

# On the taxonomy of Afrotropical Coleophoridae (V). New species of the genus Coleophora from Namibia (Lepidoptera, Coleophoridae)

Author: Baldizzone, Giorgio

Source: Revue suisse de Zoologie, 129(1) : 19-49

Published By: Muséum d'histoire naturelle, Genève

URL: https://doi.org/10.35929/RSZ.0060

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at <u>www.bioone.org/terms-of-use</u>.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

# On the taxonomy of Afrotropical Coleophoridae (V). New species of the genus *Coleophora* from Namibia (Lepidoptera, Coleophoridae)

Giorgio Baldizzone<sup>1,2</sup>

<sup>1</sup> Via Manzoni, 24, I-14100 Asti, Italy. E-mail: baldizzonegiorgio@gmail.com https://orcid.org/0000-0001-8127-0843
<sup>2</sup> Contribution to the knowledge of Coleophoridae CXLVIII

Abstract: This work presents a review of the Coleophoridae of Namibia. In addition to the list of 27 species known to date, 14 new species are described: *Coleophora magnaefontis* sp. nov., *C. gondwanae* sp. nov., *C. exotica* sp. nov., *C. pectinella* sp. nov., *C. abstrusa* sp. nov., *C. ausensis* sp. nov., *C. demiranda* sp. nov., *C. sandveldensis* sp. nov., *C. amaurosella* sp. nov., *C. omatakoella* sp. nov., *C. hobaterensis* sp. nov., *C. linteella* sp. nov., *C. leesi* sp. nov., *C. spatulifera* sp. nov.

Keywords: Lepidoptera - Coleophoridae - Coleophora - new species - Namibia - Afrotropical Region.

#### INTRODUCTION

Until the 21st century, no species of Coleophoridae was known for Namibia. Following recent researches and specimen collecting, especially by Wolfram Mey, many species have been discovered, most of them new to science (Baldizzone & van der Wolf, 2004, 2011, 2015). In addition to the new species described from material collected in Namibia, four other species records were added to the Namibian fauna. They had been described before this by E. Meyrick from South Africa: *C. scaleuta* Meyrick, 1911, *C. presbytica* Meyrick, 1911 (Meyrick, 1911; Baldizzone & van der Wolf, 2011), *C. textoria* Meyrick, 1921 (Meyrick, 1921; Baldizzone & van der Wolf, 2015), *C. oxyphaea* Meyrick, 1913 (Meyrick, 1913; Baldizzone, 2019b).

Until now, 27 species were known from Namibia, but many others will undoubtedly be added as new material is studied. The present work gives the descriptions of an additional 14 new species.

# MATERIAL AND METHODS

Most of the Euparal slide mounts of dissected genitalia were photographed with a Bresser 5.0 camera attached to a Bresser BioScienze 40-1000x trinocular microscope, mainly using the Leitz PL Fluotar 6.3 / 0.20 objective. A few slides were photographed with an old Miranda camera body fitted with an adaptor tube to an old "Galileo" microscope equipped with Aus Jena 3:1-0.10 and 6.3:1-0.18 objectives. Black-and-white Ilford PAN F film was used to obtain images with high contrast between

the structures and the background. Film negatives were digitized with a scanner then cleaned and edited in Corel PaintShop Pro. Adults were photographed with a Canon EOS 5D Mark II digital camera equipped with a Canon MP-E 65 mm objective, with lighting provided by two circular neon lamps OSRAM L 32W / 8400 C (cool white).

Morphological terms follow Baldizzone (2019a).

#### Abbreviations

- Bldz = Giorgio Baldizzone, Asti, Italy
- GP = genitalia preparation
- MfN = Museum für Naturkunde, Berlin, Germany
- NHMUK = Natural History Museum, London, U.K. (formerly British Museum of Natural History = BMNH)
- RSA = Republic of South Africa
- TMSA = Ditsong National Museum of Natural History, Pretoria, South Africa (formerly Transvaal Museum)
- Wf = Hugo W. van der Wolf, Nuenen, The Netherlands.

#### TAXONOMY

#### *Coleophora magnaefontis* sp. nov. Figs 1, 17-21

Holotype: ♂ (GP Bldz 15309); "Namibia | Grootfontein | m. 1300 | 6.IV.2009 | Legit G. Bassi"; "Collezione G. Bassi | 40398", [19°31'S, 18°08'E]; in coll. Baldizzone, Asti.

Manuscript accepted 23.08.2021 DOI: 10.35929/RSZ.0060

**Paratypes:** 1  $\Diamond$  (GP Bldz 17243); same date and locality; "Collezione | G. Bassi | 40271"; in coll. Bassi. – 1  $\Diamond$  (GP BMNH 27348) "Pretoria, Transvaal, Janse | 12.3.[19]15"; in coll. NHMUK.

**Diagnosis:** Species of general appearance pale ochraceous. The male genitalia do not resemble those of any other known Afrotropical species and are characterized by the shape of the short and stocky tegumen with the pedunculus strongly dilated on the outside, the small cucullus, and the large sacculus.

**Description:** Wingspan 9 mm. Head whitish, frons suffused with ochre. Antenna ochre; scape ochre with a tuft of short scales. Labial palpus whitish on inner side, ochre on outer side; second segment ca. 0.5 time length of third. Proboscis short. Thorax white, suffused with ochre medially. Tegula white, ochre on outer side. Forewing ochre, slightly lined white along costa, on subcostal veins, lower edge of cell, and anal fold; fringes light ochre. Hindwing light grey, including fringes. Abdomen light ochre.

*Abdominal structures* (Fig. 21): Anterior lateral struts about 2.5 times as long as posteriors. Transverse strut with proximal edge thin and linear, distal edge thicker and slightly curved. Tergal disks (3rd tergite) length about twice their width, covered with about 30 small spines.

*Male genitalia* (Figs 17-20): Gnathos knob globular. Tegumen short and stout, constricted in middle; pedunculus short, strongly dilated. Transtilla slender, linear. Valvula with dorsal margin expanded, irregularly shaped, covered with few setae ventrally. Cucullus small, short, rounded at apex. Sacculus large, more sclerotized and slightly jagged on outer edge, with small triangular protuberance at dorsal angle. Phallotheca conical, slightly curved, more thickly sclerotized dorsally. Five spine-shaped cornuti of different lengths, fused together in the shape of a claw.

Female genitalia: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia (prov. Otjozondjupa), RSA (prov. Gauteng).

**Etymology:** From the Latin *magnus* [*-a, -um*] = great, and *fons* [*-fontis*] = source, because the name "Grootfontein", in Afrikaans, means "the great source".

### *Coleophora gondwanae* sp. nov. Figs 2, 22-24

Holotype: ♂ (GP Bldz 13537); "RSA | Richtersveld | Numees | Helskloof Gate | 9-12.X.2001 | leg. W. Mey | LF"; BIOTA | 160 W lamp | 200482001702681" [28°17.58'S, 16°57.228'E, 626 m]; in coll. MfN.

Paratype: 1 ♂ (GP Bldz 15019); "Namibia | Fishriver

| Gondwana Canyon Lodge | 17.4.2008 | leg. W. Mey" [27° 40.412'S, 17°49.199'E, 757 m]; in coll. MfN.

**Diagnosis:** Species of light brownish grey habitus, with a small dot in the forewing cell. The male genitalia are characteristic because the valvula, cucullus and sacculus do not have separating margins, but are completely fused. The most similar African species is *C. frivolella* Baldizzone & van der Wolf, 2005, known only from Katanga (Democratic Republic of Congo). This species differs from *C. gondwanae* sp. nov. in habitus by its small size (8 mm) and creamy white forewing. The male genitalia show some obvious differences: the much longer transtilla, thinner, united medially, the smaller sacculus with a straight lateral margin, the very small and conical phallotheca, sclerotized only apically.

**Description:** Wingspan 10-13 mm. Head whitish. Antenna whitish grey; scape without erected scales. Labial palpus long, white on inner side, brown on outer side with protruding scales almost completely covering third segment, latter about half as long as second. Proboscis short, of normal shape. Thorax whitish grey. Tegula whitish grey, scattered with brown scales on outer side. Forewing whitish grey, thickly suffused with brown scales and with a small brown dot in the cell; fringes light ochre. Hindwing including fringes grey. Abdomen dirty whitish.

*Abdominal structures* (Fig. 24): Anterior lateral struts about 2.5 times as long as posteriors. Transverse strut with proximal edge thin and linear, with distal edge thicker and curved. Tergal disks (3rd tergite) about 5.5 times as long as wide, covered with about 50 spines.

*Male genitalia* (Figs 22, 23): Gnathos knob globular. Tegumen stout, constricted in middle; pedunculus short, dilated on outside. Transtilla large, triangular. Valvula not evident. Cucullus short, larger at base. Sacculus small, with straight ventral edge and small rounded protuberance at ventral angle. Phallotheca curved, sclerotized dorsally and dilated at rounded apex, without cornuti.

*Female genitalia*: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia (prov. Karas), RSA (prov. Northern Cape).

**Etymology:** The name derives from the name of the ancient supercontinent Gondwana.

#### *Coleophora exotica* sp. nov. Figs 3-4, 25-31

**Holotype:** ♂ (GP Bldz 15015); "Namibia, Fishriver | Gondwana Canyon Lodge | 17.4.2008 | leg. W. Mey", [27°40.412'S, 17°49.199'E, 757 m ]; in coll. MfN. Paratypes: 3 ♂ (GP Bldz 15042); "RSA, Richtersveld | Koeroegapvlakte | 14-16.X.2001 LF | leg. W. Mey", [S 28°14.116' E 17°01.509', 664 m ]; in coll. MfN. – 4 ♂ (GP Bldz 17156, 17158), 1  $\bigcirc$  (GP Bldz 17157) "Namibia, Rosh Pinah, Namuskluft, | 7.3.2014, LF| leg. W. Mey", [27°51.986'S, 016°52.033'E, 685 m]; in coll. MfN and coll. Baldizzone.

**Diagnosis:** Species of greyish appearance. The habitus is similar to that of *C. kruegeri* Baldizzone & van der Wolf, 2004, but the genitalia do not resemble those of any other Afrotropical species. The male genitalia are similar to those of *C. maculata* Baldizzone, 2016, from Armenia, of which only the male is known, with ivory-coloured forewing and brown longitudinal streaks. The differences are mainly the shape of the shorter tegumen, in the ventral border of the sacculus engraved on the inner side and the protuberance in the dorsal angle longer and more curved. In the female of *C. exotica* the shape of the ductus bursae is characteristic, with the two parts of different width, of which the distal one with a sclerotized central line.

**Description:** Wingspan 14 mm. Head white. Antenna white; scape without erected scales. Labial palpus long, white on inner side, ochre suffused on outer side; the second segment covered with long scales projecting up to the apex of the third which is half the length of the second. Proboscis vestigial. Thorax and tegula white. Forewing whitish grey suffused of brown scales more concentrated in the costal half and at the apex; fringes light grey. Hindwing grey; fringes light grey. Abdomen whitish grey.

