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Articles

Review of the African golden-spotted genera Haplopacha and Dasychirinula (Lepidoptera, Lasiocampidae, Poecilocampinae)

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African golden-spotted lappet moths from the genera *Haplopacha* Aurivillius, 1905 and *Dasychirinula* Hering, 1926 are reviewed. Antennae, heads and legs are investigated in addition to the traditional comparison of habitus, genitalia, and distribution areas. Two new genera are established and four new species are described as a result: *Eudoumbia* **gen. n.** with the type-species *Eudoumbia thorogood* **sp. n.** from Angola, Namibia, and Botswana; *Auripluvia* **gen. n.** with the type species *Auripluvia sophia* **sp. n.** from Ethiopia; *Haplopacha mason* **sp. n.** from Tanzania; and *Dasychirinula julia* **sp. n.** from Ethiopia. One species is reattributed to the new genus as *Eudoumbia ndoumoi* (Dupont, Simonsen & Zilli, 2016) **stat. n.** One new synonymy is established for two Tanzanian species: *Dasychirinula chrysogramma* Hering, 1926 = *Haplopacha lunata* Dupont, Simonsen & Zilli, 2016 **syn. n.**; and one potential synonymy is remarked between *Haplopacha tangani* Dupont, Simonsen & Zilli, 2016 from Tanzania and Malawi and *Haplopacha riftensis* Dupont, Simonsen & Zilli, 2016 from Malawi. Photos of the related material stored in the main collections of Ditsong National Museum of Natural History (Pretoria, RSA) and Natural History Museum of Zimbabwe (Bulawayo, Zimbabwe) are showed.

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Keywords

Afrotropical realm, biodiversity, lappet moth, new genus, new species, new synonymy

Introduction

The family Lasiocampidae Harris, 1841 is a sole member of the superfamily Lasiocampoidea (Minet 1994; Regier et al. 2009; Zwick et al. 2011; Hamilton et al. 2019) containing 224 genera and 1952 species (van Nieukerken et al. 2011). Five subfamilies are distinguished (see Zolotuhin 2015): 1. the Afrotropic Chionopsychinae Aurivillius, 1927 with one genus *Chionopsyche* Aurivillius, 1909 containing three species (see Zolotuhin 2010), arguably one of the archaic groups resembling in appearance members of the family Eupterotidae (Lemaire, Minet 1998; Zwick 2008); 2. the Mediterannean and South African Chondrosteginae Tutt, 1902 with four genera, two of which have brachypterous females, and about 20 species inhabiting mainly arid biotopes (Rougeot, Viette 1978; de Freina, Witt 1987; Zolotuhin 2007; de Freina et al. 2015); 3. the cosmopolitan Poecilocampinae Tutt, 1902 that contains two tribes: Palaearctic and Afrotropic Poecilocampini Tutt, 1902 with seven genera and about 30 species, and Neotropical Macromphaliini Franclemont, 1973 with 15 genera and about 584 species (Becker, Heppner 1996); 4. Holarctic Malacosominae Tutt, 1902 with so far one genus *Malacosoma* Hübner, 1820 and about 20 species (Stehr, Cook 1968; Zolotuhin 2015); and 5. Cosmopolitan Lasiocampinae Harris, 1841 – the most diverse group containing nine tribes: 1) Lachneini Grote, 1888; 2) Lasiocampini Harris, 1841; 3) Macrothylaciini Tutt, 1902; 4) Selenepherini Tutt, 1902; 5) Trabaliini Tutt, 1902; 6) Pinarini Kirby, 1892; 7) Gastropachini Stroem, 1891; 8) Odonestini Tutt, 1902; and 9) Argudini Zolotuhin, 2012 – the last discovery in the suprageneric system of the family. Zolotuhin with co-authors (2012a, 2012b) established and briefly described Argudini Zolotuhin, 2012 for one African and eleven Indomalayan genera based on the nucleotide sequences of the gene elongation factor-1 alpha (1168 bp) belonging to 49 species. However, detailed revision is required as conclusions are based on the limited investigation of morphologic features. Lees and Minet (2022) confirmed that “tribes are not yet clearly established” in the note on Madagascan Lasiocampidae. The statement applies to the entire family. Modern studies of African Lasiocampidae are concentrated on both specific and partially generic levels which will lead to a better understanding of the tribal system (Zolotuhin 2007; Gurkovich, Zolotuhin 2009a, 2009b, 2010; Joannou, Gurkovich 2009; Joannou, Krüger 2009; Zolotuhin, Gurkovich 2009a, 2009b; Zolotuhin 2010; Zolotuhin, Prozorov 2010; Prozorov 2011; Prozorov, Zolotuhin 2012a, 2012b, 2012c; Prozorov, Zolotuhin 2013a, 2013b, 2013c; Prozorov 2016a, 2016b, 2016c; Prozorov, Zolotuhin 2016; Tujuba et al. 2019, 2023; Prozorov et al. 2021a, 2021b, 2022, 2023a, 2023b, 2023c, 2023d, 2023e, 2023f, 2023g, 2023h, 2023i, 2023j, 2023k, 2024a, 2024b, 2024c, 2024d; Takano, László 2022; Friend et al. 2024; Sulak et al. 2024; Takano 2024; Takano, László 2024a, 2024b; Tejuoso et al. 2024).

