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Author: Bassi, Graziano

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Notes on the genus *Argentochiloides* Bleszyński, 1961, with description of a new species (Lepidoptera: Pyraloidea, Crambidae)

Graziano Bassi

Via Sant'Agostino, 51, I-10051 Avigliana (Torino), Italy; Muséum d'histoire naturelle de Genève, C.P. 6434, CH-1211 Genève 6, Suisse (Corresponding member); alphacrambus@gmail.com; <https://orcid.org/0000-0002-6028-0740>

Abstract: A new species of *Argentochiloides* Bleszyński is described and illustrated: *Argentochiloides mirabilis* sp. nov. from the Republic of South Africa. A list of the known species and an image of the holotype of each species are given. *Charltona argyrastis* Hampson is transferred from *Aurotalis* Bleszyński to *Argentochiloides*.

Keywords: Afrotropical - Ancyloleptini - Crambinae - distribution - new combination.

INTRODUCTION

The genus *Argentochiloides* was erected by Bleszyński (1961: 36, 37) for *A. xanthodorsellus* Bleszyński from Tanzania. A new South African species was added by Bassi (1999). A small series of another South African species here described allows me to update the actual composition of this genus, with the addition of *A. argyrastis* (Hampson, 1919) comb. n., originally described in *Charltona* Swinhoe, 1886 and here transferred from *Aurotalis* Bleszyński, 1970.

MATERIAL AND METHODS

Genitalia preparations were made following Robinson (1976). The terminology of the genitalia follows Bleszyński (1965), Klots (1970) and Kristensen (2003). Genitalia photographs were taken with a Canon S120 digital camera. The habitus photos were made with a Nikon D3300 digital camera. The images were enhanced with Adobe Photoshop Elements. The following abbreviations are used: 'GB' for Graziano Bassi, 'GS' for genitalia slides, 'RCGB' for Graziano Bassi research Collection, Avigliana, Italy (to be deposited in Muséum d'histoire naturelle de Genève, Switzerland), and 'TMSA' for Ditsong National Museum of Natural History (formerly the Transvaal Museum), Pretoria, Republic of South Africa.

TAXONOMY

Argentochiloides Bleszyński, 1961

Argentochiloides Bleszyński, 1961: 36, 37, type species
Argentochiloides xanthodorsellus Bleszyński, 1961, by original designation.

Diagnosis: The adults differ from the other Afrotropical Crambinae in having a medium-large size (22-33 mm) and wings, especially the forewings, of a particularly reflective glossy white. The male genitalia are characterized by the heavily curved uncus and gnathos associated with strongly asymmetrical valvae and a long, sinuous phallus, characters which are not present all together in other genera of Afrotropical Crambinae. In the female genitalia the most evident feature is the distal large globular extension of the ductus bursae, associated with papillae anales with strong setae originating from short projections as in *Aurotalis* Bleszyński, 1970. However, in *Aurotalis* the ductus bursae is simple. In *Ancylogastra gangraensis* Bassi, Sáfián, Müller & Kravchenko (2021), the only other Afrotropical species which has a globular extension of the ductus bursae, the extension is proximal in the ductus bursae, and in both *Aurotalis* and *Ancylogastra* the male genitalia have symmetrical valvae. The Oriental genus *Pseudoclasseyia* Bleszyński, 1964 has asymmetrical valvae and a globular extension of the ductus bursae also, but the male genitalia lack the gnathos, the asymmetry in the valvae is restricted to the costal process, the phallus is not differentiated, and the

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female genitalia (Bassi, 1989, figs 22-25) have papillae anales of the *Calamotropha-Pseudocatharylla* type, the globular extension has its own short ductus, and a signum is present in the bursa copulatrix.

Remarks: Błeszyński (1961: 36) placed the genus next to *Chilo* Zincken in the original description, but in later years he realized that this association was incorrect and included the genus in the *Pseudocatharylla* complex (Błeszyński, 1964: 755), despite having doubts on its position. In the modified uncus and gnathos in the male genitalia, the papillae anales and general structure of the female genitalia and the tympanal organs (Fig. 9) *Argentochiloides* is a member of the Ancylolemiini Ragonot (1889), and of the *Ancyloleomia* complex of genera (Bassi, 2013), close to *Aurotalis* and *Ancylogastra* Bassi & Poltavsky (in Bassi *et al.*, 2021). Unfortunately, all specimens are too old to allow for successful standard DNA extraction; the live specimen photographed in 2010 (Figs 5, 6) was not collected.

