

## ***Ingolehmannia* — a new genus of African Metarbelidae (Lepidoptera: Cossioidea)**

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<https://zoobank.org/References/420725D5-D8CF-4722-B0D5-EE9AC75988BC>

**ABSTRACT:** The article describes a new genus, *Ingolehmannia* gen.n. (Lepidoptera: Cossioidea), which includes eight species: *I. kravchenkoi* sp.n. (type species), *I. inversa* (Gaede, 1929) comb.n., *I. lenzi* sp.n., *I. politzari* sp.n., *I. lobanovorum* sp.n., *I. marykingsleyae* sp.n., *I. barthi* sp.n., and *I. murzini* sp.n. The new genus clearly differs from all the known Afrotropical and Oriental genera of Metarbelidae in its special light color, the forked uncus with very wide lobes, and special armor of the valve (the harpe and the process on the sacculus). The article is illustrated with photos of specimens (including the type ones) and of the male genitals. The representatives of the genus are widely distributed in Western Africa (Algeria, Mali, Senegal, Burkina Faso, Côte d'Ivoire, Guinea, Liberia, Nigeria) and in the north-west of Zambia. The distribution is shown on the map.

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**KEY WORDS:** systematics, taxonomy, Africa, new species, fauna, biodiversity.

## ***Ingolehmannia* — новый род африканских Metarbelidae (Lepidoptera: Cossioidea)**

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◆ Эти авторы внесли равный вклад в данное исследование

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**РЕЗЮМЕ:** В статье описан новый род *Ingolehmannia* gen.n. (Lepidoptera: Cossioidea), включающий восемь видов: *I. kravchenkoi* sp.n. (типовой вид), *I. inversa* (Gaede, 1929) comb.n., *I. lenzi* sp.n., *I. politzari* sp.n., *I. lobanovororum* sp.n., *I. marykingsleyae* sp.n., *I. barthi* sp.n., and *I. murzini* sp.n. Новый род хорошо отличается от известных афротропических и ориентальных родов Metarbelidae специфической светлой окраской, раздвоенным ункусом с очень широкими лопастями, специфическим вооружением вальвы (гарпа и вырост на саккулюсе). Статья проиллюстрирована фотографиями экземпляров в том числе и типовых и гениталий самцов. Представители рода широко распространены в Западной Африке (Алжир, Мали, Сенегал, Буркина Фасо, Кот-д'Ивуар, Гвинея, Либерия, Нигерия) и на северо-западе Замбии. Распространение проиллюстрировано картой.

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**КЛЮЧЕВЫЕ СЛОВА:** систематика, таксономия, Африка, новый вид, фауна, био-разнообразии.

## Introduction

Metarbelidae (Lepidoptera: Cossioidea) is a primitive family distributed in tropical Asia from southern China to Timor and almost everywhere in Africa and the southern Arabian Peninsula. Currently, the representatives of the group are being actively studied; in recent decades, numerous new taxa of generic and species rank have been described (Wiltshire, 1980, 1988; Lehmann, 1997, 2008, 2009, 2010a, b, 2011, 2012, 2013, 2014, 2019a, b; Mey, 2005, 2018, 2024; Lehmann, Rajaei, 2013; Lehmann *et al.*, 2018, 2023; Yakovlev, Zolotuhin, 2020, 2021a, b, c, d, 2022; Yakovlev *et al.*, 2022a, b, c, 2023, 2025; Lehmann, Dalsgaard, 2023; Pavlova *et al.*, 2025, 2026a, b). Despite this, the African fauna remains poorly studied. Our study of the largest collections of Metarbelidae revealed a group of species united by standard morphological features. This species group is close to *Salagena inversa* Gaede, 1929, described

from Senegal (Gaede, 1929: 505; pl. 78, fig. e) (Figs 1–5, 11–14, 20); we distinguish it into a separate genus.

## Material and methods

Images of the adults were taken with Canon EOS 70D and Canon EOS 600D cameras in a specially crafted lightbox. Genitalia dissection techniques were adopted from Hardwick [1950]. The distal one-third of the abdomen of each specimen was placed in a 50 ml Falcon tube with 10 ml of a 13% potassium hydroxide (KOH) solution. Several tubes containing one abdomen in KOH were placed in a small pot with hot water for 20 minutes. The tubes were removed from the pot, and the abdomens were rinsed several times with water to remove any remaining scales and soft tissue. Cleaned abdomens were then transferred into separate cells of a Corning Costar 96 Well Cell Culture Cluster with a small quantity of water to keep them moist during preparation. Subsequently, abdomens were cleaned with a soft brush and dissected using Dumont Style 5 forceps and microscissors in

a Petri dish under the microscope. The phallus was extracted and the vesica everted (Mikkola, 2007) with an insulin syringe and a 32G or 33G needle for mesotherapy. Vesicae were stained with Evans blue (Evans, Schulemann, 1914; Cooksey, 2013) and photographed while inflated using the focus stacking technique. The dissected genitalia were rinsed in 50, 70, and 96% ethanol, then mounted on a microscope slide in Euparal and covered with a cover slip. The genitalia slides were examined with a Zeiss Stemi 2000 C and an Olympus SZX16 microscope and photographed with an Olympus DP74 and a Canon EOS 70D camera. The photos were processed and arranged into plates in Adobe Photoshop software. The map was made using open-source software (<https://www.simplemapp.net/>). The morphological terminology used in the description follows Kristensen (2003).

**Abbreviations of depositories:** ANHRT — African Natural History Research Trust (Leominster, G.B.); CGM — research collection of Günter Müller, Freising, Germany; NHMUK — The Natural History Museum (London, G.B.); RYB — research collection of Roman Yakovlev (Barnaul, Russia); ZISP — Zoological Institute (Saint-Petersburg, Russia).

## Taxonomical part

### *Ingolehmanna* gen.n.

<https://zoobank.org/>

Nomenclatural Acts/996540C0-F699-4566-9333-DA704135BD47

Figs 1–17, 20–32, 34–36.

**TYPE SPECIES:** *Ingolehmanna kravchenkoi* sp.n. (designated there).

**DESCRIPTION.** Male. Moths of medium size, light-colored, with fine wavy pattern on wings. Antennae short (2–3 times shorter than fore wing), bipectinate, rami 2.5–3 times longer than flagellum in diameter. Fore wing has poorly expressed discal spot, hind wing has poorly developed pattern of strokes, or is without any pattern.

Male genitalia. Uncus triangular, wide, forked, lobes wide, diverged to sides, incisure shallow; gnathos arms thin, of medium length; gnathos with two pairs of processes: arched branches directed inwards and club-like processes on outer surface; valve relatively short, apically semicircular, basally sclerotized, distally membranous, inner surface of valve with harpe and process on sacculus; saccus semicircular, poorly expressed; phallus not less than twice shorter than valve (on some species, vesica with small cornutus).

