

Two new taxa of the genus *Dichagyris* Lederer, 1867 from the Caucasus (Lepidoptera, Noctuidae)

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Abstract. Description of *Dichagyris korshunovi dagestana* **ssp. n.** and *Dichagyris inequalis* **sp. n.** from Dagestan, Russia are given with 16 colour photos of imagines and 14 genitalia figures.

Keywords. Asia, taxonomy, Noctuidae, new descriptions.

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Introduction

Dichagyris is a diverse genus with a Holarctic distribution. In the Palaearctic, most of the species are inhabitants of Turkey, Iran and the Central Asiatic high mountains. The eight described species of *Dichagyris melanura* (Kollar, 1846) species-group (*D. melanura* is the type species of *Dichagyris*), are characterized by white ground colour on the forewings with more or less fine grey or brown suffusion and broad black marginal area. This species group was subdivided to two subgroups by Varga (1996), by the bulbed or non-bulbed apical cornutus of the subbasal diverticulum in the male genitalia. Here a new taxa from both subgroups is described.

Here, the diagnosis and description of one new species and one new subspecies from the Caucasus (Russia, Dagestan) are given. Also figured are the female genitalia of all the new and closely related taxa, although the differences between them are really slight.

Abbreviations for personal and institutional Collections used here: HNHM = Hungarian Natural History Museum (Budapest, Hungary); HT = holotype; PT = paratype; PGM = collection of Péter Gyulai (Miskolc, Hungary); GYP = genitalia slide Péter Gyulai.

Description of new taxa

Dichagyris korshunovi dagestana **ssp. n.**

(Figs 5–8, 19, 26)

Holotype: Male (Fig. 5), sp. n., Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina, slide no. 5501 (coll. PGM, later to be deposited in the HNHM).

Paratypes: 1 male, 3 females, with the same data (coll. PGM).
slide: GYP 5502f

Diagnosis. The new subspecies (Figs 5–8) is externally very similar to the nominate subspecies, (Figs 1–4) but the middle area in the forewing less greyish suffused

and the Noctuidae maculation hardly defined in the males; but in the females, the markings are much stronger than in the nominotypical subspecies.

In the male genitalia, the new subspecies (Fig. 19) can be distinguished from that of the nominotypical one (Figs 17, 18) by the less convex dilated configuration of the dorsal costa in the valvae, slightly longer cucullus apically, shorter vinculum and the lack of sclerotization in the inner bend of vesica.

In the female genitalia, the new subspecies (Figs 26.) has weaker ductus bursae and longer corpus bursa.

Description (Figs 5 – 8). Wingspan 29-30 mm. The vesture of body and ground colour of the forewings white, more or less densely irrorated with fine greyish scales, the distal area widely black. Orbicular and reniform stigmata small, narrowly more or less black edged; claviform stigma absent. Antemedian and postmedian crosslines black, strong, well defined; cilia black. Females darker than males, wing pattern stronger. Hindwings whitish with brown suffusion; marginal area widely darker in the males, the hindwing more unicolorous, darker in the females; cilia black then whitish.

Male genitalia (Fig. 19). Uncus long, narrow and slightly curved; juxta broadly shield-like, ventrally with a medial protrusion; vinculum v-shaped; valvae elongate, dorsal costa medially evenly dilated, cucullus section dorso-apically slightly pointed; harpe strong, slightly dorsally curved; ampulla long, evenly narrow, apically rounded. Aedeagus tubular; vesica tubular-spacious, with a large subbasal diverticulum dorsally, apically with a small cornutus on a bulbous base; twisted-coiled medially.

Female genitalia (Fig. 26). Papillae anales setose, short; apophyses posteriores much longer but more slender; antrum weakly sclerotized with more strongly sclerotized, bilateral, symmetrical narrow lobes; ductus bursae tubular, wrinkled; appendix bursae large, globular; corpus bursae long, saccate.

Biology and distribution. The new subspecies was found at medium elevation in Great Caucasus.

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

Dichagyris inequalis sp. n.