*Abdominal structures* (Figs 28, 31): Anterior lateral struts about 1.5 times as long as posteriors. Transverse strut curved on distal edge, with proximal edge sclerotized only in a small portion in the centre. Tergal disks (3rd tergite) about 4.5 times as long as wide, covered with about 30 conical spines.

*Male genitalia* (Figs 25-27): Gnathos knob globular. Tegumen long, restricted in middle; pedunculus short, dilated on outside. Transtilla ribbon-shaped, dilated at the apex. Valvula oblong, well sclerotized, covered with numerous setae with external edge curved and prominent. Cucullus short, ear shaped. Sacculus with inclined ventral edge and very sclerotized, dorsal angle with a robust triangular protuberance slightly overtaking the apex of the cucullus. Phallotheca conical, sclerotized only on lateral side. Not cornuti.

*Female genitalia* (Figs 29, 30): Papillae anales narrow and long. Apophyses posteriores about twice long as the anteriores. Sterigma trapezoidal, wider than long, proximal edge almost straight, distal edge curved, provided with long bristles, widely hollowed in the middle by the sinus vaginalis. Ostium bursae large, oval. Colliculum calyx-shaped, with outer edges thickened by more sclerotized bands, which merge into the short distal part of the ductus bursae. Ductus bursae: the distal part, about as long as the sterigma is thin, almost entirely crossed by a sclerotized medial line; the proximal part, slightly longer than the distal one, twice as wide, completely transparent. Corpus bursae in the form of an elongated sac with a small oval signum with a short spiny protuberance.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia (prov. Karas), RSA (prov. Northern Cape).

**Etymology:** The name derives from the Latin *exoticus* [*-a, -um*] = exotic.

#### *Coleophora pectinella* sp. nov. Figs 5, 32-37

Holotype: ♂ (GP Bldz 15019); "Namibia | 50 km N Okahandja | 12.2.2007, LF | leg. J. Deckert", [21°35.447'S, 16°56.174 E, 1349 m]; in coll. MfN.

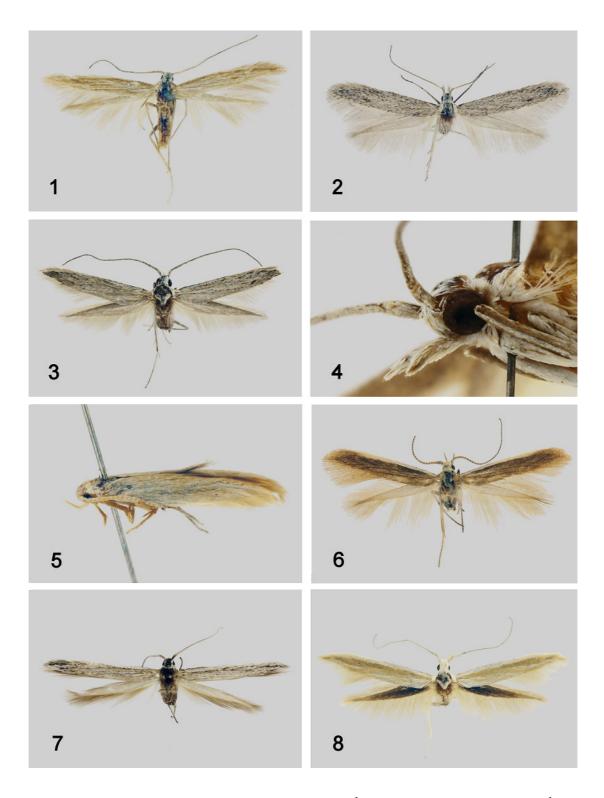
**Paratypes:** 1  $\bigcirc$  (GP Bldz 17164) "Namibia | 50 km N Okahandja | 8.4.2008, LF | leg. W. Mey"; "BIOTA observatory | Erichsfelde | Aut. Falle 1", [21°35.447'S, 16°56.174'E, 1349 m]; in coll. MfN. – 1  $\bigcirc$  (GP Wf. 6439); [South Africa] "NYALAZI Forest, 25-28. III.1968 | Potgieter & Goode"; in coll. TMSA.

**Diagnosis:** In habitus and male genitalia *Coleophora pectinella* sp. nov. resembles *C. katangica* Baldizzone & van der Wolf, 2005, species from Democratic Republic of Congo, of which only the male is known. In the male genitalia of *C. katangica* the transtilla is smaller, little sclerotized. The valvula is more evident with an elongated ventral part, the cucullus is longer, much less inclined, the phallotheca is different, with two juxta rods, one of which ends at the apex with a triangular tooth, while in *C. pectinella* it ends with five robust thorns. The female of *C. pectinella* is unmistakable because the pointed shape of the papillae anales and for the large asymmetrical V-shaped sclerotized structure, which delimits the ostium bursae.

**Description:** Wingspan 10 mm. Head whitish. Antenna light ochre; scape without erected scales. Labial palpus whitish, slightly ochre suffused on outer side; second segment about 0.5 times the third. Proboscis short. Thorax and tegula whitish. Forewing completely light ivory; fringes light ochre. Hindwing and fringes light ochre. Abdomen light ochre.

*Abdominal structures* (Figs 33, 37): No posterior lateral struts, transverse strut thin, slightly curved. Tergal disks (3rd tergite) about 2.5 times longer than wide, covered with about 35 conical spines.

*Male genitalia* (Figs 32, 34): Gnathos knob oval. Tegumen long, slightly restricted in middle; pedunculus short, dilated on outside. Transtilla triangular at the



Figs 1-8. Adults of Coleophora spp. (1) C. magnaefontis sp. nov., paratype ♂. (2) C. gondwanae sp. nov., holotype ♂. (3) C. exotica sp. nov., holotype ♂. (4) C. exotica head in lateral view. (5) C. pectinella sp. nov., holotype ♂. (6) C. abstrusa sp. nov., holotype ♂. (7) C. ausensis sp. nov., holotype ♂. (8) C. demiranda, sp. nov., holotype ♂.



Figs 9-16. Adults of *Coleophora* spp. (9) *C. sandveldensis* sp. nov., paratype ♀. (10) *C. amaurosella* sp. nov., holotype ♂. (11) *C. omatakoella* sp. nov., holotype ♂. (dorsal view). (12) *C. omatakoella*, lateral view. (13) *C. hobaterensis* sp. nov., paratype ♂. (14) *C. linteella* sp. nov., holotype ♂. (15) *C. leesi* sp. nov., paratype ♂. (16) *C. spatulifera* sp. nov., paratype ♀.

apex, joined in middle. Valvula irregularly shaped, well sclerotized on the dorsal edge, narrow and elongated on the ventral edge. Cucullus robust, inclined, rounded at the apex. Sacculus narrow and long, very sclerotized on the ventral edge, with a long sharp tip in the ventral angle and a small tooth in the dorsal angle. Phallotheca tubular, sclerotized in the ventral part, with five long parallel spines of scalar length on one side at the apex. There are no cornuti.

*Female genitalia* (Figs 35, 36): Papillae anales well sclerotized, larger at the base, ending pointed at the apex. Apophyses posteriores robust, about twice as long as the anteriores. Sterigma trapezoidal, slightly longer than wide, with curved proximal edge, with sparse and thin bristles, hollowed in the middle by the short sinus vaginalis delimited by a large V-shaped sclerotized structure that opens at the distal edge of the sterigma. Ostium bursae small, oval. Colliculum large in the shape of an elongated amphora. Ductus bursae: the distal part is long, transparent, finely dotted and widens proceeding towards the corpus bursae. The corpus bursae is shaped like a very elongated sac, without signum.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia [prov. Otjozondjupa], RSA (prov. KwaZulu-Natal).

**Etymology:** The name derives from the Latin *pecten* [*-inis*] = comb, in consequence of the shape of the spines on the apex of phallotheca.

**Remarks:** In the female genitalia of the Namibian specimen examined, a fragment of one of the spines located at the apex of the male phallotheca is evident above the sterigma.

#### *Coleophora abstrusa* sp. nov. Figs 6, 38-42

**Holotype:** ♂ (GP Bldz 15033); "Namibia, Namib | Vogelfederberg | 28.1.2009, LF | leg. W. Mey", [23°03'S 14°59'E, 493 m]; in coll. MfN.

**Paratypes:** 2  $\circ$  (GP Bldz 16246) same collection data as holotype; in coll. MfN and Baldizzone.

**Diagnosis:** In habitus and male genitalia *Coleophora abstrusa* sp. nov. resembles *C. namibiae* Baldizzone & van der Wolf, 2004. The main differences are as follows: in the male genitalia of *C. abstrusa* the tegumen is more restricted medially, the cucullus is smaller and shorter, the sacculus is thicker in the dorsal half with a large internal jagged protuberance, the cornuti are larger, less numerous, gathered in a bunch and not in a row.

**Description:** Wingspan 12 mm. Head white, light brown suffused dorsally. Antenna whitish ochre; scape

whit short tuft of scales. Labial palpus white, partially ochre suffused on outer side. Proboscis of normal shape. Thorax whitish. Tegula light brown. Forewing hazelnut colour, slightly clearer in the dorsal part; white line along the costa ending before the apex; fringes light ochre. Hindwing and fringes light grey.

*Abdominal structures* (Fig. 42): Anterior lateral struts about 3 times as long as posteriors. Transverse strut with proximal edge linear and ticker and distal edge, slightly curved in middle. Tergal disks (3rd tergite) about 5 times as long as wide, covered with about 30 spines.

*Male genitalia* (Figs 38-41): Gnathos knob globular. Tegumen stout, restricted in middle; pedunculus short, slightly dilated. Transtilla thin, linear, slightly dilated and oval at the apex. Valvula small, elongated, more sclerotized on the ventral edge. Cucullus very short, larger at the base. Sacculus with lateral edge very sclerotized, in the shape of an irregular triangle, with a small central tip; the inner edge is thicker and jagged in the dorsal half. Phallotheca conical, pointed at the apex, sclerotized only on the ventral and lateral sides. Cornuti about 20 in the shape of spines of different length, gathered at the base. *Female genitalia*: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Erongo).

**Etymology:** The name derives from the Latin *abstrusus* [-a, -um] = abstruse, complicated, due to the peculiar shape of the male genitalia.

### Coleophora ausensis sp. nov. Figs 7, 43-46

**Holotype:**  $\mathcal{J}$  (GP Bldz 16932); "S. W. AFRICA (11) | Aar Farm, 25 mls. ESE Aus | 15-17.i.1972"; "Southern African Exp | B. M. 1972-1";"NHMUK 010897636" [with QR code]; in coll. NHMUK.

