкого слегка выпуклого переднего края, с торчащими золотисто-жёлтыми щетинками. Голова в крупных точках, расстояние между которыми значительно меньше их диаметра. Темя посередине без красноватого пятна. Усики сравнительно тонкие; 3-й членик усиков самый длинный, примерно в 2.6 раза длиннее своей максимальной ширины; 6-10-й членики отчётливо поперечные, увеличивающиеся в ширину; 11-й членик самый крупный, широко закругленный на вершине.

Переднеспинка при осмотре сбоку сильно выпуклая, сверху мелко пунктированная, умеренно блестящая; проплевры широкие, вогнутые, тонко шагренированные, блестящие. Переднегрудь по переднему краю тонко окаймлена; поверхность четко пунктированная, блестящая; отросток длиннее своей ширины, с широко закруглённой вершиной. Щиток хорошо заметный, густо покрытый чёрными волосками. Среднегрудь поперечная, с глубокой U-образной выемкой на переднем крае, отчётливо пунктированная, блестящая.

Надкрылья с поперечными перевязями из светлых волосков; при осмотре сбоку сильно выпуклые; наиболее широкие у середины своей длины; с 11 тонкими бороздками, из которых вторая доходит только примерно до середины

надкрылий, а одиннадцатая слабо различима у края надкрылий в предвершинной трети их длины; промежутки сравнительно редко пунктированные, не морщинистые, заметно блестящие. Плечевые, предвершинные бугры надкрылий и крылья отсутствуют. Середина заднегруди умеренно пунктированная, блестящая, как и середина первого брюшного стернита. Брюшные стерниты большей частью в мелкой зернистости и грубой шагренировке, матовые.

Эдеагус (Рис. 5) на вершине очень слабо изогнут дорсовентрально; фаллобаза асимметричная; срединная лопасть длиннее парамер, слабо расширенная, её вершина нешироко закруглённая; парамеры плавно сужающиеся, с загнутыми наружу крючковидными вершинами. Длина эдеагуса: 1.4 мм.

Дифференциальный диагноз. Небольшими размерами, характером опушения верхней стороны тела и строением эдеагуса описываемый вид наиболее сходен с *Byrrhus sochondensis* Tshernyshev, 1999 (Рис. 3-4, 6-7) из Южного Забайкалья, но хорошо отличается от последнего меньшими размерами, пропорциями тела, строением усиков, скульптурой надкрылий, цветом опушения щитка и бескрылостью. Тело *B. ivanovi* **sp. n.** меньше (3.9-4.1 мм), широкоовальное, с наибольшей шириной у середины надкрылий, при осмотре сбоку максимально выпуклое в средней части; усики тоньше, их третий членик в 2.6 раза длиннее ширины; промежутки надкрылий без явственно выраженной поперечной морщинистости; щиток в густых чёрных волосках; крылья отсутствуют. Тело *B. sochondensis* крупнее (4.8-4.9 мм), продолговато овальное, наиболее широкое несколько за серединой надкрылий, при осмотре сбоку максимально выпуклое в задней трети своей длины; усики толще, их третий членик только в 2 раза длиннее своей ширины; промежутки надкрылий, особенно на боках, с выраженной поперечной морщинистостью; щиток в светлых волосках; крылья нормально развитые (Tshernyshev, Pütz 1999: 18 - «Hind wings normal.»).

Материал. Голотип (в коллекции Зоологического музея МГУ), ♂ с двумя этикетками: 1) белая, фотографическая: «ю Приморье Каменушка бл. Уссурийск 4 VI 1984 [Н.Б.] Никитский»; 2) красная, печатная: «HOLOTYPUS *Byrrhus IVANOVI* Gusakov

et Smirnov». Экземпляр очень хорошей сохранности, смонтированный на уголке из плотного белого картона; эдеагус наклеен на другом уголке, подколотом на той же булавке. Паратипы: Приморский край: 1 ♂ (в коллекции А.А. Городинского), Барабаш-Левада, в почвенную ловушку, 10.07-5.08.2004, А.А. Городинский; 1 ♂ (в коллекции С.Н. Иванова), около 40 км северо-западнее Уссурийска, окрестности Чернятино, гора Синеловка, 18.05.2023, С.Н. Иванов.

Сравнительный материал. Голотип (♂), и два паратипа (♂ и ♀), *Byrrhus sochondensis* Tshernyshev, 1999 (Рис. 3-4, 6-7) из коллекции Сибирского зоологического музея Института систематики и экологии животных СО РАН в Новосибирске.

Распространение. Известен по десяти экземплярам (самцам и самкам), собранным на юге Приморского края (смотри «Материал» + (Чернышёв, 2005, 2006, 2009)). Имаго встречаются со второй половины апреля до первой декады сентября. В горы поднимается примерно до 1600 м.

Этимология. Патроним. Вид назван в честь Сергея Николаевича Иванова – известного энтомолога из Владивостока, собравшего часть типовой серии этого нового таксона.

Благодарности. Авторы искренне признательны А.А. Городинскому (Москва) и С.Н. Иванову (Владивосток) за возможность изучать их энтомологические сборы, С.Э. Чернышёву (Новосибирск) за возможность исследовать типовые экземпляры *Byrrhus sochondensis*, а также М.А. Лазареву за доброжелательное внимание к нашей работе.

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Jäger O., Pütz A. 2016. Family Byrrhidae Latreille, 1804. - Catalogue of Palaearctic Coleoptera. Volume 3. Leiden, Boston: Brill: 574-591.
Tshernyshev S.E., Pütz A. 1999. New data on the fauna of pill beetles (Coleoptera: Byrrhidae) of Russia. - Russian entomological journal. 8 (1): 15-22.

Рис. 1-2. *Byrrhus ivanovi* **sp. n.**, самец, паратип из коллекции С.Н. Иванова: 1 - общий вид сверху; 2 - общий вид сбоку. Автор снимков: М.Э. Смирнов.

Рис. 3-4. *Byrrhus sochondensis* Tshernyshev, 1999, самец, голотип: 3 - общий вид сверху; 4 - общий вид сбоку. Автор снимков: А.А. Гусаков.

Рис. 5-7. *Byrrhus* spp., эдеагус сверху: 5 – *B. ivanovi* **sp. n.**, паратип из коллекции С.Н. Иванова; 6 – *B. sochondensis* Tshernyshev, 1999, голотип; 7 – то же, паратип. Авторы снимков: М.Э. Смирнов, А.А. Гусаков.

Поступила / Received: 10.06.2024
Принята / Accepted: 23.07.2024

http://zoobank.org/urn:lsid:zoobank.org:pub:9245E92E-178F-46AD-8E73-95A0703F08E0
DOI: 10.24412/2226-0773-2024-13-6-440-444
EDN: GGMPLO

A new species of *Litargus* Erichson, 1846 from Nicaragua (Coleoptera: Mycetophagidae)

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Key words: Taxonomy, new species, description, Coleoptera, Mycetophagidae, *Litargus*, Nicaragua.
Abstract: A new species *Litargus* (s. str.) *poggii* **sp. nov.** from Nicaragua is described, illustrated and compared with similar species.

Introduction

The genus *Litargus* Erichson, 1846 currently includes 71 species (Háva, 2022, 2024). Only two species are known from Nicaragua: *Litargus balteatus* LeConte, 1856 and *Litargus tetraspilotus* LeConte, 1856 (Háva, 2022).

During the determination of some unidentified material deposited in Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy a new species from Nicaragua was found and is described here.

Material and methods

The material is deposited in the following collections:

JHAC - Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-West, Czech Republic;

MCSN - Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy (R. Poggi).

The size of beetles or of their body parts can be useful in species recognition and thus, the following measurements were made:

total length (TL) - linear distance from anterior margin of head to apex of elytra.

elytral width (EW) - maximum linear transverse distance.

Specimens of the presently described species are provided with red, printed label with text as follows: "HOLOTYPE (or PARATYPE) *Litargus* (s. str.) *poggii* **sp. nov.** Jiří Háva det. 2024".

Results

Genus *Litargus* Erichson, 1846

Litargus (*Litargus*) *poggii* sp. nov.

Figs 1-4

Description. Female. Body measurements TL 1.8-1.9 mm, EW 1.0 mm; oblong-oval; weakly convex dorsally, weakly glossy; brown, covered with brown recumbent setation; elytra brownish-black with yellow patterns covered by yellow setation.

Head brown, with dense and coarse punctures; covered by yellow, recumbent setation; labrum brown; eyes prominent laterally in dorsal view, coarsely faceted and slightly emarginate near antennal insertions; antennae with 11 antennomeres, entirely brown with brown setation, antennal club with three antennomeres (Fig. 3); palpomeres brown, apical maxillary palpomere large, cylindrical.

Pronotum brown with yellowish lateral parts covered by yellow setation and with large brown spot discally, convex dorsally, rugose, with large and dense punctures, other parts covered with brown recumbent setation; widest at base, gradually narrowed anteriad; anterior margin slightly arcuate; lateral sides roundly arcuate; basal margin sinuate, without short and circular grooves on subbasal parts.

Scutellum small, brownish-black, with short recumbent yellow setation.

Elytra dark brownish-black with yellow patterns, covered by brown recumbent setation, patterns covered by yellow setation, elongate, subparallel-sided, narrowed from apical 1/4 part to apex (Figs 1-2). Epipleuron brownish-black, covered with brown recumbent setation.

Meta-meso ventrite brown, with yellow recumbent setation, finely punctate.

Legs entirely light brown with light brown spines, covered with yellow recumbent setation. Tibiae with long brown spines apically.

Abdomen with visible ventrites brown, finely punctate, covered with yellow recumbent setation. Pygidium brown, covered with yellow recumbent setation.

Male. Unknown.

Differential diagnosis. The new species differs from other known Neotropical species, especially the similar species *Litargus* (s. str.) *peruanus* Háva, 2024 by the colour of the pronotal and elytral patterns and the structure of the antennae.

Type material. Holotype (♀): "Managua, Nicaragua, III-[18]98, Solari" / "Museo Civico di Genova" - MCSN. Paratypes (3 ♀♀): same data as holotype - 2 MCSN, 1 JHAC.

Etymology. Patronymic, dedicated to my friend and curator of Coleoptera in MCSN, Roberto Poggi.

Acknowledgements. I are very obliged to Roberto Poggi (MCSN) for loaning me the interesting material and to Larry G. Bezark (California, U.S.A.) for English revision to the manuscript.

Figs. 1-4. Litargus (s. str.) *poggii* **sp. nov.**: 1a - habitus, dorsal aspect; 1b - habitus, dorsal aspect, variability; 2 - habitus, lateral aspect; 3 - antenna; 4 - labells.
Figs. 5-6. *Litargus* (s. str.) *peruanus* Háva, 2024: 5 - habitus, dorsal aspect; 6 - habitus, lateral aspect.

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Received: 02.02.2024
Accepted: 15.07.2024

http://zoobank.org/urn:lsid:zoobank.org:pub:401CB250-F745-4676-AD7F-814510D0F770
DOI: 10.24412/2226-0773-2024-13-6-445-454
EDN: IHFIYP

Further addition to the Ichneumonidae (Hymenoptera) fauna of Iran

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Key words: Ichneumonoidea, ichneumonid wasps, species diversity, new records, Iran.
Abstract: In this faunistic paper, 24 species of Ichneumonidae (Hymenoptera) in 22 genera and 13 subfamilies were collected and determined from different regions of Iran, which among them, seven species are new country records: *Allomacrus arcticus* (Holmgren, 1880) (Cyllocerinae), *Ctenochira xanthopyga* (Holmgren, 1857) (Tryphoninae), *Euceros kiushuensis* Uchida, 1958 (Eucerotinae), *Mesostenus funebris* Gravenhorst, 1829, *Trychosis gradaria* (Tschek, 1871) (Cryptinae), *Metopius* (*Ceratopius*) *mediterraneus* Clément, 1930 (Metopiinae), and *Rhimphoctona* (*Xylophylax*) *lucida* (Clément, 1924) (Campopleginae).

Introduction

The Ichneumonidae (Hymenoptera: Ichneumonoidea), known as Darwin wasps, is a comparatively large clade of cosmopolitan parasitoid wasps (Quicke 2015; Klopfstein *et al*. 2019). This family comprises over than 25,000 valid species distributed along 42 subfamilies (Yu et al. 2016; Bennett et al. 2019). Ichneumonid wasps are solitary parasitoids that mainly attack larvae and pupae of Lepidoptera, Coleoptera and Hymenoptera, many of them constitute important agricultural pests (Gauld 1991; Quicke 2015;

Belokobylskij and Lelej 2019).

The family Ichneumonidae of Iran has not been studied enough, although it is one of the most interesting places in the Palaearctic Region, due to having an extremely varying topography and various kinds of climates. In the first catalogue of the Iranian Ichneumonidae (Kolarov & Ghahari, 2005), 144 species were listed, and the updated catalogue from Yu et al. (2016) comprises only 622 species. The goal of this research is to study the fauna of Iranian Ichneumonidae and introducing seven new country records.

Material and methods

The specimens of this faunistic investigation were collected by sweeping net and Malaise traps from different areas of Iran. The collected materials were sorted to subfamily based on Broad (2015) and Broad et al. (2018), and genus level by Townes (1969, 1970a, b, 1971). The determined specimens were confirmed by the first author and some other authorized taxonomists. Most of the materials are preserved in the insect collection of Qaemshahr Islamic Azad University, and some others in private collection of the first author. Here we follow Yu et al. (2016) for nomenclature, classification, and distributional and host data.

Results

In total, 24 species of Ichneumonidae under 12 subfamilies, Adelognathinae, Banchinae, Campopleginae, Cremastinae, Cryptinae, Ctenopelmatinae, Cylloceriinae, Eucerotinae, Ichneumoninae, Mesochorinae, Metopiinae, Orthocentrinae and Tryphoninae were collected and determined from different regions of Iran.

Subfamily Adelognathinae Thomson, 1888

Genus *Adelognathus* Holmgren, 1857

***Adelognathus brevicornis* Holmgren, 1857**

Material examined: Golestan province, Golestan National Park, 3♀♀, August 2014. Mazandaran province, Sari, Semeskandeh, 1♀, September 2019.

General distribution: Austria, Bulgaria, Canada, Finland, France, Georgia, Germany, Ireland, Norway, Poland, Romania, Russia, Sweden, Ukraine, United Kingdom, United States of America.
Host records: Unknown.

Subfamily Banchinae Wesmael, 1845

***Glypta sculpturata* Gravenhorst, 1829**
Material examined: Guilan province, Lahijan, 1♂, June 2015.
General distribution: Austria, Belgium, Bulgaria, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Moldova, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom.
Host records: *Ematurga atomaria* (Linnaeus) (Lepidoptera: Geometridae).

Subfamily Campopleginae Förster, 1869

Genus *Olesicampe* Förster, 1869

***Olesicampe longipes* (Müller, 1776)**
Material examined: East Azarbayjan province, Bonab, Chopoghloo, 1♂, September 2016.
General distribution: Austria, Belgium, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Romania, Russia, Sweden, United Kingdom.
Host records: Unknown.

Genus *Rhimphoctona* Förster, 1869

***Rhimphoctona* (*Xylophylax*) *lucida* (Clément, 1924)**
Material examined: Ardebil province, Bilehsavar, 2♂♂, 3.vii.2017. *New record for the fauna of Iran*.
General distribution: Austria, Bulgaria, China, France, Germany, Hungary, Italy, Montenegro, Poland, Russia, Serbia, Switzerland.
Host records: *Monochamus saltuarius* Gebler, *Tetropium duscum* (Fabricius), and *Tetropium gabrieli* Weise (Coleoptera: Cerambycidae).

Subfamily Cremastinae Förster, 1869

Genus *Cremastus* Gravenhorst, 1829

***Cremastus dalmatinus* Strobl, 1904**
Material examined: Chaharmahal-Bakhtiari province, Lordegan, 2♀♀, August 2015.

General distribution: Romania, Russia, Tajikistan, Turkey, former Yugoslavia.
Host records: Unknown.

Subfamily Cryptinae Kirby, 1837
Genus *Hoplocryptus* Thomson, 1873

***Hoplocryptus magrettii* (Kriechbaumer, 1893)**
Material examined: East Azarbayjan province, Marand, Darandash, 2♂♂, September 2016.
General distribution: Austria, France, Germany, Hungary, Italy, Poland, Romania, Spain, Switzerland, Turkey.
Host records: *Osmia inermis* (Zetterstedt) (Hymenoptera: Apidae).

Genus *Mesostenus* Gravenhorst, 1829

***Mesostenus funebris* Gravenhorst, 1829**
Material examined: Mazandaran province, Behshahr, 2♀♀, July 2017. *New record for the fauna of Iran*.
General distribution: Austria, Azerbaijan, former Czechoslovakia, France, Germany, Hungary, Italy, Japan, Poland, Romania, Russia, Spain.
Host records: *Zygaena lonicerae* (Scheven) (Lepidoptera: Zygaenidae).

Genus *Oresbius* Marshall, 1867

***Oresbius galactinus* (Gravenhorst, 1829)**
Material examined: Lorestan province, Aligoodarz, 2♀♀, June 2018.
General distribution: Austria, Belgium, Bulgaria, Finland, France, Germany, Hungary, Ireland, Korea, Lithuania, Pakistan, Poland, Switzerland, United Kingdom.
Host records: *Deilephila elpenor* (Linnaeus) (Lepidoptera: Sphingidae), and *Synanthedon tipuliformis* (Clerck) (Lepidoptera: Sesiidae).

Genus *Polytribax* Förster, 1869

***Polytribax rufipes* (Gravenhorst, 1829)**
Material examined: Zanjan province, Khorram-Darreh, 2♂♂, July 2015.
General distribution: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Moldova, Poland, Romania, Spain, Switzerland, Turkey, Ukraine, United Kingdom.

Host records: *Bupalus piniarius* (Linnseus), *Macaria liturata* (Clerck) (Lepidoptera: Geometridae), and *Zysandra coridon* (Poda) (Lepidoptera: Lycaenidae).

Genus *Trychosis* Förster, 1869

***Trychosis gradaria* (Tschek, 1871)**

Material examined: West Azarbayjan province, Mako, 1♀, September 2018. *New record for the fauna of Iran*.

General distribution: Austria, Finland, France, Germany, Hungary, Italy, Moldova, Romania, Spain, Sweden, Switzerland.

Host records: Unknown.

Subfamily Ctenopelmatinae Förster, 1869

Genus *Barytarbes* Förster, 1869

***Barytarbes flavicornis* (Thomson, 1892)**

Material examined: Khorasan-e Razavi province, Ferdos, 3♀♀, August 2013. Semnan province, Shahrood, Jangal-e Abr, 2♀♀, July 2018.

General distribution: Afghanistan, Austria, Bulgaria, former Czechoslovakia, France, Germany, Hungary, Netherlands, Poland, Russia, Spain, Switzerland, Turkey, Ukraine, United Kingdom.

Host records: Unknown.

Genus *Phobetes* Förster, 1869

***Phobetes chrysostomus* (Gravenhorst, 1820)**

Material examined: Hamedan province, Gol-Tappeh, 2♀♀, 1♂, September 2015.

General distribution: Belgium, Bulgaria, Finland, France, Georgia, Germany, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Russia, Sweden, Ukraine, United Kingdom.

Host records: Unknown.

Genus *Trematopygus* Holmgren, 1857

***Trematopygus melanocerus* (Gravenhorst, 1829)**

Material examined: Guilan province, Langrood, Liseh-Rood, 1♀, May 2014.

General distribution: Austria, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Italy, Lithuania, Moldova, Netherlands, Norway, Poland, Russia, Switzerland, United Kingdom.

Host records: Unknown.