***Argentochiloides mirabilis* sp. nov.**

Figs 1, 5, 6, 7, 9

Holotype: female, [South Africa, Free State, 31°56'S 22°08'E] Modderpoort, 18.xii. [19]25, A.J.T. Janse, TMSA.

Paratypes: 2 females, with same data as holotype, GS 3788 GB, TMSA and CB; 2 females, Buffelspoort, 15.xii. [19]24, A.J.T. Janse, TMSA and RCGB.

Additional material: 1 male, Gauteng, Pretoria, Tshwane Metropolitan Municipality, 1340 m, 25°34'31"S, 28°34'40"E, 9.xii.2020, specimen only photographed by J.-M. Van Tonder.

Etymology: Derived from *mirabilis* (Latin) = wonderful, referring to the striking habitus of the species.

Diagnosis: No other species of Afrotropical Crambinae have a forewing pattern in any way similar to that of this species in the silvery white forewings with three large olive-green stripes. In female genitalia *A. mirabilis* (Fig. 7) is most similar to *A. argyrastis* (Fig. 8) but its apophyses posteriores are longer, narrower and sinuous instead of straight, and the ductus bursae has two sclerotised patches basally and distally, absent in *A. argyrastis*.

Description: (Figs 1, 5, 6). Wingspan 33 mm. Labial palpi 3.5 X eye diameter, yellow sprinkled with brown, with inner side white. Maxillary palpi basally olive brown, then yellow. Antenna simple, brown with costa olive green. Frons yellow sprinkled with brown and bordered white. Ocelli and chaetosemata poorly developed. Vertex white. Patagium yellow bordered white. Tegulae olive green bordered white. Thorax

white sprinkled with pale brown. Forewing with pointed apex and termen oblique; ground colour silvery white with three olive green stripes, the medial one enlarging distally; costa basally brown, then silvery white; fringes silvery white; underside with large white border and medially brown. Hindwing silvery white with costa and medial fascia pale bronze brown; fringes pure white; underside white with costa yellow-brown and veins M2-Cu2 brown; frenulum triple. Fore and mid legs bronze brown with inner side pale yellow; hind leg paler with tibial spurs short, inner spurs as long as outer. Abdomen olive green with first tergite white.

Female genitalia (Fig. 7). Papillae anales stout, ventrally rounded; apophyses posteriores 1.6 times as long as apophyses anteriores, curved inward; abdominal segment VIII large, ventrally membranous; ostium bursae asymmetrical; ductus bursae with two more sclerotised patches basally and distally; globular extension strongly wrinkled; corpus bursae 1.5 longer than ductus bursae, suboval.

Male. Judging from the photographs (Figs 5, 6), similar to female, with antenna slightly serrate.

Biology: Unknown. Specimens were caught in December.

Distribution: South Africa: Free State, Gauteng and North West Provinces.

Remarks: All of the specimens on which the species of the genus are based are very old and the suspicion that the species were extinct was strong, when, surprisingly, a live male of *A. mirabilis* was photographed in December 2020 in the surroundings of Pretoria. This specimen was not collected, which prevents insights into the taxonomy and systematics of the species and genus, but perhaps it is for the best and this specimen demonstrates how much life can survive the toughest trials.