Female (description based on the one species *I. kravchenkoi*). Moths of medium size, light-colored, slightly lighter than males. Antennae short (2–3 times shorter than fore wing), bipectinate, rami 1.5–2 times

longer than flagellum in diameter.

Female genitalia. Papillae anales roller-shaped, densely covered with setae; posterior and anterior apophyses about the same length; ostium ductus bursae oval, poorly immersed; sterigma poorly sclerotized, shaped as semicircular ribbon; antrum membranous; ductus bursae copulatrix wide, membranous; bursa copulatrix baggy, membranous, without signa.

**DIAGNOSIS.** The new genus clearly differs from the genus *Salagena* Walker, 1865 (type species — *Salagena transversa* Walker, 1865, by monotypy) (Figs 18–19, 33). *S. transversa* was described from “Sierra Leone” (Walker, 1865: 590–591). We examined externally the syntype (male) from NHMUK (Fig. 18) and a morphologically similar male from Northern Nigeria (Figs 19, 33), which confirmed a significant difference between the two genera. *S. transversa* has a special fine wavy pattern on the fore wing. The male genitalia of *S. transversa* are characterized by the long uncus, poorly forked apically; the wide belt-shaped gnathos arms; the long ribbon-like gnathos with tongue-shaped, strongly sclerotized apex; the short semicircular valve with membranous apex and triangular leaf-like process on the sacculus; the lamellar oval juxta; the phallus twice shorter than the valve, of medium thickness and even diameter throughout all its length; the vesica aperture in dorso-apical position, no cornuti in the vesica. Thus, the most significant differences of *Salagena* from *Ingolehmanna* are:

- a fundamentally different pattern on the forewing, poorly expanded and forked uncus,
- a different shape of the gnathos,
- a significantly smaller valva, the absence of a harpe.

**COMPOSITION.** The genus includes eight species: *I. kravchenkoi* sp.n. (type species), *I. inversa* (Gaede, 1929) comb.n., *I. lenzi* sp.n., *I. politzari* sp.n., *I. lobanovorum* sp.n., *I. marykingsleyae* sp.n., *I. barthi* sp.n., and *I. murzini* sp.n.

**DISTRIBUTION.** Algeria, Burkina Faso, Côte d’Ivoire, Guinea, Liberia, Mali, Nigeria, Senegal, Zambia.

**ETYMOLOGY.** The new genus is named after Dr. Ingo Lehmann (Bonn), leading specialist in African Metarbelidae.

### *Ingolehmanna inversa* (Gaede, 1929)

**comb.n.**

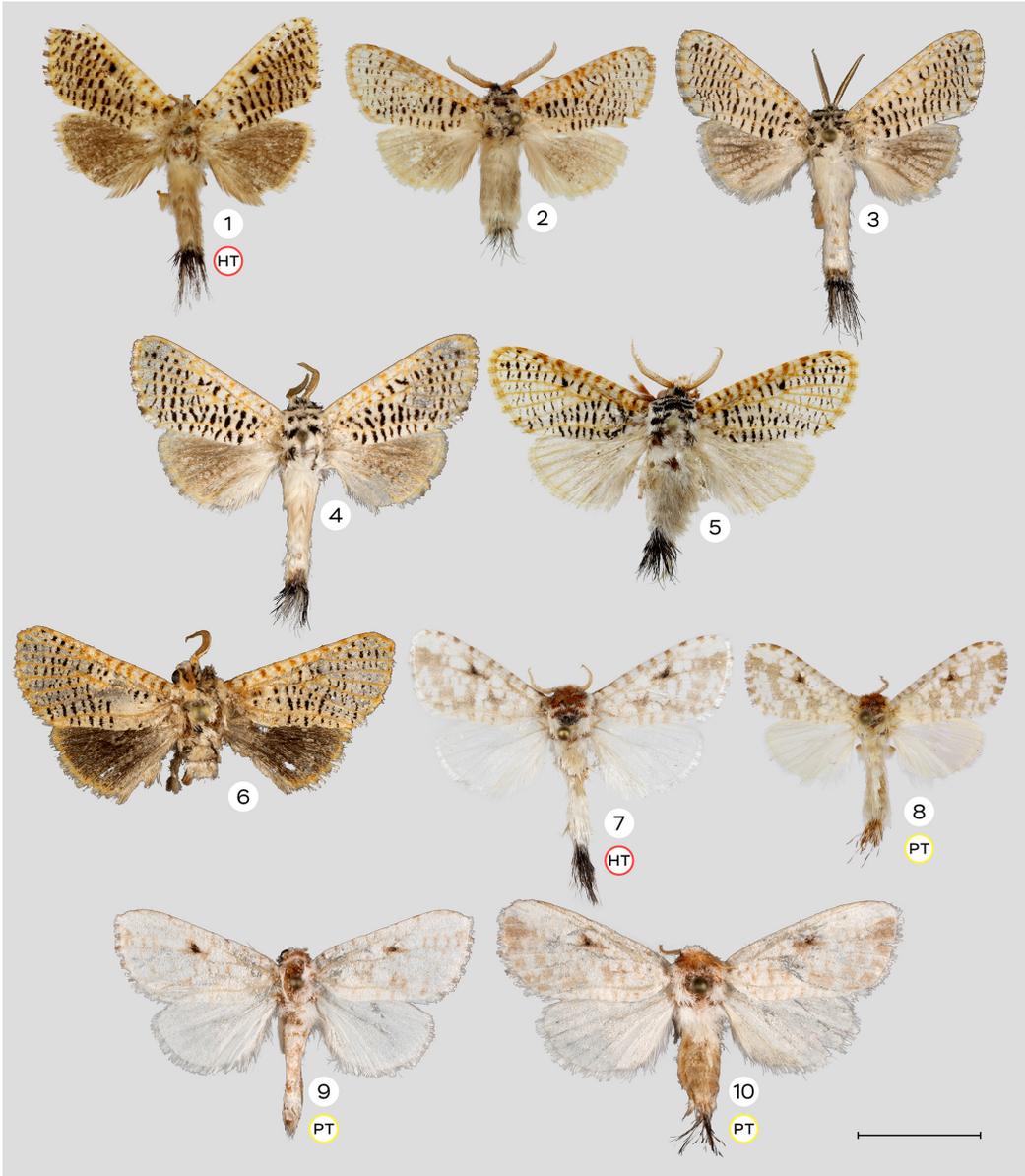
Figs 1–6, 20–23, 36.

*Salagena inversa* Gaede, 1929: 505, pl. 78e.

