

Pterophoridae of the South Africa National Park Namaqua (Lepidoptera: Pterophoridae)

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Abstract

In the present study, we review the Pterophoridae family of Namaqua National Park (Republic of South Africa). We list 38 species of 5 genera; 4 of them are listed for the first time for Namaqua National Park; new synonyms are established for 3 species: *Agdistis swierstri* Kovtunovich & Ustjuzhanin, 2009a = *Agdistis eberti* Arenberger, 2009, syn. n.; *Agdistis mostovskii* Kovtunovich & Ustjuzhanin, 2010a = *Agdistis rastri* Arenberger, 2010, syn. n.; *Agdistis dazdraperma* Kovtunovich & Ustjuzhanin, 2009 = *Agdistis swakopi* Arenberger, 2009, syn. n. KEY WORDS: Lepidoptera, Pterophoridae, Namaqua National Park, new synonyms, new data, South Africa.

Pterophoridae del sudafricano Parque Nacional de Namaqua (Lepidoptera: Pterophoridae)

Resumen

En el presente estudio, revisamos la familia Pterophoridae del Parque Nacional de Namaqua (República de Sudáfrica). Se de una lista de 38 especies de 5 géneros; 4 de ellos los son por primera vez para el Parque Nacional Namaqua; se establecen nuevas sinonimias para 3 especies: *Agdistis swierstri* Kovtunovich & Ustjuzhanin, 2009a = *Agdistis eberti* Arenberger, 2009, syn. n.; *Agdistis mostovskii* Kovtunovich & Ustjuzhanin, 2010a = *Agdistis rastri* Arenberger, 2010, syn. n.; *Agdistis dazdraperma* Kovtunovich & Ustjuzhanin, 2009 = *Agdistis swakopi* Arenberger, 2009, syn. n.

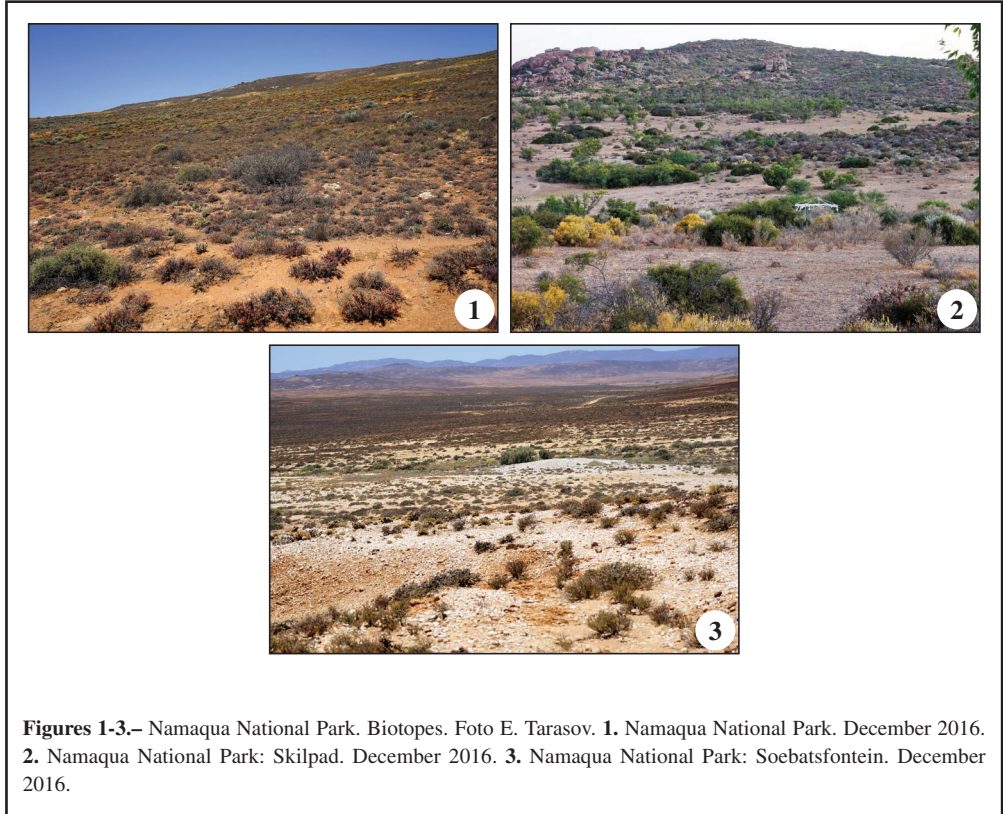
PALABRAS CLAVE: Lepidoptera, Pterophoridae, Parque Nacional Namaqua, nuevas sinonimias, nuevos datos, Sudáfrica.