***Argentochiloides argyrastis* (Hampson, 1919) comb. n.**

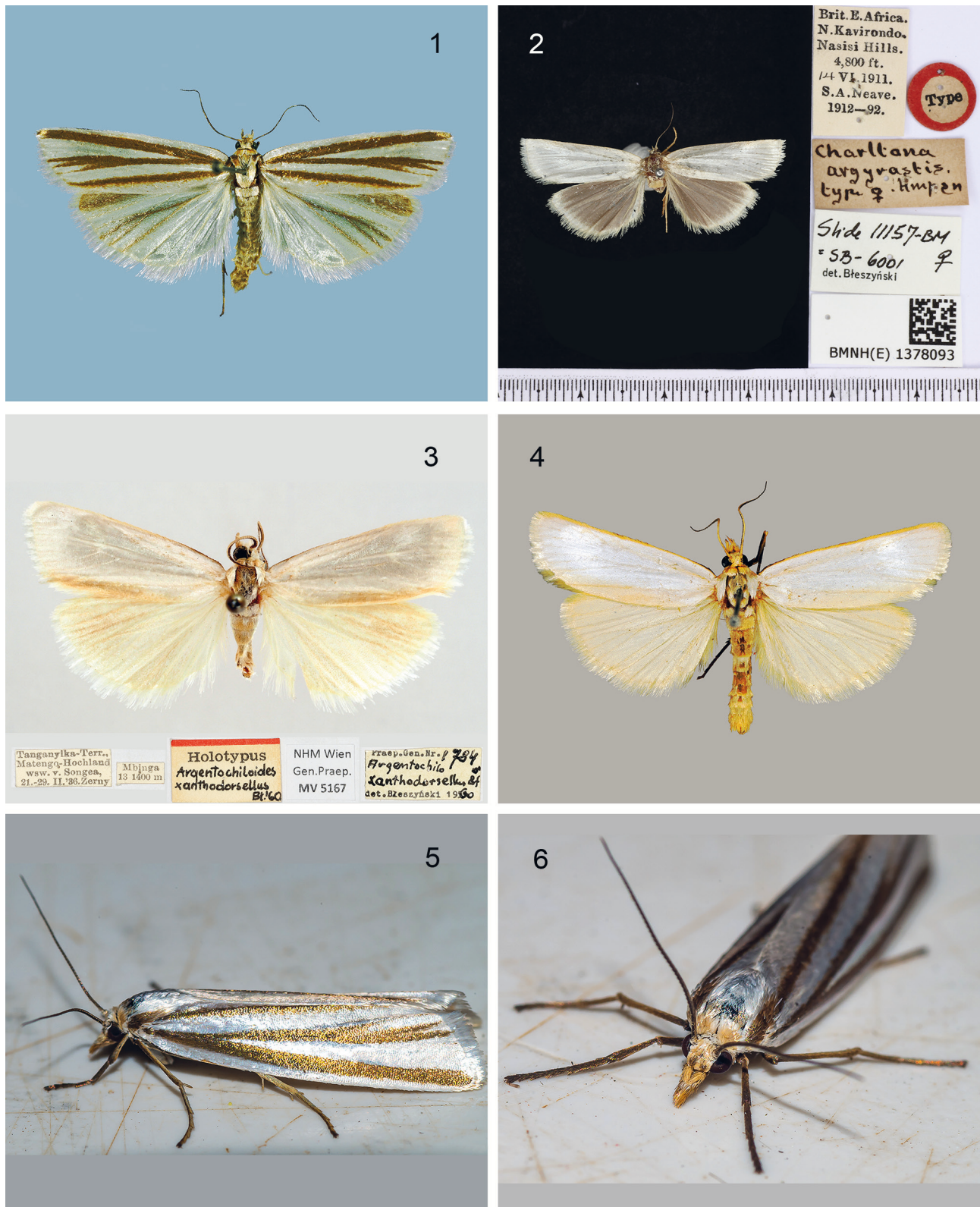
Figs 2, 8

Charltona argyrastis Hampson, 1919: 306, 307.