(Figs 9–12, 20, 21, 27, 28)

Holotype. Male (Fig. 9), Russia, Dagestan, Karabudakhkentky dist. Gubden, N42°33', E47°25', 28. VII. 2020, leg. V. Zurilina, slide no. GYP 5480 (coll. PGM, later to be deposited in the HHNM).

Paratypes. 3 males, 3 females, with the same data (coll. PGM); 1 male, same data, but 23. VII. 2020 (coll. PGM); 6 males, 3 females, Russia, Dagestan, Karabudakhkentky dist. Gubden, N42°33', E47°25', 24. VII. 2020, leg. V. Zurilina (coll. PGM); 3 males, 3 females, Russia, Dagestan, Karabudakhkentky dist. Gubden, N42°33', E47°25', 27. VII. 2020, leg. V. Zurilina (coll. PGM).
slide nos. GYP 5335m, 5474f, 5351f, 5482f, 5488m

Diagnosis. The most closely related and similar species are *Dichagyris grisescens* Staudinger, 1879 (Figs 15, 16) and *D. melanuroides* Kozhantshikov, 1930 (Figs 13, 14), from which the new species (Figs 9–12) can be easily separated by the unequal, zigzag inner edge of the black marginal area and the black and white variegated forewing cilia; additionally from *D. melanuroides* the ground colour of forewings is paler and the orbicular and reniform stigmata are obscure and not more or less narrowly

black outlined. In the male genitalia, the new species (Figs 20, 21), differs from *D. grisescens* (Fig. 24), in the narrower valvae with much smaller rounded extension dorso-medially and evenly arcuate ventral costa; terminally more tapered cucullus section, significantly shorter dorso-medial process of the juxta and larger subbasal diverticulum. In the absence of the carinal thorn of the aedeagus, the new species is more like *D. grisescens*. Compared to *D. melanuroides* (Figs 22, 23), the new species has a longer uncus, longer but narrower valvae, less dilated dorso-medially, less elongate cucullus section apically, and longer, narrower aedeagus. In the female genitalia, the new species (Figs 27, 28), differs from *D. grisescens* (Fig. 30), in the stronger pincer-like, bilaterally symmetrical lobes of the antrum, the somewhat narrower ductus bursae and the much larger appendix bursae. The main distinguishing features from *D. melanuroides* (Fig. 29), are in the shape and the longer, stronger sclerotization of the pincer-like, bilaterally symmetrical lobes of the antrum and the narrower ductus bursae.

Description (Figs 9 – 12). Wingspan 28-29 mm. The vesture of body and ground colour of the forewings white, finely irrorated with greyish scales, the distal area widely black with zigzag, unequal inner margin. Orbicular and reniform stigmata obscure, white without greyish scales; claviform stigma absent. Antemedian and postmedian crosslines black, narrow, but well defined; cilia black and white variegated. Hindwings whitish with brown suffusion and widely darker outer area in the males, which is more unicolorous, darker in the females; cilia whitish.

Male genitalia (Figs 20, 21). Uncus long, distally evenly narrow and slightly curved, apically pointed; juxta broadly shield-like, dorso-medially with a strong protrusion; vinculum long, v-shaped; valvae elongate, dorsal costa medially evenly dilated, the ventral one evenly tapered distally; cucullus section dorso-apically pointed, with a short bristled corona; harpe strong, distally slightly dorsally curved; ampulla long, evenly narrow, apically rounded. Aedeagus with a long, strongly sclerotized ventral carinal wedge; vesica tubular-spacious, with a large subbasal diverticulum dorsally, apically with a small cornutus.

