ABS ACTA BIOLOGICA SIBIRICA
A journal on the biodiversity of Siberia and the adjacent lands

Acta Biologica Sibirica 11: 1129–1136 (2025)
doi: 10.5281/zenodo.17421644
http://journal.asu.ru

RESEARCH ARTICLE

A new *Cteipolia* Staudinger, 1896 species from Russian Altai (Lepidoptera, Noctuidae)

Svyatoslav A. Knyazev[1], Vadim V. Ivonin[2]

1 *Altai State University, 61 Lenina St., Barnaul, 656049, Russia*
2 *Independent researcher, 32/1 Vystavochnaya st., apt. 81, Novosibirsk, 630078, Russia*

Corresponding author: Svyatoslav A. Knyazev (konungomsk@yandex.ru)

Academic editor: R. Yakovlev | Received 12 October 2025 | Accepted 16 October 2025 | Published 25 October 2025

http://zoobank.org/9A4BFCAC-127D-439D-9C14-F75A74F445D7

Citation: Knyazev SA, Ivonin VV (2025) A new *Cteipolia* Staudinger, 1896 species from Russian Altai (Lepidoptera, Noctuidae). Acta Biologica Sibirica 11: 1129–1136. https://doi.org/10.5281/zenodo.17421644

Abstract

A new species, *Cteipolia altaica* Knyazev et Ivonin, **sp.n.** from Altai Republic (Russia, Siberia), is described. New species is morphologically similar to *C. murina* (Ménétriés, 1848), *C. isotima* Püngeler, 1914 and *C. amissa* Gordeeva, Gordeev, G. Ronkay, L. Ronkay, 2023, but it differs in some external features, as well as in the structure of the genitals. The article presents an images of type specimens, the genital preparations of both sexes, diagnosis and the distributional map of *Cteipolia* species in Russia and Kazakhstan.

Keywords

Lepidoptera, Noctuidae, Xylenina, *Cteipolia*, Siberia, Altai Republic, Russian Altai, new species

Introduction

The genus *Cteipolia* Staudinger, 1896 currently includes 12 known species distributed mainly in the mountainous regions of Central Asia (Volynkin et al. 2024). The general distribution of the genus is from Turkey and Armenia in the west to Transbaikalia (Republic of Buryatia) in the east, as well as from the Southern Urals in the north to the mountains of central Asia and the Himalayas in the south and southeast. In the last two decades, this genus has attracted the attention of many

researchers (Ronkay et al. 2014; Gordeeva et al. 2023; Volynkin et al. 2024; Titov et al 2024). The status and taxonomic position of the genus is constantly being clarified and discussed (Volynkin et al. 2024; Titov et al 2024). Several new species have also been described from Armenia and SE Kazakhstan (Volynkin et al. 2024), and one species from the Republic of Buryatia in Russia (Gordeeva et al. 2023). For the fauna of the Altai Mountains, this genus has not previously been indicated in the literature (Volynkin 2012, Sinev 2019), except for the only mention of a photographic observation on iNaturalist from the Ongudai region https://www.inaturalist.org/observations/70874914 (Titov et al. 2024). However, it was quite logical to find representatives of the genus *Cteipolia* Staudinger, 1896 here, according to the geographical location of the region and the biotopic preferences of representatives of this genus. The authors of this work undertook expeditions to the Altai Mountains in the early spring and late Autumn in order to study the early and late faunas in this region. As a result, interesting materials were obtained, among which we found specimens belongs the genus *Cteipolia*, a detailed study of which revealed some differences from the already known species.

Materials and methods

All material processed within the framework of this article was collected on the territory of Altai Republic by the authors using standard method of collecting by butterfly net and on Mercury lamps. All collected specimens are deposited in the collections of Zoological Institute of the Russian Academy of Sciences (ZISP, St. Petersburg), Svyatoslav Knyazev (CSKO, Omsk, Russia) and Vadim Ivonin (CVIN, Novosibirsk, Russia). The photos of collectible specimens were taken using a Canon EOS 5D Mark II camera with a Canon EF-100mm macro lens. Photographs of genitalia and were taken using a Nikon stereomicroscope (model: SMZ25) coupled with a Nikon digital camera (model: DS-Ri2) and processed with NIS-Elements BR software. The distribution map was prepared using the online resource SimpleMappr (www.simplemappr.net).

Results

Currently, the fauna of the genus *Cteipolia* Staudinger, 1896 in Russia (Fig. 11) is represented by the following three species:

- *C. murina* (Ménétriés, 1848) (Russia and Kazakhstan: southern Ural and Kazakh Upland);
- *C. amissa* Gordeev, Gordeeva, G. Ronkay & L. Ronkay, 2023 (Russia: Transbaikalia, Ulan-Burgasy Mts);
- *C. altaica* Knyazev et Ivonin sp.n. (Russia: Altai Mts., Kuraisky Ridge).