Subfamily Cyllocerinae Wahl, 1990
Genus *Allomacrus* Förster, 1869

***Allomacrus arcticus* (Holmgren, 1880)**

Material examined: Isfahan province, Shahreza, 1♂, May 2013; Chaharmahal-Bakhtiari province, Lordegan, 2♂♂, 1♀, August 2015. *New record for the fauna of Iran*.

General distribution: Austria, Azerbaijan, Bulgaria, Canada, Finland, France, Georgia, Germany, Norway, Poland, Russia, Sweden, Switzerland, Ukraine, United States of America.

Host records: Unknown.

Subfamily Eucerotinae Viereck, 1919
Genus *Euceros* Gravenhorst, 1829

***Euceros kiushuensis* Uchida, 1958**

Material examined: Alborz province, Nazar-Abad, 1♀, June 2013. *New record for the fauna of Iran*.

General distribution: China, Germany, Hungary, Italy, Japan, Korea, Poland, Romania, Russia, Switzerland, Ukraine.

Host records: *Phobocampe unicincta* (Gravenhorst) (Ichneumonidae: Campopleginae).

Subfamily Ichneumoninae Latreille, 1802
Genus *Dicaelotus* Wesmael, 1845

***Dicaelotus parvulus* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Absh-Ahmad, 2♂♂, 21.v.2016, det. A.M. Tereshkin.

General distribution: Andorra, Austria, Belgium, Bulgaria, Finland, France, Germany, Latvia, Poland, Romania, Spain, Sweden, Turkmenistan, United Kingdom.

Host records: *Exoteleia dodecella* (Linnaeus) (Lepidoptera: Gelechiidae), *Plutella xylostella* (Linnaues) (Lepidoptera: Plutellidae) and *Lobesia botrana* (Denis and Schiffermüller) (Lepidoptera: Tortricidae).

Genus *Epitomus* Förster, 1869

***Epitomus infuscatus* (Gravenhorst, 1829)**

Material examined: Kurdistan province, Bijar, 1♀, June 2016, det. A.M. Tereshkin.

General distribution: Andorra, Austria, Bulgaria, Czech Republic, Finland, France, Germany, Ireland, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, United Kingdom.

Host records: *Elachista humilis* Zeller (Lepidoptera: Elachistidae).

Subfamily Mesochorinae Förster, 1869

Genus *Cidaphus* Förster, 1869

***Cidaphus atricilla* (Haliday, 1838)**

Material examined: West Azarbayjan province, Salmas, 1♀, August 2015.

General distribution: Austria, China, Finland, Germany, Japan, Latvia, Lithuania, Mongolia, Poland, Russia, Switzerland, Ukraine, United Kingdom.

Host records: *Enicospilus* sp. (Hymenoptera: Ichneumonidae).

Subfamily Metopiinae Förster, 1869

Genus *Metopius* Panzer, 1806

***Metopius* (*Ceratopius*) *mediterraneus* Clément, 1930**

Material examined: Ardebil province, Bilehsavar, 2♀♀, 3.vii.2017. *New record for the fauna of Iran*.

General distribution: Armenia, Austria, Italy, Kazakhstan, Norway, Poland, Russia, Ukraine.

Host records: Unknown.

Genus *Trieces* Townes, 1946

***Trieces rufimitranae* Aeschlimann, 1973**

Material examined: West Azarbayjan province, Naqadeh, 1♀, July 2015.

General distribution: Bulgaria, Czech Republic, France, Moldova, Norway, Poland, Russia, Switzerland, Ukraine.

Host records: *Zeiraphera rufimitrana* (Herrich-Schäffer) (Lepidoptera: Tortricidae).

Subfamily Neorhacodinae Hedicke, 1922
Genus *Neorhacodes* Hedicke, 1922

***Neorhacodes enslini* (Ruschka, 1922)**

Material examined: Mazandaran province, Tonekabon, Jangal-e 2000, 2♀♀, June 2015. *New record for the fauna of Iran*.

General distribution: Austria, Belgium, Bulgaria, Cyprus, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Norway, Poland, Russia, Spain, United Kingdom.

Host records: *Spilomena differens* Blüthgen, *Spilomena enslini* Blüthgen, and *Spilomena troglodytes* Vander Linden (Hymenoptera: Crabronidae).

Subfamily Orthocentrinae Förster, 1869
Genus *Aperileptus* Förster, 1869

***Aperileptus impurus* Förster, 1871**

Material examined: Kurdistan province, Qorveh, 1♂, 1♀, September 2013.

General distribution: Austria, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Lithuania, Norway, Poland, Romania, Sweden, United Kingdom.

Host records: *Anomalomyia guttata* (Hutton) (Diptera: Mycetophilidae).

Subfamily Tryphoninae Shuckard, 1840
Genus *Ctenochira* Förster, 1869

***Ctenochira xanthopyga* (Holmgren, 1857)**

Material examined: East Azarbayjan province, Absh-Ahmad, 2♀♀, 21.v.2016. *New record for the fauna of Iran*.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Mongolia, Netherlands, Norway, Poland, Russia, Sweden, Ukraine, United Kingdom.

Host records: Unknown.

Genus *Phytodietus* Gravenhorst, 1829

***Phytodietus astutus* Gravenhorst, 1829**

Material examined: West Azarbayjan province, Miandoab, Hesarlu, 1♂, 1♀, April 2013.

General distribution: Bulgaria, France, Germany, Ireland, Italy, Sweden, United Kingdom.
Host records: *Agonopterix heracliana* (Linnaeus) (Lepidoptera: Depressariidae).

Acknowledgements. The authors are grateful to E. Diller (Germany), D.R. Kasparyan (Russia) and V.I. Tolkanitz (Ukraine) for scientific cooperation in this project. This research was supported by Islamic Azad University and University of Turku.

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Received: 11.03.2024
Accepted: 15.07.2024

http://zoobank.org/urn:lsid:zoobank.org:pub:4AF2EC5D-E3CE-4751-A013-1FB5628B709A
DOI: 10.24412/2226-0773-2024-13-6-455-523
EDN: OKALSM

Taxonomy structure of *Agapanthia villosoviridescens* (DeGeer, 1775) (Coleoptera, Cerambycidae)

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Key words: Coleoptera, Cerambycidae, taxonomy, zoogeography, key to subspecies, new status, new synonym, new subspecies.
Abstract: *Agapanthia* (*Epoptes*) *helianthi* Plavilstshikovi, 1935, *A.* (*E.*) *subnigra* Pic, 1890, *A.* (*E.*) *gazanchidisi* Lazarev, 2021 and *A.* (*E.*) *markusi* Rapuzzi, Sama & Kotán, 2013 are downgraded to subspecies rank. A new synonym is proposed: *A. subnigra* Pic, 1890 = *A. villosoviridescens* var. *subchalybaea* Reitter, 1898, **syn. n.** Four new subspecies are described: *A.* (*E.*) *v. murzini* **ssp. n.** (northern Armenia), *A.* (*E.*) *v. syunica* **ssp. n.** (Syunik area in Armenia and neighbor Azerbaijan lands), *A.* (*E.*) *v. giresunica* **ssp. n.** (Giresun prov. in Turkey) and *A.* (*E.*) *v. shankhizai* **ssp. n.** (Denizli prov. in Turkey). A subspecies key is proposed.

Introduction

Agapanthia (*Epoptes*) *villosoviridescens* (DeGeer, 1775) is one of the most common species in Eurasia with very big area. But great individual variability made extremely difficult the adequate separation of geographic forms. Here a subspecies structure of the taxon is proposed, and several similar species are downgraded to subspecies rank.

Materials and methods

Material was collected manually. Specimens used in morphological studies were killed by ethyl acetate. All photographs were taken with Canon PowerShot G10 digital camera equipped with Cannon Zoom lens 5X IS 6.1-30.5 mm 1:2.8-4.5 and microscope AmScope SM745NTP. The illustrations were edited with Adobe Photoshop 7.0 and Helicon Focus 3.20.

Acronyms of collections:
AG - collection of A.I. Gubin (Donetsk)
AS - collection of A.V. Shamaev (Moscow)
ES - collection of E.V. Shankhiza (Moscow)
MD - collection of M.L. Danilevsky (Moscow)
ML - collection of M.A. Lazarev (Moscow)
MNHN - collection of Muséum national d'Histoire naturelle (Paris)
SM - collection of S.V. Murzin (Moscow)
VG - collection of V.Yu. Gazanchidis (Moscow)
VU - collection of V.E. Ustinov (Moscow)
SMNH - collection of Swedish Museum of Natural History (Stockholm)
SZM - collection of Siberian Zoological Museum (Novosibirsk)
ZMM - collection of Zoological Museum of Moscow University

Results

***Agapanthia* (*Epoptes*) *villosoviridescens* (DeGeer, 1775)**

I accept the species with 11 subspecies:

1. *A.* (*E.*) *v. villosoviridescens* (Degeer, 1775)
Type locality. Not indicated in the original description; conditionally accepted as Western Europe.

2. *A.* (*E.*) *v. helianthi* Plavilstshikovi, 1935, stat. n.
Type locality. Russia, Krasnodar Region, Labinsk (according to lectotype designation by Danilevsky, 2009: “Labinskaya”).

3. *A.* (*E.*) *v. subnigra* Pic, 1890, stat. n.
Type locality. High mountains of Georgia, according to the holotype habitus and available material.

4. *A.* (*E.*) *v. syunika* ssp. n.
Type locality. Armenia, Syunik province, Goris environs, Svarants, 1880 m, 39°21′21′′N, 46°12′27′’E.

5. *A.* (*E.*) *v. murzini* ssp. n.
Type locality. Armenia, Gegharkunik province, Ayagut, 40°40'30.7251"N, 45°12'15.1285"E, 1420 m.

6. *A.* (*E.*) *v. lederi* Ganglbauer, 1884
Type locality. Azerbaijan, Talysh.

7. *A.* (*E.*) *v. hodeki* Danilevsky, 2018
Type locality. Northern Iran, Gilan province, Rostamabad environs (36°55'N, 49°23'E).

8. A. (*E.*) v. *giresunica* ssp. n.
Type locality. Turkey, Giresun province, Kumbet pass, 40°32'41.4294"N, 38°26'2.0124"E, 1700 m.

9. *A.* (*E.*) *v. shankhizai* ssp. n.
Type locality. Turkey, Denizli province, eastern edge of Denizli.

10. *A.* (*E.*) *v. gazanchidisi* Lazarev, 2021, stat. n.
Type locality. Eastern Greece, Dasochori environs, 40°53′48.67″N, 24°48′26.12″E.

11. *A.* (*E.*) *v. markusi* Rapuzzi, Sama & Kotán, 2013, stat. n.
Type locality. Greece, Epirus, Ioannina, 7 km SW Metsovo, 1360 m.

Agapanthia (*Epoptes*) *villosoviridescens* (DeGeer, 1775)

Figs 1-27, Maps 1-4

Cerambyx villoso-viridescens DeGeer, 1775: 76 (no location, but apparently from Western Europe).

Type location. Not indicated in the original description; conditionally accepted as Western Europe.

Description. The species is characterized by usually totally black antennae without setae tufts; basal parts of antennal joints with fine pale pubescence, which can form white color; elytral setae patches more or less distinct, sometimes nearly totally obliterated, or just contrary very dense and contrast, totally hiding elytral surface; grey humeral stripe present or absent; elytral surface black, often with metallic luster; body length in males: 10.2-18.0 mm, body length in females: 11.0-21.5 mm.

Distribution. The northern most species of the genus, which was published for Karelia (Plavilstshikov, 1968) and Komi (Tatarinova et al., 2007 - Ukhta); eastwards it penetrates to Khakassia; southwards the species is distributed all over Caucasus with Transcaucasia and penetrates to Turkey; westwards the subspecies is distributed all over Europe including Iberian Peninsula.

Biology. The most common species of the genus; larvae develop in the stems of various herbaceous plants; were indicated: *Carduus*, *Cirsium*, *Urtica*, *Heracleum*, *Inula*, *Anthriscus*, *Angelica*, *Chaerophyllum*, *Peucedanum*, *Solidago*, *Rudbeckia*, *Eupatorium*, *Artemisia*, *Aster*, *Aconite*, *Senecio*, *Helleborus*, *Salvia*, *Gentiana*,

Adenophora, *Foeniculum*, *Lupinus*, *Veratrum* etc.; adults are active from May to July, although there are specimens dated September in the collections.

Agapanthia (*Epoptes*) *villosoviridescens villosoviridescens* (DeGeer, 1775)

Figs 1-4

Cerambyx villoso-viridescens DeGeer, 1775: 76 (no location, but apparently from Western Europe).
Cerambyx virens Voet, 1781: 22, pl. XX, fig. 98, unavailable name - "Europa".
Cerambyx viridescens Gmelin, 1790: 1864 - "Europa".
Cerambyx lineatocollis Donovan, 1797: 71 - "Isle of Ely, Cambridgeshire".
Saperda latreille Fischer von Waldheim, 1806: 17 - "Moscou".
Saperda angusticollis Gyllenhal, 1817: 189 - "Europa"; Goureau, 1868: cxiii.
Agapanthia acutipennis Mulsant, 1863: 357 - France, "les environs de Béziers".
Agapanthia lineatocollis, Mulsant, 1863: 358, part. - "n'est pas rare dans les environs de Lyon"; Gemminger & Harold, 1873: 3177 - "German. mer., Gallia"; Seidlitz, 1891: 850 (= *angusticollis* Gyll.) - "In Eur. bis Schwd. u. Finnl."; Ganglbauer, 1884: 542 (= *angusticollis* Gyll.) - "Nord- und Mittel-Europa, Caucasus"; Dyukin, 1912: 282 - Penza Region.
Agapanthia angusticollis, Mulsant, 1863: 360, part.; Obert, 1874: 136 - St. Petersburg.
Agapanthia pyrenaea Brisout de Barneville, 1863: 117 - France, "Canigou".
Agapanthia nicaeensis Chevrolat, 1881: xcvi - Gallia mer. (Nice).
Agapanthia irrorata var. *nicaeensis*, Ganglbauer, 1884: 539 - "Nizza".
Saperda angustipennis, Sonthonnax, 1889: 62 (misspelling) - "Grande-Chartreuse".
Agapanthia villosoviridescens, Reitter, 1898: 134 (= *lineatocollis* Don.) - "Nord- und Mitteleuropa, Kaukasus"; 1913: 66; Mosolov, 1902: 20 - Russia, Podolsk uezd; Sakharov, 1903: 66 - Russia, Saratov province; Zaitzev, 1906: 121 - Russia, Lykoshino station of the Nikolaev railway [about 58°06′N, 33°43′E]; Lebedev, 1906: 410 - Russia, Kazan province; Pomerantsev, 1908: 498 - Russia, Vologda province, Velsk (Voznesensko-Khoroshevskaya dacha and Priluki), [Now Arkhangelsk Region]; Miller & Zubowsky, 1910: 138 - Moldova, "Bendery"; 1917: 138 - Moldova, "Bendery"; Kiseritzky, 1915: 177 - Ukraine (Poltava); Jakobson, 1924: 239 (=*latreillei* Fischer von Waldheim, 1806); Kiseleva, 1926: 131 - Russia, Tomsk Region, Loskutovo; Winkler, 1929: 1213; Chernyshov, 1930: 12 - Russia, Kaluga province, Bryansk province, Moscow province; Heyrovský, 1931: 83 - Bulgaria ("Witoscha-Gebirge", "Rila-Gebirge", "Kresna-Defile", "Petritsch"); Plavilstshikov, 1932: 194; 1965: 416; Móczár, 1948: 92 - Slovakia, "Jahodná"; Fasulati, 1955: 140 - Ukraine (Uzhok, Uzhhorod, Velykyi Bychkiv, Lugi, Pasika, Svidovets); Breuning, 1961: 186, part. (= *lederi* Ganglb.) - "Europe, As. occ. et centr."; Paulus, 1968: 74 (larva); Fuchs & Breuning, 1971: 437 - "Anatolie: Yüksekova (Hakkari)"; Kostin,

1973: 225 - Northern half of Kazakhstan; Lobanov, 1973: 85 - Russia, Perm Region; Shernin, 1974: 181 - Russia, Kirov Region (Urzhum, Goltsy, Burmakino, Zlobino, Bolvanskaya); Villiers, 1978: 430, 433, part. (including var. *lederi* Ganglb.); Burakowski & Nowakowski, 1981: 214 Poland: "Mazovia", "Warsaw"; Soelen van & Markusse, 1983: 124 - "Netherlands"; Miroshnikov, 1984: 280 (larva); Biström & Väisänen, 1985: 156 - "Finland"; Tsherepanov, 1985: 246, part.; Volkovitsh, 1986: 101 - Russia, Belgorod Region, Forest on Vorskla; Novozhenov, 1987: 44 - Russia, Ilmen Nature Reserve; Bílý & Mehl, 1989: 134 - "Fennoscandia and Denmark", "Soviet Karelia", "The Caucasus and W. Siberia"; Zahaikevitch, 1991: 153 - mountain Crimea; Rabil, 1992: 148 - France, "Forêt de la Grésigne (Tarn)"; Bense, 1995: 400-401 - Western Europe; Carrière, 1996: 562 - France, "Lozère"; 2003: 257, 258 - France, "Pic de la Coquillade"; 2005: 468; 2009: 342 - France, "Monts d'Aubrac (Aveyron, Cantal, Lozère)"; 2012: 49 - France, "lac de Souveyrols (Canton de Nasbinals)"; Lagunov & Novozhenov, 1996: 64 - Russia, Ilmen Nature Reserve; Alexandrovitch et al., 1996: 48 - Belarus; Althoff & Danilevsky, 1997: 41; Kasatkin & Arzanov, 1997: 67, part. - Rostov Region, Krasnodar Territory, Karachay-Cherkessia, Kabardino-Balkaria; Sláma, 1998: 351 - Czech Republic, Slovakia; Kovács, 1998: 254 - Hungary; Dorofeev, 1998: 28 - Russia, Tula Region; 2003: 30 - Russia, Tula Region; Landemaine, 1999: 248 - France; Kalyuzhnaya et al., 2000: 193 - Russia (Volgograd, Tumak), Volgograd Region (Kamyshin District, Nature Park Shcherbakovskaya; Ilovlya District, Tryokhostrovskaya); Hasegawa, 2000: 13; Marquet, 2001: 116 - France, "Parc naturel régional de la Brenne (Indre)" Denton, 2002: 268 - England, "Middlesex"; Sheshurak & Sadovnicha, 2002: 242 - Ukraine, Chernigov Region; Inglebert, 2002: 100 - France, Paris, "Champs de mars"; Gouillard, 2003: 128 - France, "Gâtinais"; Sama, 2003: 93, part. - including "Russian Far East and Korean peninsula"; Brustel et al., 2003: 453 - France; Warzee & Drumont, 2004: 49 - "Belgique"; Karpinsky, 2003: 69 - Russia, Vladimir Region; Magdeev, 2003: 206 - Russia, Samara Region; 2007: 174 - Russia, Samara Region, Samarskaya Luka; Isaev et al., 2004: 41 - Russia: Chuvash Republic, Republic of Tatarstan, Ulyanovsk Region, Samara Region; Bolshakov & Dorofeev 2004: 23 - Russia, Tula Region; Negrobov et al., 2005: 601 - Russia, Voronezh Region; Dedyukhin et al., 2005: 311 - Russia, Udmurt Republic; Micas, 2005: 147 - France, "vallon de la Moulière (Alpes-de-Haute-Provence)"; Weitzel, 2005: 72 - Germany, "Mattheiser Wald"; Denux, 2005: 234 - France ("Parc naturel régional du Perche", "Saint-Pierre-la-Bruyère", "Forêt de Bellême", "Nogent-le-Rotrou"); Diego Barquín & Martínez-Porres Cáceres, 2005: 145 - Spain, "Palencia"; Sautière, 2005: 22 - France, "Vernou-sur-Brenne, La Ville-aux-Dames, Noizay (Indre-et-Loire)"; Allemand, Chevin & Withers, 2006: 281 - France, "Commune de Vénérieu (Isère)"; Debreuil, 2006: 32 - "Pyrénées-Orientales"; ACSN, 2007: 107 - France, "Aube: Piney, Rouilly-Sacey"; Migliaccio et al., 2007: 40 - Bulgaria; Simon, 2007: 155 - France,

