

**To the taxonomy of *Agapanthia dahlia* (Richter, 1821)
(Coleoptera, Cerambycidae) subspecies distributed from
West Europa to Russia, Near East and Central Asia with
several new descriptions**

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Key words: Coleoptera, Cerambycidae, taxonomy, zoogeography, new subspecies, new synonyms, subspecies key.

Abstract. Eight new subspecies are described: *Agapanthia (Epopetes) dahlia chemalensis* **ssp. n.** (type locality: Chemal, Republic of Altay, Russia), *A. (E.) d. setosa* **ssp. n.** (type locality: Eğirdir environs, Isparta, Turkey), *A. (E.) d. grossicornis* **ssp. n.** (type locality: Çorum, Turkey), *A. (E.) d. zaysanensis* **ssp. n.** (type locality: Zaysan Lake environs), *A. (E.) d. zhidkovi* **ssp. n.** (type locality: 55 km S Makanchi, Kazakhstan), *A. (E.) d. vishnyakovi* **ssp. n.** (type locality: Kitab Natural reserve, Zerafshan mountain ridge, Kashkadarya Region, Uzbekistan), *A. (E.) d. krivosheinae* **ssp. n.** (type locality: Yangier, Syrdarya Region, Uzbekistan), *A. (E.) d. revadensis* **ssp. n.** (type locality: Revad environs, Zerafshan valley, Tadzhikistan). Two synonyms are proposed: *A. (E.) pustulifera* Pic, 1905 = *A. (E.) mutinensium* Sama & Rapuzzi, 2010, **syn. nov.** = *A. (E.) subsimplicicornis* Sama & Rapuzzi, 2010, **syn. nov.** New distributional data are represented for 3 subspecies. A key for all subspecies is proposed.

Introduction.

Agapanthia dahlia (Richter, 1821) is a very complicated taxon of many rather different subspecies. According to the last Cerambycidae Palaearctic Catalogue (Danilevsky, 2020), it included 19 subspecies. Recently one new subspecies was described (*A. d. efimovi* Danilevsky, 2021) and the names of 7 species were downgraded to subspecies rank (Lazarev, 2024). Now the species consists of 33 subspecies. Below 8 new subspecies are described and 2 names are accepted as new synonyms.

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:

DE - collection of Dmitry A. Efimov (Kemerovo, Russia);

DN - collection of David Navrátil (Litomyšl, Czech Republic);

KH - collection of Karel Hodek (Brno, Czech Republic);

MD - collection of Mikhail L. Danilevsky (Moscow, Russia);

MH - collection of Michal Holomčík (Lužice, Czech Republic);

ML - collection of Maxim A. Lazarev (Moscow, Russia);

SM - collection of Sergey V. Murzin (Moscow, Russia);

VU - collection of Vadim E. Ustinov (Moscow, Russia);

ZIN - collection of Zoological Institute of the Russian Academy of Sciences (Saint-Petersburg, Russia);

ZMM - collection of Zoological Museum of Moscow University (Russia).

Results

A list of *Agapanthia* (*Epoptes*) *dahlii* (Richter, 1821) groups of subspecies

The subspecies could be joined in several related groups on the bases of geographical distribution and natural connections. Subspecies of the first group “*A. d. dahlii*” are distributed from Europe to Siberia and usually have densely pubescent elytra and setae tufts of 3rd antennal joints. Subspecies of the second group “*A. d. walteri*” are distributed in Transcaucasia and neighbor regions and usually characterized by spotted elytra and well developed antennal setae tufts. Subspecies of the third group “*A. d. sicula*” are distributed in West Europe and Near East and usually have rather glabrous elytra. Subspecies of the fourth group “*A. d. muellneri*” are

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distributed in Central Asia and are characterized by well-developed elytral pubescence.

The records of *A. dahlui* from China and Mongolia could be connected with unknown subspecies not described yet, or to wrong identifications. No *A. dahlui* from China and Mongolia are known to the author.

I. group *A. d. dahlui* (Richter, 1820)

1. *A. d. dahlui* (Richter, 1821) -Map 1: No 1.

Type locality. "Hungaria" - after original description.

2. *A. d. kuleshovi* Danilevsky, 2018 - Map 1: No 2.

Type locality. Russia, Tomsk Region, Belousovo environs, 56°18'13"N, 85°11'53"E.

3. *A. d. efimovi* Danilevsky, 2021 - Map 1: No 3.

Type locality. Russia, Kemerovo Region, Prokopyevsk District, Karakan Mt. Ridge., 6-7 km from Tykhata.

4. *A. d. chemalensis* ssp. n. - Map 1: No 4.

Type locality. Russia, Republic of Altay, Chermal.

5. *A. d. calculensis* Lazarev, 2013 - Map 1: No 5.

Type locality. North-east Kazakhstan, the valley of the Sibinka River about 40 km south of Ust-Kamenogorsk, 49°40'27.56"N, 82°39'13.12"E.

II. group *A. d. walteri* Reitter, 1898

6. *A. d. walteri* Reitter, 1898 - Map 1: No 6.

Type locality. Turkey, Erzurum.

7. *A. d. nitidipennis* Holzschuh, 1984 - Map 1: No 7.

Type locality. Georgia, environs of the Jvari monastery (41°50'19"N, 44°44'02"E) north of Tbilisi.

8. *A. d. rubenyani* Lazarev, 2013 - Map 1: No 8.

Type locality. South Armenia, Megri District, mountains above Shvanidzor, 39°13'N, 46°22'44"E, 1600 m.

9. *A. d. ismailovae* Lazarev, 2013 - Map 1: No 9.

Type locality. Russia, North Caucasus, Dagestan, Rutul environs (41°32'N, 47°25'E).

10. *A. d. persica* Semenov, 1893 - Map 1: No 10.

Type locality. Iran, Eastern and Central Mazandaran province.

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11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016 - Map 1: No 11.
Type locality. Azerbaijan, Jalal-Abad District, Andreevka environs (Karazenjir, 39°16'N, 48°30'E, 10 m).
12. *A. d. golesanica* Lazarev, Plewa & Jaworski, 2016 - Map 1: No 12.
Type locality. Iran, Golestan province, 60 km east Minudasht, 460 m, 37°21'36"N 55°55'48"E.
13. *A. d. salviae* Holzschuh, 1975 - Map 1: No 13.
Type locality. Iran, Elburz, south side, 10 km north of Karaj.
14. *A. d. transcaspica* Pic, 1900 - Map 1: No 14.
Type locality. Turkmenistan, Ashgabat.

III. group *A. d. sicala* Ganglbauer, 1884

15. *A. d. sicala* Ganglbauer, 1884 - Map 1: No 15.
Type locality. Italy, Sicilia.
16. *A. d. schurmanni* Sama, 1979 - Map 1: No 16.
Type locality. Greece, Kastoria.
17. *A. d. malmerendii* Sama, 1981 - Map 1: No 17.
Type locality. Italia, Romagna, Portico di Romagna [44°1'N, 11°46'E].
18. *A. d. lateralis* Ganglbauer, 1884 - Map 1: No 18.
Type locality. Turkey, Istanbul Province, Istanbul (Constantinople).
19. *A. d. pustulifera* Pic, 1905 - Map 1: No 19.
Type locality. Israel, Jerusalem.
20. *A. d. kindermanni* Pic, 1905 - Map 1: No 20.
Type locality. Southern Turkey.
21. *A. d. setosa* **ssp. n.** - Map 1: No 21.
Type locality. Turkey, Isparta, Eğridir environs.
22. *A. d. grossicornis* **ssp. n.** - Map 1: No 22.
Type locality. Turkey, Çorum.

IV. group *A. d. muellneri* Reitter, 1898

23. *A. d. iliensis* Danilevsky, 2018 - Map 1: No 23.
Type locality. Kazakhstan, Almaty Region, southern environs of Lake Sorbulak (43°33'57.65"N, 76°36'24.93"E), 670 m.
24. *A. d. alexandris* Pic, 1901 - Map 1: No 24.
Type locality. Kyrgyzstan, Kyrgyz Ridge (formerly Alexander Ridge); the type most likely comes from the

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western (Kazakh) part of the ridge.

25. *A. d. muellneri* Reitter, 1898 - Map 1: No 25.

Type locality. Uzbekistan, Tashkent.

26. *A. d. alaiensis* Kratochvíl, 1985 - Map 1: No 26.

Type locality. Southern Kyrgyzstan at the southern border of the Fergana Valley, Kadamjai (40°7'44"N, 71°43'26"E).

27. *A. d. zaysanensis* **ssp. n.** - Map 1: No 27.

Type locality. East Kazakhstan, Zaysan lake environs, Zhemenev River.

28. *A. d. zhidkovi* **ssp. n.** - Map 1: No 28.

Type locality. Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.

29. *A. d. lepsyensis* Danilevsky, 2018 - Map 1: No 29.

Type locality. Kazakhstan, Lepsy river, 7 km northeast Koilyk (formerly Antonovka), 45°41'36.22"N, 80°17'58.94"E.

30. *A. d. vishnyakovi* **ssp. n.** - Map 1: No 30.

Type locality. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).

31. *A. d. krivosheinae* **ssp. n.** - Map 1: No 31.

Type locality. Uzbekistan, Syrdarya Region, Yangier.

32. *A. d. revadensis* **ssp. n.** - Map 1: No 32.

Type locality. Tadzhikistan, Zerafshan valley, Revad environs.

33. *A. d. ushinovi* Danilevsky, 2013 - Map 1: No 33.

Type locality. Tadzhikistan, Pamir, Poshkharv environs [38°24'1"N, 71°9'18"E].

***Agapanthia (Epoetes) dahlii* (Richter, 1821)**

Saperda cardui, Fabricius, 1775: 186 - "Habitat in Europae australioris carduis"; 1801: 325 (misapplied) - "Habitat in Europae australioris carduis"; Herbst, 1784: 94; Olivier, 1795: N68, p. 9 - "dans les départemens méridionaux de la France", "l'Allemagne".

Saperda nigricornis Fabricius, 1793: 314 (preoccupied) - "Habitat in Europae australioris".

Saperda dahlii Richter, 1821: pl. 12 - "Hungaria".

Agapanthia cardui, Mulsant, 1839: 175 - "la France méridionale et tempérée"

Agapanthia lineatocollis, Mulsant, 1863: 358 (misapplied) - France, "les zones tempérées ou méridionales".

Agapanthia gyllenhali Ganglbauer, 1883: 190 (= *cardui*, F. = *lineatocollis*, Muls.) - "E. md."

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Agapanthia dahli, Ganglbauer, 1884: 541 - "Mittel- und Süd-Europa, Caucasus, Kleinasien, Syrien"; Reitter, 1898: 133 - "Mittel- und Südeuropa, Kaukasus; dann angeblich auch in Kleinasien und Syrien"; 1913: 66 - "Süddeutshl., Nassau, Böhmen"; Stierlin, 1898: 498 - "Genf, Aarau, Dübendorf, Glarner Alpen"; Everts, 1901: 386; Csiki, 1905: 64 - Hungary; Schaufuß, 1916: 876 - "Mittel- u. Südeuropa"; Plavilstshikov, 1927: 61 - "au Caucase, en Transcaucasie, dans le Turkestan boréal, la Sibérie mér. occ., et la Russie d'Europe moyenne et méridionale"; 1929: 103, part. (= *kindermannii* Pic, 1905); 1932: 194; 1965: 416 - the south and center of the European part of the USSR, Caucasus, Western Siberia; Chernyshev, 1930: 12 - Bryansk province; Esterberg, 1935: 197 - Gorky and Kirov regions; Zaitzev, 1954: 18, part. - Georgia: (Borjomi, Eldar, Tbilisi, Manglisi, Gagra), All Transcaucasia, Europe, Siberia, Western. Asia; Yablokov-Khnzoryan, 1961: 78 - Europe, including Armenia; Breuning, 1961: 185, part. - "Eur. centr. et mer., As. occ. et centr."; Abai, 1969: 53, part. - Iran: Gorgan, Khorassan; Kostin, 1973: 224 - Kazakhstan; Shernin, 1974: 181 - Urzhum, Kirov region; Villiers, 1978: 431, 434 - "Europe centrale et méridionale, Sibérie occidentale, Caucase, Proche et Moyen-Orient; Sama, 1979: 506, 511; 2003: 93 - Europe, Western Türkiye, Caucasus, Transcaucasia, Siberia to Lake Baikal; Mirosnikov, 1984: 280 (larva); Tsherepanov, 1985: 246 - Europe, Western Siberia; Novozhenov, 1987: 45 - Ilmensky Reserve; Rabil, 1992: 148 - "Forêt de la Grésigne (Tarn)"; Bense, 1995: 400-401 - Western Europe; Carrière, 1996a: 562 - "Hérault"; 1996b, 110, 111 - "Portiragnes; Pech Blanc, Etang de Vendres"; Alexandrovich et al., 1996: 48 - southeast of Belarus; Althoff & Danilevsky, 1997: 40 - Europe; Kasatkin & Arzanov, 1997: 67 - Rostov Region, Volgograd Region, Astrakhan Region, Kalmykiya, Krasnodar Region, Karachay-Cherkessia, Checheno-Ingushetia, Dagestan; Matveev, 1998: 87 - Mari El, Tatarstan, Kirov, Nizhny Novgorod Regions; Secchi, 1998: 227 - "Loiret: Meung-sur-Loire"; Kovács, 1998: 254 - Hungary; Efimov, 2001: 69 - Kemerovo Region; Hua, 2002: 191, part. - China; Former USSR, Mongolia; Brustel et al., 2003: 452; Isaev et al., 2004: 41 - Tatarstan, Ulyanovsk and Samara Regions; Diego Barquín & Martínez-Porres Cáceres, 2005: 145 - Spain: Cantabria; Sautière, 2005: 21 - Montlouis-sur-Loire (Indre-et-Loire); Verdugo, 2008: 484 - Andalucía: Calar Alto, término municipal de Baeza, Almería; Mouthiez & Péru, 2008: 110 - Loiret; Sama et al., 2008: 122, part. - "absent in Iran"; Kadyrbekov & Tleppeeva, 2008: 54 - tugai forests of Semirechye and the steppe belt of the Dzhungar Alatau and Northern Tien Shan; Tiberghien, 2010: 63 - Zaragoza; Gnjatović & Žikić, 2011: 36 - Montenegro; Hernández, 2011: 257 - Lerma (Burgos); Danilevsky, 2012: 153 - Palaearctic, including Belgium but excluding Korea; Zamoroka et al., 2012: 1167 - Western Podillya, Ukraine (East Pokuttia, Khotyn Eminence); Švácha & Lawrence, 2014: figs 2.4.20 T (larva), 2.4.32 M (nymph female); Dobrosavljević & Mihajlović, 2014: 26 - Serbia; Pavićević et al., 2015: 83 - Serbia; Kulenko, 2015: 1104 - Russia, Samara Region: (Tolyatti,