**TYPE LOCALITY:** Sédhiou [Sédhiou region, 12.70851°N 15.55583°W], Sénégal.

**TYPE MATERIAL:** Holotype (♂) in NHMUK.

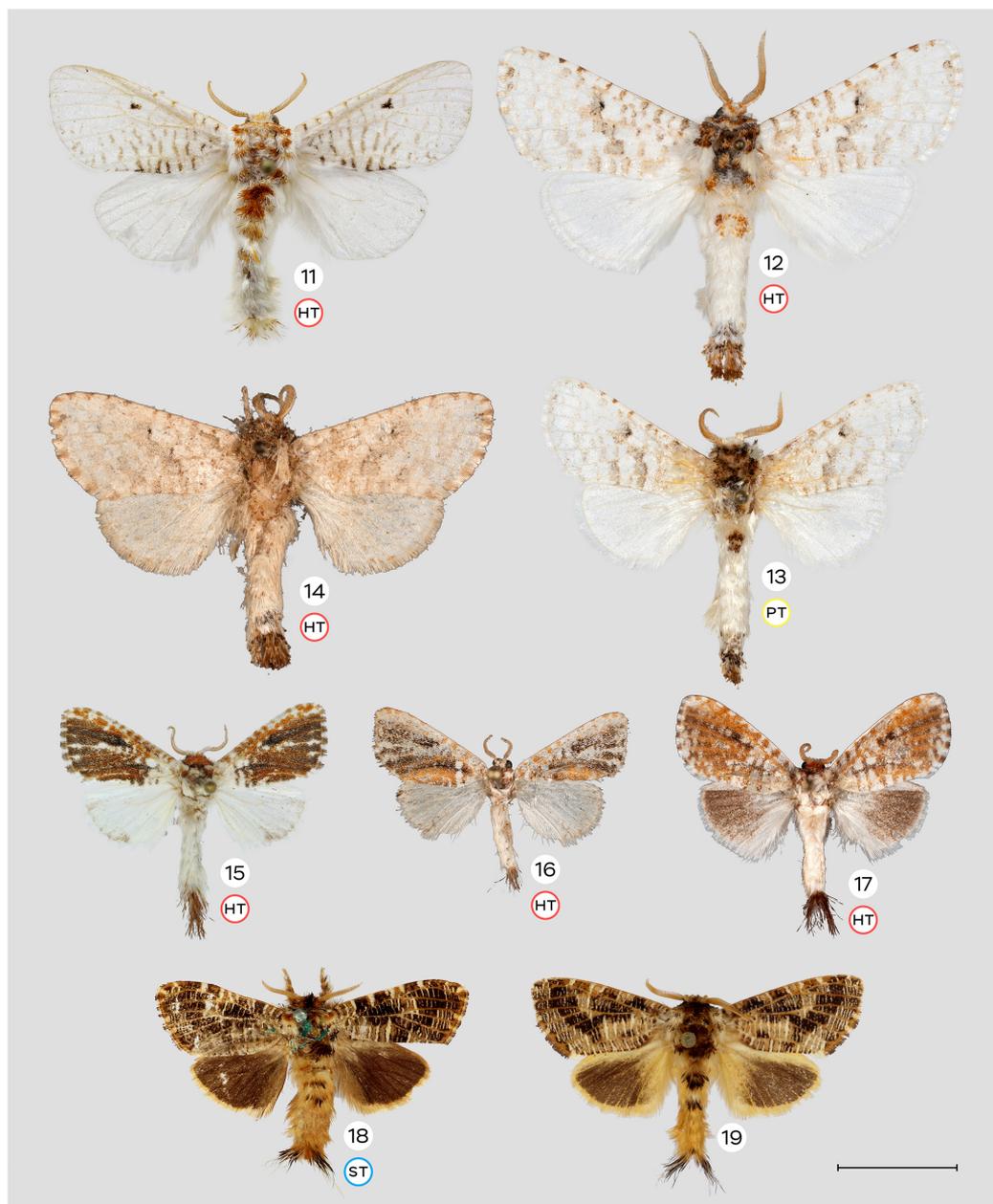
**REDESCRIPTION.** Length of fore wing 12–14 mm, antenna twice shorter than fore wing, yellow, bipectinate, rami 2.5 times longer than flagellum in diameter. Tuft of black scales on forehead, thorax



Figs 1–10. Adult specimens of Metarbelidae: 1 — *Ingolehmannia inversa*, holotype, ♂, Sédhiou, Sénégal, (NHMUK, individual number 010297712); 2 — *I. inversa*, ♂, Senegal, Botou village (ANHRT, individual number 00209995); 3 — *I. inversa*, ♂, Obervolta, Bobo-Dioulasso (CGM); 4 — *I. inversa*, ♂, Elfenbeikoste, Dietour (CGM); 5 — *I. inversa*, ♂, Mali, 75 km SW of Bamako (RYB); 6 — *I. inversa*, ♂, South Algeria (CGM); 7 — *I. kravchenkoi*, holotype, ♂, Guinea Konakri (CGM); 8 — *I. kravchenkoi*, paratype, ♂, Liberia, Nimba Mountains (ANHRT, individual number 00056514); 9 — *I. kravchenkoi*, paratype, ♀, Guinea Konakri (CGM); 10 — *I. kravchenkoi*, paratype, ♀, Guinea Konakri (CGM).

covered with light-yellow and black scales, abdomen covered with light-yellow scales, top of abdomen with tuft of long black hair-like scales. Fore wing light-yellow, veins lemon-yellow, costal area with

series of yellow or orange strokes, tiny transverse strokes throughout the entire surface of wing (except costal area), border thin, lemon-yellow, fringe yellow, unicolorous, in some species mottled (black at veins,



Figs 11–19. Adult specimens of Metarbeliidae: 11 — *Ingolehmannia lenzi*, holotype, ♂, Zambia (RYB/ZISP); 12 — *I. politzari*, holotype, ♂, Nigeria (CGM); 13 — *I. politzari*, paratype, ♂, Nigeria (CGM); 14 — *I. lobanovorum*, holotype, ♂, Nigeria (CGM); 15 — *I. marykingsleyae*, holotype, ♂, Gabon (ANHRT, individual number 00137602); 16 — *I. murzini*, holotype, ♂, Congo (CGM); 17 — *I. barthi*, Holotype, ♂, Côte d'Ivoire (CGM); 18 — *Salagena transversa*, syntype, Sierra Leone (NHMUK, individual number 010297706); 19 — *S. transversa*, N. Nigeria, Zaria, Samaru, 16.iv.1977, J.C. Demeeng (NHMUK, individual number 010290882).

yellow between veins). Hind wing from light-yellow unicolorous (in specimens from Mali) to grey (in specimens from Senegal), veins lemon-yellow, fringe light-yellow, unicolorous.