Introduction

Namaqua National Park (Figs. 1-3) is situated in the Northern Cape province, near the border of the Republic of South Africa with Namibia. It is located in about 495 km North of Cape Town and 22 km North-west of Kamieskroon. The park is a part of Namaqualand, on its territory of 55000 km², located within the semiarid Karoo biome there is a great concentration of biodiversity of flora and fauna. Over 5000 plant species are met there, about 40% of them are endemics.

The Pterophoridae fauna of the national park is very peculiar. Specimens of the genus *Agdistis* are predominating here, and their variety impresses the imagination. Only according to our research, in the period from 2007 to 2017, 18 new species of this genus were described, which are among the already known 32 species. The caterpillars feed on plants of the families Frankeniaceae, Tamaricaceae, etc. The first data on the plume moths of the genus *Agdistis* from Namaqua National Park were published by ARENBERGER (1986, 1996). Many species of the genus *Agdistis* are numerous and often endemic on the dry territory of Namaqua, which can't be said about the representatives of the other genera which

are rare and few in number here. However, two species, *Crassuncus hawkingi* and *Crassuncus koperbergi* were found and described only from the territory of Namaqua Ustjuzhanin (KOVTUNOVICH, 2016).



Figures 1-3.– Namaqua National Park. Biotopes. Foto E. Tarasov. **1.** Namaqua National Park. December 2016. **2.** Namaqua National Park: Skilpad. December 2016. **3.** Namaqua National Park: Soebatsfontein. December 2016.

Annotated list of species

Agdistis clara Arenberger, 1986

Agdistis clara Arenberger, 1986: 189. Type locality: Kalkfontein, Botswana.

Distribution: Botswana, South Africa, Namibia.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis cretifera Meyrick, 1909

Agdistis cretifera Meyrick 1909: 367. Type locality: Worcester, South Africa.

Distribution: Rep. South Africa, Namibia.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis criocephala Meyrick, 1909

Agdistis criocephala Meyrick, 1909: 349. Type locality: Troe Troe, South Africa.

Distribution: Rep. South Africa; Namibia.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis dentalis Arenberger, 1986

Agdistis dentalis Arenberger, 1986: 191. Type locality: Namaqualand, Nr. Garies, Northern Cape, South Africa.

Distribution: South Africa.

Agdistis dicksoni Kovtunovich & Ustjuzhanin, 2009

Agdistis dicksoni Kovtunovich & Ustjuzhanin, 2009a: 42. Type locality: 5 km SE of Springbok, Koperberg farm, Northern Cape, South Africa.

Distribution: South Africa: Western and Northern Cape.

Agdistis eberti Arenberger, 2009

Agdistis eberti Arenberger, 2009: 20. Type locality: Richtersveld, Koeroegabvlakte, South Africa.

Agdistis swierstri Kovtunovich & Ustjuzhanin, 2009a: 217. Type locality: 80 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa, **syn. n.**

Distribution: South Africa: Northern Cape.

Notes: Indicated for Namaqua N. P., as *Agdistis swierstri* (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis endrodyi Kovtunovich & Ustjuzhanin, 2009

Agdistis endrodyi Kovtunovich & Ustjuzhanin, 2009a: 42. Type locality: Seweputs farm, Western Cape, South Africa.

Distribution: South Africa: Western and Northern Cape.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis furcata Arenberger, 1996

Agdistis furcata Arenberger, 1996: 177. Type locality: Namaqualand, Mesklip 18 km. S. of Springbok, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis gibberipenis Arenberger, 1996

Agdistis gibberipennis Arenberger, 1996: 176. Type locality: Namaqualand, Mesklip 18 km. S. of Springbok, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis gornostaevi Kovtunovich & Ustjuzhanin, 2010

Agdistis gornostaevi Kovtunovich & Ustjuzhanin, 2010: 134. Type locality: 10 km S. of Laingsburg, Western Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2010a).