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- Zhigulevsk); Molnar et al., 2016: 49 - Hungary (Fundoklia Valley); Danilevsky, 2017: 28 - South-West Siberia; Touroult et al., 2019: 107 - France; Nikitsky, 2019: 575 - Moscow Region.
- Agapanthia dahlia*, Seidlitz, 1891b.: 850 (= *cardui*, F. = *lineatocollis*, Muls.) - "In Eur. bis Ostpr. (?)".
- Agapanthia* (s. str.) *dahli*, Aurivillius, 1923: 461 - Mittel- und Süd-Europa; Martynov & Pisarenko, 2004: 64 - Lugansk and Donetsk Regions.
- Agapanthia* (*Agapanthiella*) *dahlia*, Pesarini & Sabbadini, 2004: 127, part.; Danilevsky, 2006: 49 - Moscow Region; Özdikmen, 2007: 348, 392 - Europe, European Russia, European Kazakhstan, Siberia, Central Asia, ?Mongolia, China, Caucasus, Transcaucasia, Near East, Turkey, Iran; Listvyagova et al., 2013: 28 - Republic of Khakassia, Krasnoyarsk Krai.
- Agapanthia* (s. str.) *dahli dahli*, Bartenev, 2004: 387 - Europe, Caucasus and Transcaucasia, "Northern Iran, Syria, Turkey, Palestine, Northwestern Kazakhstan, Uzbekistan, Turkmenistan, Southwestern Siberia.
- Agapanthia* (*Epopetes*) *dahli*, Löbl & Smetana, 2010: 215; Drumont & Leduc, 2011: 293, 295 - "Belgique: province de Namur"; Shapovalov, 2012: 184 - Russia east to approximately Lake Baikal, Europe, "Caucasus, Central Asia, possibly also northwestern Mongolia and northwestern China"; Steiner & Schmid, 2013: 2 - "Griechenland"; Klausnitzer et al., 2016: 557 - Mitteleuropa; Stolbov et al., 2019: 209 - Russia (Tyumenskaya Oblast); Özdikmen, 2021: 1352; Zamoroka, 2022: 64 - Ukraine; Trócoli et al., 2023: 245 - "España (Barcelona, Catalunya): Moianès"; Danilevsky, 2020: 301, 302 - center and south of European Russia, Western Siberia, Kazakhstan, Belarus, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan, Iran, Turkey, China, Western Europe.
- Agapanthia dahli dahli*, Sláma, 1998: 350 - Czech Republic, Slovakia; Bartenev & Terekhova, 2011: 139 - Left Bank Ukraine and Crimea; Lazarev, 2013a: 443 (new Asian subspecies); 2013b: 128, 129, figs 4-5 (Samara) - Central Russia.
- Agapanthia* (*Epopetes*) *dahli dahli*, Mikhailov, 1999: 230 - Arkim; Georgiev, Gjonov & Sakalian, 2015: 82 - "Strandzha Mountain (Turkey: K  m  rk  y K  y  )"; Miroshnikov, 2011: 262; Danilevsky, 2014: 219; Gradinarov & Petrova, 2019: 70 - Bulgaria: Vrachanski Balkan Nature Park; 2020: 174 - Bulgaria: Sarnena Sredna Gora Mountains; Gradinarov et al., 2020: 106 - Bulgaria; Danilevsky, 2020: 302 - center and south of European Russia, Western Siberia, Kazakhstan, Belarus, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan, Iran, Turkey, China, Western Europe; Danilevsky, 2024: 153.
- Agapanthia* (*Agapanthiella*) *dahli dahli*, Shapovalov et al., 2006: 107 - Orenburg Region.
- Agapanthia* (*Epopetes*) *dahlia*, Lin & Tavakilian, 2019: 226 - "China, Mongolia, Russia, Uzbekistan, Kazakhstan, Turkey, Georgia; Europe".

Type locality. “Hungaria” - according to the original description.

Extremely variable species with huge area. Many local forms were originally described as species or accepted as species after original publication. All forms are characterized by red basal parts of 3rd - 12th joints; pubescence of the light parts of antennal joints usually white, but sometimes yellowish; antennal length usually variable in each population from about 2 times longer than body in males protruding beyond elytral apices with 7th joint, in females - with 8th joint; elytral pubescence from pale-yellow, to dark-yellow or orange; always more or less spotted; spots can be rather contrast or partly conjugated; very rare (*A. d. efimovi*) elytral pubescence about uniform without spots; erect setae are usually distinct along anterior elytral half or anterior two-thirds, or up to elytral apex, and often variable inside one population; one of the most typical species character is the presence of long and dense setae tuft at the apex of 3rd antennal joint, which can be completely absent in some northern populations or sometimes in certain southern; sometimes poorly developed setae tuft can be seen at the apex of 4th joint; definite specimens can have more or less contrast grey stripe along humeri; body length in males: 9.5-21.4 mm, in females - 10.5-22.5 mm.

Distribution. From Pyrenean Peninsula to Eastern Siberia; the species is known from Omsk, Tomsk, Novosibirsk and Kemerovo regions, as well as from Altay Region; Kazakhstan (including Zaysan Depression), Central Asia, Caucasus with Transcaucasia, Near East including Iran; in Europe the species does not reach Poland; in East Asia it penetrates to China and Mongolia (Lin & Tavakilian, 2019).

All records for Baykal environs (Cherepanov, 1984; Sama, 2002; Shapovalov, 2012; Danilevsky, 2023) were connected with wrong Cherepanov's identification of *Ag. alternans* Fischer von Waldheim, 1842.

Biology. Larvae develop in stems of various herbaceous plants: *Althaea*, *Arctium*, *Cannabis*, *Carduus*, *Carthamus*, *Cichorium*, *Cirsium*, *Conium*, *Daucus*, *Dictamnus*, *Dipsacus*, *Eremurus*, *Eupatorium*, *Helianthus*, *Heracleum*, *Laserpitium*, *Latuca*, *Malva*, *Melilotus*, *Onopordum*, *Pyrethrum*, *Pastinaca*, *Sambucus*, *Sonchus* and others; certain populations may clearly exhibit oligophagy or even monophagy; in Europe preference is usually noted for such *Asteraceae*

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as *Carduus*, *Cirsium* and *Onopordum*; in Eastern Siberia and Kyrgyzstan they are known only on *Malvacea* (usually *Althaea*). According to Danilevsky (2023), in Novorossiysk (Gayduk) and in Crimea (Koktebel) beetles were observed only on *Asphodelina*. It can be assumed that food specialization demonstrates reproductive isolation of the corresponding populations.

According to Tsherepanov (1984): The entire development cycle is completed within one or two years, because a part of the population pupates after the first winter, and the rest remains for the second winter.

1. *Agapanthia (Epopetes) dahlii dahlii* (Richter, 1820)

Saperda dahlii Richter, 1822: pl. 12 - "Hungaria".

New material. 18 males, 7 females, Kazakhstan, Bey-Chogur, Turgay Region, 25.5.-13.6.1916, P. Zikharev & Pania - ZMM; 1 female, Kazakhstan, Akmolinsk Region, lake Usu-Kul, 1912, Maltsev - ZMM; 1 female, Kazakhstan, Akmolinsk Region, Kunduzda River, 29.6.-1.7.1900, Balykleysky leg. - ZIN.

Distribution. North of the species area from Pyrenees to Urals with Sverdlovsk and Tyumen regions; North Caucasus, Crimea, Georgia (part.), North and Central Kazakhstan (part.).

2. *Agapanthia (Epopetes) dahlii kuleshovi* Danilevsky, 2018

Agapanthia (Epopetes) dahlii kuleshovi Danilevsky, 2018: 179 - "Russia, Tomskaya Obl., Belousovo env., 56°18'13"N, 85°11'53"E", "Tomskaya Obl., Kozhevnikovo Distr., Osinovka (55°57'23"N, 83°29'18"E) env."; Danilevsky, 2020: 302 - Western Siberia (Tomsk Region); 2023: 583.

New material. 2 males, 1 female, Russia, West Siberia, Kurgan Region, 120 km W Kurgan, 150 m, 4.7.2002, M. Danilevsky - MD; 1 female, 50 km W Kurgan, 24.6.2003, A.A. Safronov - MD; 4 males, 1 female, Omsk Region, Bolsheukovsky District, Bolshiye Uki, 29.5.-9.7.2007, V. Teploukhov - VU; 2 males, 1 female, Bolsheukovsky District, Belogrivka environs, 18.6.2016, V.H. Teplov - VU.

Distribution. West Siberia of Russia, Kurgan and Tomsk Region.

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3. *Agapanthia (Epoptes) dahlii efimovi* Danilevsky, 2021

Agapanthia dahlii, Efimov, 2001: 69 - Kemerovo Region.

Agapanthia (Epoptes) dahlii efimovi Danilevsky, 2021: 450 - "Russia, Kemerovo Reg., Prokopyevsk Distr., Karakan Mt. Ridge., 6-7 km from Tykhta", "Prokopyevsk Distr., 7 km NE Oktyabrsky Lug, 54°17'N, 86°55'E", "Belovo Distr., NW of Karakan Mt Ridge", "Kemerovo Distr., Staraya Balakhonka, 55°31'44.1"N, 85°53'23.8"E", "Krapivinsk Distr., 8 km SSW Saltymakovo", "Chebulinsk Distr., 9 km S Chumay, mouth of Kozhukh River, 55°39.5'N, 87°49.5'E", "Chebulinsk Distr., Shestakovo, 55°52'59.8"N, 87°59'8.6"E", "Chebulinsk Distr., Shestakovo", "Krapivinsk Distr., 8 km SSW Saltymakovo, 54°45'46"N, 87°1'27"E"; 2023: 583.

New material. 1 male, Kemerovo Region, Kemerovo, Sosnovy Bor, 3.6.2006, D. Sidorov - DE; 1 female, Kemerovo Region, Kemerovo, Kuzbass Botanical Garden, Sukhovskoe Lake, 16-20.6.2003, A. Azimov, E. Maksimenko - DE; 1 female, Kemerovo Region, Chebulinsk District, mouth of river Kozhukh and Kiya, VII.2016, S. Luzyanin - DE; 1 female, Kemerovo Region, Yashkino District, Yurts-Konstantinovs, 56.0659°N 84.9863°E, 2.7.2023, D. Sidorov - DE; 1 male, Russia, Republic of Khakassia, Mayna, 2.7.1970, M. Milov - MD; 3 males, 2 females, Russia, Altay, Gorno-Altaysk (north), 850 m, 20.6.1989, S. Saluk - MD; 1 male, 1 female, Russia, Novosibirsk Region, Kochenevo District, Novomikhaylovka, 8.7.1987, V. Grachev - MD; 1 female, Novosibirsk Region, Maslyanino District, Bubenchikovo, 1954, Lurye - ZMM; 1 female, Novosibirsk Region, Kargat District, Rovenskiy, 6.7.1967, V. Kuznezov - ML; 1 male, 1 female, Siberia, Minussinsk, 22.6.-30.6.1908 - ZMM.

Distribution. West Siberia of Russia (Novosibirsk Region, Altay Republic, Kemerovo Region, Khakassia Republic).

4. *Agapanthia (Epoptes) dahlii chemalensis* ssp. n.

Fig 1

Type locality. Russia, Republic of Altay, Chermal.

Only one female available; body black with numerous erect black setae; moderately wide; head with dense yellow pubescence, condensed along frons and between antennal bases, rather pale in



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Fig 1. *Agapanthia (Epopetes) dahlia chemalensis* **ssp. n.:** Holotype, female, Russia, Republic of Altay, Chermal, 20.6.1988, E. Matveev.

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front of eyes; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thick, protruding beyond elytral apices with 4 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length and here with distinct setae tuft, consisting of several dense short setae; 4th antennal joint with less developed setae tuft; other antennal joints with a few short erect setae apically; prothorax strongly widened posteriorly, much wider than long; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra about 2.9 times longer than wide; with moderately dense yellow pubescence; small glabrous elytral areas nearly indistinct; elytral setae spots more or less distinct; grey humeral elytral stripe absent; elytral apices rounded, erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length: 14.4 mm; width: 4.5 mm.

Differential diagnosis. The taxon is close to *A. (E.) d. efimovi* Danilevsky, 2021, but antennae distinctly thicker, with dense setae tufts rather distinct in 4th joint also; frons with denser pubescence; elytra with sparser paler pubescence.

Material. Holotype, female, Russia, Republic of Altay, Chermal, 20.6.1988, E. Matveev - MD.

Distribution. Russia, Republic of Altay, Chermal environs.

5. *Agapanthia (Epoptes) dahlia calculensis* Lazarev, 2013

Agapanthia dahlia calculensis Lazarev, 2013b: 128 - North-east Kazakhstan: Sibinka river [49°40'27.56"N, 82°39'13.12"E]; Putintzevo env., 20 km N Zyriyanovsk, Maralikha Mt.; S. Uskaman city; 2014: 278 - North-east Kazakhstan, Sibinka River; Karpiński et al., 2018: 88 - East Kazakhstan Region; Almaty Region; Danilevsky, 2020: 302 - Kazakhstan.

New material. 1 female, Kazakhstan, Marka-Kol District, Chernyaevka, Kalodzhar River, 11.6.1986, V. Shilenkov - MD; 1 male, 1 female, Kazakhstan, Kalbinsky Ridge, Samarka, 600 m, 22.4.2002, M. Danilevsky - MD.

Distribution. North-East Kazakhstan; Sibinka River valley approximately 40 km south of Ust-Kamenogorsk, 49°40'28"N, 82°39'13"E; Mount Maralikha (670 m, 49°50'59"N, 84°22'53"E) in

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the vicinity of Putintsevo, which is 20 km north of Zyryanovsk; the southern outskirts of Ust-Kamenogorsk (450 m, 49°51'45"N, 82°37'54"E); Berezovka (49°41'N, 83°25'E), 7 km east of Serebryansk; the Larikha Mountains (49°49'6"N, 84°26'31"E), 15 km northeast of Zyryanovsk; Marka-Kol District, Chernyaevka, Kalodzhar River; Kalbinsky Ridge, Samarka, 600 m.

6. *Agapanthia (Epopetes) dahlii walteri* Reitter, 1898

Figs 2-5

Agapanthia walteri Reitter, 1898: 132 - "Armenien: Erzerum. Kleinasien: Mardin"; Winkler, 1929: 1213, part.; Plavilstshikov, 1932: 194; Zaitzev, 1954: 18 - Borjomi, Armenia, Nakhkrai, M. Asia; Breuning, 1961: 185 - "As. occ. mer."; Villiers, 1967: 369 - "Asie Mineure, Transcaucasie, Iran"; Abai, 1969: 53 - Iran: Mazandaran, Gorgan, Azarbaidjan, Kermanschahan; Fuchs & Breuning, 1971: 437 - "Anatolie: Yenisehir (Hatay); Zw. Yükksekova u. Semdinli (Hak.); Tunceli"; Kasatkin & Arzanov, 1997: 67 - Chechnya: Petropavlovskaya; Adlbauer, 1988: 289 - "30 km E Bingöl", "NW Yükksekova, Prov. Hakkari"; Danilevsky, 1993: 39 (= *A. salviae*, Kazjutshits, 1988); Holecová et al., 2002: 10 - Armenia; Rejzek et al., 2003: 170 - "SE. Turkey: Alannyurt E. Gercüş"; Sama et al., 2005: 130 - Iran, Fars.

Agapanthia dalhi var. *erivanica* Pic, 1900: 14 - "Arménie: Erivan".

? *Agapanthia dahli* var. *theryi* Pic, 1908: 6 - "Perse: Sultanabad".

Agapanthia (s. str.) *dahli*, Pic, 1910: 96 (= *erivanica* Pic), part.; Aurivillius, 1923: 461 (= *cardui*, F. = *gyllenhali* Ganglb. = *erivanica* Pic = *lineatocollis*, Muls. = *nigricornis* F. = *theryi* Pic), part. - "Mittel- und Südeuropa", "Armenien", "Persien"; Plavilstshikov, 1930: 25, 39 ("Syn.: *A. lineatocollis* Muls. 1863, *A. cardui* Herbst, 1784, *A. nigricornis* F. 1792"; "ab. *erivanica* Pic"), part. - "Europa (von Deutschland bis Spanien, Serbien, Italien u.s.w.), Mittel- und Süd-Russland, Kaukasus, Transkaukasien, Persien, Syrien, Klein-Asien"; 1948: 168, part. - All Armenia; 1968: 121, 147 (= *nigricornis* F. = *erivanica* Pic) - (throughout the middle and southern Europe), (In the European part of the USSR... north to Chernigov, Tula, Kazan, Kirov, Perm), (Crimea, Caucasus, all Transcaucasia, northwestern Kazakhstan, Uzbekistan), (Northern Iran, Turkish Armenia, Asia Minor, Syria).