Male genitalia. Uncus triangular, very short, apically forked into two wide semicircular lobes, diverged to sides, incisure shallow, triangular; gnathos arms of medium length; gnathos of complicated configuration

with pair of inner crescent processes narrowing apically and pair of club-likely extending outer processes with tufts of setae; valve short, strongly extending lobe-likely from base to apex, distal half semicircular, membranous, basal half sclerotized with trapezoidal harpe and short hook-like process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as thin round plate; saccus wide, short, semicircular, phallus short (three times shorter than valve), thick, basally thicker, vesica without cornuti.

Female unknown.

DIAGNOSIS. Clearly differs from all the species of the genus in the special color (bright yellow veins, bright yellow border on the wings), the relatively short uncus, the hook-shaped, pointed process on the sacculus, and the absence of cornutus.

MATERIAL EXAMINED. Holotype, ♂, Sédhiou, Sénégal, 1–8 June 1917, H. Castell (NHMUK, individual number 010297712); 1 ♂, Senegal, Botou village, 13°48'28" N 13°34'43" W, 18–25.vi.2019, Aristophanous, M., Moretto, P., Mulvaney, L. leg. (ANHRT, individual number 00209995; slide ANHRT Pavlova & Yakovlev 2025/072); 17 ♂♂, Mali, 75 km SW of Bamako, Ouronina village, 12°5'39.78" N 8°24'3.16" W, June 2014, G. Müller team coll. (RYB, CGM); 1 ♂, Obervolta [Burkina Faso], Bobo-Dioulasso [11°11'N 4°17'W], 24.iv.[19]80, leg. Dr. Politzar (CGM, slide CGM 2025 1601); 1 ♂, Elfenbeikoste [Côte d'Ivoire], Dietour [10°40'60" N 3°31'0" W], 21.iv.[19]76, leg. Dr. Politzar (CGM, slide CGM 2025 1602).

DISTRIBUTION. Senegal, Mali, Burkina Faso, Côte d'Ivoire; 5 ♂♂, 1 ♀ (all without abdomens) South Algeria, Hoggar Mts., 1600–2400 m, June 2010, Müller–Mooser (CGM).

*Ingolehmannia kravchenkoi* sp.n.

<https://zoobank.org/>

Nomenclatural Acts/7A2D4481-4B60-41B6-9A01-96BB0BCD0D54

Figs 7–10, 24–25, 34–36.

MATERIAL. Holotype, ♂, Guinea Konakri, Macenta Prefecture, Ziama Forest [8.24°N 9.36°W], Mt. Nimba, 550 m, March 2017, leg. G.C. Müller, V.D. Kravchenko & G. Petranyi (CGM, slide Pavlova 2022 / 0152).

Paratypes. 6 ♂♂, 2 ♀♀, same locality and data (CGM); 2 ♂♂, 1 ♀, same locality, but April (CGM, slide 2025 1605); 1 ♂, W-Africa, Guinea, Konakri, Macenta Province, Ziama Forest, 550 m, 250 watt, March 2017, leg. Petrányi G., Müller, G.C. & Kravchenko, V.D. (CGM); 2 ♂♂, same data, but April (CGM, slide 2025 1604); 1 ♂, Guinea, Pr. Nzérékoré, Mt. Nimba, Ziela, 550 m a.s.l., Febr. 2007, leg. G. Petrányi & team G. Müller (CGM); 1 ♂, W-Africa,

Guinea, Nzérékoré Region, Mt. Nimba, Ziela, 550 m, 7.716° N, 8.36° W, April 2017, leg. Petrányi G., Müller, G.C. & Kravchenko, V.D. (CGM); 1 ♂, SE-Guinea, Mnt. Nimba Area, 500–600 m, June 2007 (CGM, slide 2025 1606); 1 ♀, Guinea, Centre Foristiére de Sérédou, Forêt Classée de Ziama, 559 m, N 8°22'3805" 9°18'17.19" W, 29–31.iii.2019, Light trap Blended Bulb, Sáfián, Sz., Koivogui, S. leg. (ANHRT; individual number 00139241); 1 ♂, Liberia, Nimba Mountains, Nimba West, Mount Gangra summit, 978 m, 7°32'45.82" N 8°38'9.36" W, 17–25.iii.2017, Light trap (250 W blended bulb), Safian, Sz., Simonics, G. leg. (ANHRT; individual number 00056514; slide Pavlova & Yakovlev 2025 / 084).

DESCRIPTION. Male. Length of fore wing 10–11 mm. Antenna three times shorter than fore wing, light-brown, bipectinate, rami 2.5 times longer than flagellum in diameter. Tuft of brick-red scales on forehead, patagia covered with brick-red scales, thorax and abdomen covered with white scales, abdomen apically with tuft of long black reddish hair-like scales. Fore wing white with pattern of light-brown spots, series of small strokes along costal margin, reticulated pattern of brown strokes and spots with jagged margins throughout the entire wing surface, discal spot small, dark-brown. Fringe mottled, brown at veins, white between veins. Hind wing white without pattern. Fringe white, unicolorous.

Male genitalia. Uncus triangular, very long, apically forked into two broad rectangular lobes, diverged to sides, incisure shallow, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of thick inner processes diverged to sides and pair of semi-oval extending outer processes with tufts of setae; valve short, lobe-likely extending from base to apex, distal half semicircular, membranous, basal half sclerotized, with trapezoidal harpe (apex of harpe flat with small notch) and triangular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as rounded thin plate; saccus wide, semicircular, short; phallus short (2.5 times shorter than valve), thick, basal end thickened, apical end curved as robust hook, vesica with thin needle-like cornutus.