**Diagnosis:** The species belongs to the group of *C. diffusa* Meyrick, 1913, to which there are also *C. kamiesella* Baldizzone & van der Wolf, 2015, *C. kuruensis*, Baldizzone, 2019, *C. rhabdophaeella* Baldizzone, 2019, *C. venusta* Baldizzone & van der Wolf, 2020b. The most similar species for the habitus and male genitalia is *C. venusta*. Compared to this species in the male genitalia of *C. ausensis* sp. nov. the transtilla is longer and thinner, with an angle at the base, the valvula is smaller and the protuberance on its external side is shorter, the cucullus is thinner, the horn-shaped protuberance in the dorsal angle is less sclerotized in the central part and its external base has a large triangular protuberance, the cornuti are much smaller and divided in two parts in a characteristic way.

**Description:** Wingspan 13 mm. Head white. Antenna white, ringed light ochre; scape white on outer side,

ochre on inner side, with short erected scales. Labial palpus white; the second article about 0.5 longer than the third. Proboscis short, of normal shape. Thorax and tegula whitish grey. Forewing brown, streaked white along the costa whit a line reaching the apex and irregularly in middle; costal fringes white, dorsal fringes light brown. Hindwing grey; fringes light ochre. Abdomen ochre.

*Abdominal structures* (Fig. 46): Anterior lateral struts about 0.5 times as long as posteriors. Transverse strut with proximal edge linear and not evident, distal edge curved in middle. Tergal disks (3rd tergite) about 3.5 times as long as wide, covered with about 50 spines.

*Male genitalia* (Figs 43-45): Gnathos knob oval. Tegumen long, slightly restricted in middle; pedunculus dilated externally. Transtilla angle shaped at the base, linear in distal part. Valvula small, oval, with outer edge rounded and prominent. Cucullus club-shaped, narrower at the base than at the apex. Sacculus rounded at the ventral edge, inclined on the lateral edge, ending with a robust and pointed horn-shaped protuberance as long as 2/3 of the cucullus; at its base the outer edge is expanded in the shape of a triangle rounded at the apex. Phallotheca long, conical, more sclerotized on 2/3 proximal part. Cornuti about 10 in the shape of spines of different length, gathered at the base; an isolated nail-shaped cornutus is located proximal to the others.

Female genitalia: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia (prov. Karas). South West Africa was the name for modern-day Namibia when it was under South African administration, from 1915 to 1990.

**Etymology:** The name derives from the locality where the specimen was collected.

#### *Coleophora demiranda* sp. nov. Figs 8, 47-50

**Holotype:** ♂ (GP Bldz 15012); "Namibia, Fishriver | Gondwana Canyon Lodge | 17.4.2008 | leg. W. Mey", [07°40.412' S, 17°49.199'E, 757 m]; in coll. MfN.

**Diagnosis:** Coleophora demiranda sp. nov. is similar to *C. sclerisaccula* Baldizzone, 2019 for the structure of the male genitalia, while the habitus is different. In *C. sclerisaccula* the forewing is brown with line along the costa, while in *C. demiranda* the forewing is light ochre, with some white stripes. In the male genitalia, compared to *C. sclerisaccula* (Fig. 50) the most evident differences are: shorter transtilla, almost square and not oblong valvula, longer cucullus, more dorsally sclerotized phallotheca, cornuti of different shape arranged in an unordered way.

Description: Wingspan 17 mm. Head white. Antenna

white; scape whit a tuft on long erected scales. Labial palpus short, white; the second segment twice the length of the third. Proboscis short, without circumvolution. Thorax and tegula white. Forewing light ochre, paler in proximal half and in the area between anal fold and costa, streaked with white lines: a large along the costa involving the fringes, a short curved on the lower edge of the cell, one along the anal fold, a large from the base along the dorsum; dorsal fringes light grey. Hindwing dark brown; fringes light grey. Abdomen white.

*Abdominal structures* (Fig. 48): Anterior lateral struts about 0.5 times as long as posteriors. Transverse strut tick and linear. Tergal disks (3rd tergite) length about twice their width, covered with about 50 spines.

*Male genitalia* (Figs 47, 49): Gnathos knob globular. Tegumen stout, slightly restricted in middle; pedunculus short, dilated externally. Transtilla, short, curved, nail shaped. Valvula big, rectangular, the lateral edge straight and more sclerotized. Cucullus long, club shaped, slightly restricted in middle. Sacculus narrow and curved, very sclerotized border in distal 2/3; dorsal angle with a small tooth. Phallotheca conical, curved, more sclerotized dorsally. Cornuti: 10 in the shape of pine needles of different length in the distal part and 4 in the shape of small spines united in a formation similar to a claw. *Female genitalia*: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Karas).

**Etymology:** The name derives from the Latin *demirandus* [*-a, -um*] = admirable, because of the nice habitus.

#### Coleophora sandveldensis sp. nov. Figs 9, 51-57

Holotype: ♂ (GP Bldz 17159); "Namibia, Gamsb. | Rooiklip Farm, | 10.-11.3.2014 | leg. W. Mey", [23°24.382'S, 016°03.614'E, 1075 m]; in coll. MfN.

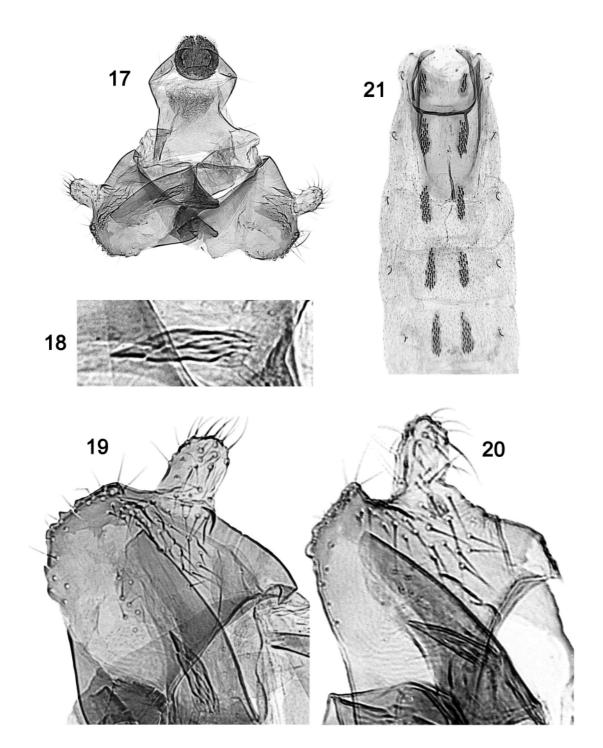
**Paratypes:**  $2 \Leftrightarrow$  (GP Bldz 15045, 17060); "Namibia, Sandveld | 60 km N Gobabis | 22.-26.1.2006, LF | leg. W. Mey", [22°04.33'S, 19°13.39'E]. In coll. MfN and coll. Baldizzone.

**Diagnosis:** Species with white forewing and elongated median triangular band of light hazelnut colour. The male genitalia does not resemble any other Afrotropical species and its shape resembles that of numerous Palearctic species, which have the forewing with silver streaks. The female genitalia resembles that of some Afrotropical species which have brown forewing with a white costal streak. It differs from all of them for the characteristic shape of the low and wide sterigma, hollowed out on the distal edge on both sides of the sinus vaginalis and for the large signum.

Hindwing and fringes light grey. Abdomen white.

*Abdominal structures* (Fig. 54): No posterior lateral struts, transverse strut thin, slightly curved. Tergal disks (3rd tergite) about two times longer than wide, covered with about 60 conical spines.

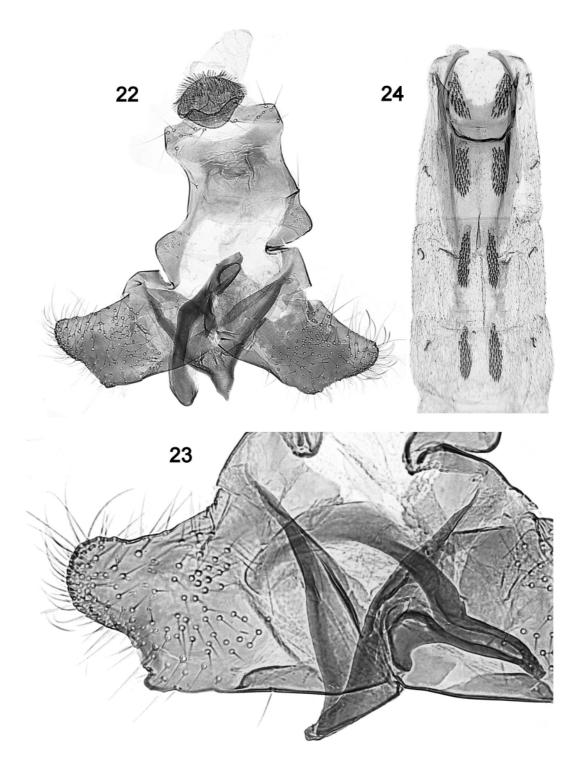
*Male genitalia* (Figs 51-53): Gnathos knob globular. Tegumen stout, slightly restricted in middle; pedunculus short and large. Transtilla short and robust, inclined, rounded at the apex. Valvula large with slightly evident



Figs 17-21. Male genitalia of *C. magnaefontis* sp. nov. (17) GP Bldz 15039, holotype. (18) Enlarged detail of cornuti. (19) Enlarged detail of valva, phallotheca and cornuti. (20) GP BMNH 27348, paratype, same detail. (21) Abdominal segments 1-5.

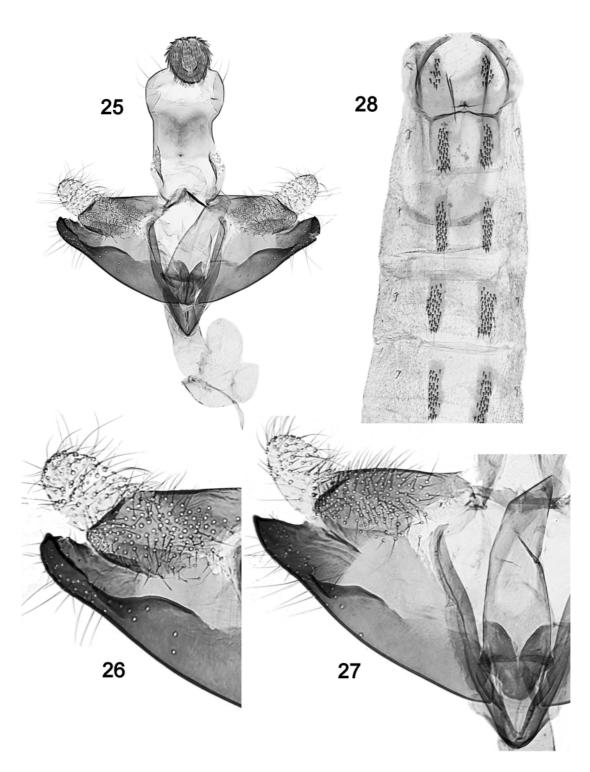
edges, except that on the outer side more sclerotized. Cucullus short, wider at the base. Sacculus curved on the ventral side with thickened edges, ending in the dorsal corner in triangular shape. Phallotheca large, conical, slightly more dorsally sclerotized. Cornuti very numerous in the form of spines of different lengths, shorter at the base and longer at the apex, gathered in a long claw-like structure.