Agapanthia (s. str.) *walteri*, Pic, 1910: 96 - "Arm., Anat."; Aurivillius, 1923: 467 - Armenien, Kleinasien; Plavilstshikov, 1930: 24, 39 - "Transkaukasien (Erivan, Daralages u.s.w.), Armenien (Ordubad, Kagyzman, Erzerum), Mardin, Anatolien, Klein-Asien"; 1948: 168, part. - Alagez, Araks Valley, Daralagez, Zangezur; 1968: 121, 146 - Armenia, Nakhichevan Autonomous Soviet Socialist Republic. Central and northeastern Turkey; Lobanov et al., 1982: 269; Danilevsky & Miroshnikov, 1985: 387, 390.

Agapanthia (s. str.) *dahli* var. *erivanica*, Aurivillius, 1923: 461 - "Armenien".

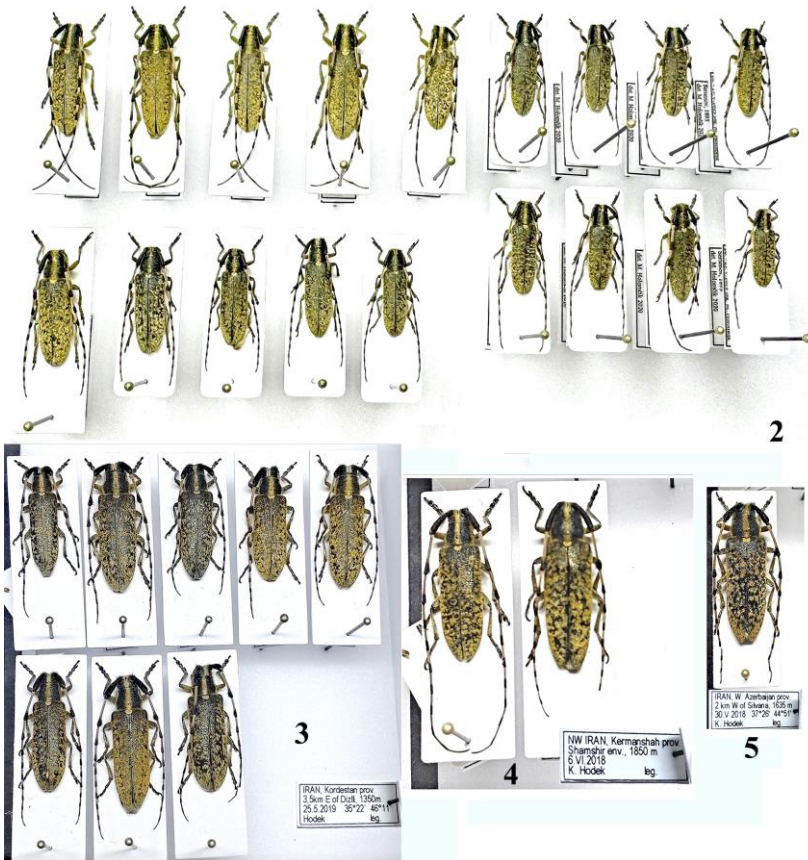
Agapanthia (s. str.) *dahli* var. *theryi*, Aurivillius, 1923: 462 - Persien.

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- Agapanthia dahli* m. *erivanica*, Breuning, 1961: 185.
Agapanthia dahli m. *theryi*, Breuning, 1961: 185.
Agapanthia salviae, Kazjutshits, 1988: 584 - Armenian SSR, Khosrovsky reserve, Vedinsky section.
Agapanthia dahli, Winkler, 1929: 1213, part. (including ab. *erivanica* Pic).
Agapanthia (*Agapanthiella*) *walteri*, Pesarini & Sabbadini, 2004: 127.
Agapanthia (*Epopetes*) *walteri*, Löbl & Smetana, 2010: 216 - Azerbaijan, Armenia, Georgia, Iran, Turkey; Barimani Varandi et al., 2010: 54 - Iran, Mazandaran; Özdikmen, 2013: 22 - “Turkey: Erzurum, Mardin, Hakkari, Tunceli, Bingöl, Amasya, Karş, Batman”; 2021: 1352; 2024: 1965, 2476 - Black Sea (Amasya, Artvin, Bayburt, Gümüşhan), Central Anatolian Region (Çankırı), Eastern Anatolian Region (Bingöl, Erzurum, Hakkâri, Kars, Muş, Tunceli), Mediterranean Region (Hatay), South-Eastern Anatolian Region (Batman, Mardin, Siirt, Şırnak).
Agapanthia (*Epopetes*) *dahli*, Sakenin et al., 2011: 7 - “Iran: Ardabil province: Ardabil”.
Agapanthia dahli walteri, Lazarev, 2013a: 443 - Central Transcaucasia.
Agapanthia (*Epopetes*) *dahli walteri*, Danilevsky, 2014: 219; 2020: 302 - Azerbaijan, Armenia, Georgia, Iran, Turkey; 2023: 584 - Armenia, Transcaucasia, Turkey, Iran.
Agapanthia (*Epopetes*) *dahlia walteri*, Kasatkin, 2020: 243.

New material. 1 male, Georgia, [Borzhom, Gori District, Tiflis Region, Christof leg. - in Russian] - ZIN; 1 male, 1 female, Iran [Western Persia, Luridtan, Bolkha, 27.5.1914, Nesterov - in Russian] - ZIN; 1 male, 1 female. Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'N, 49°37'E, 31.5.2015, K. Hodek - MD; 1 male, 1 female, Iran, Kermanshah prov., Shamshir env., 1850 m, 6.6.2018, K. Hodek - KH; 1 female, Iran, W Azerbaijan prov., 2 km W Silvana, 37°26'N, 44°51'E, 1635 m, 30.5.2018, K. Hodek - KH; 1 male, 7 females, Iran, Kordestan prov., 3.5 km E Dizil, 35°22'N, 46°11'E, 1350 m, 25.5.2019, K. Hodek - KH; 14 males, 4 females, Iran, Qazvin prov., 54 km NW of Qazvin, Kouhin env., 36°22'18.0051"N, 49°37'9.0083"E, 1520 m., 28- 29.5.2019, M. Holomčík - MH; 1 male, Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'18.12"N 49°37'8.82"E, 30.5.2019, D. Navrátil - DN; 5 males, 4 females, Iran, Qazvin prov., 4 km W Kouhin, 1500 m, 36°22'18.12"N, 49°37'8.82"E, 30.5.2019, K. Hodek - KH; 1 male, Iran, Kermanshah prov., Shamshir env., 34°59'14.70"N, 46°25'36.71"E, 1830 m, 26.5.2017, D. Navrátil - DN; 1 male, Iran, Kurdistan, Divandareh-city, Saral, 12.5.2016, Fardin Faizi - MD.

Distribution. Azerbaijan, Armenia, Georgia, Iran, Turkey.



Figs 2-5. *Agapanthia (Epopetes) dahlii walteri* Reitter, 1898: 2 - 14 males, 4 females, Iran, Qazvin prov., 54 km NW of Qazvin, Kouhin env., 36°22'18.0051"N, 49°37'9.0083"E, 1520 m., 28-29.5.2019, M. Holomčík; 3 - 1 male, 7 females, Iran, Kordestan prov., 3.5 km E Dizll, 35°22'N, 46°11'E, 1350 m, 25.5.2019, K. Hodek; 4 - 1 male, 1 female, Iran, Kermanshah prov., Shamshir env., 1850 m, 6.6.2018, K. Hodek; 5 - 1 female, Iran, W Azerbaijan prov., 2 km W Silvana, 37°26'N, 44°51'E, 1635 m, 30.5.2018, K. Hodek. (Photos by K. Hodek & M. Holomčík).

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9. *Agapanthia (Eoptes) dahlii ismailovae* Lazarev, 2013

Agapanthia dahli ismailovae Lazarev, 2013a: 446 - "North Caucasus, Dagestan, Rutul env."

Agapanthia (Eoptes) dahli ismailovae, Danilevsky, 2020: 302 - South of European Russia (Dagestan), Azerbaijan; 2023: 585 - Mountains of Dagestan (the environs of the village of Rutul, 41°32'N, 47°25'E) and northeastern Azerbaijan (the environs of the village of Altyagach, 1030 m, 40°52'32"N, 48°56'23"E).

New material. 1 female, "Aresch / Caucasus / A. Schelkownikow" - ZMM.

Distribution. Russia, Dagestan; Azerbaijan (Altyagach, Aresh).

13. *Agapanthia (Eoptes) dahlii salviae* Holzschuh, 1975

Figs 10-18

Agapanthia (s. str.) *salviae* Holzschuh, 1975: 88 - "Elburz, Südseite, 10 km nördlich Karadj".

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

Agapanthia (Eoptes) salviae, Löbl & Smetana, 2010: 216 - Iran; Danilevsky, 2020: 303 - Iran "Elburz, Südseite, 10 km nördlich Karadj".

Agapanthia (Eoptes) dahli salviae, Lazarev, 2024: 31.

Type locality. Iran, Elburz, south side, 10 km north of Karaj.

The taxonomy position of *A. salviae* Holzschuh is not clear. The type series as well as many new series collected in the type locality contain several specimens without setae tufts on 3rd antennal joints - a single distinguishing character of *A. salviae*. All known *A. salviae* were collected together with *A. dahli walteri* and all on same food plant (*Salvia*). Most probably all *A. salviae* are just a rare morphological form of *A. dahli walteri*.

New material. 1 male, Iran, Ardabil prov., Shormineh env., 37°27'N, 48°13'E, 1370 m, 26.5.2018, K. Hodek - KH; 3 males, 1 female, Iran, Ardabil prov., Askestan env., 37°28'N, 48°39'E, 1750 m, 26.5.2018, K. Hodek - KH; 1 male, Iran, Ardabil prov., Askestan env., 37°28'20.57"N, 48°39'29.26"E, 1750 m, 27-29.5.2019, D. Navrátil - DN.

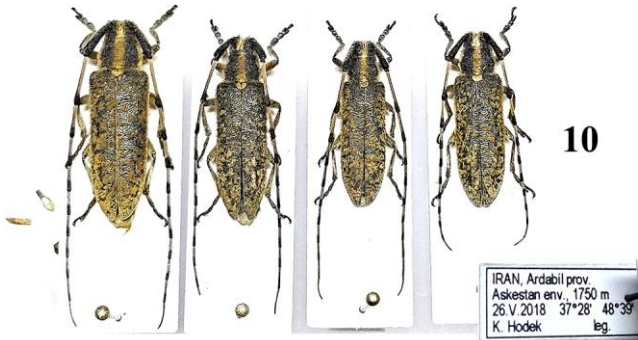
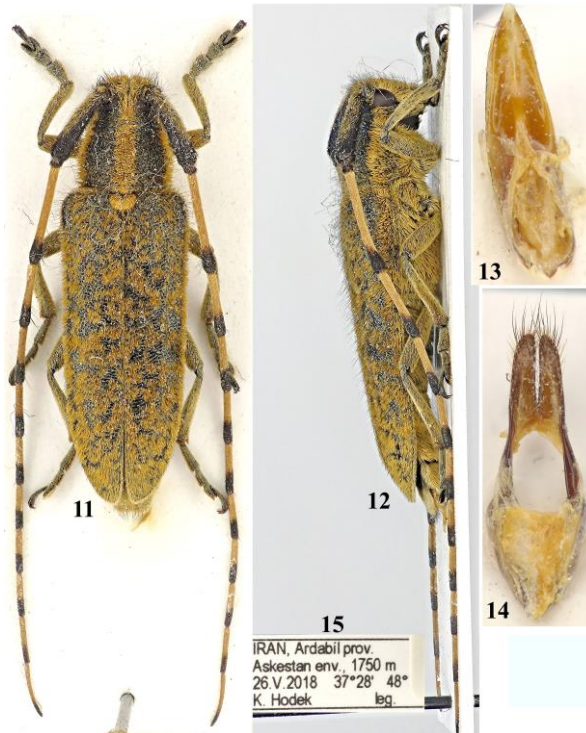


Fig. 10. *Agapanthia (Epopetes) dahlia salviae* Holzschuh, 1975: 3 males, 1 female, Iran, Ardabil prov., Askestan env., 37°28'N, 48°39'E, 1750 m, 26.5.2018, K. Hodek (Photos by K. Hodek).



Figs 11-15. *Agapanthia (Epopetes) dahlia salviae* Holzschuh, 1975: male, with same label (11 - view from above, 12 - lateral view, 13 - penis, 14 - parameres, 15 - label) (Photos by K. Hodek).



Figs 16-18. *Agapanthia (Epopetes) dahlia salviae* Holzschuh, 1975: male, Iran, Ardabil prov., Shormineh env., 37°27'N, 48°13'E, 1370 m, 26.5.2018, K. Hodek (16 - view from above, 17 - lateral view, 18 - label) (Photos by K. Hodek).

19. *Agapanthia (Epopetes) dahlia pustulifera* Pic, 1905

Agapanthia pustulifera Pic, 1905: 12 - "Jérusalem".

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

Agapanthia (Epopetes) mutinensium Sama & Rapuzzi, 2010b: 179, **syn. nov.** - "N. Liban, Akkar, Abboudiyeh"; Cocquempot et al., 2016: 99 - Lebanon: "Batloun El Shouf (= Batloun, Mont Liban)", "Aitat (Aley, Mont Liban)"; Danilevsky, 2020: 303 - Lebanon.

Agapanthia (Epopetes) subsimplicicornis Sama & Rapuzzi, 2010b: 180, **syn. nov.** - "Liban: Environs de Chtaura", "Caza Bcharré: Bcharré", "Bekaa, Ras el Assi, Nahr el Assi, 680 m, N 34°21'06", E 36°22'36"; Sama et al., 2010a: 34 - Lebanon, "Israel - Carmel" (*Agapanthia (Epopetes)* sp.); Cocquempot et al., 2016: 99 - Lebanon, "Baalbeck, Bekaa"; Danilevsky, 2020: 303 - Lebanon.

Agapanthia (Epopetes) pustulifera, Sama et al., 2010a: 4, 33 - Syria, Jordan, Israel; Sama et al., 2010b: 180 - "Syrie, Jordanie, Liban (?), Israël"; Löbl & Smetana, 2010: 216 - Jordanian, Israel, Lebanon, Syria; Ali & Rapuzzi, 2016: 267 - Syrian Coastal Region; Cocquempot et al., 2016: 99 - "Jafa", "Batloun (Mont Liban)"; Kasatkin, 2020: 244; Cocquempot et al., 2020: 219 - Syrie: Salkhad (Suweida), Amrit, Hosn, Bilyoun; Danilevsky, 2020: 303 - Jordanian, Israel, Lebanon, Syria.

Agapanthia dahlia pustulifera, Lazarev, 2024: 31.

Agapanthia dahlia mutinensium, Lazarev, 2024: 31.

Agapanthia dahlia subsimplicicornis, Lazarev, 2024: 32.

New material. 1 female, Turkey, Gaziantep, 2 km NWW Fevzipaşa vill., Nurdagi geç., 1100-1140 m, 1.6.2011, A. Napolov & I. Roma - MD.

Distribution. Israel, Syria, Jordan, Lebanon, Turkey (new record).

Note. All three names *A. pustulifera*, *A. mutinensium* and *A. subsimplicicornis* were connected with one variable taxon. Each name was used for specimens from one population. *A. pustulifera* was observed together with "*A. subsimplicicornis*" in Bekaa; and with "*A. mutinensium*" in Batloun. Besides, according to Cocquempot et al. (2016) *A. pustulifera* from Bekaa was identified by Sama et al. (2010b) as *A. mutinensium*. Specimens of *Agapanthia* mentioned by Cocquempot et al. (2016) were identified by P. Rapuzzi.