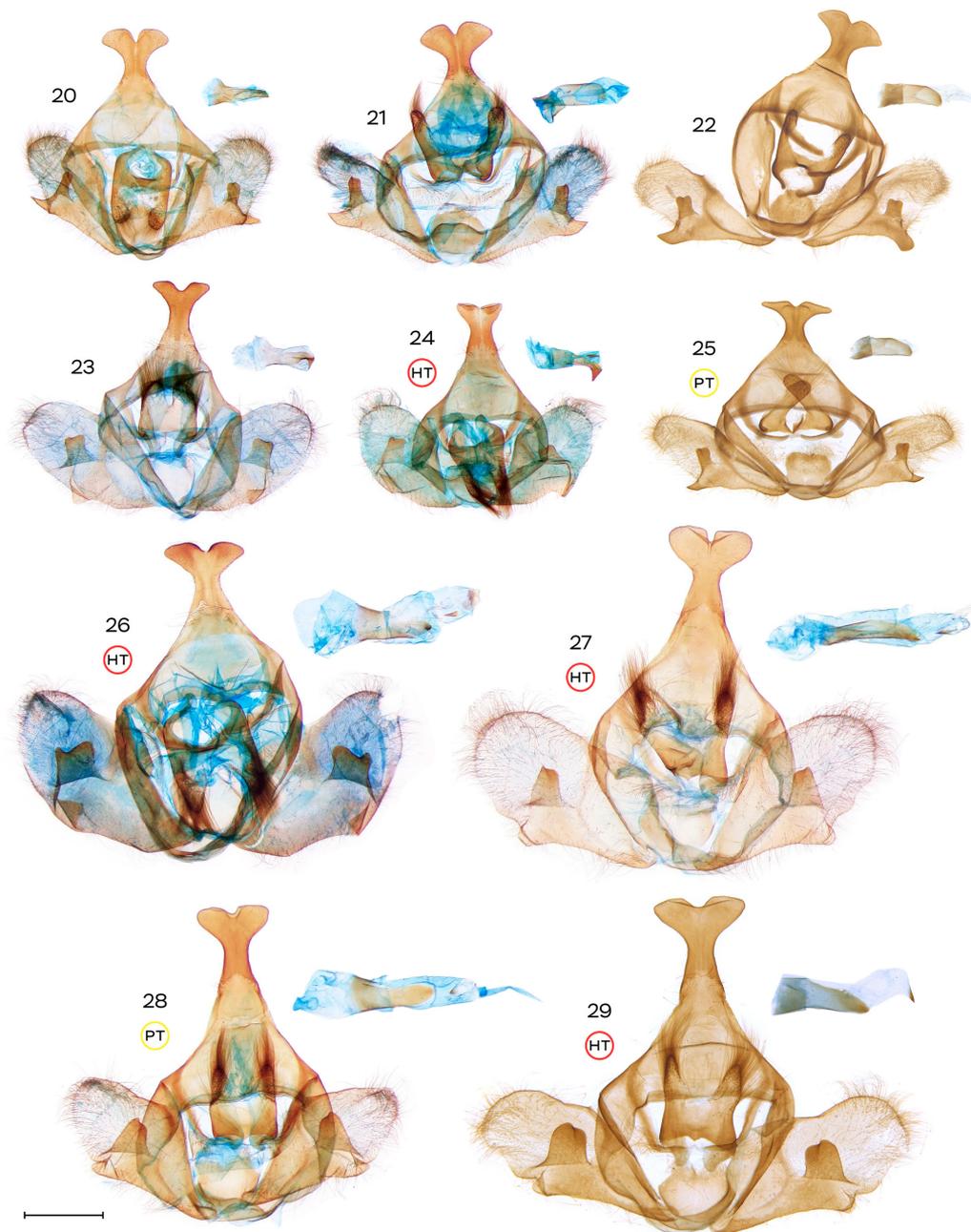
Female. Length of fore wing 12.5–14 mm. Antenna three times shorter than fore wing, light-brown, bipectinate, rami 2 times longer than flagellum in diameter. Externally resembles the male, but the wing pattern is less developed.

Female genitalia. See the generic description.

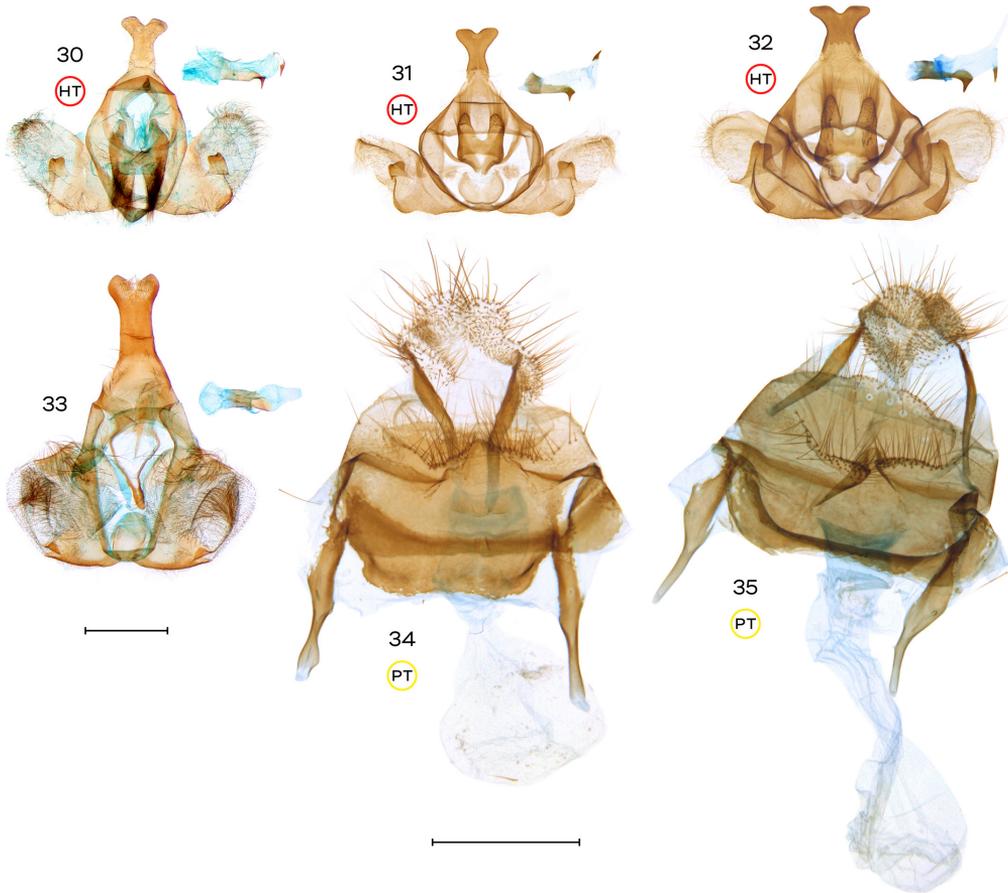
DIAGNOSIS. Externally, close to *I. politzari* from which it differs in the smaller size, the trapezoidal harpe, and the hook-like apical end of the phallus.

DISTRIBUTION. Guinea, Liberia.

ETYMOLOGY. The new species is named after our past friend, a leading specialist in Noctuoidea of the Middle East and Africa, Prof. Dr. Vasily Kravchenko (1953–2021) (Friedman, 2021).