*Female genitalia* (Figs 55-57): Papillae anales oval. Apophyses posteriores twice as long as the anteriores. Sterigma trapezoidal, about three times as wide as its height, distal edge hollowed out at the sides of the



Figs 22-24. Male genitalia of *C. gondwanae* sp. nov. (22) GP Bldz 15019, paratype. (23) GP 13537, holotype, enlarged detail of valva and phallotheca. (24) GP Bldz 15019, paratype, abdominal segments 1-4.

central part; sinus vaginalis broad, with 5-6 strong, short and sharp spines on either side of the distal edge. Ostium bursae broad, oval. Colliculum funnel-shaped, crossed by the end of the medial line. Ductus bursae: the distal part is long and thin, wrapped in small spines on two bands parallel to the medial line, which begins in the central convolution shortly after the insertion of the ductus seminalis; the proximal part of the ductus is wide and transparent in the convolution, then more sclerotized in small successive convolutions and thinner and more linear up to the bursa copulatrix shaped like an oval sac, with a large anchor-shaped signum, asymmetric in the laminar part.



Figs 25-28. Male genitalia of *C. exotica* sp. nov. (25) GP Bldz 15015, holotype. (26) Enlarged detail of valva. (27) GP Bldz 15042, paratype, enlarged detail of valva and phallotheca. (28) GP Bldz 15178, paratype, abdominal segments 1-5.

**Bionomy:** The early stages and the foodplant are unknown.

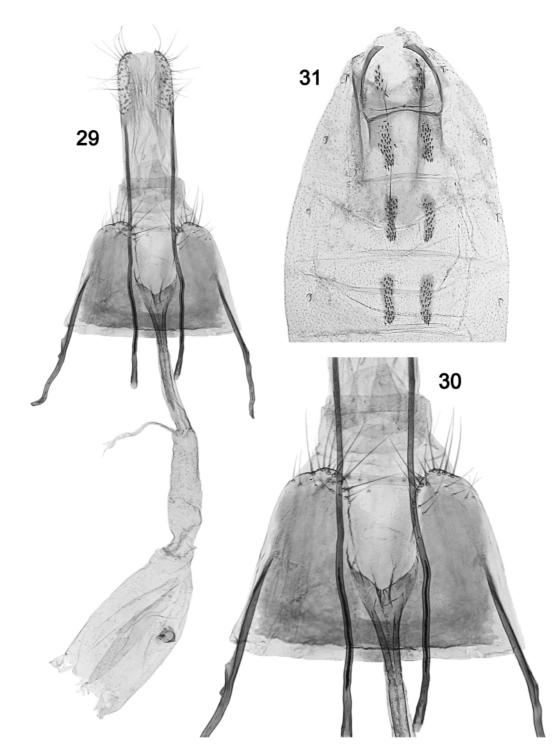
Distribution: Namibia (prov. Windhoek, Khomas).

**Etymology:** The name derives from the locality where two specimens were collected.

## Coleophora amaurosella sp. nov. Figs 10, 58-61

Holotype: ♂ (GP Bldz 13528); "Namibia, Omatako Ranch, LF | 22-23.III.2003 | leg. W. Mey", [21°30.429'S, 16°43.566'E, 1519 m]; in coll. MfN.

**Diagnosis:** Coleophora amaurosella sp. nov. does not resemble any other afrotropical species, but for the



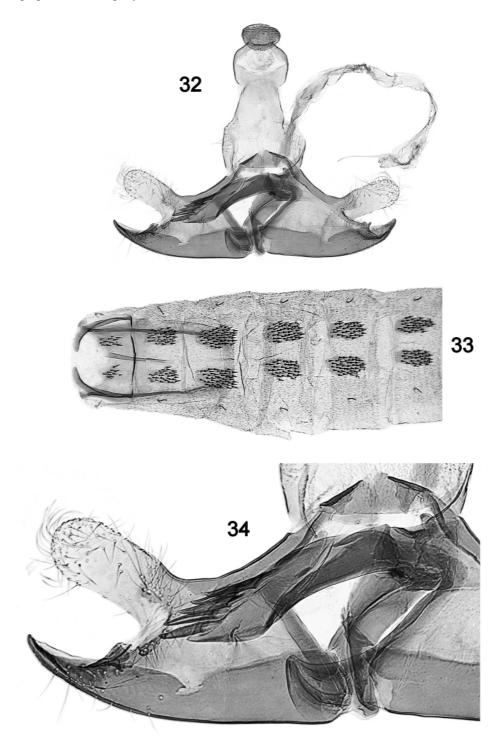
Figs 29-31. Female genitalia of *C. exotica* sp. nov. (29) GP Bldz 17157, paratype. (30) Enlarged detail of sterigma. (31) Abdominal segments 1-4.

male genitalia it is similar to Palearctic species of the *C. discordella* Zeller, 1849 group. From these species it differs in the shape of the sacculus, the conical phallotheca and the numerous short cornuti spiniform arranged irregularly.

**Description:** Wingspan 11 mm. Head white. Antenna ringed light ochre and whitish; scape without erected scales. Labial palpus white, slightly ochre suffused on

the outer side; the second article about long as the third. Proboscis of normal shape. Thorax and tegula white. Forewing greyish ochre, lighter in the dorsal half and darker on the apex, streaked with slender whitish lines along the costa, in middle, along the anal fold and along the dorsum; fringes ochre. Hindwing grey; fringes light grey. Abdomen ochre.

*Abdominal structures* (Fig. 61): No posterior lateral struts. Transverse strut curved, with proximal edge thinner and



Figs 32-34. Male genitalia of *C. pectinella* sp. nov. (32) GP Bldz 15063, holotype. (33) Abdominal segments 1-6. (34) Enlarged detail of valve and phallotheca.

distal edge thicker, slightly narrowed in middle. Tergal disks (3rd tergite) about 3 times as long as wide, covered with about 50 spines.

*Male genitalia* (Figs 58-60): Gnathos knob globular. Tegumen stout, restricted in middle; pedunculus large. Transtilla short, triangular. Valvula suboval, covered by numerous short setae. Cucullus long, large at the base, restricted in middle, expanded and rounded at the apex. Sacculus with a long slender protuberance horn shaped in dorsal angle. Phallotheca short, conical, few sclerotized. Cornuti numerous, in the shape of small spines, gathered in a curved, irregular formation. *Female genitalia*: Unknown.

36 35 37

Figs 35-37. Female genitalia of *C. pectinella* sp. nov. (35) GP Bldz 17164, paratype. (36) Enlarged detail of sterigma. (37) Abdominal segments 1-5.

**Bionomy:** The early stages and the foodplant are unknown.

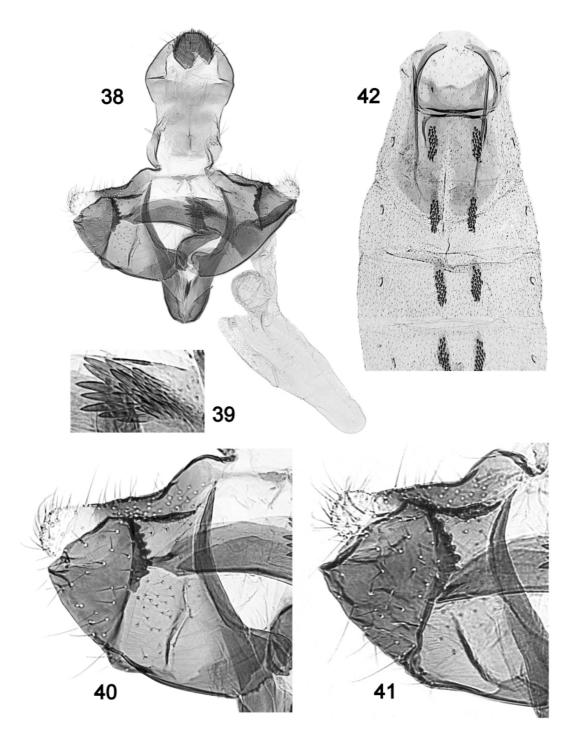
Distribution: Namibia (prov. Otjozondjupa).

**Etymology:** The name derives from the Greek  $\dot{\alpha}\mu\alpha\nu\rho\delta\varsigma$ [- $\dot{\alpha}$ , - $\dot{\delta}\nu$ ] = faded, due to the species habitus.

#### *Coleophora omatakoella* sp. nov. Figs 11-12, 62-65

**Holotype:** ♂ (GP Bldz 13526); "Namibia, Omatako Ranch, LF | 22-23.III.2003 | leg. W. Mey", [1°30.429'S, 16°43.566'E, 1519 m ]; in coll. MfN.

**Diagnosis:** Species with brown forewing, light shaded and streaked with some fine white lines. It does not resemble any species already known for the



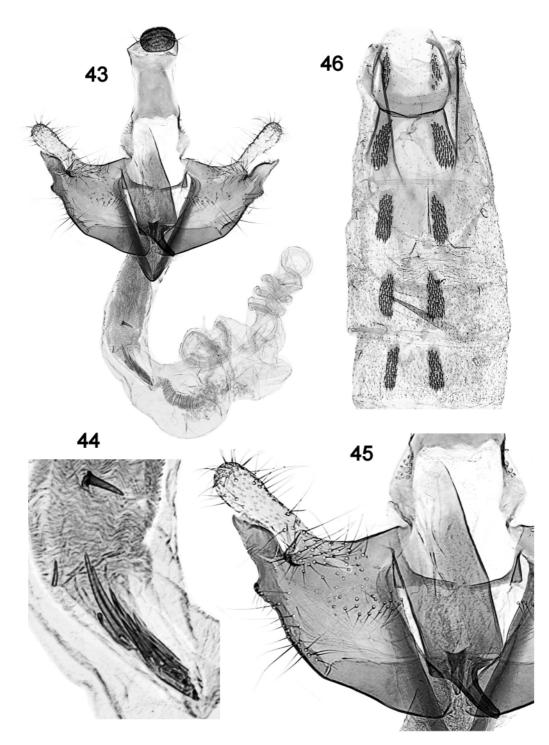
Figs 38-42. Male genitalia of *C. abstrusa* sp. nov. (38) GP Bldz 16246, paratype. (39) Enlarged detail of cornuti. (40) Enlarged detail of valva and phallotheca. (41) GP 15033, holotype, same detail. (42) Abdominal segments 1-5.

characteristic shape of the male genitalia, in particular for the outer edge of the sacculus and the curved vesica with a long row of cornuti extended for almost its entire length.