21. *Agapanthia (Eoptes) dahlia setosa* ssp. n.

Figs 6-7

Type locality. Turkey. Isparta, Eğridir environs.

Body black with poor bronze luster; moderately wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thin, protruding beyond elytral apices with 4 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length with long and dense setae tuft; 4th antennal joint with several long apical setae; other antennal joints with a few short erect setae apically; male prothorax about as wide basally as long; female prothorax slightly wider basally; pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.9 times; look glabrous, slightly shining; elytral setae spots indistinct; grey humeral elytral stripe absent, but humeral elytral area with shorter and sparser pubescence; elytral apices rounded, short oblique elytral setae distributed to about elytral middle; ventral body side with moderately dense yellow pubescence: body length in males: 12.8-20.3 mm; width: 3.3-5.1 mm; body length in females: 15.3-20.4 mm; width: 4.0-5.6 mm.

Differential diagnosis. The new subspecies is similar to *A. d. lateralis* Ganglbauer, 1884 described from “Constantinopel” (Istanbul) because of poor development of elytral pubescence, but body of *A. d. lateralis* is much wider with usually distinct grey lateral elytral stripe. It strongly differs from *A. simplicicornis* Reiter, 1898 (described from Mardin) by presence of antennal setae tufts and light 3rd antennal joint; 3rd joint of anterior tarsus is not elongated. A photo of the lectotype of *A. simplicicornis* Reiter, 1898 similar to *A. boeberi* (Fischer von Waldheim, 1806) was published by (Kasatkin, 2020).



Figs 6-7. *Agapanthia (Epopetes) dahlia setosa* ssp. n.: 6 - Holotype, male, Turkey, Isparta, Eğridir, 6.6.1986, S. Kadlec; 7 - Paratype, female, Antalya, Konakli, 25-29.5.2003, K. Vakson.

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Material. Holotype, male, [“*A. lateralis*, det. S. Kadlec”] Turkey, Isparta, Eğirdir, 6.6.1986, S. Kadlec - ML; 28 paratypes; male, female [“*A. lateralis*, det. S. Kadlec”] with same label - ML; 2 males, 1 female, Turkey, Antalya, WSW Kemer, 500 m, 4.5.2010, A. Vlasenko - ML, SM; 7 males, 1 female, Turkey, Antalya, Kemer district, Beklibi env., 13-21.5.2008, 36°44'N, 30°33'E, 15-26.5.2010, A.A. Safronov & D.A. Safronov - MD; 1 male, 1 female, “Asia Minor, Lik. Taurus”, 5.1861, Dr. Schurmann - MD; 1 male, Turkey, Isparta, W Kizilkaya, 25.4.1996, S. Kadlec - MD; 1 male, 3 female, Turkey, Antalya, Seki near Manavgat, 21.5.1996, W. Grosser - MD; 1 male, 1 female, Antalya, Konakli, 25-29.5.2003, K. Vakson - MD; 1 female, Turkey, İçel, NW Erdemli, Aydinlar, 28.5.2001, P. Bialooki - MD; 1 male, 2 females, Turkey, Adana, Hasanbeyli env. pass, 37°07'N, 36°34', 19-25.05.2001, P. Bialooki - MD; 1 female, Hasanbeyli env., N Amanus Mts. 21.5.2001, P. Bialooki - MD; 1 female, Turkey, Buglan geçidi, NW Mus, 17.6.2003, P. Bialooki - MD.

Distribution. Sothern Turkey in several provinces: Antalya, Isparta, İçel, Adana and Mus.

22. *Agapanthia (Epoetes) dahlII grossicornis* ssp. n.

Figs 8-9

Type locality. Turkey, Çorum.

Body black with poor bronze luster; moderately wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae distinctly thicker than in *A. d. setosa*, protruding beyond elytral apices with 4 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length; with long and dense setae tuft.; 4th antennal joint without setae tuft, with several long apical setae; other antennal joints with a few short erect setae apically; male prothorax about as wide basally as long; female prothorax slightly wider basally;



Figs 8-9. *Agapanthia (Eoptes) dahlia grossicornis* ssp. n.: 8 - Holotype, male, Turkey, Çorum, 18.6.1994, N. Auvray; 9 - Paratype, female with same label.

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pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.9 times; look glabrous, slightly shining; elytral setae spots indistinct; grey humeral elytral stripe hardly visible, humeral elytral area with very short and sparse pubescence; elytral apices rounded, short oblique elytral setae distributed to about elytral middle; ventral body side with moderately dense yellow pubescence: body length in males: 15.1-16.5 mm; width: 4.1-4.4 mm; body length in female: 16.5 mm; width: 4.4 mm.

Differential diagnosis. The new subspecies is similar to *A. d. setosa*, but differs by rather thick antennae and grey humeral elytral stripe hardly visible; besides it has well developed setae tufts of 3rd antennal joint, doesn't have setae tufts of 4th antennal joints.

Material. Holotype, male, Turkey, Çorum, 18.6.1994, N. Auvray - ML; 4 paratypes; 2 males, 1 female, with same label - ML, SM; 1 male, Turkey, Amasya, Yenice, 500 m, 21.5.2000, D. Obydov - MD.

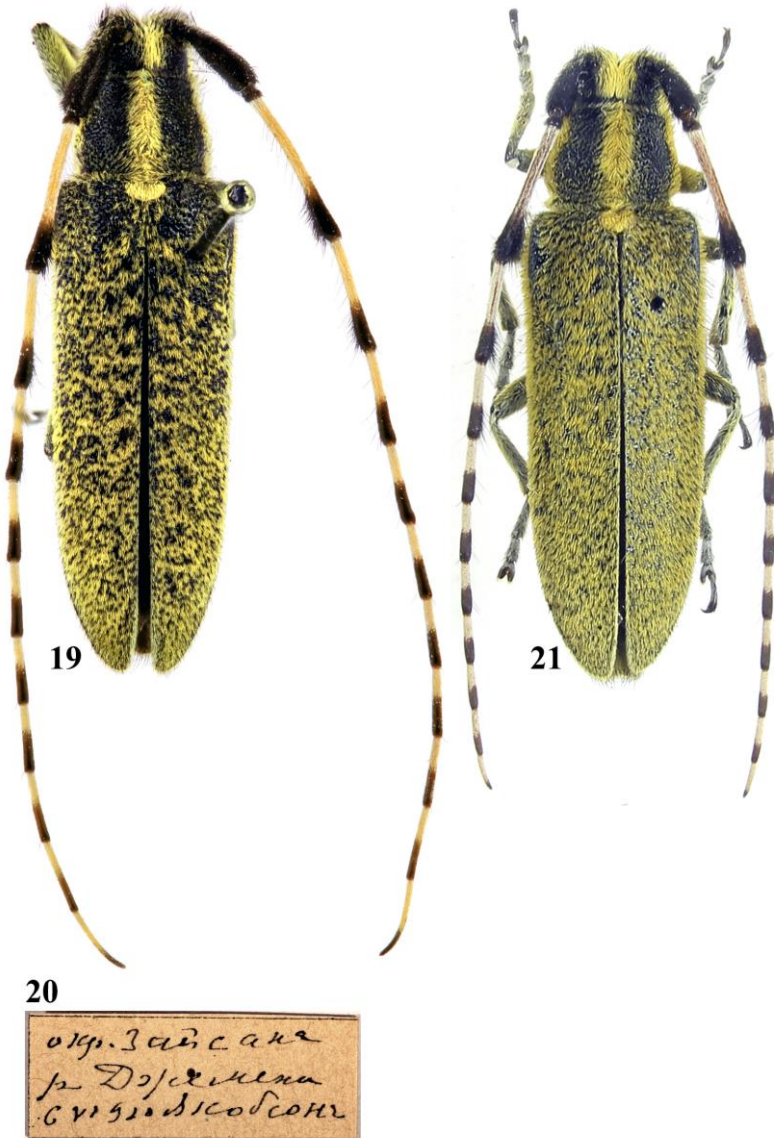
Distribution. Northern Turkey, Çorum and Amasya provinces.

27. *Agapanthia (Eoptes) dahlia zaysanensis* ssp. n.

Figs 19-21

Type locality. East Kazakhstan, Zaysan Lake environs, Zhemeny River.

Body black, elytra without bronze luster; moderately wide; head with dense yellow pubescence, whitish setae are condensed in front of eyes; genae about as long as lower eye lobes, covered with yellow and white pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes less than the width of 1st antennal joint; frons a little longer than as wide; antennae rather thin, protruding beyond elytral apices with 2-4 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about 1/3 of its length; with very dense flattened tuft of short black setae; 4th, 5th with similar setae tufts, but considerably reduced; others antennal joints with a few long apical setae; prothorax rather widened basally; pronotum with wide, dense and bright yellow central stripe;



Figs 19-21. *Agapanthia (Epoptes) dahlii zaysanensis* **ssp. n.**: 19 - Holotype, male, East Kazakhstan, Zaysan Lake environs, Zhemenev River, 6.6.1910, A. Jacobson; 20 - Holotype label; 21 - Paratype, East Kazakhstan, Zaysan Lake environs, Dzhemeney River, 31.5.1910, A. Jacobson.

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scutellum semicircular, covered with dense yellow pubescence; elytra about 2.8 times longer than wide, densely pubescent, often with fused setae patches; grey humeral elytral stripe absent; elytral apices rounded, short oblique elytral setae very short poorly visible along basal third; ventral body side with very dense yellow pubescence: body length in males: 16.0-16.1 mm, width: 3.5-4.0 mm, body length in females: 16.0-18.0 mm; body width: 4.0-4.8 mm.

Differential diagnosis. The new subspecies is characterized by relatively short antennae, surpassing elytral apex in males with 2-4 joints; setae tufts are distinct on 3rd - 5th antennal joints; seta tufts of 3rd joints very dense, consisting of short setae, protruding all along whole black joint apex.

Material. Holotype, male, East Kazakhstan, Zaysan Lake environs, Zhemeney River, 6.6.1910, A. Jacobson - ZIN; 5 paratypes, 1 male, 2 females East Kazakhstan, Zaysan Lake environs, Dzheneney River, 31.5.1910, A. Jacobson - ZIN; 2 females with same label - ZMM.

Distribution. East Kazakhstan, Zaysan Lake environs, Zhemeney River.

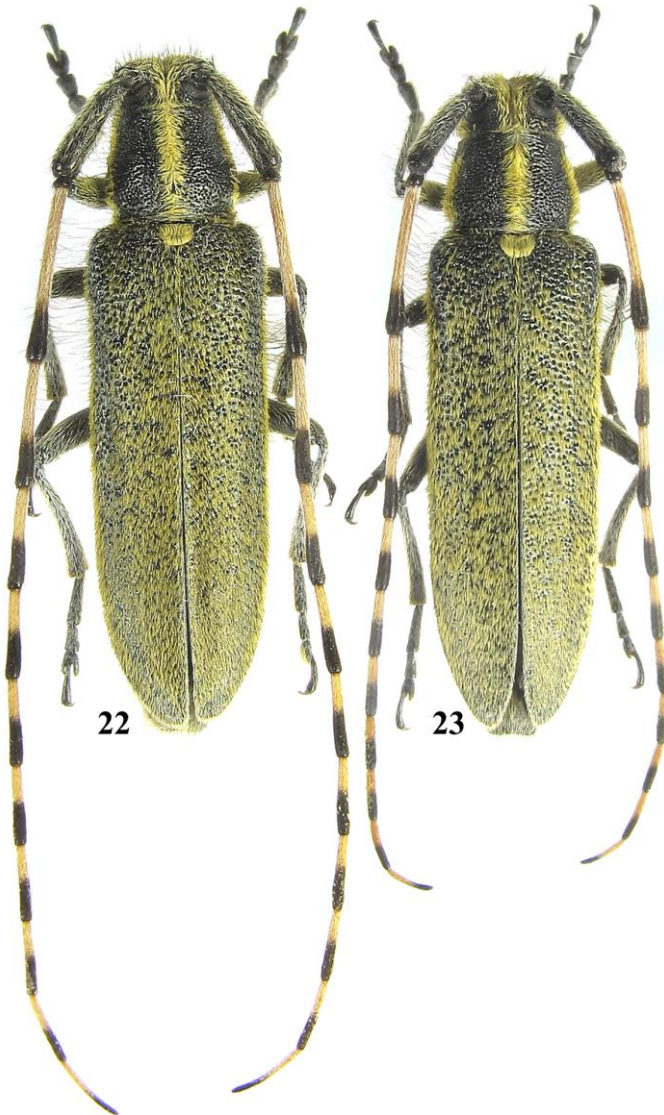
Etymology. The name of the new taxon is derived from the large lake Zaysan located near the type locality.

28. *Agapanthia (Epopetes) dahlia zhidkovi* ssp. n.

Figs 22-23

Type locality. Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.

Body black, elytra without bronze luster; moderately wide; head with dense yellow pubescence, whitish setae are condensed in front of eyes; genae about as long as lower eye lobes, covered with yellow and white pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes less than the width of 1st antennal joint; frons about as long as wide; antennae rather thin, protruding beyond elytral apices with 5 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length;



Figs 22-23. *Agapanthia (Epoptes) dahlia zhidkovi* **ssp. n.:** 22 - Holotype, male, Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E, ex pupa, from *Eremurus*, 9.5.2017, A. Abramov; 23 - Paratypes, female with same label.

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with several long apical setae without dense setae tuft; 4th, 5th and others antennal joints with a few long setae; male prothorax about as wide basally as long a little widened basally; female prothorax more widened basally; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3 times longer than wide, in females - about 2.8 times; densely pubescent, with hardly distinct setae spots; grey humeral elytral stripe absent; elytral apices rounded, short oblique elytral setae very short poorly visible to about apical elytral third; ventral body side with moderately dense yellow pubescence: body length in males: 13.6-14.3 mm; width: 3.4-3.5 mm; body length in females: 14.4-17.4 mm; width: 3.5-3.8 mm.

Differential diagnosis. The new subspecies is characterized by the absence of setae tufts of 3rd antennal joints, while elytra densely pubescent with conjugated elytral setae patches; grey lateral elytral stripe absent.

Material. Holotype, male, Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E, ex pupa, from *Eremurus*, 9.5.2017, A. Abramov - MD; 9 paratypes; 3 males, 4 females with same label - MD; 1 male, 1 female with same label - ML.

Distribution. East Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E.

Etymology. The new subspecies is dedicated to Mikhail Borisovich Zhidkov - a friend of Andrey Evgenievich Abramov, who accompanied him in his expedition.

30. *Agapanthia (Epoetes) dahlii vishnyakovi* ssp. n.

Figs 24-25

Type locality. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).