Figs 20–29. Male genitalia of Metarbeliidae: 20 — *Ingolehmannia inversa*, Senegal, Botou village (slide ANHRT Pavlova & Yakovlev 2025/072); 21 — *I. inversa*, Mali, 75 km SW of Bamako (slide PP 0126); 22 — *I. inversa*, Obervolta, Bobo-Dioulasso (CGM, slide 2025/1601); 23 — *I. inversa*, ♂, Elfenbeikoste, Dietour (CGM, slide 2025/1602); 24 — *I. kravchenkoi*, holotype (slide Pavlova 2022 / 0152); 25 — *I. kravchenkoi*, paratype (slide Pavlova & Yakovlev 2025 / 084); 26 — *I. lenzi*, Holotype, Zambia (slide PP 0072); 27 — *I. politzari*, holotype, Nigeria (slide Pavlova 2022 / 0184); 28 — *I. politzari*, paratype, Nigeria (slide Pavlova 2022 / 0183); 29 — *I. lobanovorum*, holotype, ♂, Nigeria (CGM, slide 2025/1607).



Figs 30–35. Genitalia of Metarbelidae: 30 — *Ingolehmannia marykingsleyae*, holotype, ♂, Gabon (ANHRT, slide 2025/080); 31 — *I. murzini*, holotype, ♂, Congo (CGM, slide 2025/1608); 32 — *I. barthi*, holotype, ♂, Côte d'Ivoire (CGM, slide 2025/1617); 33 — *Salagenia transversa*, N. Nigeria (slide NHMUK 014333363); 34 — *I. kravchenkoi*, paratype, Guinea (CGM, slide 2025/1604); 35 — *I. kravchenkoi*, paratype, Guinea (CGM, slide 2025/1605).

*Ingolehmannia lenzi* sp.n.

<https://zoobank.org/Nomenclatura-IAcTs/A6968CEA-0BA8-45FE-A8F8-B83B814D5B36>  
Figs 11, 26, 36.

**MATERIAL.** Holotype, ♂, North-Western Zambia, Hillwood farm, 1420 m, S 11.1601° E 24.1899°, 17.ix.2009, leg. Jürgen Lenz (RYB/ZISP; slide PP 0072).

**DESCRIPTION.** Male. Length of fore wing 16 mm. Antenna yellow, short, 2.5 times shorter than fore wing, bipectinate, and rami 2.5 times longer than flagellum in diameter. Tuft of orange scales on forehead, patagia, tegulae, and thorax covered with bright orange scales, abdomen covered with white

scales with tufts of bright orange scales from upside, abdomen apically with tuft of long reddish hair-like scales. Fore wing white with poorly expressed pattern of reddish-brown strokes more developed from base to postdiscal area, periphery of wing without pattern, discal spot small, dark-brown. Hind wing without pattern. Fringe on all wings white, unicolorous.

**Male genitalia.** Uncus triangular, very long, apically forked into two wide sole-like lobes, diverged to sides, incisure shallow, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of crescent processes directed inwards, ring-likely brought together, and pair of tapered outer processes with tufts of setae; valve short, lobe-likely extended from base to apex, distal half semicircular, membranous, basal half sclerotized with robust trapezoidal harpe (apex of harpe strongly bunt inwards)

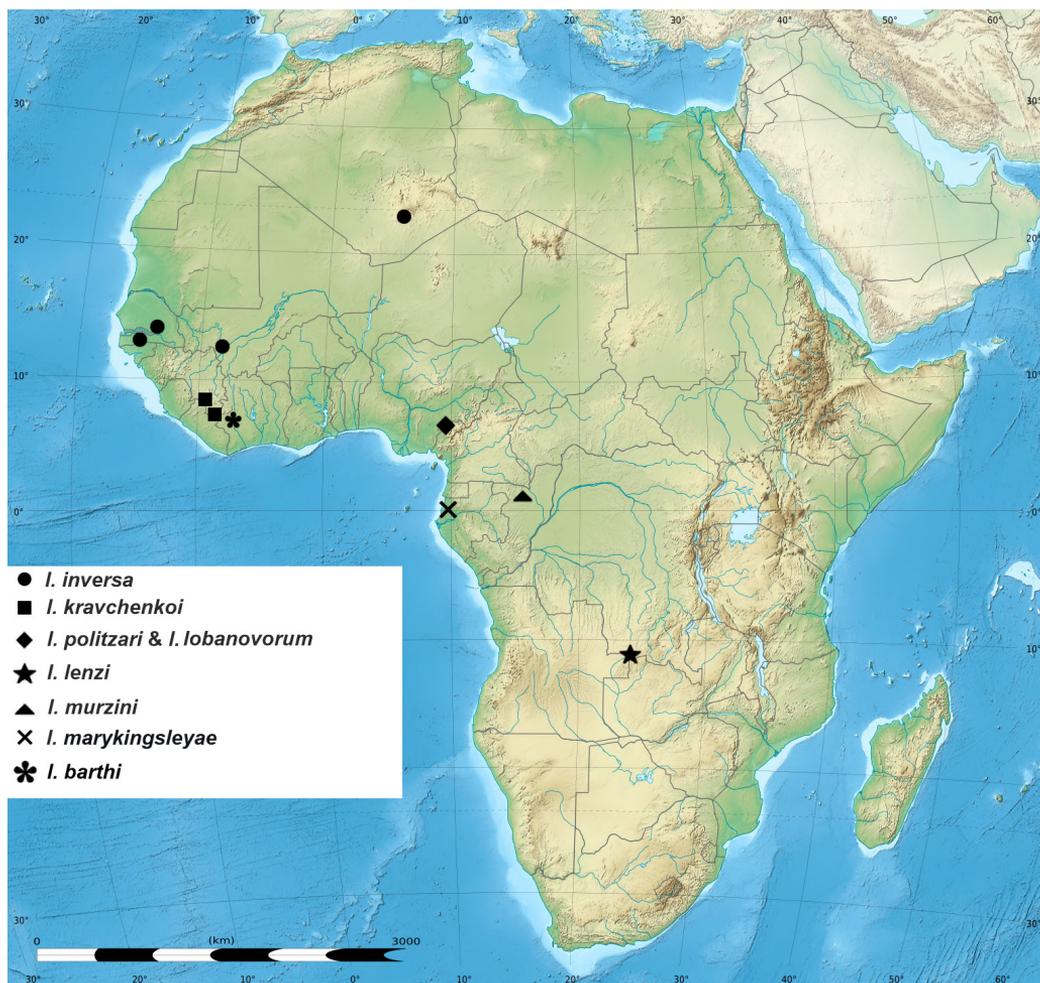


Fig. 36. Map of distribution of *Ingolehmanna*.

and triangular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as thin round plate; saccus wide, short, semicircular; phallus short (2.5 times shorter than valve), thick, basally thickened, vesica with short needle-like cornutus.

Female unknown.