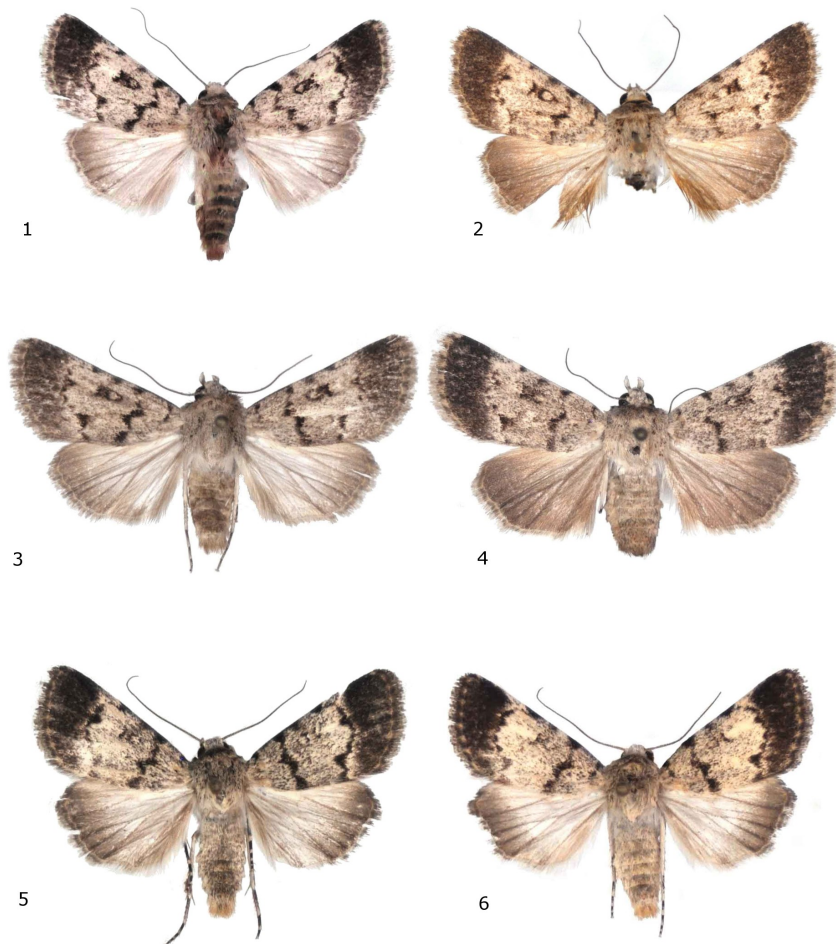
Female genitalia (Figs 27, 28). The main characters are the setose, short papillae anales, short apophyses anteriores and much longer but more slender apophyses posteriores; finely sclerotized antrum with more sclerotized, pincer-like, bilaterally symmetrical narrow lobes; more or less evenly broad, tubular ductus bursae; large, globular appendix bursae and saccate corpus bursae.

Comment. *Agrotis grisescens* var. *fasciata* (Vorbrod, 1930) is incorrectly associated with *Dichagyris grisescens* Staudinger, 1879 somewhere in Internet. In fact, it is a form of *Epipsilia grisescens* (Fabricius, 1794).

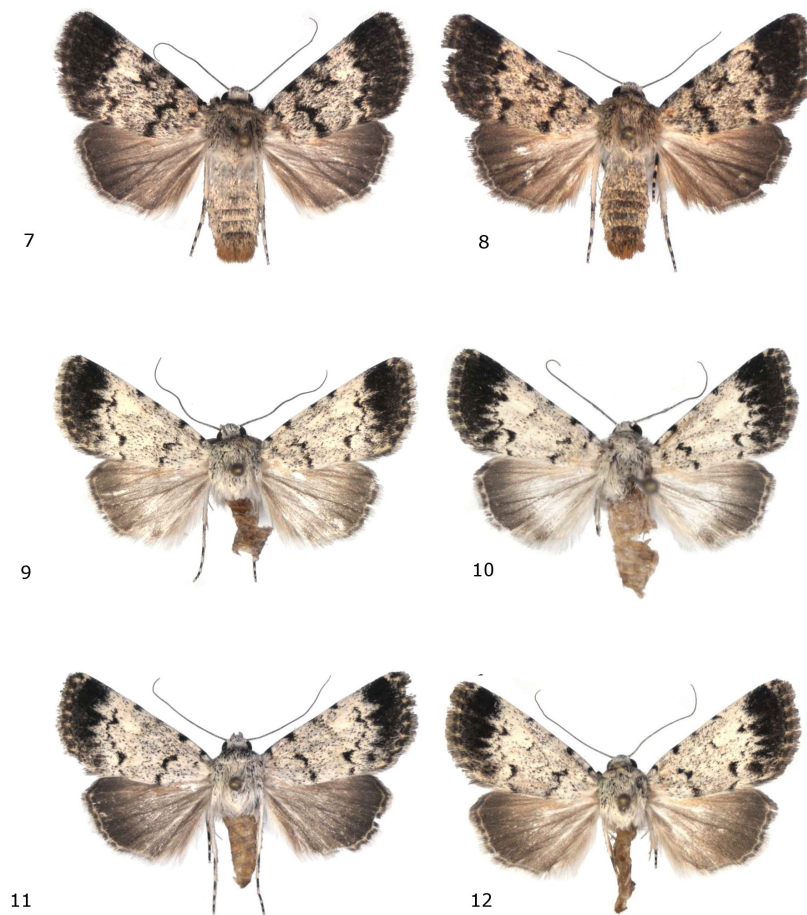
Biology and distribution. The new species was found in the lower elevation of the eastern part of Great Caucasus.