**Description:** Wingspan 14 mm. Head white. Antenna white; scape whit a tuft of erected scales, ochre on the inner side, white on the outer one. Labial palpus white on the inner side, ochre on the outer side; the second

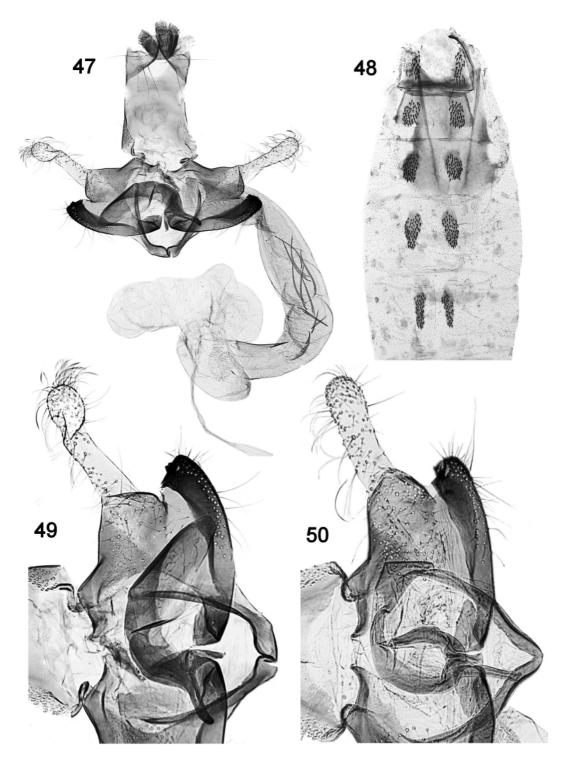
segment about 0.5 times longer than the third. Proboscis of normal shape. Thorax and tegula white. Forewing brown, lighter in the part between anal fold and costa, streaked with white lines: along the costa involving the first 1/3 of the fringes, along the anal fold, along the dorsum; fringes brown. Hindwing grey; fringes brown. Abdomen brown.

Abdominal structures (Fig. 65): Anterior lateral struts



Figs 43-46. Male genitalia of *C. ausensis* sp. nov. (43) GP Bldz 16392, holotype. (44) Enlarged detail of cornuti. (45) Enlarged detail of valva and phallotheca. (46) Abdominal segments 1-5.

*Male genitalia* (Figs 62-64): Gnathos knob globular. Tegumen stout, restricted in middle; pedunculus short and large. Transtilla long, slightly curved. Valvula large, whit lateral edge curved. Cucullus narrow slightly more expanded than the lateral edge of the sacculus. Sacculus expanded and more sclerotized on lateral edge, with a robust pointed protuberance and a little triangular protuberance at the dorsal angle. Phallotheca long,



Figs 47-50. Male genitalia of *C. demiranda* sp. nov. (47) GP Bldz 15012, holotype. (48) Abdominal segments 1-5. (49) Enlarged detail of valva and phallotheca. (50) Male genitalia of *C. sclerisaccula* Baldizzone, 2019, enlarged detail of valva and phallotheca.

conical, sclerotized on the lateral sides. Cornuti very numerous in the shape of spines of different length, gathered in a formation as long almost as the whole vesica.

Female genitalia: Unknown.

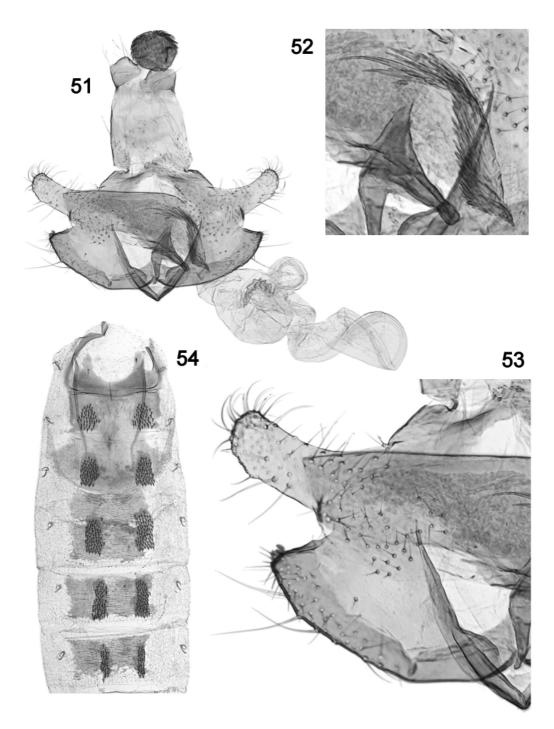
**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Otjozondjupa).

**Etymology:** The name derives from the locality where the specimen was collected.

### Coleophora hobaterensis sp. nov. Figs 13, 66-69

**Holotype:** ♂ (GP Bldz 14981); "Namibia, Hobatere Lodge, campsite | 19.- 21.II.2008, LF | leg. W. Mey" [19°19.016'S, 14°28.153'E, 1256 m]; in coll. MfN.



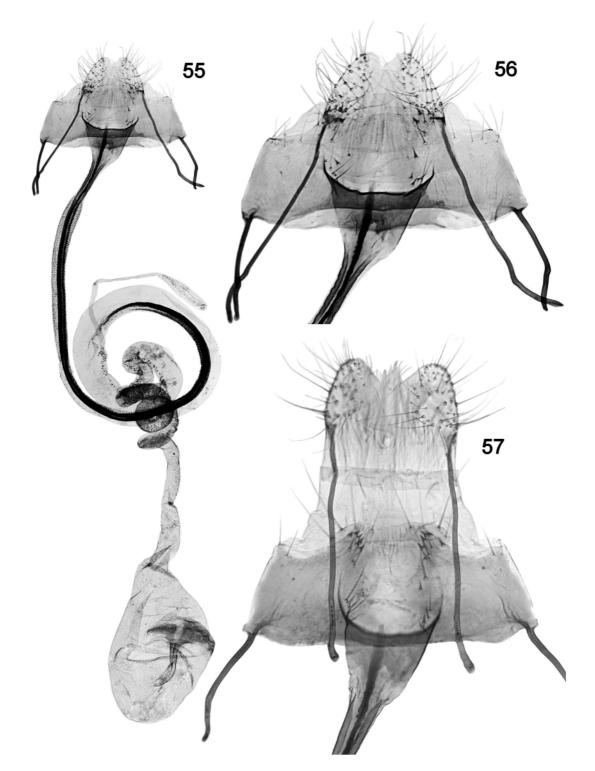
Figs 51-54. Male genitalia of *C. sandveldensis* sp. nov. (51) GP Bldz 17159, holotype. (52) Enlarged detail of cornuti. (53) Enlarged detail of valva and phallotheca. (54) Abdominal segments 1-6.

**Paratypes:** 5  $\circ$  (GP Bldz 14984, 14985, 15052); same collection data as holotype; in coll. MfN and coll. Baldizzone.

**Diagnosis:** Species of light brown appearance, with brownish forewings finely white streaked. The male genitalia does not resemble that of any other known

Afrotropical species. The main peculiarities consist in the shape of the sacculus and in that of the phallotheca.

**Description:** Wingspan 10-11 mm. Head light brown, white upper the eye. Antenna brown; scape whitish without erected scales. Labial palpus brown lighter on the inner side; the second article about as long as the



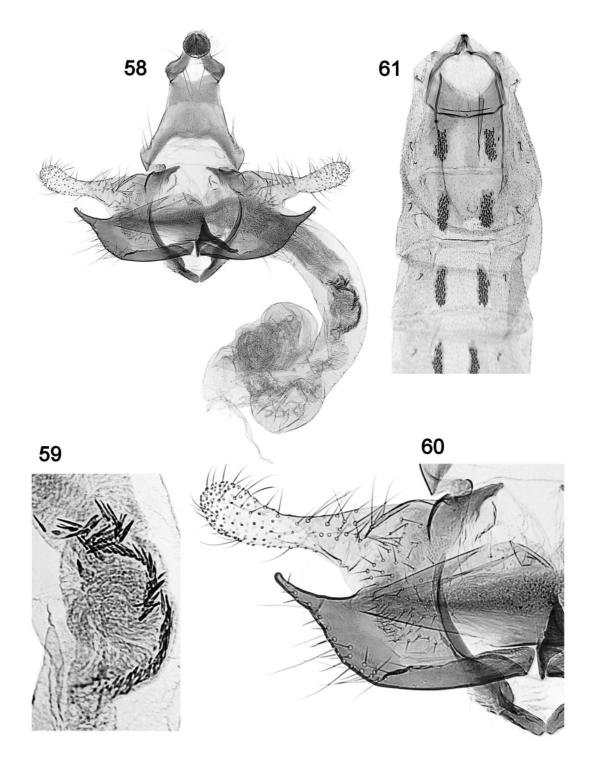
Figs 55-57. Female genitalia of *C. sandveldensis* sp. nov. (55) GP Bldz 15045, paratype. (56) Enlarged detail of sterigma. (57) GP Bldz 17160, same detail.

third. Proboscis of normal shape. Thorax and tegula brownish. Forewing brownish, finely streaked with slender whitish lines along the costa and the veins; fringes light ochre. Hindwing grey; fringes light ochre. Abdomen ochre.

*Abdominal structures* (Fig. 69): No posterior lateral struts. Transverse strut thin, with proximal edge slightly curve and distal edge straight, thinner in middle. Tergal

disks (3rd tergite) about 3.5 times as long as wide, covered with about 35 spines.

*Male genitalia* (Figs 66-68): Gnathos knob globular. Tegumen quite narrow in middle; pedunculus expanded externally. Transtilla narrow joined in middle. Valvula small, irregularly oval, covered by many setae. Cucullus short, stout, large at the base, ear-shaped. Sacculus short, with a little rounded protuberance on the ventral



Figs 58-61. Male genitalia of *C. amaurosella* sp. nov. (58) GP Bldz 13528, holotype. (59) Enlarged detail of cornuti. (60) enlarged detail of valva and phallotheca. (61) Abdominal segments 1-5.

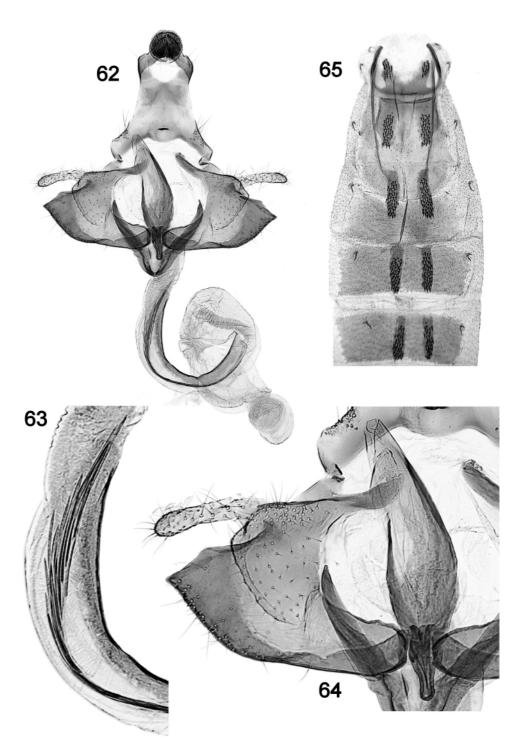
angle and on the dorsal corner a longer horn-shaped protuberance whose apex extends to the apex of the cucullus. Phallotheca with two juxta rods well sclerotized on the dorsal side; the longer is wider in the distal half where there is a robust pointed spine; the shorter rod it is thinner and has a shorter, blunt spine before the apex. There are no cornuti.