Body black with numerous erect black setae; moderately wide; head with moderately dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, covered with yellow pubescence; eyes a little

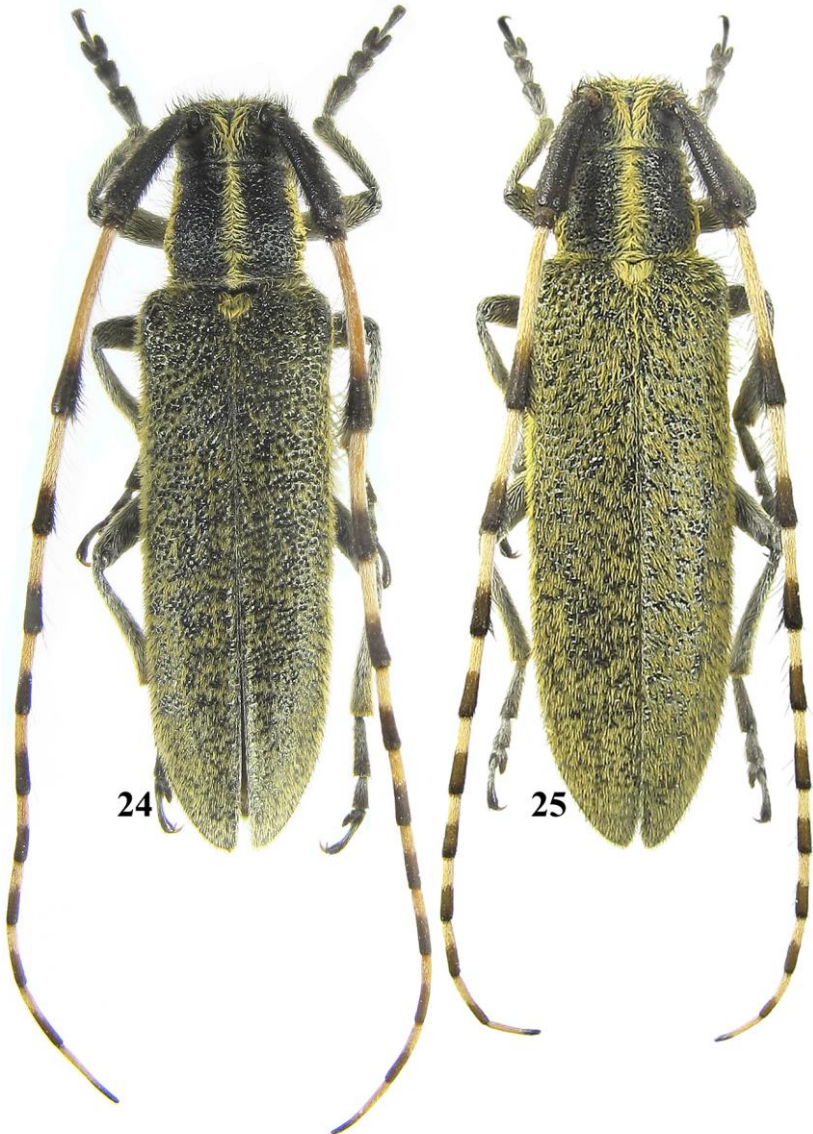
convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thick, protruding beyond elytral apices with 5 joints in males or with 3 - in females; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about $\frac{1}{4}$ of its length; with distinct setae tuft, consisting of several dense short setae; 4th antennal joint with less developed setae tuft, but 5th joint also has setae tuft, but strongly reduced; other antennal joints with a few short erect setae apically; prothorax moderately widened posteriorly, in males about as long as basal width, in females a little wider posteriorly; pronotum with less wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in males about 3.1 times longer than wide, in females - about 2.6 times; with moderately dense yellow pubescence; many small elytral areas are nearly glabrous; elytral setae spots more or less distinct; grey humeral elytral stripe absent; elytral apices rounded, erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length in males: 12.4-14.4 mm; width: 2.9-3.5 mm; body length in females: 15.5-16.3 mm; width: 4.3-4.4 mm.

Differential diagnosis. The new taxon is close to *A. d. zaysanensis* ssp. n., but differs with dark-grey elytra with scattered pubescence; pronotal setae stripe rather narrow; antennae rather long, surpassing elytral apices in males with 5 joints.

Material. Holotype, male, Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve, 6.6.2010 - MD; 6 paratypes; 2 males, 2 females with same label - MD; 1 male with same label - ML; 1 female from same locality, 1.5.2010 - MD.

Distribution. Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E).

Etymology. The new taxon is dedicated to my good friend Alexey Nikolaevich Vishnyakov.



Figs 24-25. *Agapanthia (Eoptes) dahlii vishnyakovi* **ssp. n.**: 24 - Holotype, male, Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve, 6.6.2010; 25 - female with same label.

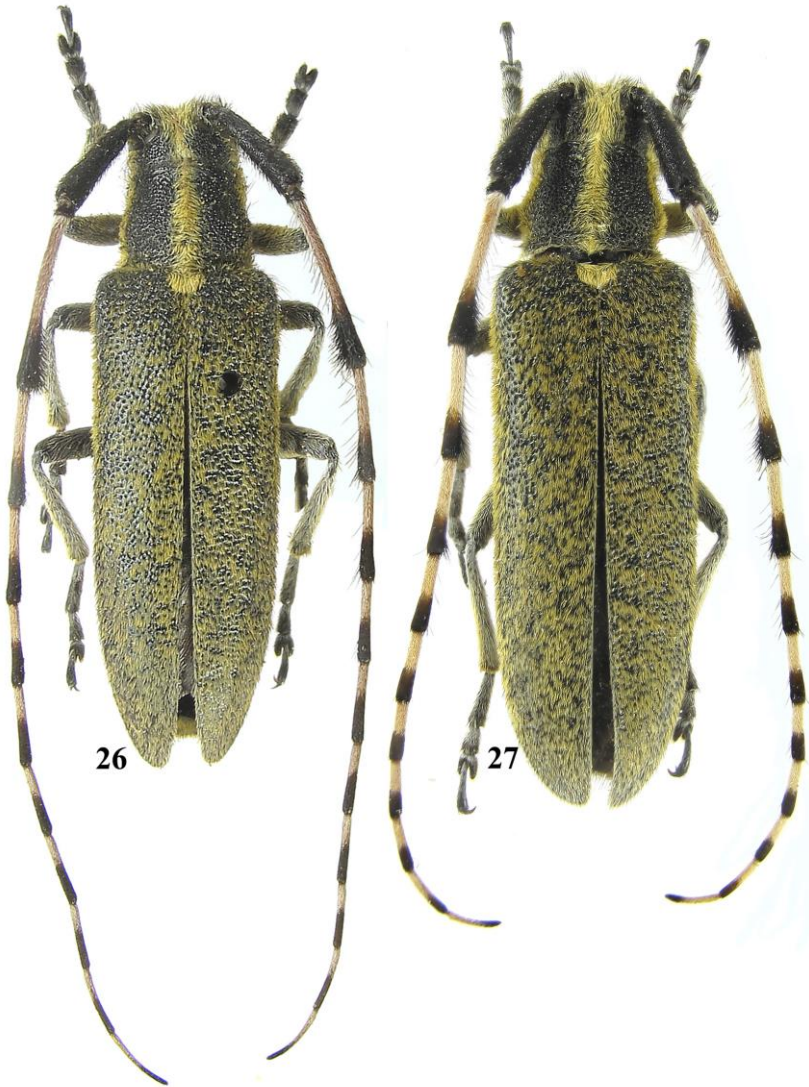
31. *Agapanthia (Epopetes) dahlii krivosheinae* ssp. n.

Figs 26-27

Type locality. Uzbekistan, Syrdarya Region, Yangier.

Two males (one - exceptionally small) and a female available; body black, moderately wide; head with dense yellow pubescence, condensed along frons and between antennal bases, rather pale in front of eyes; genae a little longer than lower eye lobes, covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes about equal to the width of 1st antennal joint; frons elongate; antennae relatively thin, protruding beyond elytral apices in big male with 5 joints, in female - with 3 joints; 3rd joint black for about 1/3 of its length and here with long and dens setae tuft; 4th - 5th antennal joints with considerably reduced setae tufts; prothorax strongly widened posteriorly, much wider than long; pronotum with wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense yellow pubescence; elytra in big male about 2.8 times longer than wide, in female - in about 2.5 times; with very dense pubescence, aggregated in numerous small setae spots; small glabrous elytral areas nearly indistinct grey humeral elytral stripes absent; erect elytral setae in big specimens very short and hardly distinct; elytral apices rounded; ventral body side with very less dense yellow pubescence than in other subspecies; body length in males: 10.1-17.9 mm, width: 2.3-4.7 mm; body length in female: 19.2 mm, width: 5.4 mm.

Exceptionally small male has several own characters: antennae just a little longer than body protruding beyond elytral apices with 4 joints; prothorax slightly diverging posteriorly, nearly cylindrical; elytra with distinct long erect, shortly sharpened apically. **Differential diagnosis.** The new taxon is characterized by very long antennae, surpassing elytral apices in males with 5 joints; elytral pubescence very dense, with hardly pronounced setae patches, without grey humeral stripes.



Figs 26-27. *Agapanthia (Epoetes) dahlii krivosheinae* **ssp. n.:**
26 - Holotype, male, Uzbekistan, Syrdarya Region, Yangier, 9.5.1980, M. Krivosheina; 27 - Paratypes, female, Uzbekistan, Chatkal Natural Reserve, 22.5.1989, A. Kompatzev.

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Material. Holotype, male, Uzbekistan, Syrdarya Region, Yangier, 9.5.1980, M. Krivosheina - ML; 2 paratypes; 1 male, USSR, Uzbekistan, near Syrdarya Station, junction No. 122, 1.5.1931 - ML; 1 female, Uzbekistan, Chatkal Natural Reserve, 22.5.1989, A. Kompatzev - MD.

Distribution. Uzbekistan: Syrdarya Region (Yangier and Syrdarya Station) and Chatkal Natural Reserve.

Etymology. The new taxon is dedicated to doctor of biology sciences Marina Gennadijevna Krivosheina, who collected the holotype.

32. *Agapanthia (Epopetes) dahlui revadensis* ssp. n.

Fig 28

Type locality. Tadzhikistan, Zerafshan valley, Revad environs.

Only one female available; body black with numerous erect black setae; rather wide; head with dense yellow pubescence, condensed in front of eyes and between antennal bases; genae about as long as lower eye lobes, densely covered with yellow pubescence; eyes a little convex, about flat, with deep emargination; the distance between upper eye lobes is about 2 mm; frons slightly elongate; antennae moderately thick, protruding beyond elytral apices with 3 joints; 1st and 2nd joints black, other joints red basally and black distally; 3rd joint black for about ¼ of its length; with distinct setae tuft, consisting of several dense short setae; 4th and 5th antennal joints with a few short erect setae; prothorax moderately widened posteriorly, a little wider than long; pronotum with very wide, dense and bright yellow central stripe; scutellum semicircular, covered with dense and bright yellow pubescence; elytra about 2.8 times longer than wide; with very dense bright yellow continuous pubescence; very small areas with sparse pubescence rather numerous, but elytral spots nearly indistinct; grey humeral elytral stripe absent; elytral apices shortly sharpened; erect elytral setae distributed to about elytral middle; ventral body side with very dense and regular yellow pubescence: body length 20.2 mm; width: 5.2 mm.

Differential diagnosis. The subspecies is characterized by very bright orange elytral pubescence; elytral setae patches partly fused; setae tuft of 3rd antennal joint poorly developed; 4th and 5th antennal joints with a few short apical erect setae.



Fig. 28. *Agapanthia (Epoetes) dahlia revadensis* **ssp. n.:** Holotype, female, Tadjikistan, Zerafshan valley, Revad environs, 9.6.1994, V. Lukhtanov.

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Distribution. A single known locality - Revad (39°23'N 68°11'E) environs in Zerafshan River valley of north-west Tadjikistan.

Material. Holotype, female, Tadjikistan, Zerafshan valley, Revad environs, 9.6.1994, V. Lukhtanov - MD.

Etymology. The name of the new taxon comes from the name of the type locality.

**A key to the subspecies of *Agapanthia (Epopetes) dahlia*
(C.F.W. Richter, 1820)**

1(36) 4th antennal joint with reduced setae tuft.

2(29) Setae tuft of 3rd antennal joint well developed.

3(18) Elytra with dense and bright pubescence.

4(13) Elytral setae spots very contrast.

5(6) Grey humeral elytral stripe usually well developed; body length: 11.3-20.5 mm. Southwest Azerbaijan, South of Armenia, Iran (East Azerbaijan province).

8. *A. d. rubenyanii* Lazarev, 2013

6(5) Grey humeral elytral stripe absent.

7(8) Prothorax a little widened basally; about 1.2 times wider posteriorly than anteriorly; elytral setae spots usually separated; elytral apices distinctly pointed; pronotal setae stripe wide; body length: 9.5-19.5 mm Turkmenistan, Kopetdag (near Ashgabat, Firyuza, Kara-Kala, Ay-Dere) and border regions of Iran.

14. *A. d. transcaspica* Pic, 1900

8(7) Prothorax strongly widened basally, about 1.4 times wider posteriorly, than anteriorly

9(12) Elytral pubescence distinctly spotted.

10(11) Setae tufts of 3rd antennal joint well develop; body length: 9.0-22.0 mm. Europe (Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, ?Belarus, Croatia, Russia (Central European Territory and South European Territory), Czech Republic, France (including Corsica and Monaco), Germany, Hungary, Kazakhstan, Macedonia, Moldova, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Spain (including Gibraltar), ?Switzerland, Ukraine), Asia (Georgia, Kazakhstan).

1. *A. d. dahlia* (Richter, 1820)

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11(10) Setae tufts of 3rd antennal joint considerably reduced, represented by several dense long setae; body length: 8.0-16.0 mm. Turkey.

20. *A. d. kindermanni* Pic, 1905

12(9) Elytral pubescence about uniform with hardly developed setae spots; body length: 14.0-22.0 mm. Kyrgyzstan, Kazakhstan.

24. *A. d. alexandris* Pic, 1901

13(4) Elytral spots conjugated.

14(17) 3rd antennal joint with numerous black oblique setae; elytral pubescence less uniform with numerous small glabrous spots.

15(16) Elytra with orange pubescence; frons with several black oblique setae; body length: 20.2 mm. Tadjikistan (Zerafshan valley, Revad environs).

32. *A. d. revadensis* **ssp. n.**

16(15) Elytra with yellow pubescence; frons with several black erect setae; body length: 14,9-19,6 mm. West Siberia of Russia: Novosibirsk Region, Altay Republic, Kemerovo Region, Khakassia Republic.

3. *A. d. efimovi* Danilevsky, 2021

17(14) 3rd antennal joint without black oblique setae; elytral pubescence more or less uniform with several small glabrous spots; body length: 13.0-22.5 mm. West Siberia of Russia: Kurgan Region, Tomsk Region.

2. *A. d. kuleshovi* Danilevsky, 2018

18(3) Elytra poorly pubescent.

19(20) Antenna relatively thick; body length: 15.1-16.5 mm. Northern Turkey (Çorum Provinces, Amasya Provinces).

22. *A. d. grossicornis* **ssp. n.**

20(19) Antenna relatively thin.

21(22) Black parts of 3rd antennal joint much longer, covers about 1/3 of its length; body length: 15.8-18.0 mm. Tajikistan (North-Western Pamir), Afghanistan (Badakhshān province).

33. *A. d. ustinovi* Danilevsky, 2013

22(21) Black parts of 3rd antennal joint much shorter, covers about 1/4 of its length or shorter.

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23(24) Elytral pubescence with strongly scattered patches; body length: 10.0-22.0 mm. Italy (Sicilia).

15. *A. d. sicula* Ganglbauer, 1884

24(23) Elytral pubescence rather uniform.

25(26) Elytral pubescence nearly indistinct; body length: 10.0-23.0 mm. Albania (Vlorë County, Delvinë District, Kardhiq Mts., 39°59'36.28"N, 20°06'10.24"E), Bulgaria, Greece, Macedonia.

16. *A. d. schurmanni* Sama, 1979

26(25) Elytral pubescence very short but distinct.

27(28) Humeral elytral area with shorter and sparser pubescence; body length: 12.8-20.4 mm. Sothern Turkey (Antalya Province, Isparta Province, İçel Province, Adana Province, Mus Province).