The Lasiocampidae family is spread all around the world but is not found in Socotra (orig. data) and

New Zealand (Common 1990). Among the eight biogeographic realms on Earth, the most diverse fauna of the family Lasiocampidae is found in the Afrotropical realm. The fauna is expected to include more than 750 species in 120 genera (orig. data). Afrotropical Lasiocampidae can be divided into two distinct groups: continental and Madagascan. They share only two genera: *Odontocheilopteryx* Wallengren, 1860 (see Gurkovich, Zolotuhin 2009b) and *Lechriolepis* Butler, 1880 (see Lajonquière 1972). They have no mutual species. The Madagascan genus *Napta* Guenée, 1865 (type species *Napta serratilinea* Guenée, 1865) used to include continental *Napta straminea* (Aurivillius, 1921), but the latter was moved into a separate genus (see Prozorov et al. 2024b). The continental fauna shares the genus *Bomby copsis* Felder & Felder, 1874 with the Palearctic realm (see Joannou, Krüger 2009); and *Estigena* Moore, 1860; *Trabala* Walker, 1856 and *Streblote* Hübner, 1820 with the Indomalayan realm (see Prozorov 2011; Prozorov et al. 2022).

The revision of *Haplopacha* Aurivillius, 1905 by Dupont, Simonsen and Zilli (2016) resulted in five species: 1) the type species *Haplopacha cinerea* Aurivillius, 1905 from “Rhodesia: Sebakwe”; 2) *Haplopacha riftensis* Dupont, Simonsen & Zilli, 2016 from “Nyasaland, Mt Mlanje [= Mulanje]”; 3) *Haplopacha tangani* Dupont, Simonsen & Zilli, 2016 from “Mlingano Tanga, Tanzania”; 4) *Haplopacha lunata* Dupont, Simonsen & Zilli, 2016 from “District of the Great Craters, Tanganyika Territory”; and 5) *Haplopacha ndoumoi* Dupont, Simonsen & Zilli, 2016 from “Ndumo Game Reserve, Kwazulu Natal, South Africa.” All of the five species are rather small-sized, having grey or greyish brown forewings with a pair of golden spots (discal one may be lunate) and brown or straw hindwings. They are distributed in East and South Africa. The genus has a close relative – *Dasychirinula* Hering, 1926 with the type species *Dasychirinula chrysogramma* Hering, 1926. The relativity was suggested by V. Zolotuhin (see the Discussion section in Dupont, Simonsen, Zilli 2016). Dupont with co-authors had very limited material (16 specimens, 15 of which are from the collection of Natural History Museum in London) which was insufficient to understand intraspecific variability and distribution patterns of the species. Differences between *Haplopacha* and *Dasychirinula*, briefly mentioned by Dupont with co-authors, needed a more detailed investigation. To perform the investigation, we obtained as much collected material as possible and sought fresh specimens in our field trips. We sacrificed some specimens to examine their antennae (Figs 1–10), heads (Figs 11–19), and legs (Figs 20–26) hoping to find additional features. Below, we redescribe morphologic features and broader distribution areas of several known species and also describe two new genera and four new species, all of which have golden spots on forewings.

Materials and methods

Genitalia preparations were made following Hardwick (1950). Distal one third of the abdomen of each specimen was put into a separate 50 ml Falcon tube with 10 ml of 13% solution of potassium hydroxide (KOH). Several tubes with abdomens and KOH were placed into a small pot with hot water for 20 minutes. The tubes there-after were removed from the pot and the abdomens were rinsed with water several times to remove any remaining scales and soft tissue. Cleaned abdomens were then transferred into separate cells of the Corning Costar 96 Well Cell Culture Cluster with a small quantity of water to keep them moist during preparation. Sequentially, abdomens were cleaned with a soft brush and dissected using Dumont Tweezers Style 5 and “no name” micro scissors in a Petri dish under the microscope. Aedeagus was extracted and vesica everted (Mikkola 2007) with an insulin syringe and a 32G or 33G needle for mesotherapy. Male’s vesica was stained with the Evans blue. The dissected genitalia were rinsed in 50, 70 and 96% ethanol and then mounted on a microscope slide in Euparal and covered with a cover slip.