Agdistis insolitus Kovtunovich & Ustjuzhanin, 2010

Agdistis insolitus Kovtunovich & Ustjuzhanin, 2010b: 298. Type locality: 80 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Notes: Indicated for Namaqua N. P. (KOVTUNOVICH & USTJUZHANIN, 2010b).

Agdistis jansei Kovtunovich & Ustjuzhanin, 2009

Agdistis jansei Kovtunovich & Ustjuzhanin, 2009a: 41. Type locality: 9 km South of Springbok, Northern Cape, Rep. South Africa.

Distribution: South Africa: Northern Cape, Western Cape, Free State, Mpumalanga.

Agdistis karischi Arenberger, 1996

Agdistis karischi Arenberger, 1996: 177. Type locality: Hondeklipbaai, Namaqualand, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis kaunda Kovtunovich & Ustjuzhanin, 2015

Agdistis kaunda Kovtunovich & Ustjuzhanin, 2015: 143. Type locality: Springbok, Kopperberg farm, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis krooni Kovtunovich & Ustjuzhanin, 2009

Agdistis krooni Kovtunovich & Ustjuzhanin, 2009a: 42. Type locality: Numees Mine, Richtersveld, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis kruegeri Kovtunovich & Ustjuzhanin, 2009

Agdistis kruegeri Kovtunovich & Ustjuzhanin, 2009a: 43. Type locality: 80 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape, Eastern Cape, KwaZulu-Natal.

Agdistis lomholdti Gielis, 1990

Agdistis lomholdti Gielis, 1990: 114. Type locality: Namibia, Gobabeb.

Distribution: South Africa: Northern Cape, Western Cape; Namibia.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis malleana Arenberger, 1988

Agdistis malleana Arenberger, 1988: 20. Type locality: Western Cape, South Africa.

Distribution: South Africa: Western Cape, Eastern Cape, Northern Cape; Swaziland.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis meyi Arenberger, 2008

Agdistis meyi Arenberger, 2008: 33. Type locality: Helskloof Gate, Numees Mine, Richtersveld, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape; Zimbabwe.

Notes: Indicated for Namaqua N. P., (KOVTUNOVICH & USTJUZHANIN, 2009a).

Agdistis myburgi Kovtunovich & Ustjuzhanin, 2009

Agdistis myburgi Kovtunovich & Ustjuzhanin, 2009b: 217. Type locality: 5 km SE of Springbok, Kopperberg farm, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis namaqua Kovtunovich & Ustjuzhanin, 2010

Agdistis namaqua Kovtunovich & Ustjuzhanin, 2010b: 250. Type locality: 40 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis nikolaii Kovtunovich & Ustjuzhanin, 2010

Agdistis nikolaii Kovtunovich & Ustjuzhanin, 2010b: 249. Type locality: 40 km SW of Springbok, Namaqua N. P., History Prison, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis prisoner Kovtunovich & Ustjuzhanin, 2010

Agdistis prisoner Kovtunovich & Ustjuzhanin, 2010b: 250. Type locality: 5 km SE of Springbok, Koperberg farm, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Agdistis pseudomeyi Kovtunovich & Ustjuzhanin, 2015

Agdistis pseudomeyi Kovtunovich & Ustjuzhanin, 2015: 560. Type locality: 80 km SW of Springbok, Namaqua National Park, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Agdistis quagga Arenberger, 2009

Agdistis quagga Arenberger, 2009: 21. Type locality: Quaggafountain, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis rastri Arenberger, 2010

Agdistis rastri Arenberger, 2010: 76. Type locality: Farm Windhoek, Kamieskroon, Northern Cape, South Africa.

Agdistis mostovskii Kovtunovich & Ustjuzhanin, 2010a: 133. Type locality: 10 km S. of Laingsburg, Western Cape, South Africa, **syn. n.**

Distribution: South Africa: Northern Cape, Western Cape.