"Domaine de Rochebois à Vitrac (Dordogne)"; Ehnström & Holmer, 2007: 26, 51, 61, 278-279 - Sweden, Denmark, Norway, Finland; Tatarinova et al., 2007: 283 - Russia, Komi (Syktyvkar, Shaitanovka, Ukhta); Gorbunov & Olshvang, 2008: 280 - Russia, South of the Urals; Peris-Felipo & al., 2008: 109 - France, "Parque Natural de La Tinença de Benifassà (Castellón)"; Mouthiez & Péru, 2008: 110 - France, Loiret; Kuleshov & Romanenko, 2009: 39 - Russia, Tomsk Region; Ermolaev & Georgi, 2009: 26 - Russia, Izhevsk; Runich, 2009: 58 - Russia, Saransk; Tsurikov, 2009 - Russia, Lipetsk Region; Humala & Polevoi, 2009: 60 - Russia, Republic of Karelia: Cherga river, Chumbozero, Steshevskaya; Krasnobayeva , 2009: 297 - Russia, Samara Region, Zhiguli State Natural Reserve (Bakhilova Polyana, Khmelevoy ravine, Kochkarka, Mt. Strelnaya); Gnjatović & Žikić, 2010: 113 - Serbia ("Niška banja", "Niš; Novo Selo", "Zlot", "Batinac"); Serafim, 2010: 241 - Romania, Bulgaria (Varna); Özdikmen, 2010: 927, 932 - European Turkey; Bukejs, 2011: 18 - Latvia: "Butiški", Vecstropi "valley of the Daugava"; Týr, 2011 - Czech Republic ("Blatno", "Jesenice", "Podbořánky, PR Rybníčky u Podbořánek", "Žihle"); Antipova, 2011: 74 - Russia, Pskov Region; Bartenev & Terekhova, 2011: 139 - Left-bank Ukraine and Crimea; Danilevsky, 2012: 722 - excluding Korea; Zamoroka et al., 2012: 1167 - Western Podillya, Ukraine (Opillya, Roztocha, Holohory, Voronyaky, Medobory, East Pokuttya, Khotyn Eminence); Georgiev et al., 2013: 113 - Bulgaria, "Belasitsa Mt."; Lacoste, 2013: 143 - France, "Puy-de-Dôme: Orléat"; Jałoszyński et al., 2014: 679; Švácha & Lawrence, 2014: 127 (morphology); Dobrosavljević & Mihajlović, 2014: 26 - Serbia; Pavićević, Ilić & Đurić, 2015: 85 - Serbia; Kulenko, 2015: 1104 - Russia, Samara Region; Molnar et al., 2016: 49 - Hungary (Fundoklia Valley); Siering & Shumka, 2016: 462 - "Albanien"; Cartier & Cartier, 2016: 232 - "Vienne: Quinçay"; Mazurov, 2017: 217 - Russia, Lipetsk Region, Krasnoye District (Leski, bank of the Don River; Maryinsky forest; Surki tract; Plyushchan; Byk tract, floodplain of the Chernavka stream; Verkhnee Bruslanovo); Sláma, 2017: 65 - "Bohemia, Terezín u Kunžaku"; Haack, 2017: 111 (plants); Haack et al., 2017: 81 (larva); Vitali, 2018: 114 - "Luxembourg"; Żurawlew & Melke, 2018: 86 - "Poland: Pleszew District (Wielkopolska-Kujawy Lowland)"; Karpiński et al., 2018: 90 - "East Kazakhstan"; Zamoroka, 2018: 684 - "The eastern Carpathian Mountains in Ukraine"; Touroult & al., 2019: 109 - France; Szczepański & Szczepański, 2019: 7 - "Poland: Wzgórza Trzebnickie"; Barševskis & Lecka, 2019: 283 - Latvia; Siering & Beier, 2019: 242 - Bulgaria; Micas & Van Meer, 2020: 140 - "France (Landes): Réserve Naturelle du Courant d'Huchet"; Weigel & Hartmann, 2020: 365 - Germany, Erfurt; Kutushev, 2020: 23 - Russia, Republic of Tatarstan; Aleksanov et al., 2020: 35 - Russia, Kaluga Region, Peremyshl District; Alekseev et al., 2020: 126 - Russia, Kaluga Region: Goritsy (53°34′53″N 35°38′08″E), Yagodnoe (53°32′53″N 35°38′47″E); Dovhaniuk & Zamoroka, 2020: 139 - Ukraine (Ternopol Region): National Park "Kremenetski Hory"; Bacal et al., 2020: 59 - Moldova ("Lozova",

"Bender", "Bularda", "Cornești", "Vatici", "Ivancea"); Siering & Rothe 2020: 274 - Estonia ("im Lahemaa-Nationalpark in Estland", "Palmse"); Shin & al., 2021: 4 - "Czech Republic (Bohemia): Ceské Budejovice"; Szafraniec & Łuszczak, 2021: 32 - "Western Beskid Mountains"; Alekseev, 2022: 8 - "Svetlogorsk Forest (Russia: Kaliningradskaya Oblast)"; Saikina et al., 2022: 815 - Russia, Omsk Region.

Agapanthia (s. str.) *villosoviridescens*, Pic, 1910: 97, part. (= *lineotocollis* Donov. = *angusticollis* Gyll. = *lederi* Ganglb = *acutipennis* Muls. = *pyrenaea* Bris. = *nicaeensis* Chevr. = *subchalybaea* Reitt. = *subacuta* Pic); Aurivillius, 1923: 464 (= *angusticollis* Gyll. = *lineatocollis* Donov. = *viridescens* Gmelin = *acutipennis* Muls. = *lederi* Gang. = *nicaeensis* Chevr. = *pyrenaea* Bris. = *subacuta* Pic = *subchalybaea* Reitt.) - "Nord- und Mitteleuropa, Kaukasus, Sibirien", "Turkestan"; Plavilstshikov, 1930b: 32, 40, part. (including var. *lederi* Ganglb.) - "Europa (von Schweden bis Spanien, Italien, Sizilien und dem Balkan), Ruβland, Kaukasus, Transkaukasien, West-Sibirien (Petropavlovsk)"; 1948: 168, part. - North Armenia, Sevan, Arax valley; (Europe, Caucasus, Western Siberia); 1968: 123, 157, part. (including var. *lederi* Ganglb.) - "In the European part of the Union, it is distributed everywhere, starting from Karelia-Vologda-Perm, all Ciscaucasia; in the Central Caucasus and Transcaucasia", "Western Siberia, northwestern Kazakhstan. In Western Europe, it is distributed everywhere, from Finland and Scandinavia to the islands of the Mediterranean Sea"; Lobanov et al., 1982: 269 - from Europe to the Pacific Ocean, including Japan; Tsherepanov, 1984: 161, 162, 175 (= *daurica* Ganglb.), part. - from Atlantic to Pacific Ocean; Danilevsky & Miroshnikov, 1985: 386, 390, 391, part. (including Transcaucasia); Niisato, 2001: 15 - "continental side of the Palearctic Region"; Martynov & Pisarenko, 2004: 63 - Lugansk and Donetsk Regions; Bartenev, 2004: 41; 2009: 389 - Europe, Western Siberia, Caucasus, Transcaucasia, Northwestern Kazakhstan, Mongolia; Sheshurak et al., 2006: 268 - Ukraine, Chernigov Region.

Agapanthia (s. str.) *villosoviridescens* var. *nicaeensis*, Aurivillius, 1923: 466 - "Nizza".

Agapanthia (s. str.) *villosoviridescens* var. *acutipennis*, Aurivillius, 1923: 466 - "Frankreich".

Agapanthia (s. str.) *villosoviridescens* var. *pyrenaea*, Aurivillius, 1923: 466 - "Pyrenäen".

Agapanthia villoso-viridescens, Planet, 1924: 309; Colas, 1928: 179 - "forêt de Saint-Germain"; Perrier, 1964: 116; Sama, 1981: 503 - Italy; Cartier, 2002: 180 - France, "Rueil-Malmaison".

Agapanthia villosoviridescens m. *acutipennis*, Breuning, 1961: 186.

Agapanthia villosoviridescens m. *pyrenaea*, Breuning, 1961: 186.

Agapanthia irrorata m. *nicaeensis*, Breuning, 1961: 184.

Agapanthia helianthi, Fomichev, 1983: 44, part. - Russia, (Republic of Kalmykia, Gorodovikovsk), (Rostov Region, Bolshiye Saly); Kalyuzhnaya et al., 2000: 193 - Russia, Volgograd Region (Tinguta), Kalmykia (Gorodovikovsk).

Agapanthia dahli (according to the oral communication by A. Shapovalov),

Novozhenov, 1987: 45 - Russia, Ilmen Nature Reserve in the Chelyabinsk Region; Lagunov & Novozhenov, 1996: 64.

Agapanthia villosovilidesvens, Ohbayashi N. et al., 1992: 559 (misspelling).

Agapanthia lineaticollis, Matveev, 1998: 87 (misspelling), part. - Russia, Mari El.

Agapanthia villosovirridescens, Matveev, 1998: 87 (misspelling), part. - Russia, Mari El, Kirov Region, Chuvashia.

Agapanthia subchalybaea, Runich et al., 2000: 85, part. - Russia, Mount Mashuk near Pyatigorsk; Negrobov et al., 2005: 601, part. - Russia, Voronezh Region, Novousmansky District.

Agapanthia villosoviridescens var. *acutipennis*, Carrière, 2002: 211 - France: "Pic de la Coquillade (Hérault)".

Agapanthia (*Agapanthiella*) *villosoviridescens*, Pesarini & Sabbadini, 2004: 126; Egorov, 2005: 17 - Russia, Chuvash Republic; Shapovalov et al., 2006: 107 - Russia, Orenburg Region; Goggi, 2006: 320 - Italy, Valsassina (Lecco, Lombardia); 2007: 85 - Italy, Parco della Grigna Settentrionale (Lecco, Lombardia); Listvyagova et al., 2013: 28 - Russia, Republic of Khakassia, Krasnoyarsk Krai.

Agapanthia (*Epoptes*) *villosoviridescens*, Löbl & Smetana, 2010: 216, part.; Chyubchik, 2010: 117 - Moldova ("Chyncheshty distr., Saerata-Meresheni vill. env.", "Chyncheshty distr., Lozova vill. env., Kodry Reserve"); Özdikmen, 2010: 942 - European Turkey; Sama, Buse et al., 2010: 34, part. - "common in Europe, western Caucasus, Siberia eastward to Ussuri, unknown in Asia Minor and in other countries of Near East"; Zabaluev, 2010: 33 - Russia, "Engels, Saratov Province"; Sama & Rapuzzi, 2011: 142 - Italy (Alto Adige, Abruzzo, Basilicata, Calabria, Campania, Emilia, Friuli, Lazio, Liguria, Lombardia, Marche, Molise, Piemonte, Romagna, Sicilia, Toscana, Trentino, Umbria, Veneto, Venezia Giulia); Drumont & Leduc, 2011: 294, 295 - Belgium; Shapovalov, 2012: 188 - Russia east to Baikal, "Europe, Caucasus, Kazakhstan, probably also northwestern Mongolia"; Shapovalov & Filimonov, 2012: 102 - Russia, Chelyabinsk Region, Chernoborsky; Ilić & Ćurčić, 2013: 89 - "Serbia: Rtanj Mountain"; Ilić, Ćurčić & Stojanović, 2013: 123 - Serbia, "Tekija"; Rapuzzi et al., 2013: 584 - West Palaearctic region; Steiner & Schmid, 2013: 2 - "Griechenland"; Vukajlović & Živanović, 2014: 199 - "Gledić Mountains (Central Serbia)"; Reisdorf & al., 2015: 156 - France, "Marais de Montabé (Essonne)"; Klausnitzer & al., 2016: 558 - "Mitteleuropa"; Facon, 2016: 11 - France, Montreuillois; Dunskis A. & Barševskis, 2018: 187 - Latvia; Georgiev et al., 2018: 106 - Bulgaria ("2 km SE of Debelt vill., near Sredetska Riv., 42°22.596'N, 27°16.338'E, 20 m a.s.l.", "2 km SE of Bistrets vill., near Sredetska Riv., 42°18.582'N, 27°02.371'E, 50 m a.s.l.", "1 km NE of Zidarovo vill., near Fakiyska Riv., 42°20.066'N, 27°24.780'E, 30 m a.s.l."); Georgiev et al., 2019: 18 - Bulgaria, "1 km NW of Gabrene vill., 41°22'41.76"N, 22°58'02.76"E, 280 m a.s.l."; Gorshkova et al., 2019: 35 - Russia, Saratov Region; Vlasov, 2019: 105 - Russia, Yaroslavl Region; Stolbov et al., 2019: 209 - Russia, Tyumen Region: "Surgutsky district (Yugansky NR)", "Tobolsky (Ovsyannikova, Penya)", "Yarkovsky

(Dubrovnoe)", "Nizhnetavdinsky (vicinity of Lake Kuchak)", "Tyumensky (Tyumen, Bogandinsky, Lake Lukashinskoye, Yantyk)", "Yalutorovsky (Lake Singul, Moshkarinsky reserve, Novoatyalovo)", "Isetsky (Bityuki)", "Omutinsky (Dmitrievka) districts"; Gradinarov & Petrova, 2019: 70 - "Bulgaria: Vrachanski Balkan Nature Park"; 2020, 174 - "Bulgaria: Sarnena Sredna Gora Mountains"; Kasatkin, 2020: 234 - Russia, Ryazan Region; Egorov et al., 2020: 86 - Russia, Republic of Mordovia; Danilevsky, 2020: 303 - European Russia, Western and Eastern Siberia, Baltic states, Belarus, Moldova, Ukraine, Kazakhstan, Mongolia, Turkey, Western Europe; Lazarev, 2021: 32 (holotype) - Central Europe; Sakalian et al., 2021: 52 - Italy, Monte Sirente; Zamoroka, 2022: 64 - Ukraine; Gubin & Martynov, 2023: 168 - Lugansk Region: "Pridontsovskaya floodplain" Reserve; Donetsk Region: Yampol, Svyatogorsk, Bogorodichnoe, Dronovka, Donetsk botanical garden, regional landscape park "Donetsk kryazh", Velikoanadolsky Forest, "Kamennye mogily" Reserve, Klinkino; Aleksandrowicz et al., 2023: 94 - Belarus.

Agapanthia (*Agapanthiella*) *villosviridescens*, Alekseev & Maryutin, 2019: 26 (misspelling) - Russia, Kaluga Region.

Agapanthia lederi, Bacal, 2020: 59 (= *helianthi* Plav.) - Moldova, "Zloți".

Agapanthia villosoviridescens subchalybaea, Bacal, 2020: 59 - Moldova, "Ivancea".

Type location. Not indicated in the original description; conditionally accepted as Western Europe.

Description. Fine pale pubescence of basal parts of antennal joints can be very dense totally covering cuticle; basal parts of middle antennal joints very rare reddish; apical setae concentration of 3rd antennal joint usually indistinct; prothorax in males about as long as its basal width, and about as wide anteriorly, as posteriorly; in females prothorax transverse with wide hind part; pronotum with wide and dense central setae stripe; elytra less shining, but without microsculpture, usually with very dense pubescence, which can be grey, yellow or sometimes orange, often totally hiding elytral surface and defining its color; grey humeral elytral stripe absent; erect elytral setae usually long and dense; poorly pubescent dark specimens are also known, especially in Siberian part of its area, where it could be missed with *A. daurica*, but the later has rather big eyes; eyes of *A.* (*E.*) *v. villosoviridescens* are very small, about as long as genae; erect elytral setae spread back to elytral apices; elytral apices never strongly attenuated, but can be sharpened or rounded; the smallest male among available specimens is 10.2 mm (Kyiv env.) long, the biggest female: 19.0 mm (Troitsk near Orenburg).

Material. *Agapanthia villosoviridescens* (Figs 1-4): 1 female, holotype of *Cerambyx villosoviridescens* DeGeer, 1775 preserved in SMNH with No: NHRS-JLKB000073628; **Russia: Leningrad Region.** 1 male, Sankt-Petersburg, Gatchina, 31.5.1901 - ZMM; **Moscow Region.** 1 female, Donino, 6.8.1952 - ZMM; 3 males, Podrezkovo, 7.6.1952 - ZMM; 1 female, Podrezkovo, 25.6.1952 - ZMM; 1 male, Podrezkovo, 6.1954 - ZMM; 1 male, Bratovshchina - ZMM; 2 males, Bratovshchina, 22.6.1931, 7.6.1933 - ZMM; 1 male, Mytishchi, 20.7.1933, G. Kostylev - ZMM; 1 male, 4 females, Khrapunovo, 10.6.1993 - MD; 1 male, Chashnikovo, 11.7.1965, M. Danilevsky - MD; 1 male, Chashnikovo, 20.6.1972, Krivovyazyuk - MD; 1 male, Chashnikovo, 11.7.1970, Nikiforov - MD; 1 female, Zvenigorod, Nikolina Gora, 11.6.1944, Nikulin - MD; 1 female, Udelnaya, 55°38′22.66′′N, 38°03′37.11′′E, 585 m, 3.6.2012, M. Danilevskaya - MD; 1 male, Bykovo, 55°38′5′′N, 38°4′E, 130 m, 11.6.2012, G. Danilevskaya - MD; 1 female, Bykovo, 55°38′5′′N, 38°4′E, 130 m, 16.6.2012, M. Danilevsky - MD; 1 male, Bykovo, 55°38′5′′N, 38°4′E, 130 m, 25.6.2012, M. Danilevsky - MD; 1 female, Dedovsk District, Miitovskaya station, 1.6. 1986, A.V. Shamaev - AS; 1 female, southern suburbs Kaliningrad [Korolev], 9.5.1982, A.V. Shamaev - AS; 1 male, 3 km N Volodarskogo, 30.5.1979, E. Shankhiza - ES; 1 male, Kyiv highway, 1 km from the road ring, 16.5.1984, E. Shankhiza - ES; 1 male, Raduga, 28.6.1997, E. Shankhiza - ES; 1 male, 2 females, Orekhovo-Zuyevsky District, 3 km S Antsiferovo, 7.6.1999, E. Shankhiza - ES; 1 female, Istra District, Manikhino, 27.5.2005, E. Shankhiza - ES; 1 female, Istra Distr., Zenkino, 7.6.2011, M. Danilevskaya - MD; 1 female, Istra Distr., Pavlovskaya Sloboda, 16.6.2005, A. Vdovichenko - ML; 1 female, Istra Distr., Pavlovskaya Sloboda, 16.6.2005, V. Kadnikov - ML; 1 female, Istra Distr., Pavlovskaya Sloboda, 19.6.2005, M. Lazarev - ML; 1 male, Istra Distr., Pavlovskaya Sloboda, 23.6.2005, M. Lazarev - ML; 1 male, 1 female, S of Chekhov, Safonovo, 55.0619˚N, 37.4144˚E, 12.6.2011 - SM; 1 male, 2 females, S of Chekhov, Safonovo, 55.0619˚N, 37.4144˚E, 4-5.6.2011 - SM; **Ivanovo Region.** 1 male, Rubskoe Lake, 6.1983, A. Tikhomirov - ML; **Kaluga Region.** 3 males, 1 female, 1 male, Kremenki, 54°54′24.36′′N, 37°07′41.92′′E, 14.7.1995, V.E Ustinov - ML; 1 female, Kremenki, 09.6.1991,