**DIAGNOSIS.** Clearly differs in the poorly developed pattern of the wing, the wide sole-like apex of the harpe, the hook-like cornutus, and the joint together inner processes of the gnathos.

**DISTRIBUTION.** Zambia.

**ETYMOLOGY.** The new species is named after our friend, the famous Zimbabwe moth researcher, Mr. Jürgen Lenz (Harare).

*Ingolehmanna politzari* **sp.n.**

[https://zoobank.org/](https://zoobank.org/NomenclaturalActs/3499D2D2-F8A9-44CD-A478-1EAB124CE932)

NomenclaturalActs/3499D2D2-F8A9-44CD-A478-1EAB124CE932

Figs 12–13, 27–28, 36.

**MATERIAL.** Holotype, ♂, Nigeria or., [Cross River State], Obudu [6°40'0"N 9°10'0"E], 2000 m, 19–20.xii.1970, leg. Dr. Politzar (CGM, slide Pavlova 2022 / 0184); Paratype, ♂, same locality and data (CGM, slide Pavlova 2022 / 0183).

**DESCRIPTION.** Male. Length of fore wing 15–17 mm. Antenna short, 2 times shorter than fore wing, flagellum flour-white, bipectinate, rami orange, 3 times longer than flagellum in diameter. Tuft of orange scales, patagia, tegulae, and thorax covered

with bright orange and black scales, abdomen covered with white scales, with tuft of bright orange scales on top in basal third of abdomen, top of abdomen with tuft of long reddish hair-like scales. Fore wing white with pale pattern of light-brown and reddish spots and strokes throughout all wing surface, series of small strokes along costal margin, discal spot small, dark-brown. Fringe mottled, brown at veins, white between veins. Hind wing white without pattern. Fringe white, unicolorous.

Male genitalia. Uncus triangular, very long, apically forked into two very wide sole-like lobes, diverged to sides, incisure shallow, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of short crescent directed inwards and diverged to sides, and pair of tapered outer processes with tufts of setae; valve short, strongly lobe-likely extended from base to apex, distal half semicircular, membranous, basal half sclerotized with robust tapered tooth-like harpe (apex of harpe jagged, lateral margin tooth-like) and semicircular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as thin rounded plate; saccus wide, short semicircular; phallus short (2.5 times shorter than valve), thick, basal end thickened, vesica with short tapered cornutus.

Female unknown.

DIAGNOSIS. Externally, close to *I. kravchenkoi* sp.n. from which it differs in the bigger size and the tooth-like harpe.

DISTRIBUTION. South-Eastern Nigeria.

ETYMOLOGY. The new species is named after the type series collector, Dr. Karlheinz Politzar (1938–2007) (Hacker, Hausmann, 2010).

*Ingolehmannia lobanovorum* sp.n.

<https://zoobank.org/>

NomenclaturalActs/74403F29-BCE1-4459-90E4-4D0B35963FC2

Figs 14, 29, 36.

MATERIAL. Holotype, ♂, Ostnigeria, [Cross River State], Obudu Cattle Ranch [6°23'N 9°22'E], 2000 m, 19–20.xii.1970, leg. Dr. Politzar (CGM, slide 2025 1607).

DESCRIPTION. Male. Length of fore wing 16 mm. Antenna short, 2.5 times shorter than fore wing, flagellum flour-white, bipectinate, rami light brown, 3 times longer than flagellum in diameter. Thorax densely covered with brown-red scales, abdomen – with light-brown ones. Abdomen apically with bundle of brown-red hair-like scales. Fore wing creamy with pattern of poorly expressed light-brown bands, discal spot very small, black. Bands more concentrated in basal and discal portions of wing, pattern more sparse on periphery. Fringe mottled, light-brown at veins, creamy between veins. Hind wing creamy with

poorly expressed pattern of light-brown strokes, fringe creamy, unicolorous.

Male genitalia. Uncus triangular, very long, apically split into two very wide sole-like lobes, diverged to sides, incisure not deep, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of short crescent processes directed inwards and diverged to sides, and pair of tapered outer processes with bundles of setae; valve short, strongly extending lobe-likely from base to apex, costal side of valve uneven with a well-defined notch in the medium third, distal half semicircular, membranous, basal half sclerotized with robust tapered tooth-like harpe (apex of harpe semicircular, slightly asymmetric with more expressed distal end) and semicircular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as thin rounded plate; saccus wide, semicircular, short; phallus short (2.5 times shorter than valve), thick, basally thickened, vesica aperture 2/3 of phallus in length, vesica with short tapered cornutus.

Female unknown.

DIAGNOSIS. The new species clearly differs from all the known species of the genus in the special pattern on the fore wing: the creamy general background and the blurred pattern of light-brown bands. In the genital structure it is close to the sympatric species *I. politzari* sp. n., from which it reliably differs in the uneven costal side of the valve (with the noticeable notch in the medium third), very short phallus and more robust harpe.

DISTRIBUTION. South-Eastern Nigeria.

ETYMOLOGY. The new species is named after Vasily T. Lobanov and Lyudmila N. Lobanova, the first author's grandparents.

*Ingolehmannia marykingsleyae* sp.n.

<https://zoobank.org/>

NomenclaturalActs/395AB1A0-E062-47E3-A476-B4E5847C85C6

Figs 15, 30, 36.

MATERIAL. Holotype, ♂, Gabon, [province de l'Estuaire], Nyonié (Lowland forest), 10 m, 0°2'22" S 9°20'25" E, 23–28.viii.2019, MV – light trap, Albert, J.-L., Aristophanous, M., Bie Mba, J., Derozier, V., Moretto, P. Leg. ANHRT: 2019.17. (ANHRT; Individual number ANHRT: 00137602. Slide: ANHRT Pavlova & Yakovlev 2025/080).

Paratypes: 2 ♂♂, same locality and data (ANHRT; Individual numbers ANHRT: 00137600, 00137601).

DESCRIPTION. Male. Length of fore wing 10–11 mm. Antenna short, 2.5 times shorter than fore wing, flagellum flour-white, bipectinate, rami yellow, 3 times longer than flagellum in diameter. Thorax and abdomen densely covered with white scales, tegulae

and patagia covered with brick-red scales, abdomen apically with bundle of long hair-like red scales. Fore wing white with bright contrasting pattern: series of round orange spots along costal edge; series of round orange spots along vein Sc; discal spot shaped as wide black stroke, reaching outer margin; postdiscal veins with sputtering of red scales, wide brown strokes between veins postdiscally; fringe mottled, brown at veins, white between veins. Hind wing white with slight sputtering of grey scales postdiscally, submarginally and marginally, fringe white, unicolorous.