Notes: Indicated for Namaqua N. P., as *Agdistis mostovskii* (KOVTONOVICH & USTJUZHANIN, 2010a).

Agdistis sergeii Kovtunovich & Ustjuzhanin, 2015

Agdistis sergeii Kovtunovich & Ustjuzhanin, 2015: 556. Type locality: 80 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis springbok Kovtunovich & Ustjuzhanin, 2010

Agdistis springbok Kovtunovich & Ustjuzhanin, 2010b: 298. Type locality: 5 km SE of Springbok, Koperberg farm, Northern Cape, South Africa.

Distribution: South Africa: Northern Cape.

Agdistis swakopi Arenberger, 2009

Agdistis swakopi Arenberger, 2009: 19. Type locality: 10 km E Swakopmund, Namibia.

Agdistis dazdraperma Kovtunovich & Ustjuzhanin, 2009b: 217. Type locality: 80 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa, **syn. n.**

Distribution: Namibia, Rep. South Africa: Northern Cape.

Notes: Indicated for Namaqua N. P., as *Agdistis dazdraperma* (KOVTONOVICH & USTJUZHANIN, 2009b).

Agdistis streltzevi Kovtunovich & Ustjuzhanin, 2010

Agdistis streltzevi Kovtunovich & Ustjuzhanin, 2010b: 251. Type locality: 40 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Agdistis vansoni Kovtunovich & Ustjuzhanin, 2015

Agdistis vansoni Kovtunovich & Ustjuzhanin, 2015: 139. Type locality: 40 km SW of Springbok, Namaqua N. P., Northern Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Agdistis violaceus Kovtunovich & Ustjuzhanin, 2010

Agdistis violaceus Kovtunovich & Ustjuzhanin, 2010a: 133-134. Type locality: 10 km S of Laingsburg, Western Cape, South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Notes: Indicated for Namaqua N. P., (KOVTONOVICH & USTJUZHANIN, 2010a).

Stenodacma wahlbergi (Zeller, 1851)

Pterophorus wahlbergi Zeller, 1851: 346. Type locality: South Africa.

Distribution: South Africa, Cameroon, Swaziland, Zimbabwe, Tanzania, Kenya, Ghana, Madagascar, Comoros, Reunion Isl., Rodriguez Isl., Mauritius, Seychelles, St. Helena Isl., Saudi Arabia, Iran, Pakistan.

Notes: Given for Namaqua N. P., for the first time, on the materials of the expedition of 2017: 1 ♀, South Africa, Northern Cape, Namaqua N. P., Skilpad, 30° 09'S, 017° 47'E, 250 m, 30-VIII-2-IX-2017, leg. V. Kovtunovich and P. Udovichenko.

Megalorhipida festus (Meyrick, 1920)

Trichoptilus festus Meyrick, 1920: 273. Type locality: Cape Town, South Africa.

Trichoptilus animosus Meyrick, 1921: 49. Type locality: KwaZulu-Natal, South Africa.

Distribution: South Africa: Northern Cape, Western Cape, KwaZulu-Natal; Kenya.

Notes: Given for Namaqua N. P., for the first time, on the materials of the expedition in 2017: 2 ex., South Africa, Northern Cape, 5 km SE Springbok, Koperberg farm, 29° 42'S, 017° 42'E, 760 m, 30-XII-2016 - 1-I-2017, leg. V. Kovtunovich and P. Ustjuzhanin; 2 ♀♀, 2 ♂♂, South Africa, Northern Cape, Namaqua N. P., Skilpad, 30° 09'S, 017° 47'E, 250 m, 30-VIII - 2-IX-2017, leg. V. Kovtunovich and P. Udovichenko.

Megalorhipida subtilis (Rebel, 1907)

Trichoptilis subtilis Rebel, 1907: 114. Type locality: Jemen.

Trichoptilis maceratus Meyrick, 1909: 2. Type locality: Rietfontein, South Africa.

Distribution: South Africa, Jemen, Socotra, Swaziland, Malawi, Mozambique, Zimbabwe.