26.6.2005, V. Ustinov leg. - VU; 1 male, Vorobi, 27.5.2013, O. Kurysheva - MD; 3 males, 1 female, Vorobi, 55°9′22′′N, 36°46′14′′E, 17.6.2023, M. Danilevskaya - MD; 2 males, 2.5 km NW Vorobi, 55°9′23′′N, 36°46′12′′E, 151 m, 17.6.2023, M. Lazarev - ML; 2 males, 2 km NW Vorobi, 55°8′56.30′′N, 36°46′34′′E, 144 m, 17.6.2023, M. Lazarev - ML; 1 male, Kozelsk, 150 m, 28.6.1993, M. Danilevsky - MD; **Kursk Region.** 2 males, Central Black Earth Nature Reserve, Kazatskoe, 17.6.1990, I. Kostina - MD; **Belgorod Region.** 1 male, Borisovka, 12.6.1975 - MD; **Voronezh Region.** 1 female, Usmansky Bor, 25 km NN Voronezh, 12.6.1988, M. Tsurikov - MD; 1 female, Novokhopersk Distr., Varvarino, 20.6.1988, I. Zykov - ML; **Lipetsk Region.** 1 male, 50 km NE Elets, 3 km N Lamskoe, 26.6.2010, M. Tsurikov - MD; **Ulyanovsk Region.** 3 males, 1 female, Radishchevo Distr., Atmaly Forest, 52°59′N, 48°01′E, 200 m, 14.6.2008, M. Danilevsky - MD; 4 males, 4 females, with the same label - ML; **Samara Region:** 1 male, 5 females, Ziguli Mts., Strelnaya Mt., 53°24′′N, 49°42′E, 360 m, 4.6.2008, M. Danilevsky - ML; 2 males, Ziguli Mts., Strelnaya Mt., 53°24′′N, 49°42′E, 360 m, 11.6.2008, 16.5.2010, M. Danilevsky - ML; **Saratov Region.** 1 female, Nikolaevskiy Gorodok, 1924 - ZMM; 1 male, Bolshaya Kamenka, 51°48.571′N, 45°42.724′E, 20-22-6-2013, V.E. Ustinov - ML; **Volgograd Region.** 1 male, Olkhovka, 1-3.6.1999, M. Danilevsky - MD; 1 male, Mikhaylovka Disrict, Glinishche, 50°06′17′′N, 43°31′58′′E, 88 m, 17-19.6.2020, I. Melnik - VU; **Rostov Region.** 1 male, steppes near, Rostov-on-Don, 10-25.6.1995 - ML; **Krasnodar Region.** 1 female, Ubinskoe, 9.5.1976, M. Kravtchenko - MD; 1 female, Apsheronsk, 12.6.2010, 300 m, A. Bondarenko - MD; 1 male. Apsheronsk, Otdalennyy, 18.6.1985, A.V. Shamaev - AS; 1 male, 2 females, Besstrashnoe, 44°13′30′′N, 41°12′55′’E, 800 m, 21.5.2016, M.L. Danilevsky - MD; 1 male, Caucasus, Psebay, 15.5.1911 - ZMM; 2 males, 5 female, Psebay, 44°10′24.35′′N, 40°48′E, 860 m, 25.5.2016, M.L. Danilevsky - MD; **Lugansk Region.** 1 male, Voroshilovgrad [Lugansk], 16.6.1951, K. Arnoldi - ML; 3 males, 3 females, Luhansk Nature Reserve (Stanichno-Lugansk Nature Reserve), 10-14.06.2003, V.V. Martynov, T.A. Pisarenko - AG; **Donetsk Region.** 3 males (4.6.2004, 28.5.2010, 5.6.2012), 2 females (1.6.2010, 12.5.2012),

Donetsk, Donetsk Botanical Garden, A.I. Gubin - AG; 1 male (10.7.2000), 1 female (19.6.2003), Kramatorsk District, Bohorodychne, V.V. Martynov - AG; 1 male, Volnovakha District, Velikoanadolsky forest, 24.7.2000, V.V. Martynov - AG; 1 female, Volodarskoy District, Kamyana Mohyla reserve, 19.6.2004, V.V. Martynov - AG; 2 males, Kramatorsk District, Svyatogorsk, 12.6.2010; 1 female, Bakhmut District, Dronovka, 11.5.2012, V.V. Martynov - AG; 2 males, 1 female, Novoazovsk District, Klinkino, 11.6.2011, V.V. Martynov - AG; 1 female, Limansk District, Yampol, 24.5.2012, V.V. Martynov - AG; **Republic of Crimea.** 1 female, Feodosia District, Kurortnoe, 6.5.2010, V.V. Martynov leg. - AG; **Republic of Mordovia.** 1 male, Svetotekhnika, 18.5.2008, A.B. Ruchin - ML; 1 male, Turgenevo, 19.5.2008, A.B. Ruchin - ML; 1 1 male, Ekaterinovka, 29.5.2008, A.B. Ruchin - ML; 1 female, Chudino, 7.6.2008, A.B. Ruchin - ML; 1 female, Saransk, 24.6.2008, A.B. Ruchin - ML; **Samara Region.** 1 female, Samara, 10.6.2011, D. Magdeev - MD; 4 males, 2 females, Zhiguli, Bostanzhoglo - ZMM; 1 male, 1 female, Kinel Distr., Krasno-Samarskoe lesnichestvo, 25.6.2011, A. Tilli - MD; 1 female, Polyakov, 31.5.2004, D. Magdeev - MD; 1 male, Sukhaya Samarka, 16.6.2009, D. Magdeev - MD; 1 male, Zhiguli Nature Reserve, Strelnaya Mt., 16.5.2010, M. Danilevsky - ML; 1 male, 2 females, Zhiguli Nature Reserve, Strelnaya Mt., 53°24′N, 49°42′E, 360 m, 4.6.2008, M Danilevsky - ML; **Kirov Region.** 2 males, 1 female, Vyatka - ZMM; **Vologda Region.** 1 male, 1 female, Ustyuzhna, 21-22.6.2011, S. Neporotovsky - MD; **Republic of Tatarstan.** 2 females, 100 km E Kazan, 12.7.2005, M. Danilevsky - MD; 1 female, Mamadysh, 55°39.501′N, 51°06.069′E, 20.52012, V.E Ustinov - ML; **Orenburg Region.** 1 female, 12 km SW Troitsk, 18-21.5.2012, S.V. Litovkin - MD; 1 female, Orenburg, 3.6.1985, M. Nesterov - MD; **Chelyabinsk Region.** 2 females, B. Miassovo, Ilmen Natural Reserve, 23.6.1985, M. Nesterov - MD; 2 males, 1 female, Tyulyuk, 800 m, Iremel Mt., 30.6.1998, M. Danilevsky - ML; **Novosibirsk Region**. 2 females, Novomikhaylovka, 8-9.7.1987, V. Grachev -MD; **Tomsk Region.** 13 males, 7 females, W Siberia, S Tomsk, Belousovo, 56°18′13′′N, 85°11′53′′E, 160 m, 2.6.2012, D. Kuleshov - MD; **Kemerovo Region.** 1 male, 9 km S Tchumay, Kozhukh River, 55°39.5′N, 87°49.5′E, 25.6.2019, S. Luzinyan -

MD; 1 male, Kemerovo env., 6.7.2020, D. Efimov - MD; 1 female, Podyakovo, 1-11. 7.2010, N. Teplova - MD; 1 female, 10 km N Polutornik, 6.7.2009, O. Artemova - MD; 1 female, Kemerovo Region, Mundybash, 4.7.2005, A. Zhuravleva - MD; 2 females, Makaraksky, 1-8.7.2007, V. Babushkina - MD; 1 female, Ust-Kabyrza, 1-4.7.2018, D. Sidorov - MD; **Altai Region.** 1 female, Zmeinogorsk, 10.6.1911 - ZMM; 1 male, Zmeinogorsk, 11.6.1984, V. Shilenkov - MD; 1 female, Altai, Kolyvan, Kamenka, 15.6.1984, V. Shilenlkov - MD; **Tyumen Region.** 2 males, 1 female, Tobolsk, 19.6.1929, 14.7.1933, 18.7.1933, Teleshov - ZMM; 1 male,1 female, Tobolsk, 20.6.1935, 23.6.1935 - ZMM; **Altai Republic.** 1 male, 1 female, Gorno-Altaysk, 1963, Z. Belova - ZMM; 1 male, Shebalino, 26.5.1934 - ZMM; 1 female, Artybash, 21.6.1981, A. Zaytsev - MD; **Republic of Khakassia.** 1 male, Khakassia, Kuznetsky Alatau, 8 km from Balyksa, Terensuk River, 3-4.7.2004, E. Kudryashova - MD; **Kazakhstan:** 1 female, 27 km NE Ust-Kamenogorsk, Tarkhanka, 14.7.1993, A.V. Ivanov - ML;.1 female, Zyryanovsk, 500 m, 12.6.1994, M. Danilevsky - ML; 1 male, 1 female, Zyryanovsk, 500 m, 25.7.1999, D. Obydov - MD; 2 males, 4 females, Putintsevo, 20 km N Zyryanovsk, Maralikha Mt., 49°51′N, 84°25E, 1000 m, 11-20.6.2005, Danilevsky - MD; 1 male, Sibinka River, 49°36′N, 82°28′E, 500 m, 1.6.2005, M.L. Danilevsky - MD; **Ukraine: Poltava Region.** 1 male, Lokhvitsa District, 19.7.1905, P. Zhikharev - ZMM; 1 female, Yareski, 18.6.1919 - ZMM; **Kharkov Region.** 2 males, Kharkov distr., Merefa, 8.5.1952 - ZMM; 1 male, 2 females, Kharkov distr., Merefa, 13.5.1952 - ZMM; 2 females, Kharkov distr., Merefa, 21.7.1953, 5.6.1952 - ZMM; **Odessa Region.** 1 female, Vilkovo, 31.5.1980, M. Nesterov - MD; 2 males, 2 females, Podolsk District, Aleksandrovka, 15.5.2010, G.V. Popov leg. - AG; **Kyiv Region.** 2 males, Motovilovka, 28-29.5.1912, Vetr.-Zubovskiy - ZMM; 2 males, 1 female, Irpin, 22.6.1980, M. Nesterov - MD; 1 male, Kyiv, Bortnychi, 4.6.1988, V.I. Gusarov - ML; **Ternopol Region.** 1 male, Medobory Nature Reserve, 20.5.2004, V.V. Martynov - AG; **Zakarpattia Region.** 1 male, Rakhov Distr., 4 km SW Kvasy, 7.6.1973, I. Zykov - ML; 1 male, 2 female, Rakhov District, Chernaya Tisa, 29.6.1973, I. Zykov - ML; 1 female, Transcarpathia, Rakhov Distr., Kvasy, 23.7.1973, I. Zykov -MD; 1 male, Uzhhorod District, Nevitskoe,

7.7.1980, A.G. Koval - ML; 1 male, Chernaya Mt., 31.5.1981, A.G Koval - ML; 1 male, Velykyi Bereznyi, 18.7.1981, A.G. Koval - ML; **Belarus:** 1 male, Borisov, 10.6.1977, A. Tikhomirov - ML; **Republic of Moldova:** 1 male, Bessarabia, Kostuleny, na Prute, 21.6.1945 - ZMM; 1 male, Meresheny, 6.6.1988, L. Penev - ML; 1 male, Codru Reserve, 8.6.1988, L. Penev - ML; 1 male, 1 female, Kozhushna, 9.5.2009, A. Zubov - ML; **Bulgaria:** 2 males, Lozenska Planina, Mtn., Goliya Rid peak, 42˚36´N, 23˚25´E, 760 m, 26.6.2006, T. Ljubomirov - ML; **Hungaria:** 1 male, Sátoristye, J. Meschnigg - ZMM; **Serbia:** 1 female, Stara Planina, Babin Zub Mt., 1-7.7.2015, M. Krivosheina - MD; **Austria:** 1 male, Kärnten - ZMM; 1male, 2 females, Gießhübl bei Wien - ZMM; **Germany:** 1 female, Pfalz, Dahn, 5.1971, R. Schimmel - MD; 1 male, Berlin - MD; **Italy:** 1 female, Forli, 29.6.1982 - MD; 1 male, Stresa, 20.5.1937 - MD; **France:** 1 male, Pyrenees or. Prades, 24-30.6.1986, R. Schimmel - ML.

Distribution. The northern most locality was published for Karelia (Plavilstshikov, 1968) and Komi (Tatarinova et al., 2007 - Ukhta); eastwards the taxon penetrates to Khakassia; southwards the taxon reaches Volgograd and Krasnodar regions, but not penetrates to Transcaucasia; westwards the subspecies is distributed all over Europe including Iberian Peninsula.

Figs 1-4. *A.* (*E.*) *villosoviridescens* (DeGeer, 1775) - holotype, female, *Cerambyx villosoviridescens* DeGeer, 1775: 1. dorsal view, 2. lateral view, 3. position of the specimen in the draw, 4. set of labels - photographed by J. Bergsten (© 2021 Naturhistoriska riksmuseet). Made available by the Swedish Museum of Natural History (CC-BY 4.0 license).

M.A. Lazarev

Agapanthia (*Epoptes*) *villosoviridescens helianthi* Plavilstshikovi, 1935, stat. n.

Figs 5-6, Map 1

Agapanthia dahli Rich. ab. *lederi* Gebl., Bogdanov-Katkov, 1917: 50 - Yekaterinodar.

Agapanthia simplicicornis ab. *heyrovskyi* Roubal, 1917: 63 - "for Rossia mer.: Pjatigorsk".

Agapanthia villosoviridescens var. *mesmini* Pic, 1927: 7 - "Caucase".

Agapanthia subchalybaea subchalybaea, Plavilstshikov, 1929b: 136, part. - "Nord-Kaukasus: Groznyj", "Kuban: Vashtrek", "Fl. Laba", "Anapa", "Central-Kaukasus: Teberda, 7000′", "Majcop", "Vladikavkas", "Lars", "Atshish'cho", "West-Kaukasus: Krasnaja Poljana", "Sotshi", "Abchasia: Gagry, 5000′", "Transkaukasien: Mz'chet", "Borzhom", "Abas-Tuman", "Teliani", "Manglis", "Bacuriani", "Suram", "Kusary", "Kars", "Talysh".

Agapanthia (s. str.) *helianthi* Plavilstshikov, 1935: 250 - "Rossia mer.-or.: Novotsherkassk; Matveev Kurgan; Ciscaucasia: prov. Kuban [loc. numerosa: Abinskaja, Korenovskaja, Rodnikovskaja, Mirskaja, Labinskaja, Tulskaja, Maikop etc.], prov. Terek [loc. numerosa: Naurskaja, Petropavlovskaja, Grozny etc.]; Transcaucasia: Mzchet, …, Teliani"; 1948: 169, part. - Ciscaucasia, Georgia; 1968: 124, 164 - In the European part of the USSR, it is distributed in the southeast, namely in the Rostov region and further south … all over the Ciscaucasia; in Transcaucasia found in a number of areas of Georgia; Lobanov et al., 1982: 269; Danilevsky & Miroshnikov, 1985: 386, 391, photo 38, part. - South of the European part of the USSR, Caucasus, Transcaucasia, Talysh.

Agapanthia (s. str.) *villosoviridescens*, Plavilstshikov, 1948: 168, part. - North Armenia, Sevan, dol. Arax; Europe, Caucasus, western Siberia; Abdurakhmanov, 2012: 32 - Russia, Dagestan, Pervomaysk.

Agapanthia (s. str.) *subchalybaea subchalybaea*, Plavilstshikov, 1948: 169 - North Armenia, Sevan, Alagez, Zangezur; (Caucasus).

Agapanthia helianthi, Zaitzev, 1954: 19, part. - Georgia, middle Asia; Breuning, 1961: 186. - "Caucase, Transcaucasie"; Plavilstshikov, 1965: 416 - Ciscaucasia; Fomichev, 1983: 44, part. - Russia, (Republic of Kalmykia, Gorodovikovsk), (Rostov Region, Bolshiye Saly); Miroshnikov, 1984: 279 (larva) - Krasnodar; Kasatkin & Arzanov, 1997: 67 - Kislovodsk; Japoshvili et al, 2022: 794 - "from Lagodekhi protected areas, Sakartvelo (Georgia)".

Agapanthia villosoviridescens, Breuning, 1961: 186, part. (= *lederi* Ganglb.) - "Europe, As. occ. et centr."; Runich et al., 2000: 85, part. - Russia, Mount Mashuk near Pyatigorsk.

Agapanthia lopatini Kazjutschits, 1988: 583 - Armenian SSR, Byurakan, southern slope of Mount Aragats.

Agapanthia lederi, Danilevsky, 1992: 115 (= *helianthi* Plav.); 1993: 39 (= *lopatini* Kazjutschits); 2010: 45 (= *mesmini* Pic); Althoff & Danilevsky, 1997: 40 (= *helianthi* Plav.); Kalashian, 2017: 44 - "Armenia: Hankavan hydrological

State Sanctuary"; Kalashian & Khalatyan, 2018: 312 - "Jermuk hydrological State Sanctuary (Armenia)".

Agapanthia (*Agapanthiella*) *lederi*, Pesarini & Sabbadini, 2004: 127.

Agapanthia subchalybaea, Jablokoff-Khnzorian, 1961: 94 - Armenia.

Agapanthia (*Epoptes*) *lederi*, Danilevsky, 2009a: 657 (designation of lectotype and paralectotypes for A. *helianthi* Plav. - lectotype: Labinskaya, paralectotypes: Rodnikovskaya, Ladoga, Mingrelskaya, Naurskaya, Armavir, Grozny, Mtskheta, Telavi); Danilevsky, 2009b: 715; Danilevsky & Smetana, 2010: 216 (= *helianthi* Plav. = *mesmini* Pic = *lopatini* Kazjutschits) - Azerbaijan, Armenia, Georgia, south of European Russia; Lazarev, 2019: 1340 (lectotype) - "Cauc. bor. occ., prov. Kuban, Labinskaja".

Agapanthia (*Epoptes*) *lederi lederi*, Danilevsky, 2020: 302, part. - south of European Russia, Georgia, Armenia, Azerbaijan, Turkey.

Type locality. Russia, Krasnodar Region, Labinsk [44°38'N, 40°44'E] (according to lectotype designation by Danilevsky, 2009: "Labinskaya").

Description. Antennae in males surpassing elytral apices by 5 apical joints, in females - by 3-4 joints; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints usually reddish; one male from Tsagveri (Georgia) has red antennae; 3rd antennal joint with apical setae concentration; prothorax in males and in females transverse, widened posteriorly; pronotum with wide and dense central setae stripe; elytra shining, but without blue luster, without microsculpture, with usually poor greyish pubescence, which sometimes can be rather dense (Teberda); grey humeral elytral stripe often distinct; erect elytral setae long and dense along anterior elytral third, and gradually shortened posteriorly; elytral apices slightly attenuated; body length in males: 10.5-18.0 mm, female length: 11.0-21.5 mm.

The taxon differs from the nominative subspecies by less pubescent elytra and often presence of grey humeral elytral stripe.