21. *A. d. setosa* **ssp. n.**

28(27) Humeral elytral area with same pubescence as dorsal elytral side; body length: 10.0-18.0 mm. Southern Kyrgyzstan, Uzbekistan (Jordan, about 39°56'N, 71°45'E, 2300 m), Tajikistan (Indications by Kadyrov (1989) on *A. muellneri* - Darvoz Range, Zigar, Viskharv).

26. *A. d. alaiensis* Kratochvíl, 1985

29(2) Setae tuft of 3rd antennal joint reduced (several type specimens of *A. d. calculensis* including holotype have distinct setae tufts).

30(31) Elytra with grey humeral stripe; body length: 12.0-24.0 mm. Turkey.

18. *A. d. lateralis* Ganglbauer, 1884

31(30) Elytra without grey humeral stripe, usually with well-developed pubescence.

32(33) Elytral pubescence less developed; prothorax rather widened posteriorly; body length: 11.4-17.9 mm. North-Eastern Kazakhstan.

5. *A. d. calculensis* Lazarev, 2013

33(32) Elytral pubescence well developed.

34(35) Elytral setae tufts diffused, partly conjgated; body length: 13.6-17.4 mm. East Kazakhstan (eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E).

28. *A. d. zhidkovi* **ssp. n.**

35(34) Elytral setae tufts rather contrast with glabrous spaces in between.

13. *A. d. salviae* Holzschuh, 1975

36(1) 4th antennal joint with well-developed setae tuft.

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37(46) Elytral pubescence poorly developed; elytra look dark and shining.

38(39) Elytral look totally glabrous, elytral pubescence usually indistinct; body length: 13.5-16.5 mm. East Azerbaijan (Zarat on the Caspian coast; based on a specimen from the collection of C. Holzschuh with his definitions), Eastern Georgia.

7. *A. d. nitidipennis* Holzschuh, 1984

39(38) Elytra with slightly visible pubescence.

40(41) Antennae dark, basal part of 3rd antennal joint greyish; body length: 14.0-23.2 mm. Northern Iran (Mazandaran Province).

10. *A. d. persica* Semenov, 1893

41(40) Antenna light, basal part of 3rd antennal joint reddish.

42(43) Apical setae tuft of 4th antennal joint poorly developed with about 9 long setae only; body length: 12.5-19.8 mm. Kyrgyzstan, Uzbekistan, ?China (Xinjiang).

25. *A. d. muellneri* Reitter, 1898

43(42) Apical setae tuft of 4th antennal joint well with numerous long setae.

44(45) Elytral punctation very dense, many dots conjugated; elytra nearly glabrous, elytral pubescence often indistinct; body length: 13.0-19.0 mm. Jordan, Israel, Lebanon, Syria.

19. *A. d. pustulifera* Pic, 1905

45(44) Elytral punctation much sparser, dots never conjugated; elytra with distinct pubescence; body length: 14.0-21.0 mm. Northern Iran (Golestan Province).

12. *A. d. golestanica* Lazarev, Plewa & Jaworski, 2016

46(37) Elytral pubescence well developed; elytra look yellow.

47(58) Prothorax a little widened basally; about 1.2 times wider posteriorly than anteriorly, or sometimes about equally in wide.

48(51) Antennae short, male antennae protruding beyond elytral apex with 4 joints or about one third of elytral length.

49(50) Elytra yellow with very dense pubescence; pronotal setae stripe very wide; body length: 16.0-18.0 mm. East Kazakhstan (Zaysan Lake environs, Zhemeny River).

27. *A. d. zaysanensis* **ssp. n.**

50(49) Elytra dark-grey, with scattered pubescence; pronotal setae stripe rather narrow; body length: 12.4-16.3 mm. Uzbekistan

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(Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E)).

30. *A. d. vishnyakovi* **ssp. n.**

51(48) Male antennae very long, protruding beyond elytral apex with 5 joints about half of elytral length.

52(53) Pronotal setae stripe rather narrow; body length: 14.0-19.7 mm. Kazakhstan (Southern environs of Lake Sorbulak, 43°33'57.65"N, 76°36'24.93"E; Ili River Valley (Dobun pier)).

23. *A. d. iliensis* Danilevsky, 2018

53(52) Pronotal setae stripe rather wide.

54(55) Elytral spots concentrated in transverse rows; body length: 13.1-17.2 mm. Russia (Dagestan), North-Eastern Azerbaijan (Altağac).

9. *A. d. ismailovae* Lazarev, 2013

55(54) Elytral spots are randomly located.

56(57) Grey humeral elytral stripe rather distinct; body length: 17.0-17.7 mm. Azerbaijan (Jalal-Abad District), ?Iran.

11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016

57(56) Grey humeral elytral stripe absent; body length: 10.1-19.2 mm. Uzbekistan (Syrdarya Region (Yangier and Syrdarya Station) and Chatkal Natural Reserve).

31. *A. d. krivosheinae* **ssp. n.**

58(47) Prothorax strongly widened basally, about 1.4 times wider posteriorly, than anteriorly

59(60) Elytra strongly spotted with very distinct contrast bright yellow setae spots; body length: 10.5-20.0 mm. Azerbaijan, Armenia, Georgia, Iran, Turkey.

6. *A. d. walteri* Reitter, 1898

60(59) Elytral setae spots less distinct, does not look spotted.

61(62) Elytral spots more or less separated; body length: 10.0-22.0 mm. France (Corse), Italy.

17. *A. d. malmerendii* Sama, 1981

62(61) Most of elytral spots conjugated.

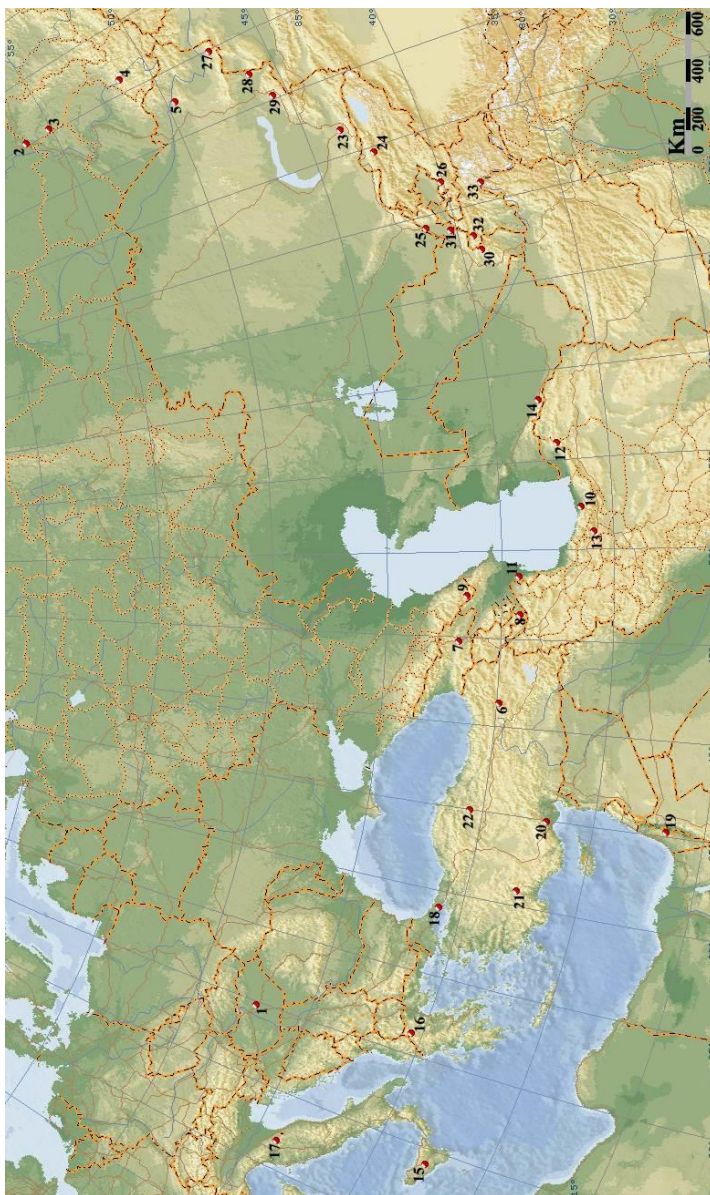
63(64) Antennal setae tuft smaller and shorter; body length: 14.4 mm. Russia (Republic of Altay, Chermal environs).

4. *A. d. chemalensis* **ssp. n.**

64(63) Antennal setae tuft long and large; body length: 15.3-17.6 mm. Kazakhstan (Lepsy River), ?China (Xinjiang).

29. *A. d. lepsyensis* Danilevsky, 2018

Map. 1. Typical localities of *Agapanthia dahlia* (Richter, 1821) subspecies.



Map 1. Typical localities of *Agapanthia dahlui* (Richter, 1821) subspecies.

1. *A. d. dahlui* (Richter, 1820): “Hungaria”; **2. *A. d. kuleshovi* Danilevsky, 2018:** Russia, Tomsk Region, Belousovo environs, 56°18'13"N, 85°11'53"E; **3. *A. d. efimovi* Danilevsky, 2021:** Russia, Kemerovo Region, Prokopyevsk District, Karakan Mt. Ridge., 6-7 km from Tykhta; **4. *A. d. chemalensis* ssp. n.:** Russia, Republic of Altay, Chermal; **5. *A. d. calculensis* Lazarev, 2013:** North-east Kazakhstan, the valley of the Sibinka River about 40 km south of Ust-Kamenogorsk, 49°40'27.56"N, 82°39'13.12"E; **6. *A. d. walteri* Reitter, 1898:** Turkey, Erzurum; **7. *A. d. nitidipennis* Holzschuh, 1984:** Georgia, environs of the Jvari monastery (41°50'19"N, 44°44'02"E) north of Tbilisi; **8. *A. d. rubenyani* Lazarev, 2013:** South Armenia, Megri District, mountains above Shvanidzor, 39°13'N, 46°22'44"E, 1600 m; **9. *A. d. ismailovae* Lazarev, 2013:** Russia, North Caucasus, Dagestan, Rutul environs (41°32'N, 47°25'E); **10. *A. d. persica* Semenov, 1893:** Iran, Eastern and Central Mazandaran province; **11. *A. d. lenkorana* Lazarev, Plewa & Jaworski, 2016:** Azerbaijan, Jalal-Abad District, Andreevka environs (Karazenjir, 39°16'N, 48°30'E, 10 m); **12. *A. d. golestanica* Lazarev, Plewa & Jaworski, 2016:** Iran, Golestan province, 60 km east Minudasht, 460 m, 37°21'36"N 55°55'48"E; **13. *A. d. salviae* Holzschuh, 1975:** Iran, Elburz, south side, 10 km north of Karaj; **14. *A. d. transcaspica* Pic, 1900:** Turkmenistan, Ashgabat; **15. *A. d. sicula* Ganglbauer, 1884:** Italy, Sicilia; **16. *A. d. schurmanni* Sama, 1979:** Greece, Kastoria; **17. *A. d. malmerendii* Sama, 1981:** Italia, Romagna, Portico di Romagna [44°1'N, 11°46'E]; **18. *A. d. lateralis* Ganglbauer, 1884:** Turkey, Istanbul Province, Istanbul (Constantinopel); **19. *A. d. pustulifera* Pic, 1905:** Israel, Jerusalem; **20. *A. d. kindermanni* Pic, 1905:** Southern Turkey; **21. *A. d. setosa* ssp. n.:** Turkey, Isparta, Eğridir environs; **22. *A. d. grossicornis* ssp. n.:** Turkey, Çorum; **23. *A. d. iliensis* Danilevsky, 2018:** Kazakhstan, Almaty Region, southern environs of Lake Sorbulak (43°33'57.65"N, 76°36'24.93"E), 670 m; **24. *A. d. alexandris* Pic, 1901:** Kyrgyzstan, Kyrgyz Ridge (formerly Alexander Ridge); the type most likely comes from the western (Kazakh) part of the ridge; **25. *A. d. muellneri* Reitter, 1898:** Uzbekistan, Tashkent; **26. *A. d. alaiensis* Kratochvíl, 1985:** Southern Kyrgyzstan at the southern border of the

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Fergana Valley, Kadamjai (40°7'44"N, 71°43'26"E); **27. *A. d. zaysanensis* ssp. n.**: East Kazakhstan, Zaysan Lake environs, Zhemenev River; **28. *A. d. zhidkovi* ssp. n.**: Kazakhstan, eastern shore of Alakol lake, 60 km S Makanchi, 408 m, 46°15'24.54"N, 82°12'55.68"E; **29. *A. d. lepsyensis* Danilevsky, 2018**: Kazakhstan, Lepsy river, 7 km northeast Koilyk (formerly Antonovka), 45°41'36.22"N, 80°17'58.94"E; **30. *A. d. vishnyakovi* ssp. n.**: Uzbekistan, Kashkadarya Region, Zerafshan mountain ridge, Kitab Natural reserve (about 39°10'30"N, 67°18'43"E); **31. *A. d. krivosheinae* ssp. n.**: Uzbekistan, Syrdarya Region, Yangier; **32. *A. d. revadensis* ssp. n.**: Tadzhikistan, Zerafshan valley, Revad environs; **33. *A. d. ustinovi* Danilevsky, 2013**: Tadzhikistan, Pamir, Poshkharv environs [38°24'1"N, 71°9'18"E].

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REFERENCES

- Abai M. 1969. List of Cerambycidae family in Iran. - Entomologie et Phytopatologie appliquees. 28: 47-54.
- Adlbauer K. 1988. Neues zur Taxonomie und Faunistik der Bockkäferfauna der Türkei (Coleoptera, Cerambycidae). - Entomofauna. Zeitschrift für Entomologie. 9 (12): 257-297.
- Alexandrovitch O.R., Lopatin U.K., Pisanenko A.D., Tsinkevitch V.A. & Snitko S.M., 1996. A catalogue of Coleoptera (Insecta) of Belarus. Minsk: 103 pp.
- Ali K. & Rapuzzi P. 2016. Second contribution to the knowledge of Longhorn Beetles of the Syrian Coastal Region (Coleoptera Cerambycidae). -