*Female genitalia*: Unknown.

**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Kunene).

**Etymology:** The name derives from the locality where the specimen was collected.



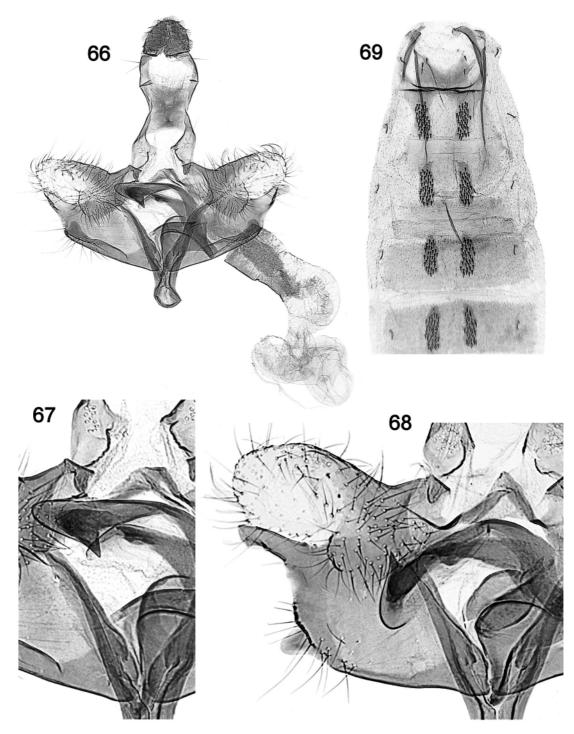
Figs 62-65. Male genitalia of *C. omatakoella* sp. nov. (62) GP Bldz 13526, holotype. (63) Enlarged detail of cornuti. (64) enlarged detail of valva and phallotheca. (65) Abdominal segments 1-5.

#### Coleophora linteella sp. nov. Figs 14, 70-74

**Holotype:**  $\bigcirc$  (GP Bldz 15062); "Namibia, Fishriver | Gondwana Canyon Lodge | 13.X.2007 | leg. W. Mey", [27°41.01'S, 7°48.21'E, 850 m]; in coll. MfN.

**Paratype:** 1 ♂ (GP Bldz 15070); "Namibia, Karios | Gondwana Canyon Lodge | 1.XII.2008 | leg. W. Mey", [7°39.185'S, 7°46.476'E, 757 m]; in coll. MfN. **Diagnosis:** Species of whitish appearance. The male genitalia does not resemble that of any known afrotropical species, but has some similarities with the Palearctic species *C. arkaimella* Baldizzone & Tabell, 2007, known from Russia (Ural Mts.) with obvious differences in the shape of the cucullus, the sacculus and the phallotheca.

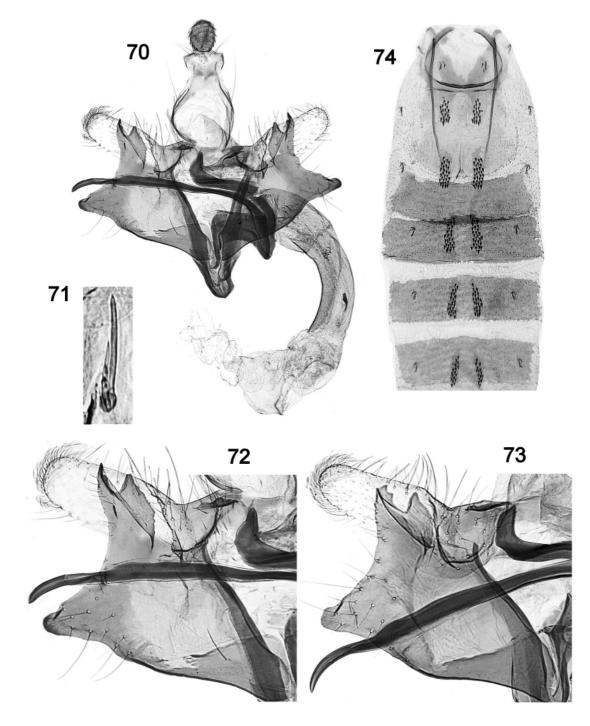
Description: Wingspan 12 mm. Head white. Antenna



Figs 66-69. Male genitalia of *C. hobaterensis* sp. nov. (66) GP Bldz 14981, holotype. (67) Enlarged detail of phallotheca. (68) GP Bldz 14985, paratype, enlarged detail of valva and phallotheca. (69) GP Bldz 14981, abdominal segments 1-5.

dirty white; scape white, whit a short tuft of erected scales. Labial palpus white; the second segment about 0.5 times longer than the third. Proboscis of normal shape. Thorax and tegula white. Forewing very light ochre scattered whit few brown scales, streaked whit large white lines along the costa, the anal fold and the dorsum; fringes light grey. Hindwing and fringes light grey. Abdomen white. *Abdominal structures* (Fig. 74): No posterior lateral struts. Transverse strut with proximal edge curved and thicker and thin distal edge, straight not sclerotized in middle. Tergal disks (3rd tergite) about 3 times as long as wide, covered with about 30 spines.

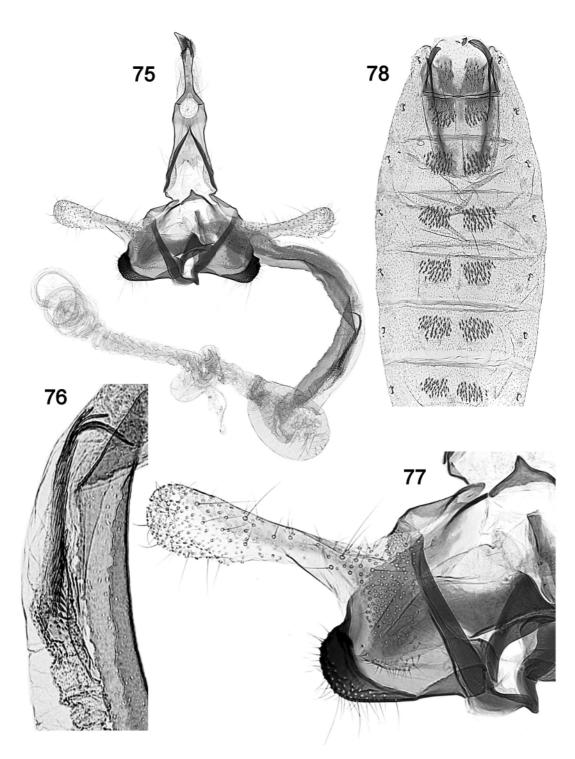
*Male genitalia* (Figs 70-73): Gnathos knob oval. Tegumen restricted in middle, pedunculus long, slightly dilated. Transtilla small triangular. Valvula with round ventral



Figs 70-74. Male genitalia of *C. linteella* sp. nov. (70) GP Bldz 15062, holotype. (71) GP Bldz 15070, paratype, enlarged detail of cornuti. (72) GP Bldz 15062, holotype, enlarged detail of valva and phallotheca. (73) GP Bldz 15070, same detail. (74) abdominal segments 1-6.

edge and more sclerotized and a ridge-shaped relief parallel to the upper edge in the dorsal part. Cucullus robust, medium length, slightly wider in the basal half. Sacculus large with a great triangular protuberance in ventral angle and a robust apical protuberance divided into two irregular triangular structures in dorsal angle. Phallotheca with two juxta rods of different length and shape: the longer is thinner, almost straight and ends at the apex with a long slightly curved tip; the other is about half of the first, thicker and ends at the apex with a robust curved tip. Cornuti, two spines of different length joined at the base.

Female genitalia: Unknown.



Figs 75-78. Male genitalia of *C. leesi* sp. nov. (75) GP Bldz 16930, paratype. (76) Enlarged detail of cornuti. (77) Enlarged detail of valva and phalloteca. (78) Abdominal segments 1-7.

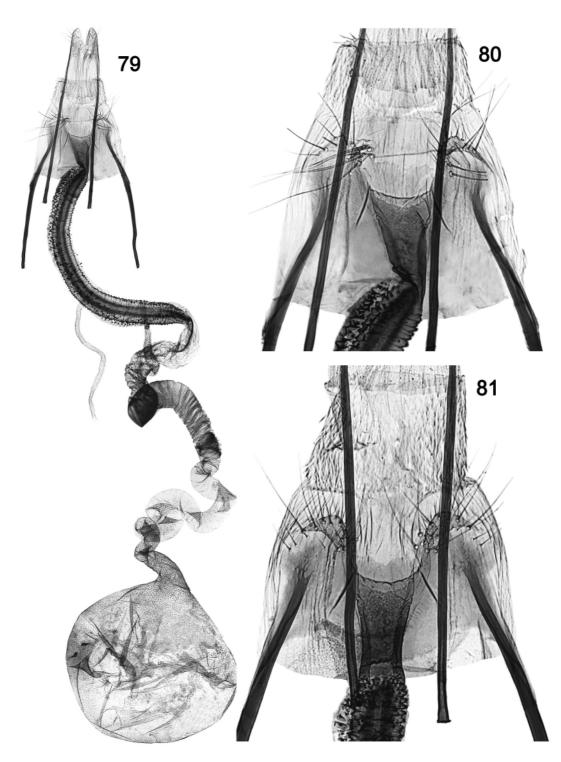
**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Karas).

Etymology: The name derives from the Latin linteus

[-a, -um] = linen colour, due to the colour of the forewings.

**Remarks:** In Fig. 70 the cornuti are broken, which sometimes happens during copula. The complete cornuti are those of Fig. 71.



Figs 79-81. Female genitalia of *C. leesi* sp. nov. (79) GP Bldz 16253, paratype. (80) Enlarged detail of sterigma. (81) GP Bldz 16250, paratype, same detail.

### Coleophora leesi sp. nov. Figs 15, 75-81

Holotype: ♂ (GP Bldz 16931) "S. W. AFRICA (W 19) | Sesriem Canyon, Maltahöhe, 2800 ft. | 21-22.i.1972"; "Southern African Exp | B. M. 1972-I";"NHMUK 010897736" [with QR code]; in coll. NHMUK.

