

New species of the genus *Agdistis* Hübner, [1825] (Lepidoptera: Pterophoridae) from South Africa

Новый вид пальцекрылки рода *Agdistis* Hübner, [1825] (Lepidoptera: Pterophoridae) из Южной Африки

V.N. Kovtunovich¹, P.Ya. Ustjuzhanin^{2,3,*}
В.Н. Ковтунович¹, П.Я. Устюжанин^{2,3,*}

¹ Moscow Society of Naturalists, Bolshaya Nikitskaya 2, Moscow 125009 Russia.

² Altai State University, Lenina 61, Barnaul 656049, Russia.

³ Biological Institute, Tomsk State University, Lenina Prospekt 36, Tomsk 634050 Russia.

¹ Московское общество испытателей природы, ул. Большая Никитская 2, Москва 125009 Россия.

² Алтайский государственный университет, пр. Ленина 61, Барнаул 656049 Россия.

³ Томский государственный университет, пр. Ленина 33, Томск 634050 Россия.

Vasily Kovtunovich vasko-69@mail.ru; <https://orcid.org/0000-0001-5091-4263>

Pert Ustjuzhanin petrust@mail.ru; <https://orcid.org/0000-0002-5222-2241>

* Corresponding author

KEY WORDS: Biodiversity, new species, Pterophoridae, plume moths, Republic of South Africa.

КЛЮЧЕВЫЕ СЛОВА: Биоразнообразие, новый вид, пальцекрылки, Республика Южная Африка.

ABSTRACT. The article describes a new species of plume moths (Lepidoptera, Pterophoridae) *Agdistis surkova* Kovtunovich et Ustjuzhanin **sp.n.**, from the province Northern Cape, the Republic of South Africa.

РЕЗЮМЕ. Описывается новый вид пальцекрылки (Lepidoptera, Pterophoridae) *Agdistis surkova* Kovtunovich et Ustjuzhanin **sp.n.**, из провинции Северный Кейп Южной Африки.

Introduction

Plume moths of the genus *Agdistis* are abundantly represented in South Africa. They account for more than 60 species, many of which were found and described on the materials of Russian expeditions [Kovtunovich, Ustjuzhanin, 2009a, b; 2010a, b, c; 2015a, b]. The representatives of this genus mostly inhabit dry, open arid landscapes. In South Africa, they are widely spread in western and south-western regions, many species are endemics of this territory. The new species was found on the Koperberg farm near the town Springbok (Figs 1–2).

Material and methods

The Wild MBP-1 microscope and Canon DS126291 camera were used to prepare images. The holotype and part of the paratypes are deposited in the Zoological Institute in St. Petersburg, Russia (ZISP). Several para-

types are also kept in the research collection of P. Ustjuzhanin and V. Kovtunovich (Novosibirsk, Moscow) (CUK).

Results

Agdistis surkova Kovtunovich et Ustjuzhanin **sp.n.**
Figs 3–6.

TYPE MATERIAL: Holotype, ♂, (ZISP, gen.pr. Nr 2002) Rep. S. Africa, Free State, Northern Cape, 5 km SE Springbok, Koperberg farm, 29°42'S 017°42'E, h 760 m, 1–3. IX. 2019, leg. Kovtunovich V. & Udovichenko P.; Paratypes, 14 ex. (ZISP, CUK), same locality as holotype, 1–3. IX. 2019; 1 ♂, 1 ♀, ZISP, gen.pr. Nrs 2003, 2004), 8–10. IX. 2017; 4 ♂♂, 1 ♀, CUK, 8–10. IX. 2017, leg. Kovtunovich V. & Udovichenko P.