Material. **Russia: Krasnodar Region.** 2 males, 1 female, Kuban, Bolshaya Laba River - ZMM; 1 male, Ekaterinodar [Krasnodar], 26.4.1911 - ZMM; 1 male, Armavir. 6.6.1912 - ZMM; 3 males, Armavir - Natyrbovo - ZMM; 2 males, Sochi, 18-19.6.1913, Zicharev - ZMM; 1 female, Sochi, 5.1986, A.Yu. Veselova - MD; 1 male, Sochi, 19.6.1913 - ZMM; 1 male, Sochi, Utch-Dere - ZMM; 1 male, 3 females, Sochi, 5.1986, L.Yu. Veselova - ML; 1 female,

Anapa, 13.7.1911, Zhikharev - ZMM; 2 males, Anapa, 27.6.1911, Zhikharev - ZMM; 1 male, 1 female, Kuban, Mingrelskoe, 10.5.1930, V. Galkin - ZMM; 1 male, Kuban prov., Ladozhskaya, 6.VI. - ZMM; 4 males, 5 females, Caucasus, Goryachy Klyuch, 5.1938, M. Lutchnik - ZMM; 3 females, Goryachy Klyuch, Shchetka Mt., 21.6.1987, N. Okhrimenko - MD; 1 female, Betta, 44°13'45.4853"N, 39°14'24.7287"E, 27.5.2011, V. Ustinov - VU; **Republic of Adygea.** Lectotype, male (length: 14.3 mm; width: 3.5 mm) with 5 labels: 1) [red] "Type"; 2) "Cauc. bor. occ. / prov. Kuban / Labinskaja / 19.VI.[1]914"; 3) "*Agapanthia* / *helianthi* / m. / N. Plavilstshikov det."; 4) [red] "LECTOTYPUS / *Agapanthia HELIANTHI* / Plavilstshikov, 1935 / M. Danilevsky des., 2008"; 5) [pink] "Зоомузей МГУ (Москва, РОССИЯ) / № ZMMU Col 00141 / Zool. Mus. Mosq. Univ. / (Mosquae, ROSSIA) / ex coll. N. N. Plavilstshikov" - ZMM; Paralectotype, male with three labels: 1) [red] "Cotype", 2) "Caucas. bor. / distr. Maikop / p. Rodnikovskaya, 1.VI 1930", 3) "*Agapanthia* / *helianthi* / m / N. Plavilstshikov det." - SZM; 1 male, 3 females, Maikop, Rodnikovskaya, 15.5.1930, B. Dobrovolsky - ZMM; 5 males, Maikop, Rodnikovskaya, 1.6.1930 - ZMM; 1 male, 1 female, Maikop, 30.5.1929 - ZMM; 1 male, 1 female, Maikop, 12-13.6.1933 - ZMM; 2 males, Maikop, 1.6.1933, 26.6.1933, Arnoldi - ZMM; 1 male, Maikop, 5.6.1935 -ZMM; 2 males, Maikop, 4.5.1947 - ZMM; 2 females, Maikop, 15.5.1951, 18.5.1952 - ZMM; 1 male, 10 km SW Krasnodar, Khomuty, 21.6.1988, V.I. Gusarov - ML; 4 males, 2 females, Khomuty, 6.1973, A. Miroshnikov - MD; **Karachay-Cherkessia Republic.** 1 female, Kuban, Teberda - ZMM; 1 male, 1 female, Teberda, A. Zolotarew - ZMM; 1 male, Cauc. sept. Teberda, Popova g., 19.6.1908, A Zolotarew - ZMM; 36 males, 23 females, Teberda, 2.6.1930, P. Elagin - ZMM; 7 males, 6 females, Teberda, 30.5.1931, P. Elagin - ZMM; 1 male, Teberda, 20.7.1964, A. Tikhomirova - ZMM; 1 female, Teberda, 4200`, S. Tschetweikow - ZMM; 1 male, Cauc. cent, bor. Teberda, 7000`, A. Zolotarew - ZMM; 3 females, Teberda, 24.5.1940, 8.6.1940 - MD; 1 male, Teberda, Mukha, 25.6.1916 - MD; 4 males, 2 females, N Caucasus, Teberda, 1700-1800 m, watershed Dzhenait and Korylykaya Rivers, 22.6.1993, V. Savitsky - MD; 1 female, Caucasus, Zelenchukskaya, 26.5.1949, M. Stavskaya - ZMM; **Stavropol Region.** 1 male, Cauc.

bor. Stavropol, 5.1914, B. Zolotarevsky - ZMM; 1 male, Cauc. bor. Stavropol, 7-13.5.1914, B. Zolotarevsky - ZMM; 1 male, Cauc. bor. Stavropol, 1-10.6.1914, B. Zolotarevsky - ZMM; 1 female, Caucas. bor., Stavropol, 13.5.1914, A. Zolotarew - ZMM; 1 male, Kislovodsk - ZMM; 1 male, Kislovodsk, 6.1913, N. Plavilstchikov - ZMM; 1 male, 1 female, Kislovodsk env, 1-10.6.2003, Y. Liman - ML; 1 female, near Kislovodsk, Beriozovaja River, 1000 m, 10.6.1995 - SM; 1 male, Zheleznovodsk, 9.6.1907, Pliginsky - ZMM; 2 males, Zheleznovodsk, 11.5.1909, J. Parfentiev - ZMM; 1 female, Caucasus, Mineralnye Vody, Mashuk, 13.5.1909, J. Parfentiev - ZMM; 3 males, 1 female, Mashuk, 44°2'51.26"N, 43°6'2"E, 29.4.2024, M. Danilevsky - MD; 1 female, Mashuk, 44°2'49"N, 43°4'55"E, 26.4.2024, M. Danilevsky - MD; 3 males, Mashuk, 44°03.020'N, 43°04.186'E, 25.4.2024, V. Ustinov - VU; 5 males, Pyatigorsk, Kolstevaya str., 44°05.301'N, 43°00.694'E, 28.4.2024, V. Ustinov - VU; 2 males, 1 female, Pyatigorsk, Proval env., 29.4.2024, V. Ustinov - VU; 1 male, Temnolesskaya, 31.5.1950, O. Kryzhanovski - ZMM; **Republic of North Ossetia-Alania.** 1 male, Mont. prope Wladikavkas, A Zolotarew - ZMM; 1 male, 2 females, Mozdok, 27.5.1982, V. Janushev - MD; **Republic of Ingushetia.** 1 female, Nizhniy Alkun [Alkun], 8.6.1958, B. Vorobev - ZMM; **Chechen Republic.** 1 female, Grozny, Luchnik - ZMM; 1 female, Grozny, 1909, Luchnik - ZMM; 1 male, Grozny, 20.5.1913, N. Plavilstchikov - ZMM; 2 males, 2 females, Naurskaya, 4.6.1913, N. Plavilstshikov - ZMM; 1 male, Chechnya, Starogladkovskaya, Terek River, 23.6.1928, Arnoldi - MD; **Republic of Dagestan.** 1 female, Kizlyar, 25.6.1932 - ZMM; 2 males, Khasavyurt, 14.6.1953, 18.8.1953 - ZMM; 1 male, 2 females, Novy Biryuzak, 21.5.1959, B. Vorobev- ZMM; **Georgia:** 1 male, Manglisi, 22.VI. - ZMM; 2 males, Manglisi, 1200 m, 16.6.1990, M. Danilivsky - MD, ML; 1 female, Bakuriani, 7.1924 - ZMM; 1 female, Bakuriani, 19.7.1909, J. Parfentiev - ZMM; 3 females, Bakuriani, 11.7.1930, N. Kotova - ZMM; 4 males,4 females, Bakuriani, 24.7.1930, N. Kotova - ZMM; 1 male, Bakuriani, 29.7.1930, N. Kotova - ZMM; 2 males, Teliani prope, Telav, Kakhetia, 20.06.1907, N.J. Fursov - ZMM; 1 male, Kakheti, 24.8. - ZMM; 1 male, Mtschet, prope Tiflis, 9.6.1915, B. Uvarov - ZMM; 1 male, Mtskheta, 31.5.1914, L. Bankovsky - ZMM; 1 female,

Mtschet, prope Tiflis, 8.1915 - ZMM; 1 male, Tiflis, Suram, 28.5.1882 - ZMM; 1 male, Surami, 5.6.1917, C. Ahnger - ZMM; 1 male, Tsagveri, 25.5.1967, I. Dzhavelidze - MD; 1 female, Tsagveri, 21.6.1982, V. Dolin - MD; 2 males, Tsagveri, 23.7.1987, M. Danilevsky - ML; 1 female, Borzhom, 6.1925 - ZMM; 1 male, Borzhomi, 18.7.1902 - MD; 1 female, Borzhomi, 2.8.1987, O. Gorbunov - ML; 1 male, Tbilisi, Satovle Ridge, 1300-1400 m, 18.6.1985, S. Kyzmin - MD; 1 female, Mskhneta, 22.5.1985, R.D. Zhantiev - ML; 8 males, 6 females, Akhaldaba, 15.7.1987, M. Danilevsky - MD; 5 males, 3 females, Akhaldaba, 600 m, 15.7.1987, M. Danilevsky - ML; 1 male, Orbeti, Trialiti Ridge, 28-29.5.2016, A. Zubov - MD; **Armenia:** 1 male, Erivan Distr., Darachichag [Tsaghkadzor], 20.6.1912, Dobrovljanski - ZMM; 1 male, 1 female, Transcauc., Erivan Distr., Darachichag, 14-17.7.1912, Dobrovljanski - ZMM; 1 male, Darachichag, 6.1935 - ZMM; 1 female, Inaklyu [Antarut], 26.7.1934, B. Tkatchukov - ZMM; 1 female, Alagez [Aragats Mount], Inaklyu, 6.1935 - ZMM; 1 male, Alagez, Inaklyu, 25.7.1936 - ZMM; 1 male, 1 female, Alagez, Inaklyu, 26.7.1936 - ZMM; 1 female, Alagez, Inaklyu, 28.6.1956, A. Tsvetaev - ZMM; 1 female, Daratchitchag, Maljushenko - ZMM; 4 males, 1 female, Daratchitchag, 14-17.7.1912, Dobrovlyansky - ZMM; 1 male, Idzhevan, 26.5.1935, A. Zagulyaev - ZMM; 2 females, Darachichag, 7.1935 - ZMM; 1 female, Idzhevan, 26.5.1955, L. Zomina - ZMM; 1 male, Idzhevan, 26.5.1955, L. Zimina - ZMM; 1 male, Idzhevan, Kirants, 30.4.1989, M. Kalashian - MD; 2 males, Idzhevan, Kirants, 20.4-2.5.1989, M. Kalashian - ML; 1 female, Tavush, Ditavan, 40.955˚N, 45.222˚E, 1400 m, 27.6.2015, S. Murzin - ML; 1 female, Geghard, 8.6.1989, M. Kalashian - ML; 1 female, Geghard, 40.1414˚N, 44.8074˚E, 1800 m, 19.5.2013, S. Murzin - SM; 1 female, Khosrov, 7.8.1967, M. Danilevsky - MD; 1 female, Khosrov, 1.7.1983, V. Kuznetsov - ML;1 female, Khosrov, 2.7.1983, M. Danilevsky - MD; 1 male, 1 female, Khosrov, 24.6.1984, V. Kuznetsov - ML; 1 male, 1 female, Khosrov, 25.6.1986, M.Yu. Kalashian - ML; 2 males, 4 females, Khosrov, 25.6.1991, M. Kalashian - MD; 2 males, 1 female, Khosrov, 24.7.1991, M. Kalashian - MD; 2 males, Khosrov, 1-3.6.1992, A. Sukiasian - VU; 1 male, Khosrov, 19.8.2002, M. Kalashian - MD; 1 male, 1 female, Khosrov, 24.6.1992, M. Kalashian - MD; 1 male, 1 male,

Khosrov, 5.6.1982, Dolin - ML; 1 male, 1 female, Khosrov Reserve, Central aerea, E slope of Kotuts Mt., 9.6.2002, M. Kalashian - SM; 1 male, Khosrov, 40°02'N, 45°02'E, 10-12.6.2003, M. Danilevsky - MD; 1 female, Byurakan, 17.6.2003, 1700 m, M. Danilevsky - MD; 1 male, 3 females, Arailer, 1900-2000 m, 18-21.6.2003, M. Danilevsky - MD; **Azerbaijan:** 1 female, Transcaucasia, Arax, Sabir-Abad, 8.VI. - ZMM; 2 female, Qusar, 1.7.1900, 10.7.1900, A. Zavadsk - ZMM; 1 male, 1 male, Transcaucasia, Akstafa, 13.6.1907, D. Skorospelov - ZMM; 1 male, 1 female, Barda, 26.6.1933, F. Lukjanovitch - ZMM; 1 female, Nukha [Shaki], 25.6.1933, F. Lukjanovich - ZMM; 1 male, 1 female, Nukha, 25.7.1933, F. Lukjanovitch - ZMM; 1 male, 1 female, Altyagach, 9.7.1979, M. Danilevsky - MD.

Distribution. North Caucasus without very high areas from Krasnodar Region to Daghestan; Transcaucasia: Azerbaijan without Talysh, Armenia without north Trans Sevan mountains and without south Meghri environs, Georgia without high mountains.

Agapanthia (*Epoptes*) *villosoviridescens subnigra* Pic, 1890, stat. n.

Figs 7-9, Map 1

Agapanthia subnigra Pic, 1890: 119 - "Georgie"; Winkler, 1929: 1213; Danilevsky, 2010: 44; Sama et al., 2008: 122 (?= *subchalybaea* Pic) - "Caucasus", "absent in Iran".

Agapanthia villosoviridescens var. *subchalybaea* Reitter, 1898: 134 - "Kaukasus und Turkestan: Taschkend"; Winkler, 1929: 1213 - "Ca. Tk.", **syn. n.**

Agapanthia angusticollis v. *subacuta* Pic. 1909: 106 - "Caucase".

Agapanthia (s. str.) *villosoviridescens*, Pic, 1910: 97, part. (= *lineotocollis* Donov., = *angusticollis* Gyll., = *lederi* Ganglb., = *acutipennis* Muls., = *pyrenaea* Bris., = *nicaeensis* Chevr., = *subchalybaea* Reitt., = *subacuta* Pic).

Agapanthia (s. str.) *subnigra*, Pic, 1910: 97 - "Caucase"; Aurivillius, 1923: 464, part. - "Kaukasus".

Agapanthia (s. str.) *villosoviridescens* var. *subchalybaea*, Aurivillius, 1923: 466, part. - "Kaukasus, Turkestan".

Agapanthia (s. str.) *villosoviridescens* var. *subacuta*, Aurivillius, 1923: 466, part. - "Kaukasus".

Agapanthia subchalybaea subchalybaea, Plavilstshikov, 1929: 103, part. - "Caucasus"; 1930a: 131.

Agapanthia (s. str.) *subchalybaea subchalybaea*, Plavilstshikov, 1930b: 34, 40, part. (= *subacuta* Pic = *subnigra* Pic); 1948: 169, part. - North Armenia, Sevan, Alagez, Zangezur; (Caucasus).

Agapanthia subchalybaea, Plavilstshikov, 1932: 194, part. - Caucasus; 1965: 416, part. - Caucasus; Zaitzev, 1954: 19, part. - Georgia: Borjomi, Gvirgvina, Tana, Tsagveri, Akhaldaba, Saguramo, Mtskheta, Tbilisi, Lagodekhi, Armenia, middle Asia; Breuning, 1961: 186, part. (= *subacuta* Pic, = *subnigra* Pic, = *turanica* Plav.) - "Caucase, Transcaucasie"; Kasatkin & Arzanov, 1997: 67, part. - Krasnodar Krai: Ust-Labinsk, Nickel; Karachayevo-Cherkessia: Teberda, ridge Arkasara; Kabardino-Balkaria: Dolina Narzanov, 1350 m, 43°41'50"N, 42°40'28"E; Danilevsky, 2010: 44.

Agapanthia subchalybaea m. *subnigra*, Breuning, 1961: 186.

Agapanthia subchalybaea m. *subacuta*, Breuning, 1961: 186.

Agapanthia (s. str.) *subchalybaea*, Plavilstshikov, 1968: 123, 159, part. (= *subacuta* Pic = *subnigra* Pic) - Caucasus with Transcaucasia. Northeastern Turkey; Lobanov et al., 1982: 269; Danilevsky, Miroshnikov, 1985: 386, 391 - Caucasus, Transcaucasia; Northeast Turkey.

Agapanthia (*Agapanthiella*) *subnigra*, Pesarini & Sabbadini, 2004: 127.

Agapanthia (*Agapanthiella*) *subchalybaea*, Pesarini & Sabbadini, 2004: 127; Özdikmen, 2007: 349, 392, part. (?= *subnigra* Pic) - Turkey.

Agapanthia (*Epoptes*) *subnigra*, Danilevsky & Smetana, 2010: 216, part. - Azerbaijan, Georgia, Russia: South European Territory; Danilevsky, 2020: 303 - Georgia.

Agapanthia (*Epoptes*) *subchalybaea*, Danilevsky & Smetana, 2010: 216 (= *subacuta* Pic), part. - Azerbaijan, Georgia, Russia: South European Territory; Özdikmen, 2013: 20 - Turkey: Konya; Danilevsky, 2020: 303, part. - Azerbaijan, Georgia, Russia: South European Territory.

?*Agapanthia subehalybaea*, Şabanoğlu, 2020: 204 (misspelling, unavailable name) - Turkey: Rize: İkizdere.

Type locality. High mountains of Georgia, according to the holotype habitus and available material.

Description. Antennae reaching elytral apex by 6th-8th joints in males, in females - by 9th-10th joints; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints never reddish; 3rd antennal joint with apical setae concentration; prothorax in males about as long as wide, and about as wide anteriorly, as posteriorly; in females prothorax transverse with wider hind part; pronotum with narrow setae stripe, often more or less reduced; elytra about glabrous, with poor bluish luster, recumbent pubescence often indistinct, but with dense erect setae present up to the apex; microsculpture absent; body length in males: 11.2-16.4 mm, in females: 11.4-18.7 mm.

This high mountain taxon is close to *A. v. helianthi* Plav. but can be easily identified by poor elytral pubescence and bluish luster.