***Cteipolia altaica* Knyazev et Ivonin sp.n.**
http://zoobank.org/94C8A629-8ED1-4DBD-826D-38EBE1E1C260
Figs 1–10

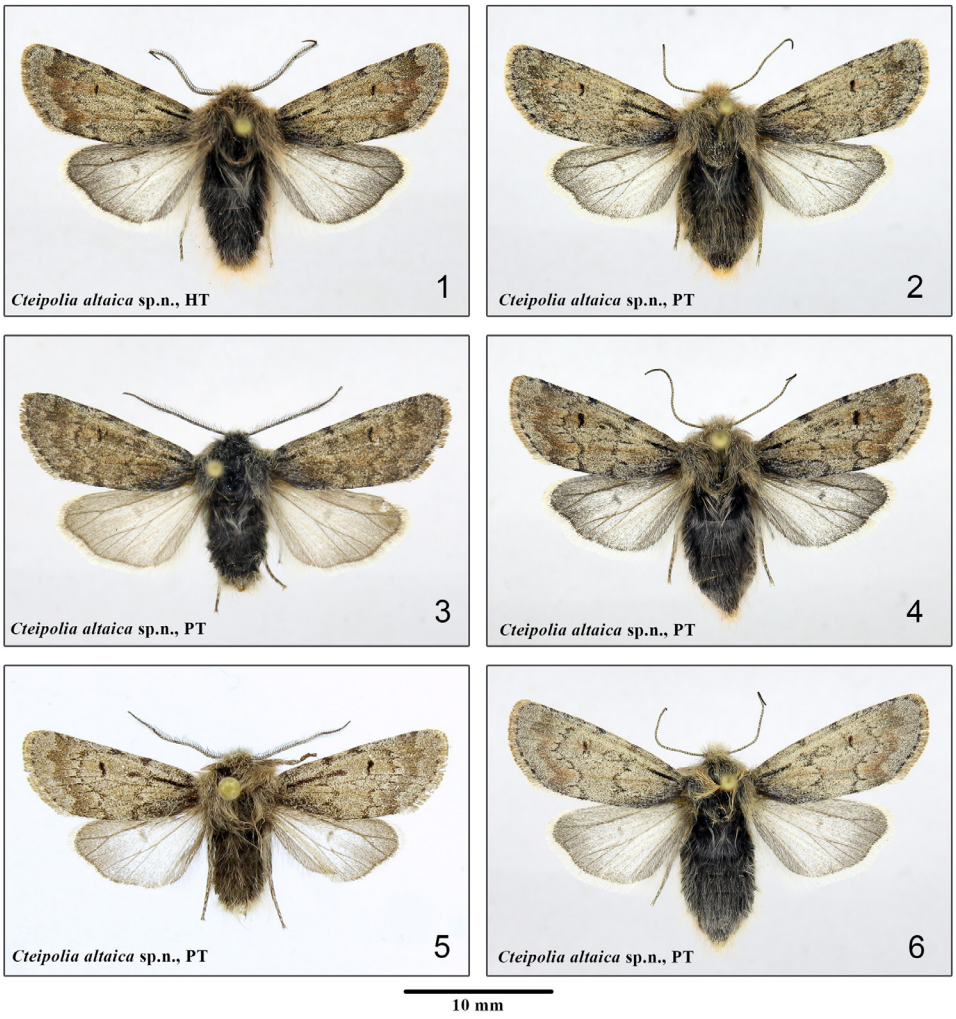
Type locality. Altai Mountains, Kuraisky Ridge.

Holotype. (Fig. 1). ♂, with labels: "Russia, Altai Republic, / Kosh-Agachsky district, / 7 km E of Telengit-Sortogoi / vill., 50.000087, 88.844735, / 17-18.IX.2025, / h=2000, S.A. Knyazev leg."; "HOLOTYPUS ♂ / *Cteipolia altaica* / Knyazev et Ivonin sp.n. / S. Knyazev des., 2025" (ZISP).