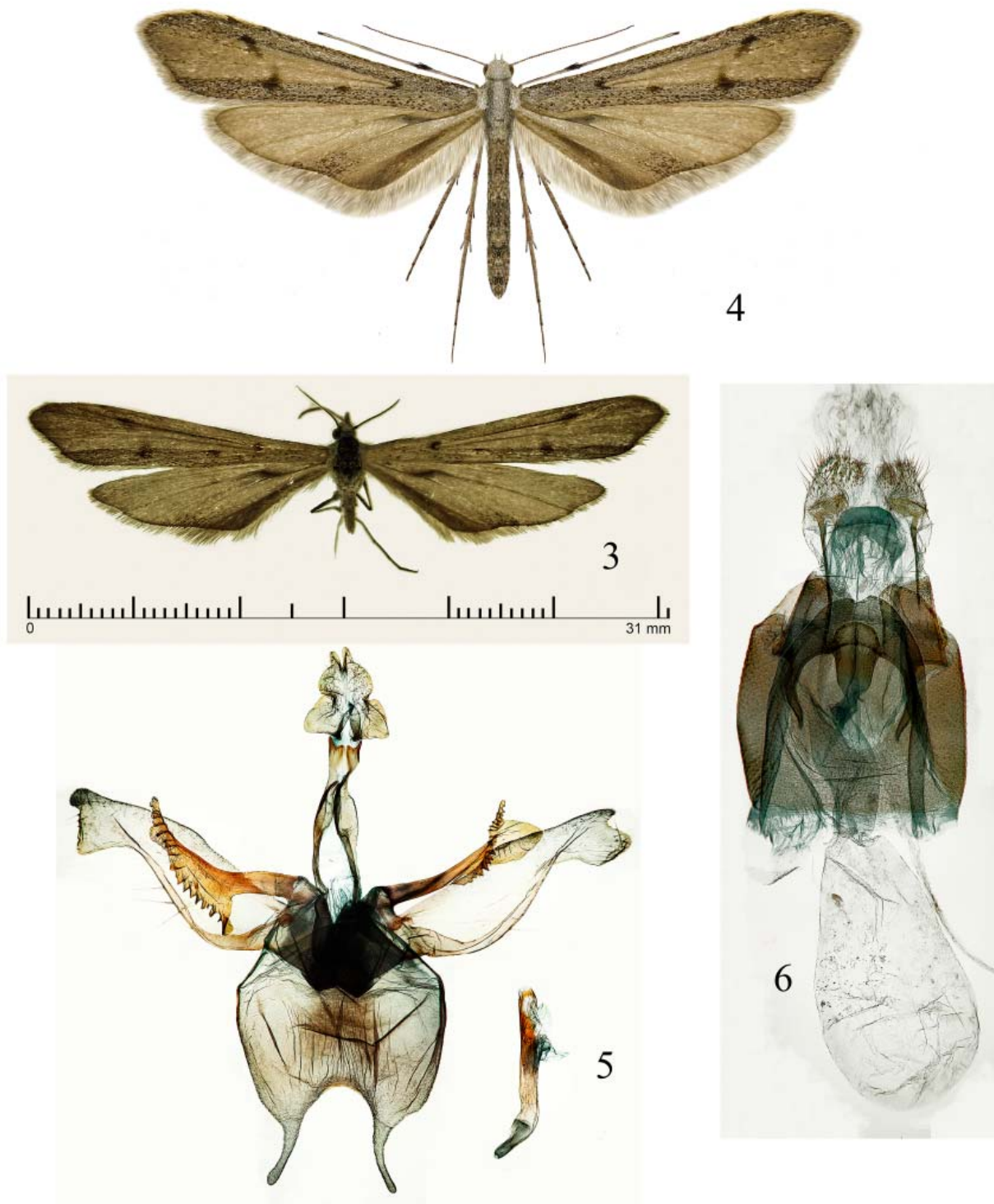
DESCRIPTION. External characters (Figs 3–4). Head and thorax with ash-grey scales. Labial palpi short, wide, equal to longitudinal eye diameter in length. Wingspan 26–32 mm, holotype — 31 mm. Fore wings brown-grey. Two black spots obliquely located in distal portion of wing, parallel to its outer margin. Two more black spots in centre and closer to wing base. Central spot slightly elongated, basal spot more rounded. Hind wings light-grey, basally with portion of black hairs. Anal margin of hind wing noticeably darker than basic background. Fringe light-grey. Hindlegs grey-brown with slightly lighter tarsus.

Male genitalia (Fig. 5). Valves slightly asymmetric. Costal process on left valve has robust brush-like plate with serrated outer edge; similar but significantly smaller plate on right valve. Distal portion of valves noticeably more narrow (in



Figs 1–2. Biotopes: Rep. S. Africa, Northern Cape, 5 km SE Springbok, Koperberg farm.