Material. **Russia: Krasnodar Region.** 1 male, 2 females, Circassia, Kardyvach, 20.6.1912, I. Michelson - ZMM; 2 males, Atchishkho, 1600 m, 28.6.1973, A. Lobanov - MD; 1 female, Cauc. occ., Krasnaya Polyana, VIII, Dr. Lgocki - ZMM; 3 males, 1 female, Krasnaya Polyana, 26.7.1910 - ZMM; 1 male, Krasnaya Polyana, 1952, Zhelokhovtsev - ZMM; 4 males, 2 females, Cauc., Krasnaya Polyana, 9-15.8.1952, Zhelokhovtsev - ZMM; 2 males, Atchishkho, 800-1500 m, 10.8.2003, 23.6.2005, V. Savitsky - MD; 1 male, Novorossiysk, Andreevsky pass, 500 m, 44°43'N, 37°51'E, 5.6.2010, M. Danilevsky - MD; **Republic of Adygea.** 1 female, Abago Mt., 2100 m, 29-30.6.1999, Puchkov - MD; 1 female, Russia, westwards Tkhach Mt., 1700-1900 m, 20.7.2002, V. Savitsky - MD; 1 male, Lagonaki, Ridge, Kamennoe More, 1760-1800 m, 44°10'33"N, 40°03'19"E, 7-19.6.2012, A.V. Korshunov - MD; **Karachay-Cherkessia Republic.** 1 male, Damkhurts, 29.7.1967, N. Filippov - MD; 1 female, from same locality, 14.8.1967, N. Filippov - MD; 1 female, from same locality, 18.8.1967, S. Sharova - MD; 1 male, 1 female, Bolshaya Laba River, Pkhiya, 1400-1600 m, 29.8.1992, V. & M. Savitsky - MD; 2 males, 2 females, Bolshaya Laba River, Arkasara Ridge, 1500 m, 25.6.1997, I. Shokhin - MD; 1 male, 1 female, Arkhyz, Abishara-Akhuba Ridge, Dzhumarykly-Tebe Mt. [43°36'7"N, 41°14'41"E], 1800 m, 11.7.2009, A. Zubov - ML; **Kabardino-Balkaria Republic.** 1 male, Dolina Narzanov, 1964 - MD; 1 female, Tyrnyauz, 1800-2200 m, 6.6.1988, M. Danilevsky - MD; **Republic of North Ossetia-Alania.** 1 female, Fiagdon, 1.8.1983 - MD; **Republic of South Ossetia - the State of Alania.** 1 male, Tskhinvali, 7.1929, Zurinov - ZMM; **Georgia:** Holotype, male with 7 labels: 1) [white] “type”; 2) [white] “Caucase”; 3) [white] “*agap. subnigra* / Pic. (Georgie) / *subnigra* p. 119”; 4) [white] “Museum Paris / Coll. M. Pic” 5) [red] "HOLOTYPE"; 6) [white] "HOLOTYPE / *Agapanthia* / *subnigra* Pic, 1890"; 7) [white] "MNHN, Paris / EC26187” - MNHN; 6 females, Abastumani, VII. - ZMM; 1 male, Abastumani, 8.7.1895 - ZMM; 2 females, Abastumani, 20-30.6.1914 - ZMM; 1 male, south slope of Svaneti Ridge, Lentrkhi district, 9 km NW Kheledy, 1800-1900 m, 8-11.7.2005 - MD; 1 male, Tehuri River, 2000 m, 30.6.1989, A. Koval - MD; 1 female, Martvili distr., left bank of Tekhuri River, 15-30.6.2005 - MD; 1 male, 1 female, Imeretia, N slope of

Meskhetsky Ridge, 6 km S Sairme, 1000 m, 23-026.6. 2006, A. Puchkov - MD; 2 females, Imeretia, Meskhetsky Ridge, Zekari Pass, 2100-2200 m, 26-30.6.2006, A. Puchkov - MD; 2 males, Lebarde, 42°44'20"N, 42°30'04"E, 1600 m, A. Zubov - MD; 3 males, E Tbilisi, Lori River, S Sagarejo, 19.6.2015, Snižek - SM & ML; 1 male, 1 female, 50 km S Kutisi, SE Sairme, Zekari pass, 22.6.2015, Snižek - ML; 1 male, SE Tbilisi, Udabno, 30.6.2015, Snižek - SM; **Republic of Abkhazia.** 1 male, Mont. Gagra, 6000`, A. Zolotarew - ZMM; 1 male, Gagra, 5.7.1932 - MD; 1 male, Gagra, 6.1936 - MD; 1 male, Mamzyshkha Mt., 11.6.1986, N. Okhrimenko - MD; 1 male, 3 females, westwards Bzyb Ridge, Anzhulyara Mt. [43°20'N, 40°28'E], 1250-1600 m, 15.6.2004, V. Savitsky - MD; 2 males, 2 females, Mt. Atchibakh, 15 km W Pskhu, 23.6.2009, A. Gusakov - MD; 2 males, congluent of Avadkhara and Lashepse, 1470 m, 43°29'49"N, 40°39'43"E, 12.7.2009, A. Bondarenko - MD; 3 females, Bzyb vall., 1000-1600 m, 23.6.2009, A. Prosvirov - ML & SM; 1 female, Bzyb vall., 600 m, 4.7.2009, A. Prosvirov - SM; 1 male, Pyv Pass, 1880 m, 43°29'22"N, 40°41'18"E, 26.6.2010, A. Bondarenko - MD.

Distribution. High mountains of Caucasus and Transcaucasia.

Figs 5-6. *A.* (*E.*) *v. helianthi* Plavilstshikovi, 1935**, stat. n.**: 5. Lectotype, male; 6. set of labels.
Figs 7-9. *A.* (*E.*) *v. subnigra* Pic, 1890**, stat. n.**: 7. Holotype, male; 8. lateral view; 9. set of labels.

M.A. Lazarev

Agapanthia (*Epoptes*) *villosoviridescens syunika* ssp. n.

Figs 10-13, Map 1

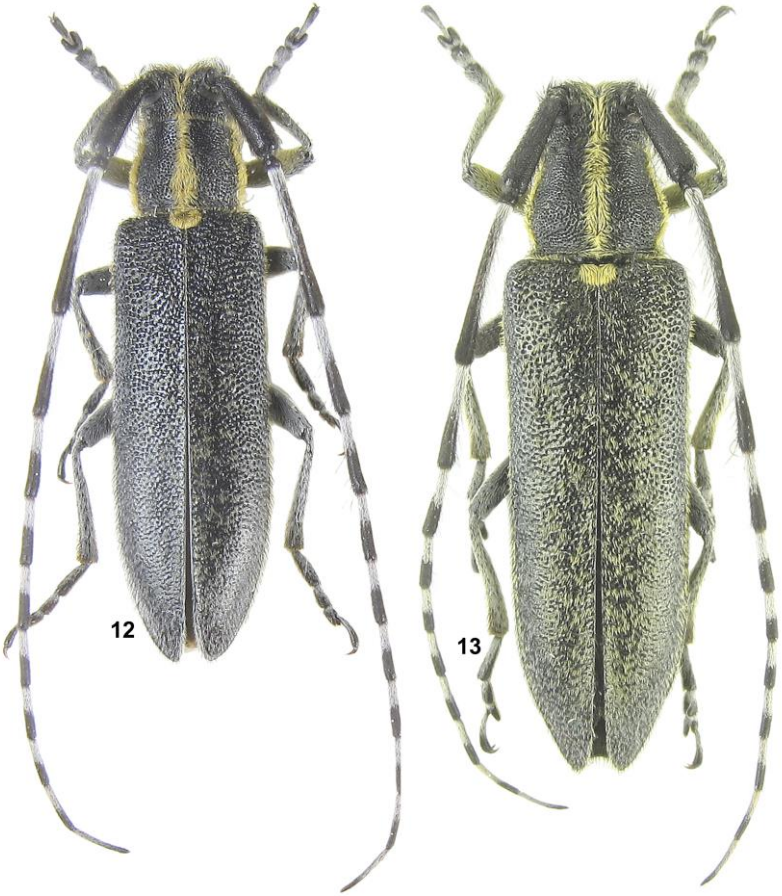
Type locality. Armenia, Syunik province, Meghri, Gumorantz, 38°59'49.20"N, 46°22'35.76"E, 1516 m.

Description. Antennae protruding beyond elytral apex with 4 joints, about one third longer than body; long oblique setae concentrated at 3rd joint apex; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints not reddish; prothorax about as long as wide, and about as wide anteriorly, as posteriorly; pronotum with wide well-developed dense yellow stripes; elytra shining, without microsculpture, with very poor recumbent pubescence, nearly glabrous, grey humeral elytral stripe absent; with indistinct setae spots, slightly shiny, without blue luster; erect setae concentrate anteriorly, diminished posteriorly; grey humeral elytral stripe absent; body length in males: 11.2-15.7 mm, in females: 15.9-18.1 mm.

The taxon is very close to *A.* (*E.*) *v. lederi* Ganglbauer, 1884 from which it can be easily distinguished by short antennae.

Material. **Armenia:** Holotype, male, Syunik province, Meghri, Gumorantz, 38°59'49.20"N, 46°22'35.76"E, 1516 m, 30.5.2013, S. Murzin - ML; 22 paratypes; 1 female, Mt. Khustup, 4.7.1982, M. Danilevsky - MD; 2 males, Shikahogh, 3.7.1981, M. Kalashian - MD; 1 male, Shikahogh, 19.6.1982, M. Danilevsky - MD; 1 female, Nor Arajadzor, 39.3404˚N, 46.4166˚E, 1360 m, 18-21.5.2014, S. Murzin, J. Hron - SM; 1 male, Svarants, 39°21´21´´N, 46°12´27´´E, 1880 m, 4.5.2013, A. Rubenyan - MD; 5 males, 4 females, Khndzoresk, 39.50193˚N, 46.4326˚E, 1260 m, 16-22.5.2014, S. Murzin - SM & ML; 1 male, Khndzoresk, 39.5026˚N, 46.4316˚E, 1300 m, 22-25.5.2013, S. Murzin - ML; 1 female, Khndzoresk, 39.5˚N, 46.43˚E, 1300 m, 10.6.2016, S. Murzin - SM; **Azerbaijan:** 1 male, 16.5 km NW Zangilan, 39°11'35.4"N 46°31'23.5"E, 967 m, 5-6.5.2013, A. Rubenyan - MD; 1 male, Nakhichevan, Bichenek, 9.6.1982, M. Danilevsky - MD; 2 males, 1 female, Nakhichevan, Ordubad, 5.5.1987, Davydyan - ML.

Figs 10-11. *A.* (*E.*) *v. syunika* **ssp. n.**: 10. Holotype, male, Syunik province, Meghri, Gumorantz, 38°59'49.20"N, 46°22'35.76"E, 1516 m, 30.5.2013, S. Murzin; 11. Paratype, male, Armenia, Syunik province, Svarants, 1880 m, 39°21′21′′N, 46°12′27′'E, 4.5.2013, A. Rubenyan.



Figs 12-13. *A.* (*E.*) *v. syunika* **ssp. n.**: 12. Paratype, male, 16.5 km NW Zangilan, 39°11'35.4"N 46°31'23.5"E, 967 m, 5-6.5.2013, A. Rubenyan; 13. Paratype, females, Khndzoresk, 39.50193˚N, 46.4326˚E, 1260 m, 16-22.5.2014, S. Murzin.

Distribution. Armenia, Syunik province: Meghri, Gumorantz, 38°59'49.20"N, 46°22'35.76"E, 1516 m; Khustup Mt.; Shikahogh; Nor Arajadzor, 39°20'25.4451"N, 46°24'59.7684"E, 1360 m; Svarants, 39°21′21′′N, 46°12′27′'E, 1880 m; Khndzoresk (39°30'6.9531"N, 46°25'57.3684"E, 1260 m; 39°30'9.3651"N, 46°25'53.7684"E, 1300 m). Azerbaijan: 16.5 km NW Zangilan, 39°11'35.4"N 46°31'23.5"E, 967 m; Nakhichevan, Bichenek; Nakhichevan, Ordubad.

Etymology. The new taxon is named after the province of the type locality.

Agapanthia (*Epoptes*) *villosoviridescens murzini* ssp. n.

Figs 14-15, Map 1

Type locality. Armenia, Gegharkunik province, Ayagut, 40°40'30.7251"N, 45°12'15.1285"E, 1420 m.

Description. Antennae in males protruding beyond elytral apex with 5 joints, about one half longer than body, in females antennae protruding beyond elytral apex with 3 joints, about one fifth longer than body; long oblique setae strongly concentrated at 3rd joint apex, forming poor setae tuft; pronotum in males transverse, distinctly widened posteriorly; with wide well-developed dense yellow stripes; elytra with very poor recumbent pubescence, but with dense erect setae up to the apex, with indistinct setae spots, without microsculpture, slightly shiny, without blue luster; grey humeral elytral stripe absent; body length in males: 12.3-15.2 mm; in females: 15.6-17.5 mm.

The taxon is very close to *A.* (*E.*) *v. syunika* **ssp. n.**, but antennae are distinctly longer and prothorax widened posteriorly.

Material. **Armenia:** Holotype, male, Armenia, Ayagut, 40.6752°N, 45.2042°E, 1420 m, 12-13.6.2016, S. Murzin - ML; 6 paratypes; 1 male with the same label - ML; 1 male, Armenia, Ayagut, 40.6752°N, 45.2042°E, 1420 m, 1-4.6.2016, S. Murzin - ML; 1 male, Armenia, Gegharkunik prov., Ayagut, 40°40'30.72"N, 45°12'14.40"E, 1432 m, 30.6.2023, S. Murzin - SM; 1 male, Armenia, Gegharkunik prov., Ayagut, 40°40'30.72"N, 45°12'14.40"E, 1432 m, 18.5-15.6.2023, S. Murzin - SM; 1 female, Armenia, Gegharkunik prov., Ayagut, 40°40'30.72"N, 45°12'14.40"E, 1432 m, 23.6.2023, S. Murzin

- ML; 1 female, Armenia, Gegharkunik prov., Ayagut, 40°40'30.72"N, 45°12'14.40"E, 1432 m, 13.7.2023, S. Murzin - SM.
Distribution. North Armenia, Gegharkunik province, Ayagut environs.

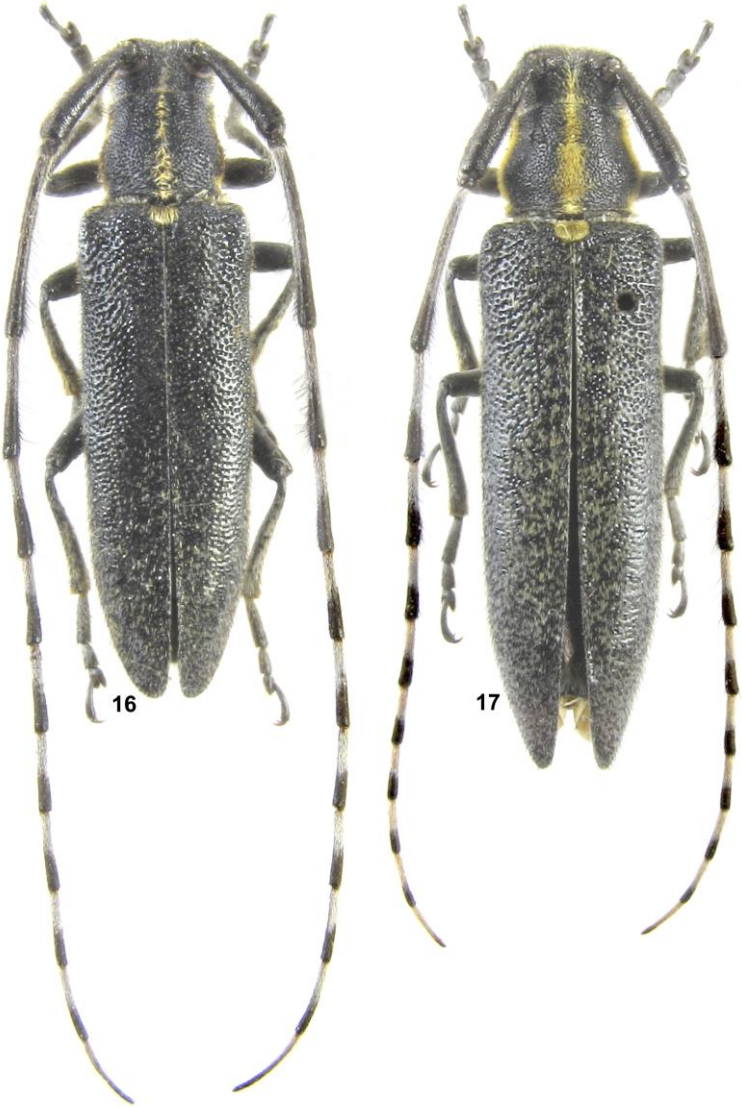
Agapanthia (*Epoptes*) *villosoviridescens lederi* Ganglbauer, 1884

Figs 16-17, Map 2

Agapanthia lineatocollis var. *lederi* Ganglbauer, 1884: 542 - "Caucasus".
Agapanthia (s. str.) *villosoviridescens*, Pic, 1910: 97, part. (= *lineotocollis* Donov. = *angusticollis* Gyll.), part. (including v. *lederi* Ganglb., v. *subchalybaea* Reitt., v. *subacuta* Pic).
Agapanthia subchalybaea subchalybaea, Plavilstshikov, 1929b: 136, part. - "Nord-Kaukasus: Groznyj", "Kuban: Vashtrek", "Fl. Laba", "Anapa", "Central-Kaukasus: Teberda, 7000´", "Majcop", "Vladikavkas", "Lars", "Atshish'cho", "West-Kaukasus: Krasnaja Poljana", "Sotshi", "Abchasia: Gagry, 5000´", "Transkaukasien: Mz'chet", "Borzhom", "Abas-Tuman", "Teliani", "Manglis", "Bacuriani", "Suram", "Kusary", "Kars", "Talysh".
Agapanthia villosoviridescens var. *lederi*, Winkler, 1929: 1213; Villiers, 1978: 433.
Agapanthia (s. str.) *villosoviridescens* var. *lederi*, Plavilstshikov, 1930b: 32, 40, part. - "Kaukasus".

Type locality. According to Tavakilian & Chevillotte (23 November 2022), the type locality of *Agapanthia* (*Epoptes*) *lederi* Gang. is Talysh area of Caucasian Azerbaijan. So, traditional attribution of the origin of the species to the north-west Caucasus was not correct. The type specimens of *A.* (*E.*) *lederi* were collected in Talysh area by H. Leder, who often collected in Talysh, where *Clytus arietis lederi* Ganglbauer, 1882 was also described from.

Figs 14-15. *A.* (*E.*) *v. murzini* **ssp. n.**: 14. Holotype, male, Armenia, Ayagut, 40.6752°N, 45.2042°E, 1420 m, 12-13.6.2016, S. Murzin; 15. Paratype. female, Armenia, Gegharkunik prov., Ayagut, 40°40'30.72"N, 45°12'14.40"E, 1432 m, 23.6.2023, S. Murzin.



Figs 16-17. *A.* (*E.*) *v. lederi* Ganglbauer, 1884: 16. male (paratype of *A. l. hodeki* Danilevsky, 2018), Azerbaijan, Talysh, 17.7.1981, S. Nikireev; 17. female, (paratype of *A. l. hodeki* Danilevsky, 2018), Azerbaijan, Talysh, Avrora, 28.5.1979, M. Danilevsky.

Description. Antennae in males surpassing elytral apices by 5-6 apical joints, in females - by 3-4 joints; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints usually reddish; 3rd antennal joint with apical setae concentration; prothorax in males about as long as wide, and about as wide anteriorly, as posteriorly; in females prothorax transverse with wide hind part; pronotum with wide and dense central setae stripe; elytra shining, but without blue luster, without microsculpture, with very poor greyish pubescence, never hiding elytral surface; grey humeral elytral stripe absent; erect elytral setae long and dense along anterior elytral third, and gradually shortened posteriorly; elytral apices slightly attenuated in males, or rounded in females; body length in available males: 10.3-16.6 mm, in available females: 16.1-16.7 mm.

The taxon is very close to *A.* (*E.*) *v. hodeki* Danilevsky, 2018 from north-west Iran because of nearly glabrous elytra and very long antennae; but *A.* (*E.*) *v. lederi* distinctly more shining, with very smooth elytral interspaces, without microsculpture, bigger elytral punctation.

Material. Azerbaijan: 7 paratypes of *A.* (*E.*) *l. hodeki* Danilevsky, 2018: 1 male, Talysh, 10.5.1988, Voronin - MD; 1 male, 2 females, Talysh, 17.7.1981, S. Nikireev - MD; 1 female, Avrora, 28.5.1979, M. Danilevsky - MD; 1 female, Talysh, Avrora, 7.5.1983, S. Nikireev - MD; 1 male, "Kasp. Meer.-Geb. / Talysch / 1897 Korb" - MD; 1 male, "Talysch / 1897 Corb" - ZMM; 1 male, Talysh, Alekseevka, 9.6.1920, J. Safronov - ZMM.

Distribution. Azerbaijan, Talysh, Lerik and Avrora (Hirkan).

Agapanthia (*Epoptes*) *villosoviridescens hodeki* Danilevsky, 2018

Figs 18-19, Map 2

Agapanthia lederi hodeki Danilevsky, 2018: 181, part. – "Iran, p.Gilan, Rostamabad, 12 km W, 1550 m, 36°55', 49°23'", "Iran, NW, prov. Gilan, Salaneh Sar, 20 km W Rostamabad"; "Talysch", "Lerik", Talysh, Avrora"; 2020: 302, part. - Azerbaijan (Talysh), Iran.