Etymology. The new species is named from the unequal inner margin of the wide, black outer area of the forewings

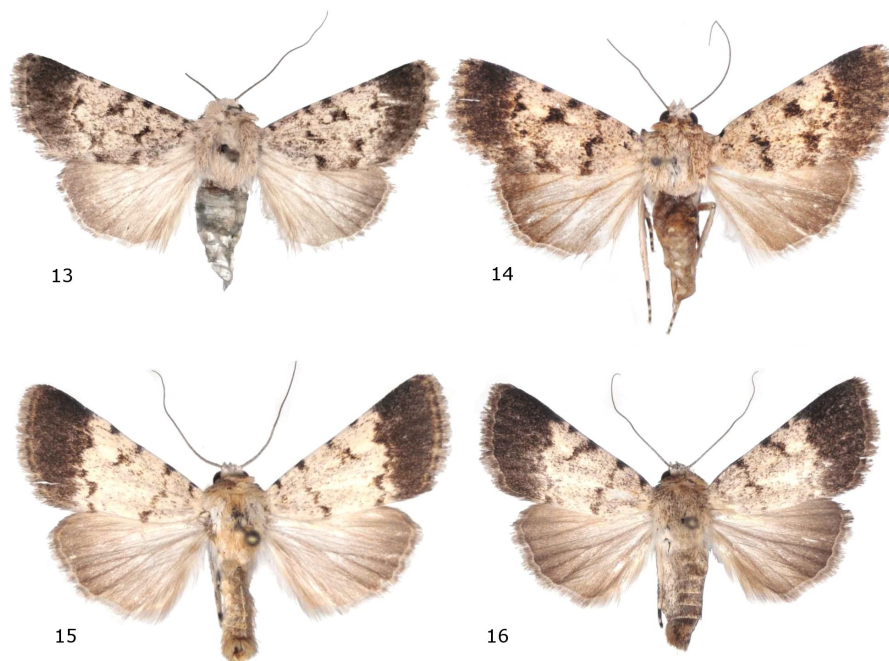
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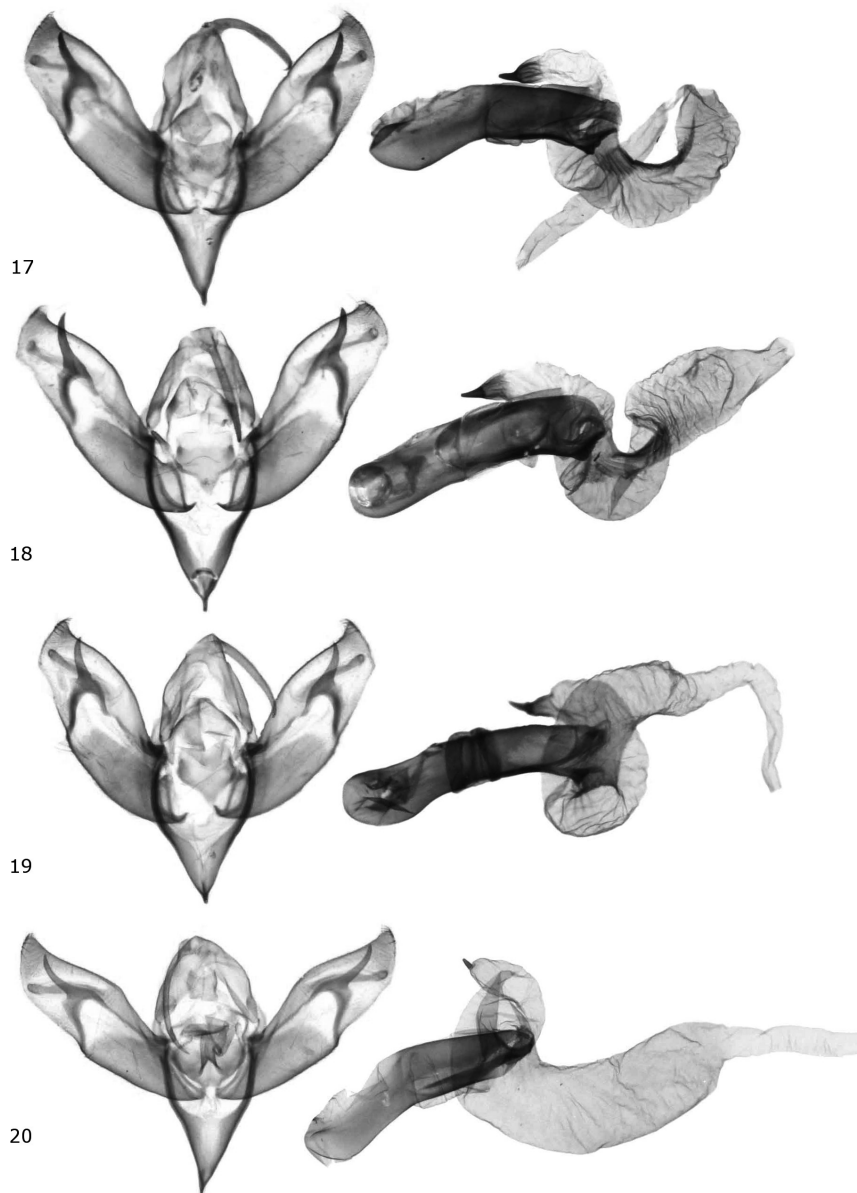
Figures 1–6. *Dichagyris* spp. and ssp. adults. 1. *D. korshunovi* Varga, 1996, male, PT, Turkmenistan, Kopet Dagh, Dushak, 37°54'N, 57°56'E, 1500 m, 7-8. VIII. 1992, L 59, leg. M. Hreblay, Gy. László & G. Ronkay, GYP 5303 (PGM); 2. *D. korshunovi* Varga, 1996, female, PT, Turkmenistan, Kopet Dagh, 6 km S of Ipay-Kala, 38°17'N, 57°07'E, 1600 m, 16-23. VIII. 1992, L 74, leg. M. Hreblay, Gy. László & G. Ronkay, GYP 5504 (PGM); 3. *D. korshunovi* Varga, 1996, male, Iran, prov. Khorasan, Kuh-e-Binaloud, 1770 m, NE of Neyshapur, 7-8. VII. 2010, leg. P. Gyulai & A. Garai, GYP 5506 (PGM); 4. *D. korshunovi* Varga, 1996, male, Iran, prov. Khorasan, Kuh-e-Binaloud, 1770 m, NE of Neyshapur, 7-8. VII. 2010, leg. P. Gyulai & A. Garai (PGM); 5. *D. korshunovi dagestana* ssp. n., HT, male, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina, GYP 5501 (PGM); 6. *D. korshunovi dagestana* ssp. n., PT, male, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina (PGM).