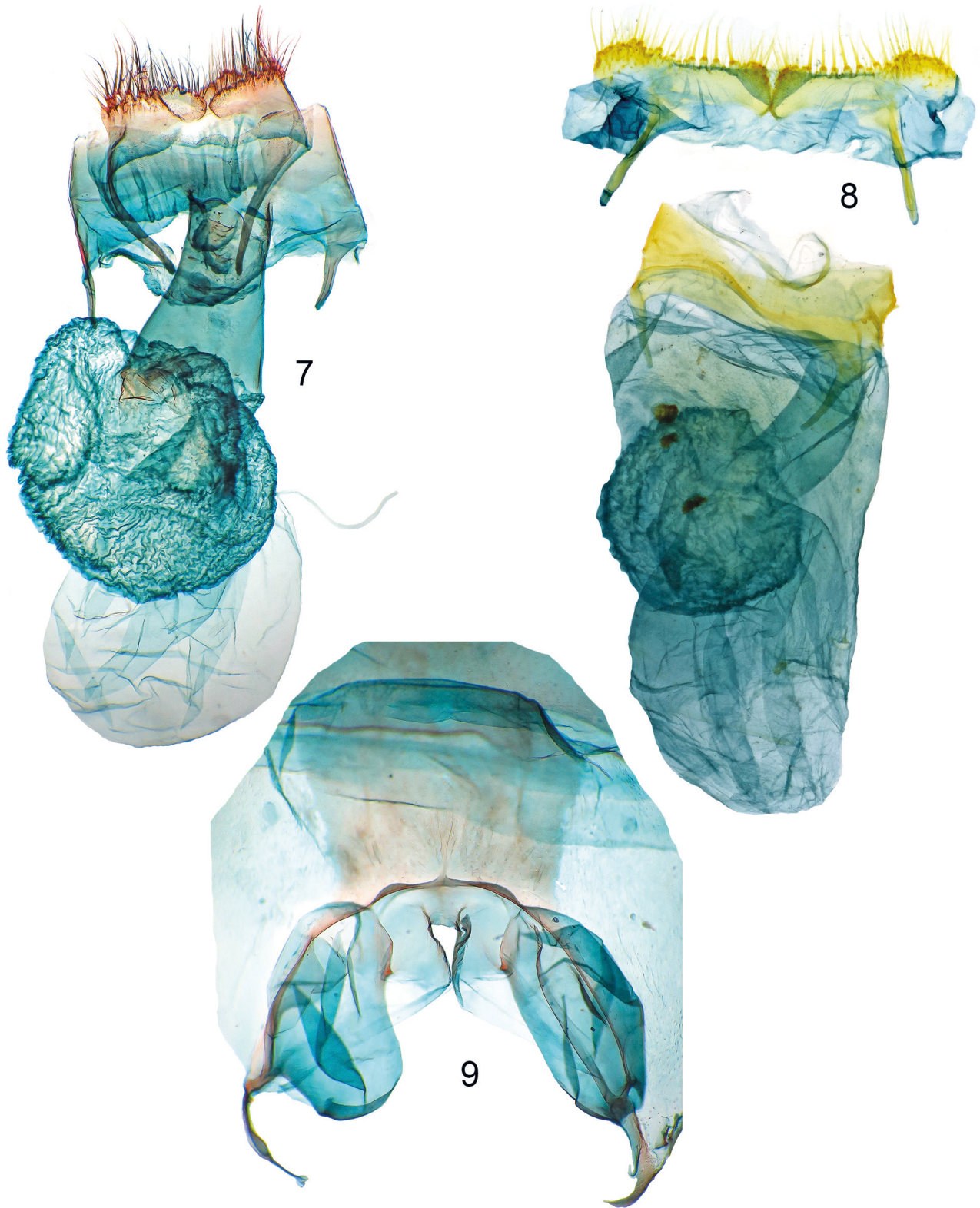
Aurotalis argyrastis (Hampson, 1919). – Bassi, 2016: 14.

Type locality: Kenya

Remarks: The female holotype from western Kenya and an additional specimen from Nigeria were both collected early in the past century. They remain the only two known specimens and the Nigerian one is without abdomen. The holotype is figured on Figs 2, 8.



Figs 1-6. *Argentochiloides* spp., habiti. (1) *A. mirabilis* sp. n., holotype, wingspan 32 mm. (2) *A. argyrastis* (Hampson), holotype and its labels, photo A. Giusti, © Courtesy of the Trustees of the Natural History Museum, London, U.K. (3) *A. xanthodorsellus* Bleszyński, holotype and its labels, wingspan 22 mm, photo: H. Bruckner, Lepidoptera Image Collection, Natural History Museum Vienna, Austria. (4) *A. meridionalis* Bassi, holotype, Johannesburg, Liniord, wingspan 28 mm. (5, 6) *A. mirabilis* sp. n., male, Pretoria, Tshwane (photo Jaunne-Marelize Van Tonder, Dec. 9, 2020).



Figs 7-9. *Argentochiloides* spp., female genitalia and tympanal organs. (7) *A. mirabilis* sp. n., holotype. (8) *A. argyrastis*, holotype. (9) *A. mirabilis* sp. n., tympanal organs.

***Argentochiloides xanthodorsellus* Bleszyński, 1961**

Fig. 3

Type locality: Tanzania.

Remarks: Described from four males collected in the 1930s, the species is only known from the Matengo Highlands in southern Tanzania. No other specimens are known beyond the typical series. The holotype is figured on Fig. 3.

***Argentochiloides meridionalis* Bassi, 1999**

Fig. 4

Type locality: South Africa.

Remarks: Described from two males collected early in the past century in areas now integrated into the city of Johannesburg. No other specimens are known beyond the type series. The holotype is figured on Fig. 4.

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