Type locality. Northern Iran, Gilan province, Rostamabad environs (36°55'N, 49°23'E).

Figs 18-19. *A.* (*E.*) *v. hodeki* Danilevsky, 2018: 18. Holotype, male, Iran, prov. Gilan, 12 km W Rostamabad, 36°55'N, 49°23'E, 6.6.2017, K. Hodek; 19. Paratype, female with same label.

Description. Antennae in males protruding beyond elytral apex with 5 joints, about one half longer than body, in female antennae protruding beyond elytral apex with 3 joints, about one fifth longer than body; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints never reddish; long oblique setae a little concentrated at 3rd joint apex; pronotum in males transverse, distinctly widened posteriorly; with wide well-developed dense yellow stripes; elytra with poor blue luster and distinct microsculpture; grey humeral elytral stripe absent; recumbent elytral pubescence, almost completely absent; short erect setae distinct up to the apex; elytral apices slightly attenuated; body length in males: 14.5-15.7 mm; in female: 16.2 mm.

The taxon is very close to *A.* (*E.*) *v. lederi* Ganglbauer, 1884 but differs by noticeable blue luster.

Material. Iran: Holotype, male, Iran, prov. Gilan, 12 km W Rostamabad, 36°55'N, 49°23'E, 6.6.2017, K. Hodek - MD; 2 paratypes: 1 male, 1 female with same label - MD. 1 male, Kaleibar env., Makidi, 1450-1650 m, 38.8406°N, 46.9102°E, 6-7.6.2013. S. Murzin - ML.

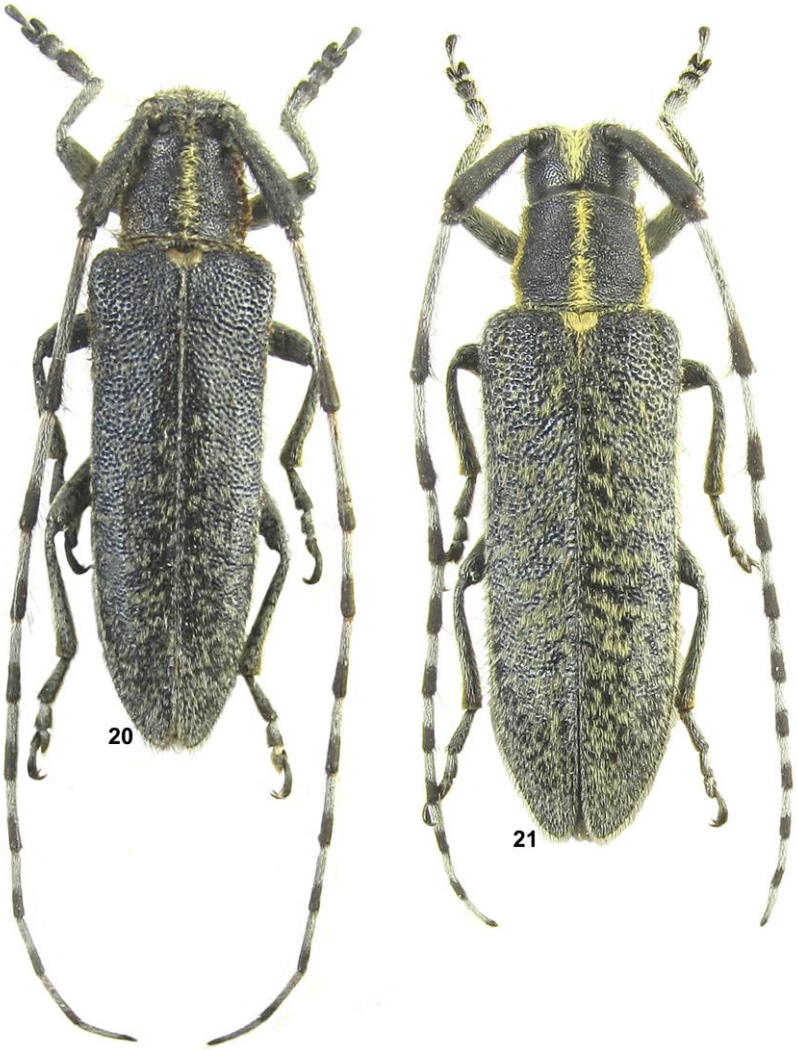
Distribution. Northern Iran, Gilan province, Rostamabad environs, 1550 m (36°55'N, 49°23'E); Northwestern Iran, East Azerbaijan province, Kaleibar environs., Makidi, 1450-1650 m (38°50'26.1651"N, 46°54'36.7284"E).

Agapanthia (*Epoptes*) *villosoviridescens giresunica* ssp. n.

Figs 20-21, Map 3

Type locality. Turkey, Giresun province, Kumbet, 40°32'41.4294"N, 38°26'2.0124"E, 1748 m.

Description. The subspecies is characterized by matte black elytra without bluish luster; antennae reaching elytral apex by 7th-8th joints in males, in females - by 9th-10th joints; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints never reddish; 3rd antennal joint without apical setae concentration; elytral cuticle usually with distinct microsculpture; recumbent elytral pubescence moderately developed; erect elytral setae very short, nearly indistinct; antennae in males reaching elytral apex by 8th joint,



Figs 20-21. *A.* (*E.*) *v. giresunica* **ssp. n.**: 20. Holotype, male, Giresun province, Kumbet, 40°32'41.4294"N, 38°26'2.0124"E, 1748 m, 16.6.2002, N. Auvray; 21. Paratype, female, S Giresun, Kumbet, 1700 m, 26.6.1995, N. Auvray.

in females - by 10th-11th joints; body length in males: 12.7-14.8 mm, in females: 14.2-18.2 mm.

Material. Turkey: Holotype, 1 male, Giresun province, Kumbet, 40°32'41.4294"N, 38°26'2.0124"E, 1748 m, 16.6.2002, N. Auvray - ML; 18 paratypes (ML, SM & MD); 1 male, 2 females with the same label; 2 males, 3 females, S Giresun, Kumbet, 1700 m, 26.6.1995, N. Auvray; 2 males, 2 females, Kumbet, (Giresun), 1700 m, 40.54484°N, 38.43389°E, 2.7.2001, N. Auvray; 1 male, 1 female, Giresun, Kumbet, 21.6.1994, C. Auvray; 1 female, Giresun, Kumbet, 29.6.1994, C. Auvray - MD; 1 female, S Giresun, Pinarlar env., 950 m, 40.6543°N, 38.3661°E, 20.5.-10.6.2012, J. Hron, S. Murzin; 1 male, 1 female, Giresun, Kumbet, 11.7.1996 - MD.

Distribution. North-Eastern Turkey, Giresun province, Kumbet environs and Pinarlar environs.

Etymology. The new taxon is named after the province of the type locality.

Agapanthia (*Epoptes*) *villosoviridescens shankhizai* ssp. n.

Figs 22-23, Map 3

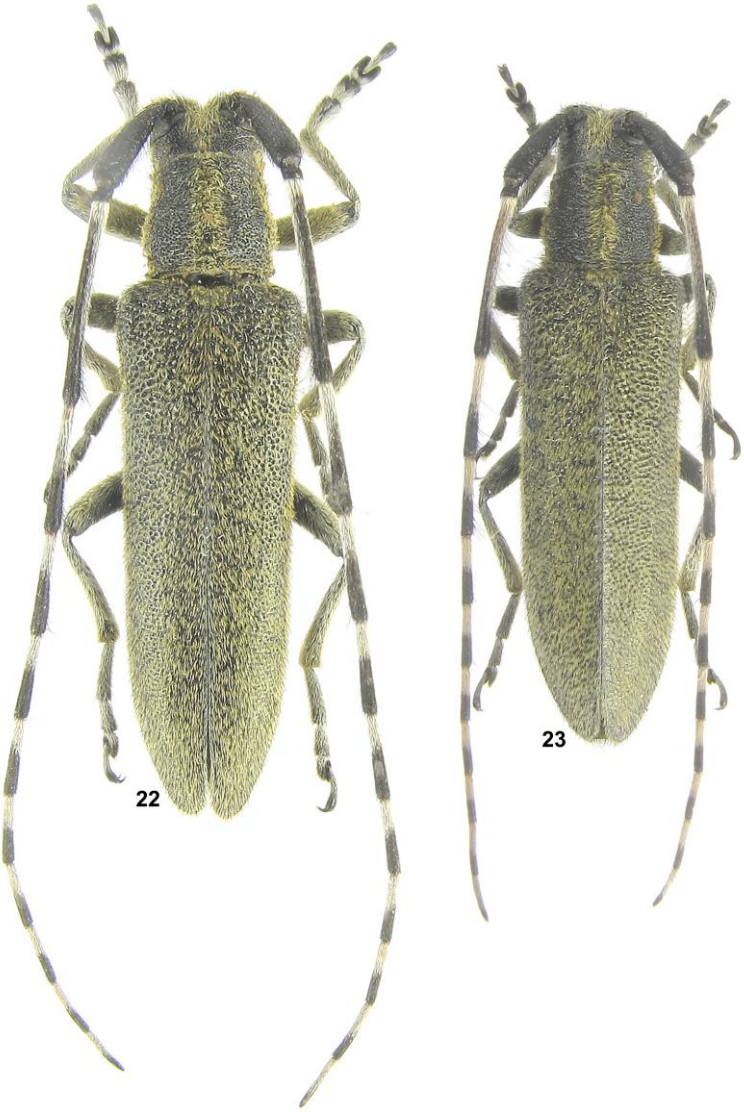
Type locality. Turkey, Denizli province, eastern edge of Denizli.

Description. Antennae in males protruding beyond elytral apex with 6 joints, about one half longer than elytral length; in females antennae reaching elytral apex by 9th joint; basal parts of antennal joints with very fine pale pubescence, slightly reddish; erect apical setae of 3rd antennal joint distinctly condensed apically; prothorax with wide yellow central stripe; in male about 1.1 times wider at bases than long, in females - about 1.2 times; elytra with poorly developed pubescence and short dense erect setae; setae patches of recumbent pubescence hardly pronounced; elytral microsculpture poorly developed; body length in male: 17.2 mm; in females: 17.4-18.5 mm.

Material. Holotype, 1 male, Turkey, Denizli province, eastern edge of Denizli, 20.5.2015, E. Shankhiza - ML. 2 paratypes; 2 females, with the same label - MD & ML.

Distribution. South-Western Turkey, Denizli province.

Etymology. The new taxon is dedicated to E.V. Shankhiza, who collected the type series.



Figs 22-23. *A.* (*E.*) *v. shankhizai* **ssp. n.**: 22. Holotype, male, Turkey, Denizli province, eastern edge of Denizli, 20.5.2015, E. Shankhiza; 23. paratype, female with same label.

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Agapanthia (*Epoptes*) *villosoviridescens gazanchidisi* Lazarev, 2021, stat. n.

Figs 24-25, Map 4

Agapanthia (*Epoptes*) *gazanchidisi* Lazarev, 2021: 31 - "Eastern Greece, Dasochori env. 40°53′48.67″N, 24°48′26.12″E".

Type locality. Eastern Greece, Dasochori environs, 40°53′48.67″N, 24°48′26.12″E.

Description. Body moderately elongated; antennae very thin, black, with disperse setae tufts, in males reaching beyond elytral apices by 5 joints, in females - by 3 joints; 3rd antennal joint slightly lightened basally in Bulgarian specimens; 1st and 2nd joints covered with black pubescence; about three basal forth of 3rd joint covered with pale fine recumbent pubescence, apical forth with black pubescence; whole length of 3rd joint with long suberect setae concentrated apically; others joints covered with white pubescence to about half; 3rd antennal joint is the longest, 4th and 5th joints both shorter than 1st; prothorax about as long as its basal width, slightly convex laterally; pronotum with dense central and lateral, moderately wide yellow lines, less pronounced in Greek specimens; pronotal punctation regular, very dense, but not conjugated; elytra in males about 3.1 times longer than wide, in females - 3.0 times, parallel sided; with distinct microsculpture with nearly indistinct, small transverse yellow patches (better developed in Bulgarian specimens) and glabrous in between; with numerous erect black setae diminished apically and sometimes totally disappearing in posterior elytral half; elytral apices rounded; elytral punctation very dense, partly transversally conjugated; body length in males: 10.8-15.8 mm, body length in females: 12.4-17.7 mm.

Material. Greece: Holotype, 1 male, Eastern Greece, Dasochori env. 40°53′48.67″N, 24°48′26.12″E, 5.7.2021, V. Gazanchidis leg. - ML; 21 paratypes; 2 males (VG), 1 female (ML) with same label; 1 female, Macedonia, Katerini dist., Paralia, 6.6.1997, J. Macek leg. - SM; **Bulgaria:** 1 female, Tchervenata Stena reserve, 41°54′36″N, 24°52′33″E, 1213 m, 29.6.2014, T. Ljubomirov leg. - MD; 1 female, W Popkralevo vill., 43°59′38″N, 27°20′34″E, 50 m, 13.5.2012, T. Ljubomirov leg. - MD; 1 male, 1 female, N Sudievo, 42°40′35″N,

27°19′27″E, 137 m, 21.5.2012, T. Ljubomirov leg. - MD; 3 males, 4 females, Lozenska Planina Mts., SE German vill., 780 m, 17.6.2004, T. Ljubomirov leg. - MD; 1 female, E Stroumeshnitsa vill., 41°23′N, 23°03′E, 170 m, 16.6.2009, T. Ljubomirov leg. - MD; 1 male, SW Gabrovo vill., 41°52′10″N, 22°56′31″E, 1029 m, 8.6.2012, T. Ljubomirov leg. - MD; 1 female, E Kayazhevo, 42°06′39″N, 26°31′14″E, 99 m, 24.6.2012, T. Ljubomirov leg. - MD; 1 female, Etropolska Planina Mts., Ravna River riverside, 42°49′N, 23°49′E, 610 m, 6.6.2006, T. Ljubomirov leg. - MD; 1 female, NW Vassil Levsky vill., 43°57′39″N, 27°21′47″E, 125 m, 13.5.2012, T. Ljubomirov leg.; 1 female, Kozhuch, 17.5.1983, J. Ganev leg. - MD.
Distribution. The taxon is distributed in eastern Greece and in Bulgaria.

Agapanthia (*Epoptes*) *villosoviridescens markusi* Rapuzzi, Sama & Kotán, 2013, stat. n.

Figs 26-27, Map 4

Agapanthia (*Epoptes*) *markusi* Rapuzzi, Sama & Kotán, 2013: 583 - "Greece, Ipiros, Joanina pref., 7 Km SW Metsovo, 1360 m", Greece: Ipiros, Varnous Mts., Trikala, Ioannina, Florina, Kastoria, Pindos, Macedonia; Steiner & Schmid, 2013: 2 "Griechenland"; Danilevsky, 2020: 303 - Albania, Greece.

Agapanthia markusi, Kovács, 2015: 53 - "Albania, Korçë district, Opari area, Moglicë, E of the village, 40°42'25.2", 20°25'04.6" 525 m".

Type locality. Greece, Epirus, Ioannina, 7 km SW Metsovo, 1360 m.
Description. Antennae relatively short, about one third longer than elytra, reaching elytral apex by 8th joints in males, in females - by 10th joints; basal parts of antennal joints with very fine pale pubescence, and look rather dark; basal parts of middle antennal joints often reddish; 3rd antennal joint with apical setae concentration; prothorax in males about as long as wide, and slightly widened posteriorly; in females prothorax transverse with wider hind part; pronotum glabrous, without central setae stripe; elytra with indistinct recumbent pubescence, but with dense erect setae present up to the apex; elytral punctation very dense, nearly conjugated; microsculpture sometimes distinct; body length in males: 10.4-14.5 mm; in females: 12.8-15.1 mm.

A. (*E.*) *v. markusi* Rapuzzi, Sama & Kotán, 2013 is very

close to *A.* (*E.*) *v. gazanchidisi* Lazarev, 2021, but differs by several small characters: *A.* (*E.*) *v. gazanchidisi* is distinctly narrower, pronotal setae stripe better developed, humeral angles more obliterated, elytral punctation finer.

Material. **Greece:** 2 males, 3 females, Pindos, Metsova, Katara Pass, 1700 m, 5.7.2008 - MD; 1 male, Kastoria, 31.5.2008 - MD.

Distribution. According to the original description, known localities are: Greece: Ipiros, Joanina pref., 7 km SW Metsovo, 1360 m; Varnous Mts., 1450 m, Agios Germanos; Trikala, Katara pass; Ioannina, Metsovo e Grevena; Trikala, Katara pass, 1400-1700 m; Florina, Pisoderion, Agios Triados, 1400 m; Ioannina, Katara pass, 1650 m, 39°47’48’’N 21°13’49’’E; Kastoria, Mt. Vernon, 1900 m; Pindos, Peristeri, 1400 m; Ipiros, Aoos lake; Ipiros, Milia; Macedonia, pref. Imathia, Mt. Vermio, 6 km W Naousa, 1041 m; Ipiros, pref. Joannina, 2 km W Fourka, 1450 m. Albania: Korçë district, Opari area, Moglicë, E of the village, 40°42’25.2”, 20°25’04.6”, 525 m.

Figs 24-25. *A.* (*E.*) *v. gazanchidisi* Lazarev, 2021, **stat. n.**: 24. Holotype, male, Eastern Greece, Dasochori env. 40°53′48.67″N, 24°48′26.12″E, 5.7.2021, V. Gazanchidis leg.; 25. paratype, female with same label.

Figs 26-27. *A.* (*E.*) *v. markusi* Rapuzzi, Sama & Kotán, 2013**, stat. n.**: 26. males, Greece, Pindos, Metsova, Katara Pass, 1700 m, 5.7.2008; 27. female with same label.

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Key to *Agapanthia* (*Epoptes*) *villosoviridescens* (DeGeer, 1775) subspecies

1(2) Elytra usually with relatively dense pubescence, often totally hiding cuticula; body length: 10.2-21.5 mm……
……*A. v. villosoviridescens* (DeGeer, 1775)

2(1) Elytra with scattered pubescence, shining cuticula fragments always distinct.

3(4) Elytral pubescence hardly visible, often indistinct; bluish luster usually more or less pronounced; body length: 11.2-18.7 mm…
……*A. v. subnigra* Pic, 1890, **stat. n.**

4(3) Elytral pubescence always distinct.

5(11) Erect elytral pubescence very short.

6(10) Antennae with reddish basal parts of middle joints (only one female known).

8(9) Prothorax nearly cylindrical (in male and in females), about as wide anteriorly as posteriorly, about 1.1-1.2 times wider basally than long; body length: 17.2-18.5 mm……..…
……..*A. v. shankhizai* **ssp. n.**

9(8) Prothorax in females strongly widened posteriorly; humeral elytral grey stripe often distinct; body length: 10.5-21.5 mm…..
……*A. v. helianthi* Plavilstshikov, 1935, **stat. n.**

10(6) Antennae never with reddish basal parts of middle joints; body length: 12.7-18.2 mm……
……*A. v. giresunica* **ssp. n.**

11(5) Erect elytral pubescence well developed back to the apex.

12(15) Antennae relatively short, about one third longer than body in males.

13(14) Antennae never with reddish basal parts of middle joints; body length: 11.2-18.1 mm……
……*A. v. syunika* **ssp. n.**

14(13) Antennae usually with reddish basal parts of middle joints; body length: 10.4-15.1 mm……...
……*A. v. markusi* Rapuzzi, Sama & Kotán, 2013, **stat. n.**

15(12) Antennae relatively long, about half longer than body in males.

16(19) Elytra with distinct microsculpture.

17(18) 3rd antennal joints with disperse setae tufts; elytra without bluish luster; body length: 10.8-17.7 mm…….