- Biodiversity Journal. 7 (2): 261-272.
- Althoff J. & Danilevsky M.L. 1997. A check-list of Longicorn beetles (Coleoptera, Cerambycoidea) of Europe. Slovensko Entomolosko Drustvo Stefana Michielija. Ljubljana. 64 pp.
- Aurivillius C. 1923. Cerambycidae: Lamiinae. II. Coleopterorum Catalogus pars 74 [Vol. 23] II: 323-704. W. Junk & S. Schenkling, Berlin.
- Barimani Varandi H., Kalashian M.Yu. & Barari H. 2010. Contribution to the knowledge of the longhorn beetles (Coleoptera, Cerambycidae) fauna of Mazandaran province, Iran. - Euroasian Entomological Journal. 9 (1): 50-54.
- Bartenev A.F. 2004. A review of the long-horned beetles species (Coleoptera: Cerambycidae) of the fauna of Ukraine. - Izvestiya Kharkovskogo Entomologicheskogo Obschestva [The Kharkov Entomological Society Gazette. 2003 (2004). 11 (1-2): 24-43. [in Russian]
- Bartenev A.F. & Terekhova V.V. 2011. An addition and remarks to the fauna of cerambycid beetles (Coleoptera, Cerambycidae) of Left-bank Ukraine and Crimea. - The Journal of V.N. Karazin Kharkiv National University. Series: biology. 13 (947): 133-146.
- Bense U. 1995. Longhorn beetles. Illustrated key to the Cerambycidae and Vesperidae of Europe. Weikersheim. 512 pp.
- Breuning S. 1961. 4. Lieferung, pp: 183-284. In: S. Breuning, 1958-1969. Catalogue des Lamiaires du Monde (Col. Céramb.). Tutzing bei München, Verlag des Museums G. Frey. 1069 pp.
- Brustel H., Berger P. & Cocquempot C. 2003. Catalogue des Vesperidae et des Cerambycidae de la faune de France (Coleoptera). - Annales de la Société Entomologique de France, Paris (N. S.). 38 (4) (2002): 443-461.
- Carrière J. 1996. A propos d'Agapanthiini: note biologique complémentaire. (Coleoptera, Cerambycidae). - Lambillionea. 96 (3) 2: 561-570.
- Carrière J. 1996b. Oviposition et stade post-embryonnaire d'Agapanthiini : à propos d'Agapanthia asphodeli (Latreille, 1804) et d'Agapanthia dahli (Richter, 1821) en région héraultaise, généralisés, aspect iconographique (Coleoptera, Cerambycidae). - Lambillionea. 96 (1) 1: 109-121.
- Chernyshev [Chernyshov] A.P. 1930. List of beetles b. Kaluga province, Pp. 5-16.- In the book: Fauna of insects b. Kaluga province. Vol. 2. Kaluga: Kaluga plant protection station. 26 p. [in Russian]
- Cocquempot C., Nemer N., Brustel H. & Tanios C. 2016. Nouvelles données et nouveau catalogue des Coléoptères Cerambycidae du Liban (Coleoptera, Cerambycoidea). - Bulletin de la Société Entomologique de France, Paris. 121 (1): 91-104.
- Cocquempot C., Weill P. & Kabátek P. 2020. Contribution à la connaissance des Coléoptères Cerambycidae de Syrie (Coleoptera). - Revue de l'Association Roussillonnaise d'Entomologie (R.A.R.E.). 29 (3): 215-224.
- Csiki E. 1905. Magyarországi Cerambycidái. XIX. - Rovartani Lapok, Budapest. 12 (3): 61-64.
- Danilevsky M.L. & Miroshnikov A.I. 1985. Timber-Beetles of Caucasus (Coleoptera, Cerambycidae). Key. Krasnodar: 419 pp. [in Russian]
- Danilevsky M.L. 1993. Taxonomic and zoogeographic notes on the family

M.A. Lazarev

- Cerambycidae (Coleoptera) of Russia and adjacent regions. - Russian Entomological Journal. 1 [1992]: 37-39.
- Danilevsky M.L. 2006. A Checklist of the Longicorn-Beetles (Coleoptera, Cerambycidae) of Moscow Region. - Russian Entomological Journal. 15 (2005) (1): 43-51.
- Danilevsky M.L. 2012. Additions and corrections to the new Catalogue of Palaearctic Cerambycidae (Coleoptera) edited by I. Löbl and A. Smetana, 2010. Part. III. - Munis Entomology & Zoology. 7 (1): 109-173.
- Danilevsky M.L. 2014. Additions and corrections to the new Catalogue of Palaearctic Cerambycidae (Coleoptera) edited by I. Löbl and A. Smetana, 2010. Part. IX. - Humanity space. International almanac. 3 (2): 193-250.
- Danilevsky M.L. 2017. Three new Agapanthia Audinet-Serville, 1835 (Coleoptera, Cerambycidae) from Russia, Central Asia and Kazakhstan. Humanity space. International almanac. 6 (1): 24-32.
- Danilevsky M.L. 2018. Four new Agapanthia (Epopetes) Gistel, (Coleoptera, Cerambycidae) from the West Siberia, Kazakhstan, Azerbaijan and Iran. - Euroasian Entomological Journal. 17 (3): 179-181.
- Danilevsky M.L. 2020. taxa from West Europe, and North Africa to countries of former Soviet Union, and Mongolia. - In: Danilevsky M.L. (ed.). Catalogue of Palaearctic Coleoptera, vol. 6 (1), Chrysomeloidea I (Vesperidae, Disteniidae, Cerambycidae). Revised and updated edition. Leiden / Boston: Brill, i-xxii, 1-712.
- Danilevsky M.L. 2021. New taxa of genus Agapanthia Audinet-Serville, 1835 (Coleoptera, Cerambycidae) from Kazakhstan and Siberia. - Humanity space. International almanac. 10 (4): 497-506.
- Danilevsky M.L. 2023. Longicorn beetles (Coleoptera, Cerambycoidea) of Russia and adjacent countries. Part 3. Moscow: IAE. 873 pp. [in Russian]
- Danilevsky M.L. 2024. Key to longhorned beetles (Coleoptera, Cerambycidae) of Russia. Volume 1. European part and North Caucasus. M.: IAE. 246 pp. [in Russian]
- Diego Barquín J. & Martínez-Porres Cáceres R. 2005. Cerambícidos nuevos para Cantabria, Burgos y Palencia (España) (Coleoptera, Cerambycidae). - Lambillionea. 105 (1): 143-145.
- Dobrosavljević J. & Mihajlović L. 2014. [Contribution to the knowledge on Longhorn Beetles (Coleoptera, Cerambycidae) of Serbia, with reference to protected species]. - Sumarstvo (1-2): 21-31.
- Drumont A. & Leduc F. 2011. Note sur la présence en Belgique d' Agapanthia (Epopetes) dahlia (Richter, 1820) (Coleoptera, Cerambycidae, Lamiinae). - Lambillionea. 110 (3) (2010): 293-296.
- Efimov D.A. 2001. To the Longicorn Beetle (Coleoptera, Cerambycidae) fauna of Kemerovo Region. Pp. 65-70. - In: Sbornik trudov oblastnoy nauchnoy konferentsii "Molodye uchenye - Kuzbassu. Vzgl'yad v XXI vek". Mediko-biologicheskie nauki. Kemerovo: RIO KGMA. Proceedings of the regional scientific conference "Young scientists - Kuzbass. A look into the XXI century". Biomedical sciences. Kemerovo: RIO KSMA. 256 pp. [in Russian]
- Esterberg L.K. 1935. Insects of Gorky and Kirov regions. - Nature of Gorky and

M.A. Lazarev

- Kirov regions. Gorky publishing house: 195-210. [in Russian]
- Everts E.J.G. 1901. Coleoptera Neerlandica de schildvleugelige Insecten van Nederland en het aangrenzend Gebied. - Coleoptera Neerlandica. 2: iii-iv + 1-796, 62 figs & 8 pls.
- Fabricius J.C. 1775. Systema entomologiae sistens insectorum classes, ordines, genera, species, adiectis synonymis, locis, descriptionibus, observationibus. Flensburgi et Lipsiae: Libraria Kortii, xxxii + 832 pp.
- Fabricius J.C. 1793. Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species, adiectis, synonymis, locis, observationibus, descriptionibus. Tomus I. Pars II (1792). Hafniae: C.G. Proft, xx + 538 pp.
- Fabricius J.C. 1801. Systema eleutheratorum secundum ordines, genera, species, adiectis synonymis, locis, observationibus, descriptionibus. Tomus II. Kiliae: Bibliopoli Academici Novi: 687 pp.
- Fuchs E. & Breuning S. 1971. Die Cerambycidaenausbeute der Anatolienexpeditionen 1966-67 des Naturhistorischen Museums, Wien. - Annalen des Naturhistorischen Museums, Wien. 75: 435-439.
- Isaev A.Yu. 2004. Additional data on the fauna of Lamellicorne detritophagous beetles (Scarabaeidae) and xilophagous beetles [Jewel-beetles (Buprestidae) and Longicornes (Cerambycidae)] of Ulianovsk region. - The Nature of Simbirsk Volga Area. Collection of transactions of 6th regional scientific conference "Nature-scientific investigations in Simbirsk-Ulianovsk Region". Ulianovsk.] No. 5: 64-66. [in Russian]
- Ganglbauer L. 1883. [new name]. In: Heyden L. F.J.D. von, Reitter E. & Weise J.: Catalogus Coleopterorum Europae et Caucasi. Editio tertia. Berolini: Libraria Nicolai, [4] + 228 pp.
- Ganglbauer L. 1884. Bestimmungstabellen europäischer Coleopteren: VIII. Cerambycidae (Schlüss). Mit Berücksichtigung der Formen Algiers und des paläarktischen Asiens, exclusive jener von Japan. - Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien, 33 [1883]: 437-586.
- Georgiev G. Gjonov I. & Sakalian V. 2015. New Records of Longhorn Beetles (Coleoptera: Cerambycidae) in Strandzha Mountain. - Journal of the Entomological Research Society. 17 (2): 73-88.
- Gradinarov D. & Petrova Y. 2019. Longhorn beetles (Coleoptera: Cerambycidae) from Vrachanska Planina Mountains and Vrachanski Balkan Nature Park. - In: Dimitar Bechev and Dilian Georgiev editors, Plovdiv University Press. Faunistic Diversity of Vrachanski Balkan Nature Park part 2, Zoonotes Supplement 7: 59-80.
- Gradinarov D. & Petrova Y. 2020. Longhorn beetles (Coleoptera: Cerambycidae) in Sarnena Sredna Gora Mountains. - In: Dilian Georgiev, Dimitar Bechev & V. Yancheva (Eds.). Fauna of Sarnena Sredna Gora Mts, Part 1 Zoonotes Supplement 9: 159-184.
- Gradinarov D., Sivilov O., Gasharov V., Migliaccio E., Sakalian V. & Georgiev G. 2020. New records of longhorn beetles (Coleoptera: Cerambycidae) in Bulgaria. - Silva Balcanica. 21 (1): 91-112.
- Gnjatović I. & Žikić V. 2011. New data on longhorn beetles for the territories of

M.A. Lazarev

- Serbia and Montenegro (Coleoptera, Cerambycidae) with the detailed description of *Callimoxys gracilis* (Brullé 1832). - *Biologica Nyssana*. 2 (2): 35-38.
- Herbst J.F.W. 1784. Kritisches Verzeichniß meiner Insectensammlung.- Archiv der Insectengeschichte, herausgegeben von J.C. Fuessly, Hefte. 4-5: 1-151, Tab. 19-30.
- Hernández J.M.2011. Estructura del órgano estridulador y análisis de la emisión acústica de *Agapanthia dahli* (Richter, 1821) (Coleoptera, Cerambycidae, Lamiinae). - *Animal Biodiversity and Conservation*. 34 (2): 257-264.
- Hua L.-Z. 2002. List of Chinese Insects. - Zhongshan (Sun Yat-sen) University Press, Guangzhou. List of Chinese Insects. 2: 1-612.
- Holecová M., Lachowska D. & Karagyan G. 2002. Karyological Notes on Six Beetles Species from Armenia (Coleoptera: Tenebrionidae, Cerambycidae, Curculionidae). - *Folia biologica*, Krakow. 50 (1-2): 9-12, 7 figs.
- Holzschuh C. 1975. Neue westpalaearktische Bockkäfer aus den Gattungen *Cortodera*, *Vadonia* und *Agapanthia* (Coleoptera: Cerambycidae). - *Zeitschrift der Arbeitsgemeinschaft österreichischer Entomologen*. 26 (2-4) [1974]: 77-90.
- Kadyrbekov R.H. & Tleppeeva A.M. Review of longicorn beetles (Coleoptera, Cerambycidae) of Almaty region. - *Tethys Entomological Research*. 16: 45-58. [in Russian]
- Kadyrov A.K. 1989. Review of the fauna of longhorn beetles (Coleoptera, Cerambycidae) of Tadzhikistan. - *Records of the Academy of Sciences of Tajik SSR (department of biological sciences)*. (1): 30-35. [in Russian]
- Karpiński L., Szczepański W.T., Plewa R., Walczak M., Hilszczański J., Kruszelnicki L., Łoś K., Jaworski T., Bidas M. & Tarwacki G. 2018. New data on the distribution, biology and ecology of the longhorn beetles from the area of South and East Kazakhstan (Coleoptera, Cerambycidae). - *ZooKeys*. 805: 59-126.
- Kasatkin D.G. 2020. Contribution to the knowledge of the genus *Agapanthia* Audinet-Serville, 1835 (Coleoptera: Cerambycidae: Lamiinae) from the Near East and Transcaucasia. - *Caucasian Entomological Bulletin*. 16 (2): 233-249.
- Kasatkin D.G. & Arzanov Ju.G. 1997. "Der Bockkaffer (Cerambycidae). Material für Fauna der Kaffer (Coleoptera) norden Kaukasus und untere Don." [wrong translation of the Russian title of the article; must be: "Die Bockkäfer (Cerambycidae) (Teil 2). Die Materialien zur Käferfauna (Coleoptera) des Nordkaukasus und des unteren Don] *Records of Kharkov Entomological Society*. 5 (2): 63-70.
- Kazjutshits A.V. 1988. New species of longicorn beetles (Coleoptera, Cerambycidae) from Transcaucasia. - *Revue d'Entomologie*. 67 (3): 583-584. [in Russian]
- Klausnitzer B., Klausnitzer U., Wachmann E. & Hromádka Z. 2016. Die Bockkäfer Mitteleuropas. Cerambycidae. Band 2: Die mitteleuropäischen Arten. Die Neue Brehm-Bücherei. 499 (2): 3-303, 84, photos. VerlagsKG Wolf. Magdeburg.
- Kostin I.A. 1973. The *Dendrophagus* Beetles of Kazakhstan (Buprestidae, Cerambycidae, Ipidae). Alma-Ata: 288 pp. [in Russian]

M.A. Lazarev

- Kovács T. 1998. Magyarországi cincérek tápnövény- és lelőhelyadatai II. (Coleoptera: Cerambycidae). - Folia Historico-Naturalia Musei Matraensis. 22 (1997): 247-255.
- Kulenko A.V. 2015. The Longhorn beetles (Cerambycidae) of the environs of Togliatti and Zhigulyovsk. - Humanity space. International almanac. 4 (5): 1091-1107. [in Russian]
- Lazarev M.A. 2013a. Two new subspecies of *Agapanthia dahli* (Richter, 1821) from Dagestan and Armenia (Coleoptera, Cerambycidae). - Humanity space. International almanac. 2 (3): 443-448.
- Lazarev M.A. 2013b. A new subspecies of *Agapanthia dahli* (C.F.W. Richter, 1820) from North-East Kazakhstan (Coleoptera: Cerambycidae). - Studies and Reports of District Museum Prague-East, Taxonomical Series. 9 (1): 127-131.
- Lazarev M.A. 2014. Taxonomy notes (Coleoptera, Cerambycidae). - Humanity space. International almanac. 3 (2): 272-285.
- Lazarev M.A. 2024. Taxonomic notes on longhorned beetles with the descriptions of several new taxa (Coleoptera, Cerambycidae). - Humanity space. International almanac. 13 (1): 21-38.
- Lin M.-Y. [Meiying] & Tavakilian G. 2019: Subfamily Lamiinae Latreille, 1825, pp 216-408. - In: Lin M.-Y. [Meiying] & Yang X.-K. [Xingke] (ed.). Catalogue of Chinese Coleoptera, volume 9. Chrysomeloidea: Vesperidae, Disteniidae, Cerambycidae. Beijing: Science Press: i-xii, 575 pp.
- Listvyagova N.A., Raykhert A.I. & Skribchenko A.V. 2013. Catalog of the collection of longhorned beetles (Insecta, Cerambycidae, Lepturini) of the Zoological Museum of Khakass State University. N.F. Katanova (message 2). - Bulletin of N.F. Katanov Khakass State University. 6: 23-29.
- Lobanov A.L., Danilevsky M.L. & Murzin S.V. 1982. Systematic list of longicorn beetles (Coleoptera, Cerambycidae) of the USSR. 2.- Revue d'Entomologie. 61 (2): 252-277.
- Löbl I. & Smetana A. (ed.) 2010. Catalogue of Palaearctic Coleoptera, Vol. 6. Chrysomeloidea. Stenstrup: Apollo Books. 924 pp.
- Martynov V.V. & Pisarenko T.A. 2004. A review of the fauna and ecology of the long-horned beetles (Coleoptera: Cerambycidae) of southeast Ukraine. - The Kharkov Entomological Society Gazette. 11 (2003) (1-2): 44-69.
- Matveev V.A. 1998. Xilophagous insects of Volga-Viatka region. Joshkar-Ola. 93 pp.
- Mikhailov Yu.E. 1999. Insects of "Arkaim" museum-natural reserve. Beetles: species composition and notes on the structure of populations. - Natural systems of South Urals. Cheljabinsk. Cheljabinsk University: 221-248. [in Russian]
- Miroshnikov A.I. 1984. New information about woodcutter beetles (Coleoptera, Cerambycidae) of the Northwestern Caucasus. - Entomological Review. 63 (2): 273-281. [in Russian]
- Miroshnikov A.I. 2011. Family Cerambycidae - Longhorn-beetles, Timber-beetle. (pp. 239-263). In: Zamotajlov A.S. & Nikitsky N.B. (red.) Coleopterous Insects (Insecta, Coleoptera) of Republic of Adygheya (annotated catalogue of species) (Fauna conspecta of Adygheya. N1). Maykop: Adyghei State University Publishers] (2010): 404. [In Russian]
- Molnar B., Szerényi G. & Szövényi G. 2016. Az érdei Fundoklia-völgy