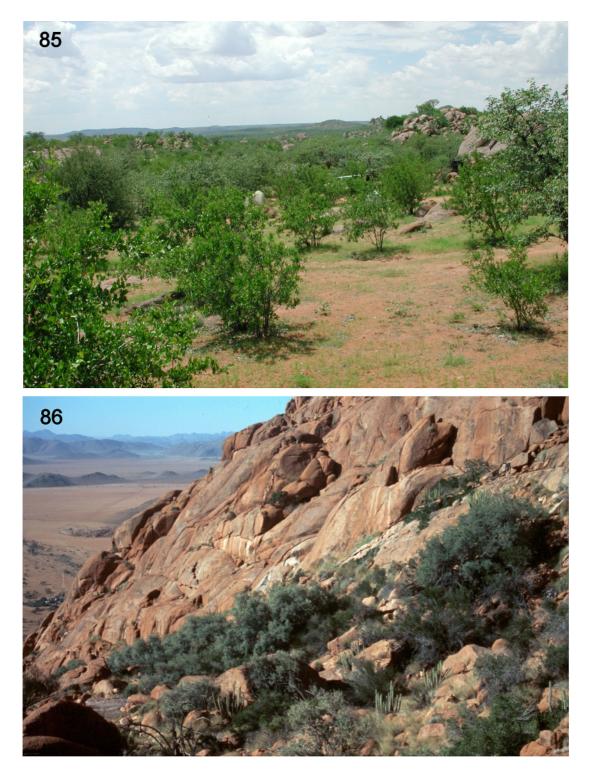
Paratypes: 1 ♂ (GP Bldz 16930); "S. W. AFRICA (W

17) | Sesriem Farm | Maltahöhe distr. | 19.-20.i.1972"; Southern African Exp | B. M. 1972-I"; "NHMUK 010897633" [with QR code]; in coll. NHMUK. – 1  $\bigcirc$  (GP Bldz 16257) "Namibia, Solitaire | Tsauchab, camp | 14.4.2013, LF | leg. W. Mey", [24°31.426', 016°.04.391'E, 1042 m]; in coll. MfN. – 4  $\bigcirc$  (GP Bldz 16248, 16249), 2  $\bigcirc$  (GP Bldz 16250, 16253); "Namibia, Tiras Mt. | Koiimasis | 8.3.2014 | leg. W. Mey",



Figs 82-84. Female genitalia of *C. spatulifera* sp. nov. (82) GP Bldz 17191, paratype. (83) Enlarged detail of sterigma. (84) Abdominal segments 1-6.

**Diagnosis:** Species of light ochre or whitish appearance. Belongs to the 34° group of Toll (1953, 1962) of which two species of the Afrotropical fauna are known: *C. ugabensis* Baldizzone & van der Wolf, 2004 and *C. hirsutella* Baldizzone & van der Wolf, 2015, both known only from Namibia. The most closely species to *C. leesi* sp. nov. is *C. ugabensis*. In the male genitalia the main differences are: in *C. ugabensis* the gnathos knob is not elongated, larger and rounded, the tegumen is narrower and shorter, the triangular part in middle of the transtilla is smaller, the lateral edge of the sacculus is sclerotized asymmetrically compared

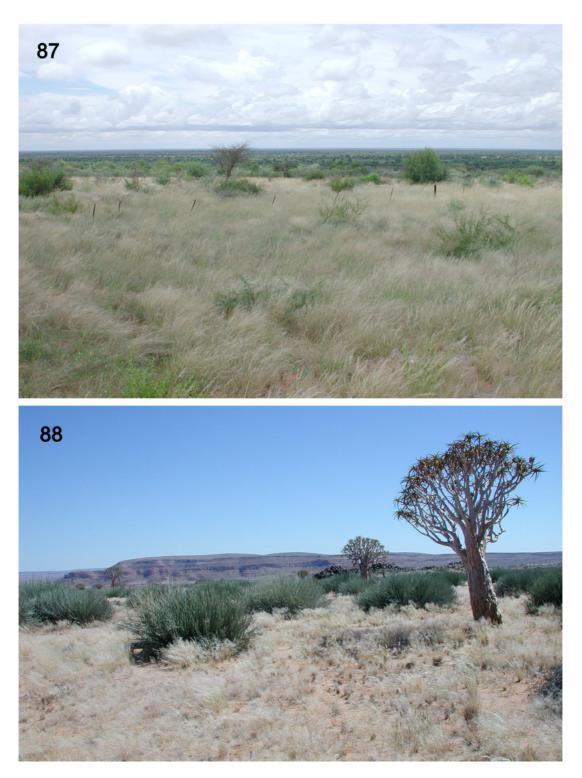


Figs 85-86. Biotopes in which some new species have been collected: (85) Hobatere. (86) Koiimasis. (photos W. Mey)

to that of *C. leesi* sp. nov., there are no cornuti. In the female genitalia the differences are less evident: in *C. ugabensis* the sterigma is lower, the colliculum is narrower, the anterior part of the ductus bursae is thinner, the corpus bursae is slightly smaller.

**Description:** Wingspan 13-14 mm. Head white, light ochre suffused dorsally. Antenna light ochre, sometimes

ringed brown on the distal half; scape white, with a tuft of erected scales, white on outer side, ochraceous ferruginous on inner side. Labial palpus very short, white, ochre suffused on outer side; the second segment about 0.5 times longer than the third. Proboscis of normal shape. Thorax and tegula white, light ochre suffused. Forewing light ochre or whitish, scattered

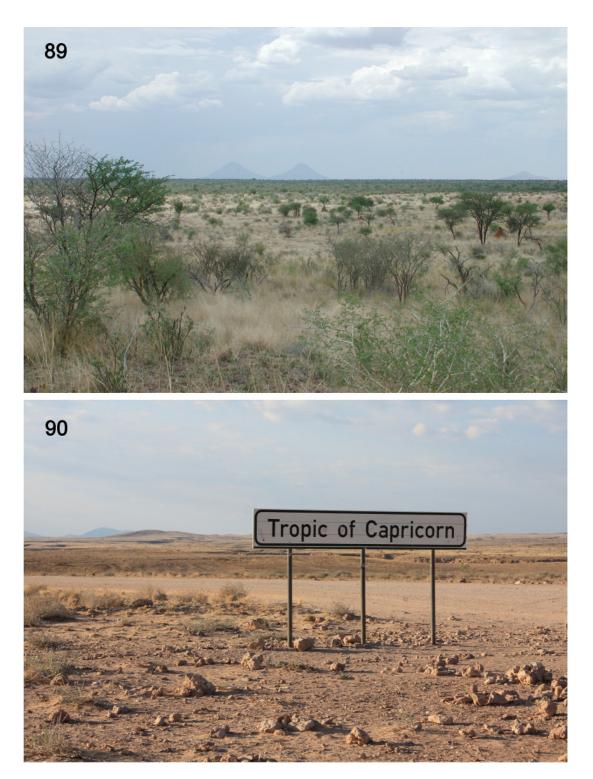


Figs 87-88. Biotopes in which some new species have been collected: (87) Erichsfeld. (88) Karios. (photos W. Mey)

from few light brown scales at the apex; fringes light ochre. Hindwing light grey; fringes light ochre. Abdomen whitish.

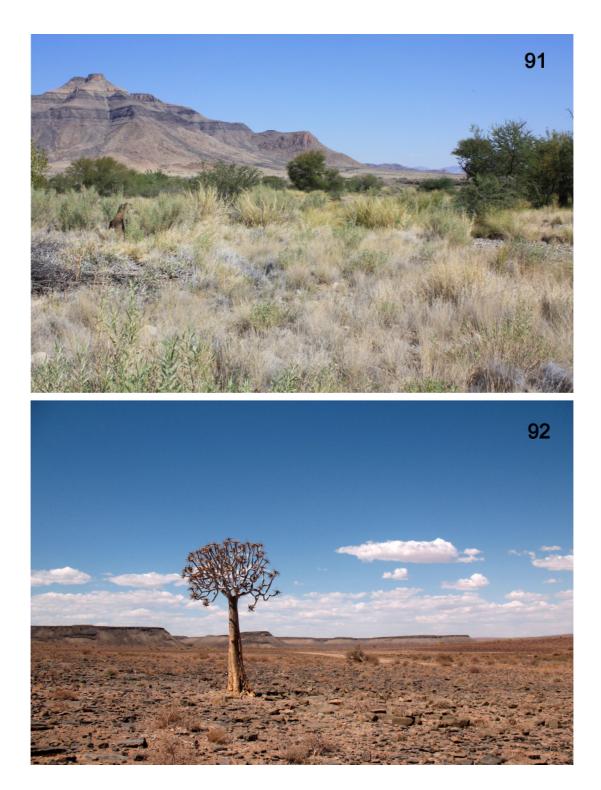
*Abdominal structures* (Fig. 78): No posterior lateral struts. Transverse strut slender, slightly curved. Tergal disks (3rd tergite) large about twice their length, covered with about 50 little conical spines with large base.

*Male genitalia* (Figs 75-77): Gnathos knob thin, elongated beak-shaped, covered with spines only on the dorsal side. Tegumen long, slightly restricted in middle; pedunculus moderately dilated. Transtilla thin, joined in middle in a triangular large structure. Valvula big, covered by short setae, with lower edge rounded. Cucullus elongated, restricted at 1/3 from the base,



Figs 89-90. Biotopes in which some new species have been collected: (89) Omatako. (90) North of Solitaire. (photos W. Mey)

club-shaped. Sacculus small, very sclerotized on the outer edge, curved, slightly jagged. Phallotheca large, conical, with two almost completely fused symmetrical juxta rods, more sclerotized at the base and in the distal half. Cornuti: many spines of different length, joined in a formation similar to a long claw. *Female genitalia*: (Figs 79-81) Papillae anales small and oval. Apophyses posteriores about as long as the anteriores. Tuba analis covered with small spines. Sterigma trapezoidal, little sclerotized, largely hollowed by the sinus vaginalis, curved dorsal edge with long setae. Ostium bursae large, oval. Colliculum cup-shaped,



Figs 91-92. Biotopes in which some new species have been collected: (91) Tsauchab valley (photo W. Mey). (92) Fishriver canyon (photo G. Bassi).

more sclerotized on the outer sides. Ductus bursae long: posterior part, with long medial line, completely wrapped in two sclerotized bands covered with triangular spines; anterior part more transparent with some convolutions of various sizes. Corpus bursae large, spherical, with a leafshaped signum.

**Bionomy:** The early stages and the foodplant are unknown.

Distribution: Namibia (prov. Karas).

**Etymology:** The species is dedicated to David C. Lees, curator of Microlepidoptera at NHMUK in recognition of his research on Afrotropical microlepidoptera especially of Madagascar.