…….*A. v. gazanchidisi* Lazarev, 2021, **stat. n.**

18(17) 3rd antennal joints with distinct setae tufts; elytra with poor bluish luster; body length: 14.5-16.2 mm……. …….*A. v. hodeki* Danilevsky, 2018

19(16) Elytra without microsculpture.

20(21) 3rd antennal joints with dense, elongated setae tufts; body length: 12.3-17.5 mm…… ……...*A. v. murzini* **ssp. n.**

21(20) 3rd antennal joints with dispers, shortened setae tufts; body length: 10.3-16.7 mm…… …….....*A. v. lederi* Ganglbauer, 1884

Acknowledgments. I am deeply indebted to many my friends and colleagues who tool parts in the taxonomy discussions and supplied me with the specimens from their collections: M.L. Danilevsky (A.N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow), V.Yu. Gazanchidis (Moscow), A.I. Gubin (Donetsk Botanical Garden), A.A. Gusakov (Zoological Museum of Moscow State University), S.V. Murzin (Moscow), E.V. Shankhiza (Moscow), A.V. Shamaev (Moscow), V.E. Ustinov (Moscow).

I am very grateful to Gérard Tavakilian and Christophe Rivier (Muséum National d'Histoire Naturelle, Paris) who arranged all photos of the holotype of *Agapanthia subnigra* Pic, 1890, and to Johannes Bergsten, Docent and Senior Curator of the Department of Zoology in Swedish Museum of Natural History (Stockholm) for supplying me with photos of the holotype of *Cerambyx villosoviridescens* DeGeer, 1775.

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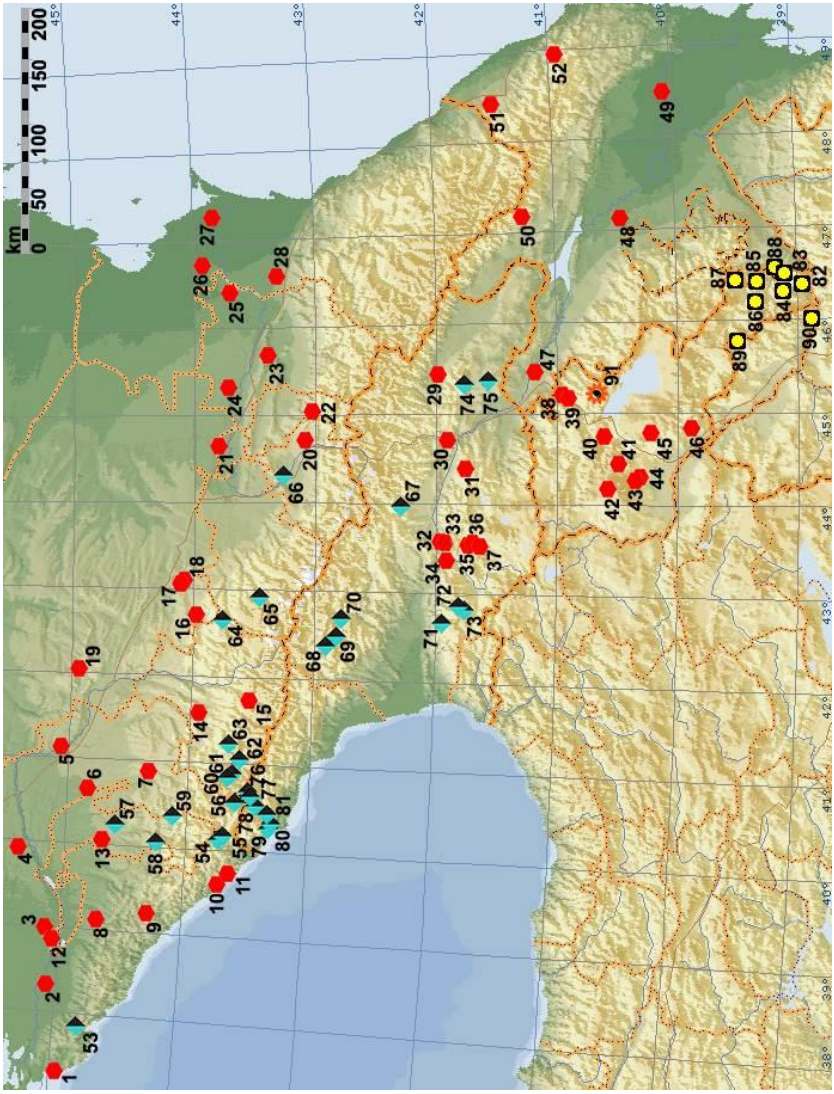
Map 1.



***A.* (*E.*) *v. helianthi* Plavilstshikovi, 1935, stat. n.:** Russia: Krasnodar Region: 1-11; Republic of Adygea: 12-13; Karachay-Cherkess Republic: 14-15; Stavropol Region: 16-19; Republic of North Ossetia-Alania: 20-21; Republic of Ingushetia: 22; Chechen Republic: 23-25; Republic of Dagestan: 26-28; Georgia: 29-37; Armenia: 38-46; Azerbaijan: 47-52.

***A.* (*E.*) *v. subnigra* Pic, 1890, stat. n.:** Russia: Krasnodar Region: 53-56; Republic of Adygea: 57-59; Karachay-Cherkess Republic: 60-63; Kabardino-Balkarian Republic: 64-65; Republic of North Ossetia-Alania: 66; Republic of South Ossetia - the State of Alania: 67; Georgia: 68-75; Republic of Abkhazia: 76-81.

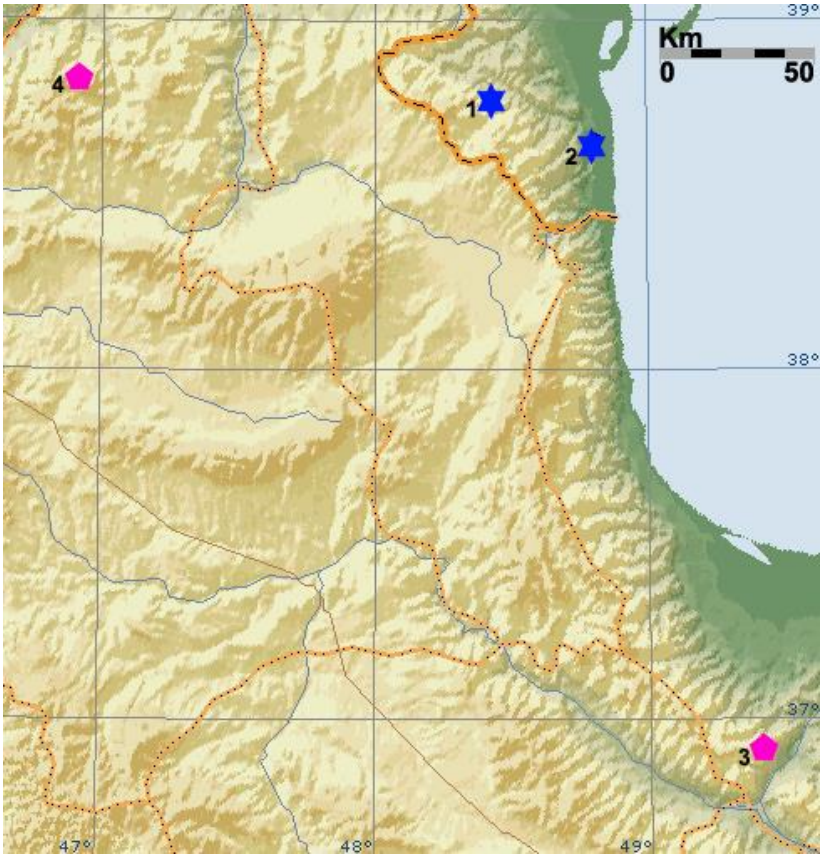
***A.* (*E.*) *v. syunika* ssp. n.:** Armenia: 82-87; Azerbaijan: 88-90.

***A.* (*E.*) *v. murzini* ssp. n.:** Armenia: 91.

1 - Anapa; 2 - Mingrelskoe; 3 - Ekaterinodar [Krasnodar]; 4 - Ladozhskaya; 5 - Armavir; 6 - Rodnikovskaya; 7 - Bolshaya Laba River; 8 - Goryachy Klyuch, Shchetka Mt.; 9 - Betta, 44°13'45.4853"N, 39°14'24.7287"E; 10 - Sochi, Utch-Dere; 11 - Sochi; 12 - Khomuty; 13 - Maikop; 14 - Zelenchukskaya; 15 - Teberda; 16 - Kislovodsk; 17 - Zheleznovodsk; 18 - Mineralnye Vody, Mashuk; 19 - Temnolesskaya; 20 - Vladikavkaz; 21 - Mozdok; 22 - Alkun; 23 - Grozny; 24 - Naurskaya; 25 - Starogladkovskaya, Terek River; 26 - Kizlyar; 27 - Novy Biryuzak; 28 - Khasavyurt; 29 - Teliani near, Telavi; 30 - Mtskheta; 31 - Manglisi; 32 - Surami; 33 - Akhaldaba; 34 - Borjomi; 35 - Tsagveri; 36 - Bakuriani; 37 - Orbeti, Trialiti Ridge; 38 - Ditavan, 40°57'18.0051"N, 45°13'19.2086"E; 39 - Ijevan; 40 - Darachichag [Tsaghkadzor]; 41 - Arailer; 42 - Alagez [Aragats Mt.]; 43 - Inaklyu [Antarut]; 44 - Byurakan; 45 - Geghard, 40°8'29.0451"N, 44°48'26.6485"E; 46 - Khosrov, 40°02'N, 45°02'E; 47 - Akstafa; 48 - Barda; 49 - Sabir-Abad; 50 - Nukha [Shaki]; 51 - Qusar; 52 - Altyagach; 53 - Novorossiysk, Andreevsky pass, 44°43'N, 37°51'E, 500 m; 54 - Atchishkho, 1600 m; 55 - Krasnaya Polyana; 56 - Kardyvach; 57 - Abago Mt., 2100 m; 58 - Lagonaki, Ridge, Kamennoe More, 44°10'33"N, 40°03'19"E, 1760-1800 m;

59 - westwards Tkhach Mt., 1700-1900 m; 60 - Damkhurts; 61 - Bolshaya Laba River, Pkhiya, 1400-1600 m; 62 - Bolshaya Laba River, Arkasara Ridge, 1500 m; 63 - Arkhyz, Abishara-Akhuba Ridge, Dzhumarykly-Tebe Mt. [43°36'7"N, 41°14'41"E], 1800 m; 64 - Dolina Narzanov; 65 - Tyrnyauz, 1800-2200 m; 66 - Fiagdon; 67 - Tskhinvali; 68 - Tehuri River, 2000 m; 69 - Lebarde, 42°44'20"N, 42°30'04"E, 1600 m; 70 - south slope of Svaneti Ridge, Lentrkhi district, 9 km NW Kheledy, 1800-1900 m; 71 - N slope of Meskhetsky Ridge, 6 km S Sairme, 1000 m; 72 - Meskhetsky Ridge, Zekari Pass, 2100-2200 m; 73 - Abastumani; 74 - Lori River, S Sagarejo; 75 - Udabno; 76 - Pyv Pass, 43°29'22"N, 40°41'18"E, 1880 m; 77 - congluent of Avadkhara and Lashepse, 43°29'49"N, 40°39'43"E, 1470 m; 78 - Atchibakh Mt., 15 km W Pskhu; 79 - Gagra; 80 - Mamzyshkha Mt.; 81 - westwards Bzyb Ridge, Anzhulyara Mt. [43°20'N, 40°28'E], 1250-1600 m; 82 - Gumorantz, 38°59'49.20"N, 46°22'35.76"E, 1516 m; 83 - Shikahogh; 84 - Khustup Mt.; 85 - Nor Arajadzor, 39°20'25.4451"N, 46°24'59.7684"E, 1360 m; 86 - Svarants, 39°21´21´´N, 46°12´27’’E, 1880 m; 87 - Khndzoresk, 39°30'9.3651"N, 46°25'53.7684"E, 1300 m; 88 - 16.5 km NW Zangilan, 39°11'35.4"N 46°31'23.5"E, 967 m; 89 - Nakhichevan, Bichenek; 90 - Nakhichevan, Ordubad; 91 - Armenia, Ayagut, 40°40'30.7251"N, 45°12'15.1285"E, 1420 m.

Map 2.



***A.* (*E.*) *v. lederi* Ganglbauer, 1884**: Azerbaijan: 1 - Lerik; 2 - Avrora [Hirkan].

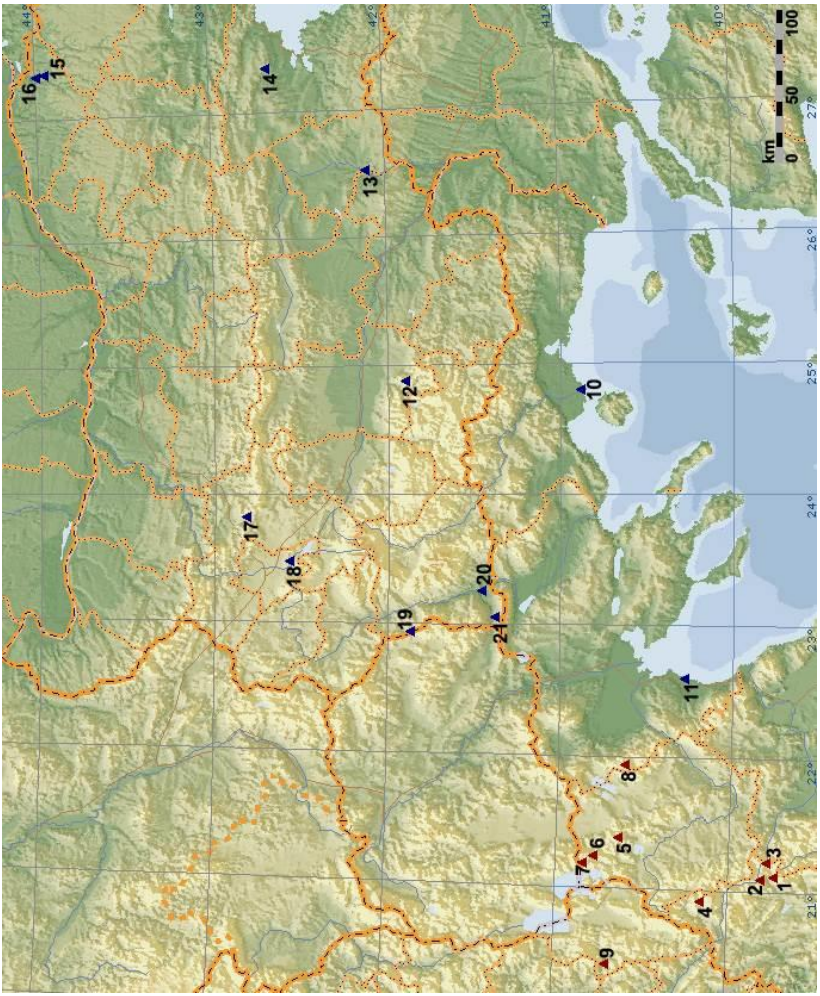
***A.* (*E.*) *v. hodeki* Danilevsky, 2018:** Iran: 3 - Gilan, 12 km W Rostamabad, 36°55'N, 49°23'E; 4 - Makidi, 38°50'26.1651"N, 46°54'36.7284"E, 1450-1650 m.

Map 3.

***A.* (*E.*) *v. giresunica* ssp. n.:** Turkey, Giresun province: 1 - Kumbet, 40°32'41.4294"N, 38°26'2.0124"E, 1748 m; 2 - Pinarlar environs, 40°39'15.4854"N, 38°21'57.9684"E, 950 m.

***A.* (*E.*) *v. shankhizai* ssp. n.:** 3 - Turkey, Denizli province, eastern edge of Denizli.

Map 4.



***A.* (*E.*) *v. markusi* Rapuzzi, Sama & Kotán, 2013, stat. n.:** Greece: 1-8; Albania: 9.

***A.* (*E.*) *v. gazanchidisi* Lazarev, 2021, stat. n.:** Greece: 10-11; Bulgaria: 12-21.

1 - Ipiros, Ioannina pref., 7 km SW Metsovo, 1360 m; 2 - Ipiros, Aoos lake; 3 - Ioannina, Katara pass, 1650 m, 39°47’48’’N 21°13’49’’E; 4 - Ipiros, pref. Ioannina, 2 km W Fourka, 1450 m; 5 - Macedonia, pref. Imathia, Mt. Vermio, 6 km W Naousa, 1041 m; 6 - Florina, Pisoderion, Agios Triados, 1400 m; 7 - Varnous Mts., 1450 m, Agios Germanos; 8 -Macedonia, pref. Imathia, Mt. Vermio, 6 km W Naousa, 1041 m; 9 - Korçë district, Opari area, Moglicë, E of the village, 40°42’25.2”, 20°25’04.6”, 525 m; 10 - Dasochori environs, 40°53′48.67″N, 24°48′26.12″E; 11 - Macedonia, Katerini dist., Paralia; 12 - Tchervenata Stena reserve, 41°54′36″N, 24°52′33″E, 1213 m; 13 - E Kayazhevo, 42°06′39″N, 26°31′14″E, 99 m; 14 - N Sudievo, 42°40′35″N, 27°19′27″E, 137 m; 15 - NW Vassil Levsky vill., 43°57′39″N, 27°21′47″E, 125 m; 16 - W Popkralevo vill., 43°59′38″N, 27°20′34″E, 50 m; 17 - Etropolska Planina Mts., Ravna River riverside, 42°49′N, 23°49′E, 610 m; 18 - Lozenska Planina Mts., SE German vill., 780 m; 19 - SW Gabrovo vill., 41°52′10″N, 22°56′31″E, 1029 m; 20 - Kozhuch; 21 - E Stroumeshnitsa vill., 41°23′N, 23°03′E, 170 m.

Received: 22.01.2024
Accepted: 19.07.2024

О ЖУРНАЛЕ

Гуманитарное пространство (Гуманитарное пространство. Международный альманах = Humanity space. International almanac) издается с 2012 года. Публикуются статьи, являющиеся результатом научных исследований. К печати принимаются оригинальные исследования, содержащие новые, ранее не публиковавшиеся результаты, обзоры, аналитические и концептуальные разработки по конкретным проблемам гуманитарных и естественных наук.

Издание зарегистрировано в Международном Центре ISSN в Париже (идентификационный номер печатной версии: ISSN 2226-0773).

Выходит 4 номера в год, а так же дополнения в виде приложения к журналу.

Альманах представлен во многих базах данных и каталогах: Zoological Record (Web of Science), ZooBank, EBSCO, ERIH PLUS, Index Copernicus International, Genamics JournalSeek, Google Scholar, Интеллектуальная система тематического исследования наукометрических данных (ИСТИНА), Российский индекс научного цитирования (РИНЦ), КиберЛенинка (Cyberleninka) и др.

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Издание поступает в основные фондодержатели РФ, перечень которых утвержден в законодательном порядке в соответствии с приказом Министерства культуры Российской Федерации от 29 сентября 2009 г. № 675 г. Москва «Об утверждении перечней библиотечно-информационных организаций, получающих обязательный федеральный экземпляр документов».

Осуществляется дополнительная адресная рассылка по территории РФ и за рубежом.

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Publication is registered in the ISSN International Centre in Paris (identification number printed version: ISSN 2226-0773).

There are 4 issues per year, as well as supplements in the form of an appendix to the journal.

Almanac is presented in many databases and directories: Zoological Record (Web of Science), ZooBank, EBSCO, ERIH PLUS, Index Copernicus International, Genamics JournalSeek, Google Scholar, Intellectual System of the Thematic Research of Scientific Metric Data (ISTINA), Russian Science Citation Index (RSCI), Cyberleninka etc.

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