Paratypes. (Figs 2–6). 1♂, 13.IV.2025, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, h=1630, 50.245907, 87.875216, S.A. Knyazev (CSKO); 1♂, 1♀ 13–14.IV.2025, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, h=1630, 50.245907, 87.875216, at light, V.V. Ivonin (CVIN), slide SK0092; 1♀, 16–17.IX.2025, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, Kuraiskaya steppe, h=1630, 50.245907, 87.875216, at light, S.A. Knyazev (CSKO); 1♀, 16–17.IX.2025, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, Kuraiskaya steppe, h=1630, 50.245907, 87.875216, at light, V.V. Ivonin (CVIN); 4♀, 17-18.IX.2025, Russia, Altai Republic, Kosh-Agachsky district, 7 km E of Telengit-Sortogoi village, h=2000, 50.000087, 88.844735, at light, S.A. Knyazev (CSKO, ZISP), slide SK0091.

Diagnosis. The wingspan of males and females is 27–29 mm, the forewing length is 12–13 mm. The body strong, short, covered with light yellowish hairs. Antennae of males are ciliate, while those of females are filiform. Antennae length is 7–8 mm in both sexes. The new species looks similar to *C. murina* (Ménétriés, 1848), *C. isotima* Püngeler, 1914, and *C. amissa* Gordeeva, Gordeev, G. Ronkay, L. Ronkay, 2023 by appearance but it has some differences in the structure of the genitals. All these species and the genitals of their females are depicted in a recently published work (Titov et al. 2024). Externally, the new species differs from *C. murina* and *C. isotima* in narrower wings and a less contrasting and weakly pronounced wing pattern with more diffuse transverse lines of the forewing. From *C. amissa* the new species differs by the predominance of gray coloration of the general background of the wings. The cilia on the antennae of males in *C. altaica* look longer than in males of *C. amissa*. The fringe on the forewings is always lighter than the main wing background, a yellowish shade, unlike other similar species in which the fringe is the same color as the background of the wings. The fringe on the hindwings is light, yellowish-white. In the structure of the male's genitals (Fig. 7), the shape of the valva is identical to other members of the genus, but the outgrowths of the harp are uniform throughout and have a blunted tip, unlike the pointed one in all other closely related species. The new species differs best in the structure of the genitals of the females (Fig. 8). *C. altaica* differs well from *C. murina* and *C. isotima* in shape and length of apophyses anteriores, as well as in shape and thickness of ductus bursa. Compared to *C. amissa*, the female genitalia of *C. altaica* have a broad round-shaped corpus bursae (elongated in *C. amissa*) and a broader appendix bursae. The

bursa of the new species bears two strongly spaced serrated signa, one of which is 1.8 times larger than the other, unlike *C. amissa*, where two equally elongated signa are located side by side in the bursa.



Figures 1–6. Type specimens of *Cteipolia altaica* **sp.n.** and depositories of the specimens: **1** – in ZISP; **2**, **3**, **4**, **6** – in CSKO; **5** – in CVIN.

Bionomics. Imago activity is observed in late September–October, as well as after wintering in April–early May. Specimens were collected on dry steppe slopes at an altitude of 1600–2000 m a.s.l. Biotopes of this species are mainly arid mountainous areas with sparse arid herbaceous vegetation without the participation of tree and shrub species in the vicinity of the village of Telengit-Sortogoi (Fig. 12) and with the presence of *Larix sibirica*, *Juniperus sabina*, *Caragana bungei* and *Lonicera* in the Kurai steppe (Fig. 13). Imagoes are mostly nocturnal and are well attracted to light sources. Moths flight is observed at the beginning of the night, usually within the first hour after dark. We also noted a single case of daytime activity of a male of this species in Kurai steppe in April (Fig. 10). Some of the specimens were collected in the middle of April at a time when there was still a lot of snow in the mountain steppe, but daytime temperatures were already quite high (near +20°C). Night temperatures at this time dropped to -5°C. In autumn, moths appear after the first frosts during the return warming in late September (Fig. 9), when daytime temperatures reach +15+18°C, and nighttime temperatures range from 0+5°C. The preimaginal stages and host plants are unknown.