Рис. 1–2. Биотопы: Южно-Африканская Республика, Северный Кейп, 5 км ЮВ г. Спрингбок, ферма Коперберг



Figs 3–6. *Agdistis surkovaе* Kovtunovich et Ustjuzhanin **sp.n.** 3 — adult image (holotype, ZISP); 4 — photo reconstruction of adult; 5 — male genitalia (holotype, ZISP, gen.pr. Nr. 2002); 6 — female genitalia (paratype, CUK, gen.pr. Nr. 348);
 Figs. 3–6. *Agdistis surkovaе* Kovtunovich et Ustjuzhanin **sp.n.** 3 — имаго (голотип, ZISP); 4 — фото-реконструкция имаго; 5 — гениталии самца (голотип, ZISP, gen.pr. Nr. 2002); 6 — гениталии самки (паратип, CUK, gen.pr. Nr. 348).

comparison with basal portion). Apex of left valve obtusely rounded, apex of right valve slightly narrowing. Uncut narrowing and forked on top. Sternum VIII with oval cut. Lobes of sternum VIII quite thin and long. Aedeagus distally smoothly bent.

Female genitalia (Fig. 6). Papillae anales wide-oval. Apophyses posteriores thin and short, slightly longer than papillae anales. Apophyses anteriores quite long and thick. Lamina antevaginalis wide, with small triangular notch on top. Lamina postvaginalis of sternum VII shaped as two wide rectangular lobes. Antrum wide, glass-like. Ductus relatively wide and short. Bursa copulatrix large, oval.

DIAGNOSIS. In the male genitalia, in the shape of the aedeagus and the costal process on the left valve, the new species is closest to *Agdistis vansoni* Kovtunovich et Ustjuzhanin, 2015, from which it differs in the special shape of the uncus, peculiar structure of the right valve and its costal process. In the female genitalia, in the antevaginalis lamina shape, it is similar to *Agdistis krooni* Kovtunovich et Ustjuzhanin, 2009, but differs in the anterior apophyses, special shape of the antrum and the narrow ductus.

DISTRIBUTION. South Africa: Northern Cape.

Flight period: September – October

ETYMOLOGY. The species is named after Irina Surkova (Moscow, Russia), the wife of the entomologist Pavel Udovichenko, who was a participant of the expedition in South Africa where the new species was found.

Acknowledgements

We express our gratitude to Mr. Maritz Myburgh (Springbok, South Africa) for providing the possibility to catch the specimens in his property, on the farm Koperberg, and also to Pavel Udovichenko (Moscow, Russia) for his assistance in collecting the materials in the expeditions in South Africa. The authors are grateful to Anna Ustjuzhanina (Tomsk, Russia) for linguistic corrections of the manuscript.

Competing interests. The authors declare no competing interests.

References

- Kovtunovich V.N., Ustjuzhanin P.Ya. 2009a. New species and records of Plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera, Pterophoridae) from Southern Africa // Amurian zoological journal. Vol.1. No.1. P.37–44. Pl.III–IV.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2009b. New species and records of Plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera, Pterophoridae) from Southern Africa. 2 // Amurian zoological journal. Vol.1. No.3. P.216–218. Pl.II–IV.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2010a. New species of Plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera, Pterophoridae) from Southern Africa. 3 // Amurian zoological journal. Vol.2. No.2. P.133–134, Pl.I.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2010b. New species of Plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera, Pterophoridae) from Southern Africa. 4 // Amurian zoological journal. Vol.2. No.3. P.249–251, Pl.II–III.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2010c. New species of Plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera, Pterophoridae) from Southern Africa. 5 // Amurian zoological journal. Vol.2. No.4. P.298–299, Pl.I.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2015a. New species of plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera: Pterophoridae: Agdistinae) from southern Africa 6 // African Invertebrates. Vol.56. No.1. P.137–145.
- Kovtunovich V.N., Ustjuzhanin P.Ya. 2015b. New species of plume moths of the genus *Agdistis* Hübner, 1825 (Lepidoptera: Pterophoridae: Agdistinae) from southern Africa. 7 // Zootaxa. Vol.4033. No.4. P. 555–566.