# *Coleophora spatulifera* sp. nov. Figs 16, 82-84

**Holotype:**  $\bigcirc$  (GP Bldz 15057); "RSA | 50 km NE Bitterfontein | Drai-Hoek | 25.XI.2008 | leg. Ebert, Kühne & W. Mey, LF", [30°42'S 18°25'E ]; in coll. MfN.

**Paratypes:** 1 ♀ (GP Bldz 16265); "Namibia, Gobabeb | Kuiseb-Tal | LF | 16.-19.1.2007 | leg. Mey & Ebert", [23°52.58'S 15°04.28'E, 373 m]; in coll. MfN. – 6 ♀ (GP Bldz 17187); "Namibia, Gamsb. | Rooiklip Farm | 22.-24.11.2007, LF | leg. W. Mey", [23°24.382'S, 16°03.614'E, 1075 m]; in coll. MfN and coll. Baldizzone. – 1 ♀ (GP Bldz 17154); same locality as previous, 6.-7.XI.2019, leg. W. Mey, coll. MfN. – 2 ♀ (GP Bldz 17191); same locality as previous, 6.-7. XI.2019, LF | leg. W. Mey; in coll. MfN.

**Diagnosis:** Species with habitus completely white. The male is unknown. On the basis of the female genitalia and tergal disks, it belongs to the group of Afrotropical species similar to *C. ugabensis* Baldizzone & van der Wolf, 2004, from which it clearly differs in the shape of the large papillae anales, the large sterigma and the thin ductus bursae. Its structure is more similar to that of numerous palearctic species described by Falkovitsh, in example *C. tytri* Falkovitsh, 1970, *C. dilabens* (Falkovitsh, 1982), *C. crassa* (Falkovitsh, 1989); in addition to the differences in sterigma and ductus bursae, the most evident is the very characteristic large and elongated papillae anales.

**Description:** Wingspan 10-12 mm. Head white. Antenna white ringed brown in the distal third; white scape with a short tuft of erected scales. Labial palp white, the second article is about twice as long as the third. Proboscis of normal shape. Thorax and tegula white. Forewing white, slightly tinged light ochre; costal fringes white, dorsal fringes light grey. Hindwing and fringes light grey. Abdomen white.

Abdominal structures (Fig. 84): No posterior lateral struts. Transverse strut slender, slightly curved. Tergal

disks (3rd tergite) large about 2,5-3 times their length, covered with about 60 little, slender spines with large base.

Male genitalia: Unknown.

*Female genitalia* (Figs 82, 83): Papillae anales very long, well sclerotized, spatula-shaped. Apophyses posteriores about as long as the anteriores. Sterigma suboval, about twice long as large, more sclerotized in the anterior part, deeply hollowed by the sinus vaginalis. Ostium bursae broad, oval. Colliculum narrow and elongated calyx-shaped. Ductus bursae long: posterior part thin, wrapped by two bands covered with small spines, except in the central convolution where only the medial line is present; anterior part wider, transparent, finely dotted, with some convolutions of various sizes. Corpus bursae thickly dotted, oval sac shaped, with a small signum in the shape of a leaf.

**Bionomy:** The early stages and the foodplant are unknown.

**Distribution:** Namibia (prov. Swakopmund, Erongo; Windhoek, Khomas) and RSA (prov. Northern Cape).

**Etymology:** The name derives from the Latin words spatula = spatula, and *fero* [*fĕrs, tuli, latum, fĕrre*] = to bear, due to the characteristic shape of the papillae anales.

### LIST OF COLEOPHORA SPECIES OF NAMIBIA

The names are listed here in alphabetical order (Baldizzone & van der Wolf, 2004, 2011, 2015):

- C. afrotropicalis Baldizzone & van der Wolf, 2004
- C. abstrusa sp. nov.
- C. albadomina Baldizzone & van der Wolf, 2004
- *C. amaurosella* sp. nov.
- C. aquaecadentis Baldizzone & van der Wolf, 2004
- C. arens Baldizzone & van der Wolf, 2004
- *C. ausensis* sp. nov.
- C. austrina Baldizzone & van der Wolf, 2004
- C. brandbergella Baldizzone & van der Wolf, 2004
- C. capricornis Baldizzone & van der Wolf, 2004
- C. damarella Baldizzone & van der Wolf, 2004
- *C. demiranda* sp. nov.
- C. etoshae Baldizzone & van der Wolf, 2011
- *C. exotica* sp. nov.
- C. gondwanae sp. nov.
- C. hirsutella Baldizzone & van der Wolf, 2015
- C. hobaterensis sp. nov.
- C. jurateella Baldizzone & van der Wolf, 2011
- C. kamiesella Baldizzone & van der Wolf, 2015
- C. karischella Baldizzone & van der Wolf, 2011
- C. kruegeri Baldizzone & van der Wolf, 2004
- C. kunenensis Baldizzone & van der Wolf, 2015
- C. leesi sp. nov.
- C. linteella sp. nov.

- *C. magnaefontis* sp. nov.
- C. meyi Baldizzone & van der Wolf, 2004
- C. mirabibella Baldizzone, Mey & van der Wolf, 2011
- C. monticola Baldizzone & van der Wolf, 2004
- C. namella Baldizzone & van der Wolf, 2004
- C. namibiae Baldizzone & van der Wolf, 2004
- *C. omatokella* sp. nov.
- C. oxyphaea Meyrick, 1913
- C. pectinella sp. nov.
- C. presbytica Meyrick, 1911
- C. sandveldensis sp. nov.
- C. sanella Baldizzone & van der Wolf, 2004
- C. scaleuta Meyrick, 1911
- C. spatulifera sp. nov.
- C. textoria Meyrick, 1921
- C. ugabensis Baldizzone & van der Wolf, 2004
- C. vansoni Baldizzone & van der Wolf, 2015

#### ACKNOWLEDGEMENTS

I am warmly grateful to Wolfram Mey (MfN, Berlin, Germany) who sent me most of the specimens that allowed the realization of this work. I also thank Alessandro Giusti for the loan of NHMUK specimens and for various information. My thanks also extend to Graziano Bassi (Avigliana, Italy) for the loan and gift of specimens that he collected. Many thanks to Pier Giuseppe Varalda (Morano sul Po, Italy) for photographing spread specimens. Finally, many thanks to Terence Hollingworth (Blagnac, France), who revised and corrected the English text and to Bernard Landry (Geneva, Switzerland) for revision of the text, corrections and useful advice and to the anonymous reviewers for their comments and suggestions.

# REFERENCES

- Baldizzone G. 2016. The Coleophoridae of Armenia collected by Ole Karsholt in 2011. Contributions to the knowledge of the Coleophoridae CXXXI (Lepidoptera: Coleophoridae). SHILAP Revista de Lepidopterología 44(177): 129-144.
- Baldizzone G. 2019a. Lepidoptera Coleophoridae. Fauna d'Italia. LIII. *Calderini, Bologna*, XVII + 907 pp.
- Baldizzone G. 2019b. Coleophoridae. *In:* Mey W. & Krüger M. (eds), The Lepidoptera fauna of Asante Sana in the Great Escarpment of South Africa. *Esperiana Memoir* 8: 217-249.
- Baldizzone G., Tabell J. 2007. Seven new species of the genus *Coleophora* Hübner (Lepidoptera: Coleophoridae) from the Volgo-Ural region. *Acta Zoologica Scientiarum Hungaricae* 3 (Suppl. 1): 21-46.

- Baldizzone G., van der Wolf H.W. 2004. Coleophoridae (Lepidoptera, Coleophoridae). *In:* Mey W. (ed.), The Lepidoptera of the Brandberg Massif in Namibia, Part 1. *ESPERIANA*, Mem. 1: 151-184, 90 figs. + 1 pl.
- Baldizzone G., van der Wolf H. 2005. New species of Coleophoridae (Lepidoptera) from Katanga, Central Africa. *Revue suisse de Zoologie* 112: 65-82. DOI: 0.5962/bhl.part.80287
- Baldizzone G., van der Wolf H.W. 2011. On Afrotropical Coleophoridae (I) (Lepidoptera: Coleophoridae). SHILAP Revista de Lepidopterología 39(156): 351-377.
- Baldizzone G., van der Wolf H.W. 2015. On the taxonomy of Afrotropical Coleophoridae (II). *Zootaxa*, 4000(3): 335-362. DOI: 10.11646/zootaxa.4000.3.2
- Baldizzone G., van der Wolf H.W. 2020a. On the taxonomy of Afrotropical Coleophoridae (III). New or little known species from Central and Oriental Africa (Lepidoptera, Coleophoridae) *Zootaxa* 4763: 151-174. DOI: 10.11646/zootaxa.4763.2.1
- Baldizzone G., van der Wolf H.W. 2020b. On the taxonomy of Afrotropical Coleophoridae (IV). New or little known species from South Africa (Lepidoptera, Coleophoridae) *Zootaxa* 4816(2): 151-170. DOI: 10.11646/zootaxa.4816.2.1
- Baldizzone G., Mey W., van der Wolf H.W. 2011. Coleophora mirabibella n.sp. In: Mey W., Basic pattern of Lepidoptera diversity in southwestern Africa. Esperiana Memoir 6: 7-316.
- Falkovitsh M.I. 1970. [New species of casebearer moths (Lepidoptera, Coleophoridae) associated with trees and shrubs of the family Chenopodiaceae in Soviet Central Asia]. *Entomologicheskoe Obozrenie* 49: 869-885. [In Russian].
- Falkovitsh M.I. 1982. [Two new species of casebearer moths (Lepidoptera, Coleophoridae) from Middle Asia]. (Pp. 99-104). In: Medvedev, G.S. (ed.), [New species of insects from Middle Asia]. Trudy Zoologicheskogo Instituta, Akademia Nauk SSSR No. 110, 117 pp. [In Russian].
- Falkovitsh M.I. 1989. [New species of casebearer moths (Lepidoptera, Coleophoridae) of the Turanian fauna]. (Pp. 40-87). In: Falkovitsh M.I. (ed.), [Lepidoptera of Middle Asia]. Trudy Zoologicheskogo Instituta, Akademia Nauk SSSR No. 200, 147 pp. [In Russian].
- Meyrick E. 1911. Descriptions of South African Micro-Lepidoptera. III. Annals of the Transvaal Museum, 3 [1911-1913]: 63-83.
- Meyrick E. 1913. Descriptions of South African Micro-Lepidoptera. IV. Pterophoridae. Annals of the Transvaal Museum 3 [1911-1913]: 267-336.
- Meyrick E. 1921. Descriptions of South African Micro-Lepidoptera. *Annals of the Transvaal Museum* 8 [1921-22]: 49-148.
- Toll S. 1953. Rodzina Eupistidae polski. *Documenta Physiographica Poloniae*, 32 [1952]: 293 pp. + 38 pls.
- Toll S. 1962. Materialien zur Kenntnis der paläarktischen Arten der Familie Coleophoridae (Lepidoptera). *Acta Zoologica Cracoviensia*, 7: 577-720 + 133 pls.