Male genitalia. Uncus cylindrical, elongated, with almost parallel sides, apically split into two wide sole-like lobes diverged to sides, incisure not deep, semicircular; gnathos arms of medium length; gnathos of complicated configuration: with pair of short crescent processes directed inwards and diverged to sides and pair of wide tapered outer processes with bundles of setae; valve short, strongly extending lobe-likely from base to apex, costal side of valve smooth, distal half semicircular, membranous, basal half sclerotized with robust trapezoidal tooth-like harpe and semicircular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve); juxta shaped as thin round plate; saccus tapered, short; phallus short (2.5 shorter than valve), thick, basally thickened, apical end of phallus with spiky process, vesica aperture 2/3 of phallus on length, vesica with spiky cornutus.

Female unknown.

DIAGNOSIS. Externally resembles *I. muzini* sp.n., from which it differs in the darker brighter pattern on the fore wing, the tapered saccus and the smooth costal side of the valve.

DISTRIBUTION. Gabon.

ETYMOLOGY. The new species is named after Mary Henrietta Kingsley (1862–1900) English ethnographer, writer and explorer who made numerous travels through West Africa (including Gabon) and wrote several books on her experiences there.

*Ingolehmannia murzini* sp.n.

[https://zoobank.org/](https://zoobank.org/NomenclaturalActs/7B267277-9985-414B-A826-B83746597280)

NomenclaturalActs/7B267277-9985-414B-A826-B83746597280

Figs 16, 31, 36.

MATERIAL. Holotype, ♂, Congo [Republic of the Congo], D'Ozala [sic! Odzala] Park National, 400–500 m, 1°00' N 15°00' E, 29 Jan. – 3 March 1997, leg. S. Murzin & V. Siniaev (CGM, slide 2025 1608).

Paratypes. 5 ♂♂, same locality and data (CGM, slide 2025 1609).

DESCRIPTION. Male. Length of fore wing 10–11 mm. Antenna short, 2.5 times shorter than fore wing, flagellum flour-white, bipectinate, rami orange, 3 times longer than flagellum in diameter. Thorax and

abdomen densely covered with white scales, tegulae and patagia covered with brick-red scales, abdomen apically with bundle of long hair-like red scales. Fore wing flour-white with bright contrasting pattern: wide longitudinal white field with orange strokes from costal edge to vein Sc; brown stroke in discal cell; brown strokes postdiscally between medial and cubital veins; area from cubital trunk to inner margin occupied with field of orange scales; fringe mottled: brown at veins, white between veins. Hind wing white, with slight sputtering of grey and brown scales postdiscally, submarginally and marginally (mostly along veins), fringe white, unicolorous.

Male genitalia. Uncus cylindrical, elongated, with almost parallel sides, apically split into two wide sole-like lobes, diverged to sides, incisure not deep, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of short crescent processes directed inwards and diverged to sides and pair of wide tapered outer processes with bundles of setae; valve short, relatively narrow, costal side of valve smooth, distal half semicircular, membranous, basal half sclerotized with robust trapezoidal harpe with sole-like apex and semicircular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve), abdominal side of valve with clearly noticeable semicircular notch in medium third; juxta shaped as thin round plate; saccus semicircular, very short; phallus short (2.5 times shorter than valve), thick, basally thickened, apically with spiky process, vesica aperture 2/3 of phallus in length, vesica with spiky cornutus.

Female unknown.

DIAGNOSIS. The new species is mostly close to *I. marykingsleyae* sp.n., from which it reliably differs in a series of characters: the wide orange field of the fore wing from the cubital trunk to inner margin, the notch in the medium third on the abdominal side of the valve and the relatively narrow valves.

DISTRIBUTION. Republic of the Congo.

ETYMOLOGY. The new species is named after our friend Mr. Sergey V. Murzin (Moscow), one of the collectors of type series.

*Ingolehmannia barthi* sp.n.

[https://zoobank.org/](https://zoobank.org/NomenclaturalActs/2FE425B1-89EF-4688-BA15-93E28F658A15)

NomenclaturalActs/2FE425B1-89EF-4688-BA15-93E28F658A15

Figs 17, 32, 36.

MATERIAL. Holotype, ♂, Ivory Coast, North of Guiglo (~6.57 N, 7.52 W), galleries and wetlands of Nzo River, August 2010 (CGM, slide 2025 1617).

DESCRIPTION. Male. Length of fore wing 11 mm. Antenna short, 2.5 times shorter than fore wing, flagellum flour-white, bipectinate, rami orange, 3 times longer than flagellum in diameter. Forehead

with bundle of brick-red scales. Thorax and abdomen covered with white scales, abdomen apically with bundle of long brown hair-like scales. Fore wing white with reticulated pattern of orange and brown elements: series of large orange strokes and veins with orange sputtering along costal margin, pattern of transverse orange strokes basally and discally, discal spot blurred, brown, wide brown field with transverse orange veins postdiscally, poorly expressed reticulated brown pattern submarginally, fringe mottled, brown at veins and white between veins. Hind wing white with wide brown field from discal to submarginal portions, fringe white.

Male genitalia. Uncus triangular, relatively short, apically split into two wide sole-like lobes, diverged to sides, incisure not deep, wide, semicircular; gnathos arms of medium length; gnathos of complicated configuration with pair of short crescent processes directed inwards and diverged to sides and pair of wide tapered outer processes with bundles of setae; valve short, costal side of valve smooth, distal half semicircular, membranous, basal half sclerotized, with robust trapezoidal harpe with asymmetric apex and semicircular poorly sclerotized short process on sacculus (on border between sclerotized and membranous portions of valve), abdominal side of valve with clearly noticeable semicircular notch in medium third; juxta shaped as thin round plate; saccus semicircular, very short; phallus short (2.5 times shorter than valve), thick, basally thickened, apically with spiky process, vesica aperture 2/3 of phallus in length, vesica with spiky cornutus.

Female unknown.

DIAGNOSIS. The new species reliably differs from all the species of the genus in its special wing pattern (the brown field developed on the hind wing).

DISTRIBUTION. Côte d'Ivoire.

ETYMOLOGY. The new species is named after Johann Heinrich Barth (1821–1865), well known German explorer of Africa.

## Discussion

Our work has shown the heterogeneity of the studied group, which includes about 30 described species (De Prins, De Prins, 2011–2025; Lehmann, 2019a) currently united into the genus *Salagena*. According to our preliminary estimates, the genus *Salagena* in its current form represents an artificial unit, including at least 4 different genera, which will be described in the future.

The representatives of the genus *Ingolehmannia* are widely distributed in Africa from Central Algeria, Mali and Senegal to north-west of Zambia.

## Compliance with ethical standards

CONFLICT OF INTEREST: The authors declare that they have no conflicts of interest.

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