Notes: Given for Namaqua N. P., for the first time, on the materials of the expedition in January 2017: 1 ♂, South Africa, Northern Cape, 5 km SE Springbok, Koperberg farm, 29° 42'S, 017° 42'E, 760 m, 30-XII-2016 - 1-I-2017, leg. V. Kovtunovich and P. Ustjuzhanin.

Marasmarcha corniculata (Meyrick, 1913)

Platyptilia corniculata Meyrick, 1913: 267. Type locality: Three Sisters, Northern Cape, South Africa.

Distribution: South Africa, Kenya.

Notes: Given for Namaqua N. P., for the first time, on the materials of the expedition in autumn 2017: 2 ♀♀, 1 ♀ South Africa, Northern Cape, Namaqua N. P., Skilpad, 30° 09'S, 017° 47'E, 250 m, 30-VIII - 2-IX-2017, leg. V. Kovtunovich and P. Udovichenko.

Crassuncus hawkingi Ustjuzhanin & Kovtunovich, 2016

Crassuncus hawkingi Ustjuzhanin & Kovtunovich, 2016:169. Type locality: Namaqua N. P., South Africa.

Distribution: South Africa: Northern Cape, Western Cape.

Crassuncus koperbergi Ustjuzhanin & Kovtunovich, 2016

Crassuncus koperbergi Ustjuzhanin & Kovtunovich, 2016: 167. Type locality: 5 km SE of Springbok, South Africa.

Distribution: South Africa: Northern Cape.

Discussion

As a result of our study, 38 Pterophoridae species have been indicated on the territory of Namaqua National Park. Most of them belong to the genus *Agdistis* (32 species), which is explained by their ability to the extreme adaptation in the severe arid biocenoses. Despite many years of our research in this region (seven expeditions have been carried out), the data on the Pterophoridae fauna of this region will be undoubtedly supplemented with species new to the region, as well as new to science.

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BIBLIOGRAPHY

- ARENBERGER, E., 1986.– Die *Agdistis*-Arten der Äthiopischen Region (1. Beitrag). (Lepidoptera, Pterophoridae).– *Mitteilungen der Schweizerischen entomologischen Gesellschaft*, **59**: 187-196.
- ARENBERGER, E., 1996. - Die *Agdistis*-Arten der Äthiopischen Region. 3.– *SHILAP Revista de lepidopterología*, **24**(94): 175-182.
- ARENBERGER, E., 2009.– Zur Verbreitung der Pterophoridae im südlichen Afrika. 5. Beitrag (Lepidoptera).– *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, **61**: 19-28.
- ARENBERGER, E., 2010.– *Agdistis rastris* sp. n., aus dem südlichen Afrika mit weiteren Angaben zur Verbreitung der Gattung *Agdistis* Hübner, [1825]. 6. Beitrag (Lepidoptera).– *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, **62**: 75-80.
- KOVTUNOVICH, V. & USTJUZHANIN, P., 2009a.– New species and records of Plume moths of the genus *Agdistis* Hübner [1825] (Lepidoptera, Pterophoridae) from Southern Africa.– *Amurian Zoological Journal*, **1**(1): 37-44, pls. III-IV.
- KOVTUNOVICH, V. & USTJUZHANIN, P., 2009b.– New species and records of Plume moths of the genus *Agdistis* Hübner, [1825] (Lepidoptera, Pterophoridae) from Southern Africa 2.– *Amurian Zoological Journal*, **1**(3): 216-218, pls. II-IV.
- KOVTUNOVICH, V. & USTJUZHANIN, P., 2010a.– New species of Plume moths of the genus *Agdistis* Hübner, [1825] (Lepidoptera, Pterophoridae) from Southern Africa 3.– *Amurian Zoological Journal*, **2**(2): 133-134, pl. I.
- KOVTUNOVICH, V. & USTJUZHANIN, P., 2010b.– New species of Plume moths of the genus *Agdistis* Hübner, [1825] (Lepidoptera, Pterophoridae) from Southern Africa 5.– *Amurian Zoological Journal*, **2**(4): 298-299, pl. I.
- USTJUZHANIN, P. & KOVTUNOVICH, V., 2016.– New species of South African Plume moths (Lepidoptera: Pterophoridae).– *Russian Entomological Journal*, **25**(2): 167–171.

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