M.A. Lazarev

- rovarfaunisztikai kutatása. - Állattani Közlemények. 101 (1-2): 43-64.
- Mouthiez J. & Péru L. 2008. Liste des Longicornes observés dans le département du Loiret (Coleoptera Cerambycidae). - L'Entomologiste, Paris. 64 (2): 109-111.
- Mulsant E. 1839. Histoire naturelle des Coléoptères de France. Longicornes. Maison Libraire, Paris. Imprimerie de Dumoulin, Ronet et Sibuet, Lyon. 304 pp.
- Mulsant E. 1863. Histoire Naturelle des Coléoptères de France. Longicornes. - Annales de la Société Impériale d'Agriculture, d'Histoire Naturelle et des Arts Utiles de Lyon 1862: 1-480.
- Nikitsky N.B. 2019. Family Cerambycidae Latreille 1802 - longhorned beetles, or cerambycidae, Pp. 528-578. - In: Coleoptera insects (Insecta, Coleoptera) of the Moscow Region. Part 2. Moscow; Berlin: Direct-Media. 791 pp.
- Novozhenov Yu.I. 1987. Fauna of woodcutters of the Ilmensky Nature Reserve, Southern Urals. - Fauna, ecology of invertebrate animals of the Chelyabinsk region. Sverdlovsk UO USSR Academy of Sciences: 29-47. [in Russian]
- Olivier A.G. 1795. Entomologie, ou histoire naturelle des insectes. Avec leur caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Coléoptères. Tome quatrième. Paris: de Lanneau, 519 pp. +72 pls. [each gender has independent pagination: 67 - Cerambyx: 1-132; 68 - Saperda: 1-41; 70 - Callidium: 1-72].
- Özdikmen H. 2007. The Longicorn Beetles of Turkey (Coleoptera: Cerambycidae). Part I - Black Sea Region. - Munis Entomology & Zoology. 2 (2): 179-422.
- Özdikmen H. 2013. Turkish Agapanthiini Mulsant, 1839 with identification keys (Coleoptera: Lamiinae). - Munis Entomology & Zoology. 8 (1): 9-40.
- Özdikmen H. 2021. An annotated catalogue: Cerambycoidea (Cerambycidae and Vesperidae) of Turkey (Coleoptera). - Munis Entomology & Zoology. 16 (Suplement): 1273-1556.
- Özdikmen H. 2024. Cerambycoidea of Turkey (Cerambycidae and Vesperidae) (Coleoptera). - Munis Entomology & Zoology. 19 (supplement): 1153-2614.
- Pavićević D., Ilić N. & Đurić M. 2015 Longhorn beetles of Serbia field guide. Zavod za zaštitu prirode & HabiProt, Belgrade: 1-249.
- Pesarini C. & Sabbadini A. 2004. Osservazioni sulla sistematica della tribù Agapanthiini Mulsant, 1839 (Coleoptera Cerambycidae). - Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale in Milano. 145 (1): 117-132.
- Pic M. 1900. Descriptions. - Matériaux pour servir à l'étude des Longicornes. 3 (1): 11-16.
- Pic M. 1905. Descriptions et Notes Diverses. - Matériaux pour servir à l'étude des Longicornes. 5 (2): 5-15.
- Pic M. 1908. Notes diverses et diagnoses. - Matériaux pour servir à l'étude des Longicornes. 7 (1): 2-6.
- Pic M. 1910. Catalogue bibliographique et synonymique des longicornes d'Europe et régions avoisinantes: suite. Pp. 95-98 [pagination speciale]. In: Matériaux pour servir à l'étude des longicornes. 7ème cahier, 2ème partie. Lyon: Imprimerie Jacquet Frères: 95-98 pp.
- Plavilstshikov N.N. 1927. Addenda et corrigenda concernant le Coleopterorum Catalogus, parties 73 et 74 (Lamiinae) de Chr. Aurivillius. - Encyclopédie

M.A. Lazarev

- Entomologique (Paris) Ser. B. I. Col. 2: 49-68.
- Plavilstshikov N.N. 1929. Synonymische Bemerkungen über *Agapanthia*-Arten (Coleoptera, Cerambycidae). - Entomologisches Nachrichtenblatt. 3: 103.
- Plavilstshikov N.N. 1930. Die *Agapanthia*-Arten der palaearktischen Region. Bestimmungs-Tabellen der europaischen Coleopteren. 98. Heft. Troppau: Edmund Reitters Nachfolger Emmerich Reitter. 40 pp.
- Plavilstshikov N.N. 1932. Timber-beetles - Timber Pests. Moscow, Leningrad. 200 pp. [in Russian]
- Plavilstshikov N.N. 1948. A Key for Longicorn Beetles of Armenia. Erevan. 232 pp. [in Russian]
- Plavilstshikov N.N. 1965. 75-th Fam. Cerambycidae - Timber Beetles, Longicornes. - In: A Key to Insects of the European Part of the USSR, v. 2, Coleoptera and Strepsiptera. Moscow-Leningrad, "Nauka": 389-419. [in Russian]
- Plavilstshikov N.N. 1968. Review of the genus *Agapanthia* Serv. (Coleoptera, Cerambycidae) of the USSR fauna. - Archives of Zoological Museum Moscow State University. 11: 113-168.
- Rabil J. 1992. Catalogue des Coléoptères de la Forêt de la Grésigne (Tarn). - Nouvelles Archives du Muséum d'Histoire Naturelle de Lyon. 29-30: 1-174.
- Rejzek M., Sama G., Alziar G. & Sadlo J. 2003. Host plants of longhorn beetles (Coleoptera: Cerambycidae) from the Balkan Peninsula, Asia Minor, and Iran (Part II). - Biocosme Méditerranéen, Nice. 19 (2002) (3): 161-189.
- Reitter E. 1898. Ueber die bekannten und einige neue palaearctische *Agapanthia*-Arten. - Wiener Entomologische Zeitung. 17 (4-5): 130-135.
- Richter C.F.W. 1821. Supplementa faunae insectorum Europae. Teil 1 [1820]. Vratislaviae: Richter, 3 + 12 pp. + 12 pls
- Reitter E. 1913. Fauna Germanica. Die Käfer des Deutschen Reiches. Nach der analytischen Methode bearbeitet. IV. Band. [1912]. Stuttgart: K.G. Lutz' Verlag: 236 pp., pl. 129-152.
- Sakenin H., Samin N., Moemen Beitollahi S., Ezzatpanah S., Havaskary M., Rastegar J., Valizadeh A. & Shakouri M.J. 2011. A study on the longhorn beetles (Coleoptera: Cerambycidae) from north-western Iran. - Calodema. 143: 1- 19.
- Sama G. 1979. Una nuova specie di *Agapanthia* Serville di Macedonia (Coleoptera: Cerambycidae). - Bollettino del Museo Civico di Storia Naturale di Verona. 5 (1978): 505-513.
- Sama G. 2003. Atlas of Cerambycidae of Europe and the Mediterranean area. Vol. 1: northern, western, central and eastern Europe, British Isles and continental Europe from France (excl. Corsica) to Scandinavia and Urals. Zlín: Kabourek (2002), 173 pp.
- Sama G., Buse J., Orbach E., Friedman A.L.L., Rittner O. & Chikatunov V. 2010. A new catalogue of the Cerambycidae (Coleoptera) of Israel with notes on their distribution and host plants. - Munis Entomology & Zoology. 5 (1): 1-51.
- Sama G., Fallahzadeh M. & Rapuzzi P. 2005. Notes on some Cerambycidae (Coleoptera) from Iran with description of two new species (Insecta Coleoptera Cerambycidae). - Quaderni di Studi e Notizie di Storia Naturale

- della Romagna. 20: 123-132.
- Sama G., Rapuzzi P. & Kairouz A. 2010. Catalogue commenté des Cerambycidae du Liban. An annotated catalogue of the Cerambycidae of Lebanon (Insecta Coleoptera Cerambycidae). - Quaderni di Studi e Notizie di Storia Naturale della Romagna. 30: 131-201.
- Sama G., Seddighi N. & Talebi A.A. 2008. Preliminary note for a checklist of the Cerambycidae of Iran (Coleoptera - Cerambycidae). - Biocosme Méditerranéen, Nice. 25 (3): 101-126.
- Sautière C. 2005. Les Cerambycidae des îles et franc-bords de la Loire entre Tours et Amboise (Indre-et-Loire). - Bulletin de Liaison de l'Entomologie Tourangelle et Ligérienne, Saint-Cyr sur Loire. 26 (1): 10-28.
- Schaufuss C.F.C. 1916. Calwer's Käferbuch; Einführung in die Kenntnis der Käfer Europas. Stuttgart, Schweizerbart'sche Verlag (sechste Auflage) 2: 709-1390, figs 251-254, pls 21-48.
- Seidlitz G.C.M. von. 1891. Fauna Transsylvanica. Die Käfer (Coleoptera) Siebenbürgens. Königsberg: Hartung'sche Verlagsdruckerei, [12] + lvi + 192 + 914 pp., 1 pl. [issued in parts: Pp. i-xl, Gattungen 1-48, Arten 1-240 in 1888; Pp. xli-lvi, Gattungen 49-128, Arten 241-544 in 1889; Pp. xlix-lvi, Gattungen 129-192, Arten 545-914 in 1891].
- Secchi F. 1998. De quelques longicornes de la région d'Orléans (Loiret) (Coleoptera Cerambycidae). - L'Entomologiste, Paris. 54 (5): 223-230.
- Shapovalov A.M., Nemkov V.A., Rusakov A.V. & Shovkun D.F. 2006. [Longicorn-beetles (Coleoptera, Cerambycidae) of Orenburg Region. - Vestnik of Orenburg State University], 4: 105-109. [in Russian]
- Shapovalov A.M. 2012. Longicorn-beetles (Coleoptera, Cerambycidae) of Orenburg Region: fauna, distribution, bionomy. Archives of Orenburg Branch of Russian Entomological Society, 3. Orenburg: Orenburg Branch of Russian Entomological Society. 224 p. [in Russian]
- Shernin A.I. 1974. Sem. Cerambycidae - Longhorned beetles (pp. 174-181, 219). Chapter 7. Order Coleoptera - Coleoptera (p. 111-227). - In: Shernin A.I. (ed.) Fauna of the Kirov region. Issue 2. Kirov: Kirov Pedagogical Institute. 523 pp. [in Russian]
- Sláma M. 1998. Tesaříkovití - Cerambycidae České republiky a Slovenské republiky (Brouci - Coleoptera). Praha. 383 pp.
- Steiner S. & Schmid H. 2013. Eine neue Agapanthia-Art (Coleoptera: Cerambycidae: Lamiinae: Agapanthiini) aus Griechenland. - Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen. 65: 1-4.
- Stierlin W.G. 1898. Fauna coleopterorum helvetica: die Käfer-Fauna der Schweiz nach der analytischen Methode. Fauna Insectorum Helvetiae. Coleoptera Helvetiae. Zweiter Band Schaffhausen: Bolli & Böcherer. 2: 3-662 + iii-xii.
- Stolbov V.A., Sergeeva E.V., Lomakin D.E. & Sheykin S.D. 2019. A check-list of longicorn beetles (Coleoptera: Cerambycidae) of Tyumenskaya Oblast of Russia. - Euroasian Entomological Journal. 18 (3): 199-212. [in Russian]
- Švácha P. & Lawrence J.F. 2014. Arthropoda: Insecta: Coleoptera. Morphology and Systematics (Phytophaga). 2.4 Cerambycidae Latreille, 1802. - In: Walter de Gruyter, Handbook of Zoology, 3: i-xii + 1-676, 465 figs. Edited by

M.A. Lazarev

- Richard A.B. Leschen & Rolf G. Beutel.
- Tiberghien G. 2010. Observations sur les Coléoptères de la chaîne pyrénéenne et régions limitrophes. 12^{ème} note: Cerambycidae (Coleoptera Phytophagoidea), suite. - Bulletin de la Société Linnéenne de Bordeaux. (145) 38 (1): 59-66.
- Trócoli S., Mercadé A., Oliete C. & Aibar R. 2023. Los Longicornios del Moianès (Barcelona, Catalunya) Les Longicornes du Moianès (Barcelona, Catalogne) (Coleoptera, Cerambycidae, Vesperidae). - Revue de l'Association Roussillonnaise d'Entomologie (R.A.R.E.). 32 (4): 237-247.
- Tsherepanov A.I. 1984. Longicorn Beetles of North Asia (Lamiinae: Pterycoptini - Agapanthiini). Novosibirsk. 214 pp. [in Russian]
- Tsherepanov A.I. 1985. Longicorn Beetles of North Asia (Lamiinae: Saperdini - Tetraopini). Novosibirsk. 256 pp. [in Russian]
- Verdugo Páez A. 2008. Contribución al conocimiento de los cerambycoides de Andalucía. V. *Stenurella hybridula* (Reitter, 1901) nuevo para Andalucía, y datos interesantes sobre otras especies (Coleoptera, Cerambycidae). - Boletín de la Sociedad Entomológica Aragonesa. 43: 483-485.
- Villiers A. 1967. Contribution à la faune de l'Iran. I. - Coléoptères Cerambycidae. - Annales de la Société Entomologique de France (N.S.). 3 (2): 327-379.
- Villiers A. 1978. Faune des Coleopteres de France, 1. Cerambycidae. Paris. 636 pp.
- Winkler A. 1929: Cerambycidae. Pars 9: 1135-1136; pars 10: 1137-1226. In: Catalogus Coleopterorum regionis palaearcticae. Wien: A. Winkler Verlag. 1698 pp.
- Yablokov-Khnzoryan S.M. 1961. Experience in reconstructing the genesis of the beetle fauna of Armenia. Yerevan: Publishing House of the Academy of Sciences of the Armenian SSR. 265 pp. [in Russian]
- Zaitzev F.A. 1954. Timber-beetles (Cerambycidae) in the fauna of Georgia. - Archives of the Institute of Zoology of the Academy of Sc. Of Georgian SSR. 13: 5-27. [in Russian]
- Zamoroka A.M. 2022. The longhorn beetles (Coleoptera, Cerambycidae) of Ukraine: Results of two centuries of research. - Biosystems Diversity. 30 (1): 46-73.
- Zamoroka A.M., Panin R.Y., Kapelukh Y.I. & Podobivskiy S.S. 2012. The catalogue of the Longhorn Beetles of Western Podillya, Ukraine (Coleoptera: Cerambycidae). - Munis Entomology & Zoology. 7 (2): 1145-1177.

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