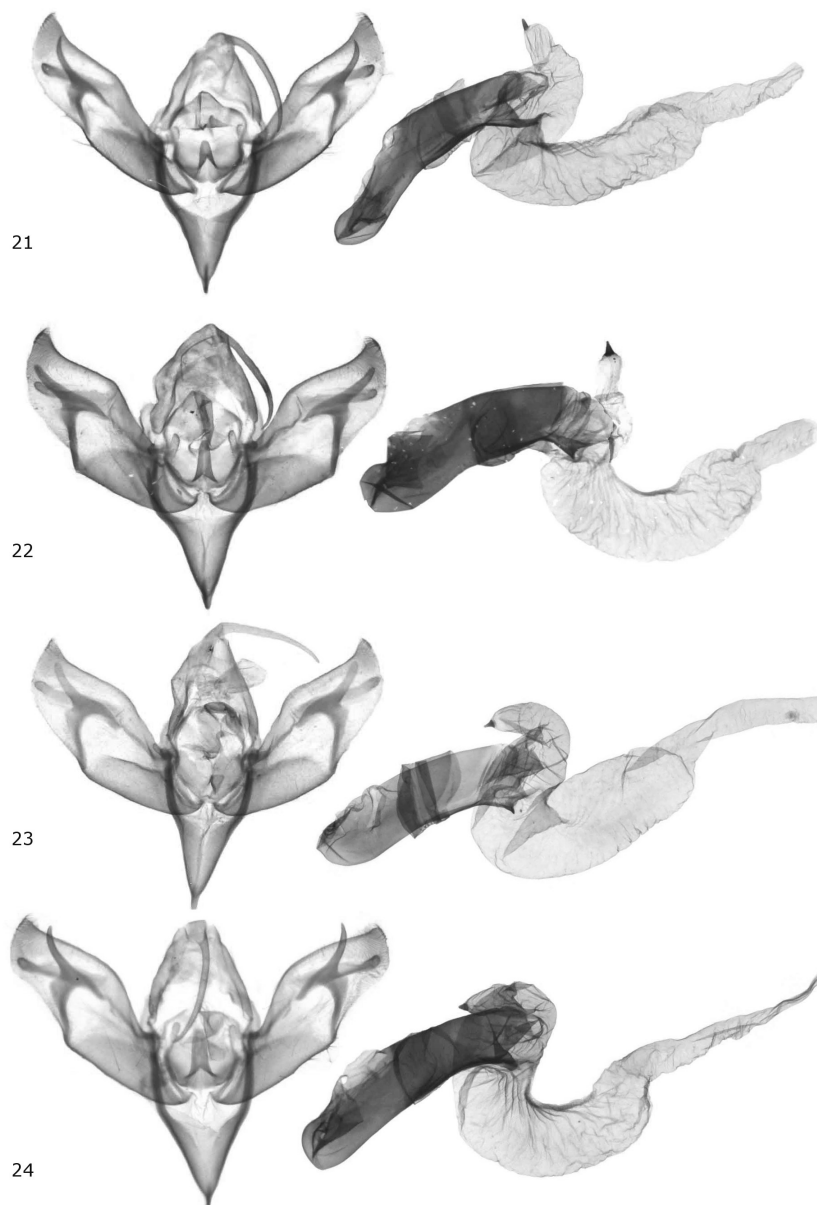
Figures 7–12. *Dichagyris* spp. and ssp. adults. 7. *D. korshunovi dagestana* ssp. n., PT, female, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina (PGM); 8. *D. korshunovi dagestana* ssp. n., PT, female, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina GYP 5502 (PGM); 9. *D. inequalis* sp. n., HT, male, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 28. VII. 2020, leg. V. Zurilina, GYP 5480 (PGM); 10. *D. inequalis* sp. n., PT, male, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 24. VII. 2020, leg. V. Zurilina GYP 5335 (PGM); 11. *D. inequalis* sp. n., PT, female, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 27. VII. 2020, leg. V. Zurilina, GYP 5474 (PGM); 12. *D. inequalis* sp. n., PT, female, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 24. VII. 2020, leg. V. Zurilina, GYP 5482 (PGM).