7

***Cteipolia altaica* sp.n., PT**
Russia, Altai Mts., Slide SK0092

8

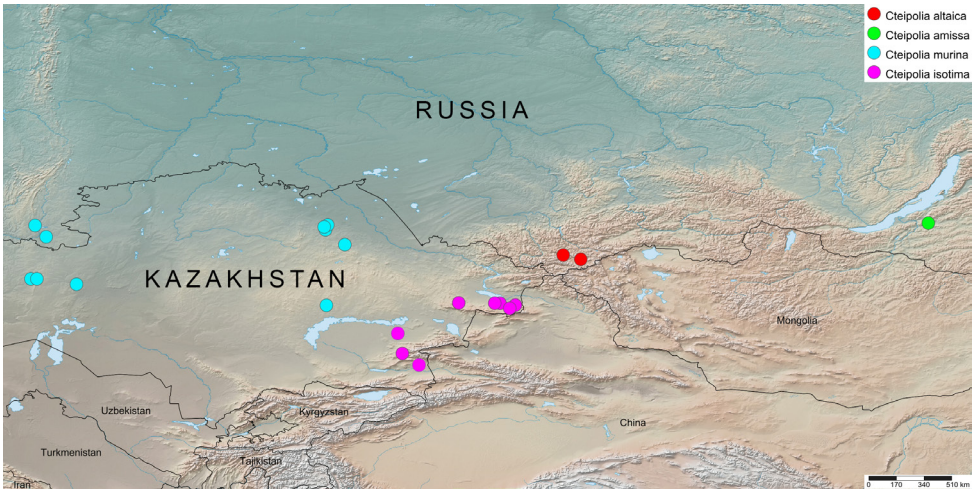
***Cteipolia altaica* sp.n., PT**
Russia, Altai Mts., Slide SK0091

Figures 7–8. Genitalia of *Cteipolia altaica* **sp.n.**: **7** – male, Paratype; **8** – female, Paratype.

Distribution. Currently, this species is known from two localities (Telengit-Sortogoi vicinity and Kurai steppe) 75 km apart on the Kurai Ridge in the Altai Mountains (Russia, South Siberia).

Ethymology. The new species is named after the type locality in Altai Mountains.

Figures 9–10. Adult specimens of *Cteipolia altaica* **sp.n.** in nature: **9** – ♀, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, Kuraiskaya steppe, h=1630, 17.IX.2025, photo by S.A. Knyazev; **10** – ♂, Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, Kuraiskaya steppe, h=1630, 14.IV.2025, photo by S.A. Knyazev.



Figures 11. Distribution map of the *Cteipolia* species in Russia and Kazakhstan.

Figures 12. Habitat of *Cteipolia altaica* **sp.n.**: Russia, Altai Republic, Kosh-Agachsky district, 7 km E of Telengit-Sortogoi village, h=2000, 18.IX.2025, photo by S.A. Knyazev.

Figures 13. Habitat of *Cteipolia altaica* **sp.n.**: Russia, Altai Republic, Kosh-Agachsky district, 4 km W of Kurai village, h=1630, 13.IV.2025, photo by S.A. Knyazev.

Acknowledgements

Authors thank Dr. Alexei Matov and Dr. Ilya Makhov (Zoological Institute of the Russian Academy of Sciences, St. Petersburg) for assistance with the preparation and photographing of genital preparations, providing literature and valuable consultations during the work; the first author expresses deep gratitude to Sofya M. Saikina (Omsk) for her comprehensive assistance in field research and productive discussion and participation in the description of the new species.

The study of the first author was funded by the state assignment of the Ministry of Science and Higher Education of the Russian Federation (project FZMW-2023-0006 "Endemic, local and invasive arthropods (Arthropoda) of the mountains of South Siberia and Central Asia: a unique gene pool of a biodiversity hotspot".

References

Gordeeva TV, Gordeev SY, Ronkay G, Ronkay L (2022) A new *Cteipolia* Staudinger, 1896 species from Transbaikalia (Lepidoptera, Noctuidae, Xyleninae). Fibigeriana Supplement 3: 133–142.

Ronkay G, Ronkay L, Gyulai P (2014) New Xyleninae and Psaphidinae species from Asia, with special reference to the Central and Inner Asiatic *Dasypolia* Guenee, 1852 (Lepidoptera, Noctuidae). Fibigeriana Supplement 2: 141–169.

Sinev SYu (Ed.) (2019) Catalogue of Lepidoptera of Russia. Second Edition. Zoological Institute RAS, St. Petersburg, 448 pp. [In Russian]

Titov SV, Gorbunov PYu, Černila M, Matov AYu, Volynkin AV (2024) New data on the distribution of *Cteipolia murina* (Ménétriés, 1848) (Lepidoptera: Noctuidae: Noctuinae: Xylenini). Ecologica Montenegrina 71: 269–283. https://dx.doi.org/10.37828/em.2024.71.29

Volynkin AV (2012) Noctuidae of the Russian Altai (Lepidoptera). Tigirek State Natural Reserve Publ., Barnaul, 339 pp.

Volynkin AV, Dûda J, Saldaitis A, Benedek B, Titov SV, Kalashian M, Matov AY, Gorbunov PY, Tóth B (2024) On the taxonomy of the genus *Cteipolia* Staudinger (Lepidoptera: Noctuidae: Noctuinae) with descriptions of two new species from Transcaucasia and Central Asia. Ecologica Montenegrina 77: 146–160. https://dx.doi.org/10.37828/em.2024.77.15