Figures 13–16. *Dichagyris* spp. adults. 13. *D. melanuroides* Kozhantshikov, 1930, male, Iran, prov. Esfahan, 15 km S of Sahreza, 1500 m, 3. VII. 2000, leg. B. Benedek, GYP 5325, (PGM); 14. *D. melanuroides* Kozhantshikov, 1930, Uzbekistan, Kughitang, 120 km NNW Thermes, Tshashmobison, 1500 m, 4. VII. 1994, leg. V. A. Lukhtanov, GYP 5497 (PGM); 15. *D. griseescens* Staudinger, 1879, male, Uzbekistan, W Thian Shan Mts. Chimgan, 800-2000 m, E69°58'E, 41°32' N, 18-25.VII.1990, leg. P. Gyulai (PGM); 16. *D. griseescens* Staudinger, 1879, female, Uzbekistan, W Thian Shan Mts. Chimgan, 800-2000 m, E69°58'E, 41°32' N, 18-25.VII.1990, leg. P. Gyulai (PGM).



Figures 17–20. *Dichagyris* spp. and ssp. male genitalia. 17. *D. korshunovi* Varga, 1996, PT, Turkmenistan, Kopet Dagh, Dushak, 37°54'N, 57°56'E, 1500 m, 7-8. VIII. 1992, L 59, leg. M. Hreblay, Gy. László & G. Ronkay, GYP 5303 (PGM); 18. *D. korshunovi* Varga, 1996, Iran, prov. Khorasan, Kuh-e-Binaloud, 1770 m, NE of Neysha-pur, 7-8. VII. 2010, leg. P. Gyulai & A. Garai, GYP 5506 (PGM); 19. *D. korshunovi dagestana* ssp. n., HT, male, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina, GYP 5501 (PGM); 20. *D. inequalis* sp. n., HT, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 28. VII. 2020, leg. V. Zurilina, GYP 5480 (PGM).



Figures 21–24. *Dichagyris* spp. male genitalia. 21. *D. inequalis* sp. n., PT, Russia, Dagestan, Karabudakhkentky dist. Gubden, N42°33', E47°25', 27. VII. 2020, leg. V. Zurilina, GYP 5488 (PGM); 22. *D. melanuroides* Kozhantshikov, 1930, Uzbekistan, Kughitang, 120 km NNW Thermes, Tshashmobison, 1500 m, 4. VII. 1994, leg. V. A. Lukhtanov, GYP 5498 (PGM); 23. *D. melanuroides* Kozhantshikov, 1930, Iran, prov. Esfahan, 15 km S of Sahreza, 1500 m, 3. VII. 2000, leg. B. Benedek, GYP 5325 (PGM); 24. *D. grisescens* Staudinger, 1879, Uzbekistan, W Thian Shan Mts. Chimgan, 800-2000 m, E69°58'E, 41°32' N, 18-25.VII.1990, leg. P. Gyulai (PGM).



Figures 25–30. *Dichagyris* spp. and ssp. female genitalia. 25. *D. korshunovi* Varga, 1996, female, PT, Turkmenistan, Kopet Dagh, 6 km S of Ipay-Kala, 38°17'N, 57°07'E, 1600 m, 16-23. VIII. 1992, L 74, leg. M. Hreblay, Gy. László & G. Ronkay, GYP 5504 (PGM); 26. *D. korshunovi dagestana* ssp. n., PT, Russia, Dagestan, Gunibsky dist., 3 km NW of Gunib, N42°23', E46°56', 25. VII. 2020, leg. V. Zurilina, GYP 5502 (PGM); 27. *D. inequalis* sp. n., PT, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 27. VII. 2020, leg. V. Zurilina, GYP 5474 (PGM); 28. *D. inequalis* sp. n., PT, Russia, Dagestan, Karabudakhkentsky dist. Gubden, N42°33', E47°25', 24. VII. 2020, leg. V. Zurilina, GYP 5482 (PGM); 29. *D. melanuroides* Kozhantshikov, 1930, Uzbekistan, Kughitang, 120 km NNW Thermes, Tshashmobison, 1500 m, 4. VII. 1994, leg. V. A. Lukhtanov, GYP 5497 (PGM); 30. *D. griseescens* Staudinger, 1879, Uzbekistan, W Thian Shan Mts. Chimgan, 800-2000 m, E69°58'E, 41°32' N, 18-25.VII.1990, leg. P. Gyulai (PGM).

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