Adults were photographed with an Olympus C-750 UZ, a Nikon D3300, a Nikon 40mm f/2.8G and a Nikon R1C1. Slides were photographed using a Fujifilm XT-10 and a Leica MC170 HD. All images were processed in Photoshop CS6 and InDesign CS6. Morphological terminology follows Scoble (1992). Distribution map was made with Google My Maps service (https://www.google.com/maps/). Altitude for collecting sites was taken from Google Earth Pro if missing from labels. Ecoregions listed in the Distribution section of the species follow Dinerstein et al. 2017 (also see

https://ecoregions.appspot.com/).

The following abbreviations were used for the examined collections: CAC – collection of Alexandre Cipolla (Grivegnée, Belgium); CGM – collection of Günter Müller (Freising, Germany); CRF – collection of Ralf Fiebig (Roßleben-Wiehe, Germany); DMNH – Ditsong National Museum of Natural History (Pretoria, RSA); MNHN – Muséum national d'Histoire naturelle (Paris, France); MfNB – Museum für Naturkunde (Berlin, Germany); NHMO – Natural History Museum, University of Oslo (Oslo, Norway); NHMUK – National History Museum (London, UK); NHMZ – Natural History Museum of Zimbabwe (Bulawayo, Zimbabwe); SMNS – State Museum of Natural History (Stuttgart, Germany); SNHM – Swedish Natural History Museum (Stockholm, Sweden); USTTB – l'Université des Sciences, des Techniques et des Technologies de Bamako (Bamako, Mali); and ZMJU – Zoological Museum of Jagellonian University (Cracow, Poland).

Other abbreviations used in the text: GS – genitalia slide; HT – holotype; LT– lectotype; PLT – paralectotype; PT – paratype; RSA – Republic of South Africa; ST – syntype; TS – type species.

Result

Haplopacha Aurivillius, 1905

https://zoobank.org/F3EB374E-9264-4D3E-B6E1-431AECCF395A

Figs 1–3, 11–13, 20–21, 27–49, 51–53

The Transactions of the Entomological Society of London, 1905, 323. TS: *Haplopacha cinerea* Aurivillius, 1905, ibidem, by monotypy. See Fletcher, Nye 1982.

Taxonomic note. The genus has to be redescribed as well as the TS due to misattribution of South African specimens to *H.cinerea* by Dupont with co-authors (2016). South African specimens moved instead to *Eudoumbia* **gen. n.** with subsequent change of the status to *Eudoumbia ndoumoi* (Dupont, Simonsen, Zilli 2016) **stat.n.**, see details under the new genus description below.

Redescription. Moths sexually dimorphic: female larger than male and has thinner antennal rami. *Antenna* (Figs 1–3). Scape bulbous; pedicel tubercle-like; male antenna consists of 39 or 52 flagellomeres, whereas female – 39, each of them bears pair of rami, except sometimes for the first flagellum; rami rapidly grow in length in basal third of antenna and then gradually shorten towards top. *Head* (Figs 11–13). Frons bears crown-like extension with dents on its edge. Eyes naked. Labial palpi 3-segmented: I segment basally swollen, cylinder-like; II segment barrel-like; III segment somewhat ovoid, smallest. Maxillary palpi reduced. Legs (Figs 20–21). Foreleg may have epiphysis, spur formula 0-2-2. *Habitus* (Figs 27–41, 51–53). Flagellum, head, thorax and abdomen covered with pale brownish, brown and greyish brown scales. Forewing somewhat triangular with smooth outer margin and rounded apex, speckled pale brownish and brown or greyish brown. Pattern consist of dark crenulated medial lines and dark spotted submarginal fascia; basal and discal golden spots present. Fringe of wing color. Hindwing somewhat oval with slightly wavy outer margin. Background color brown or greyish brown. Fringe of wing color. *Male genitalia* (Figs 42–47). Uncus and gnathos triangular, almost similar in shape. Tegumen a somewhat trapezoid plate. Socii reduced. Vinculum a rather narrow band. Cucullus short, c-shaped, apically rounded, densely covered with setae, completely separate from sacculus. Sacculus narrow, elongated, hardly sclerotized, covered with setae along, apically with spikes, basally with an additional small extension covered with setae. Juxta reduced. Aedeagus more of less c-shaped, dorsally membranous. Vesica long, conical, c-shaped, may bear minute cornuti medially. *Female genitalia* (Figs 48–49). Papillae anales semi-oval, densely covered with setae. Posterior apophyses slightly longer than anterior ones. Sterigma a large sclerotized plate forming wrinkled antrum, additional wrinkled semi-sclerotized extension formed near antrum, direction papillae anales.

Ductus bursae short relatively wide. Corpus bursae cut off on both existing slides.

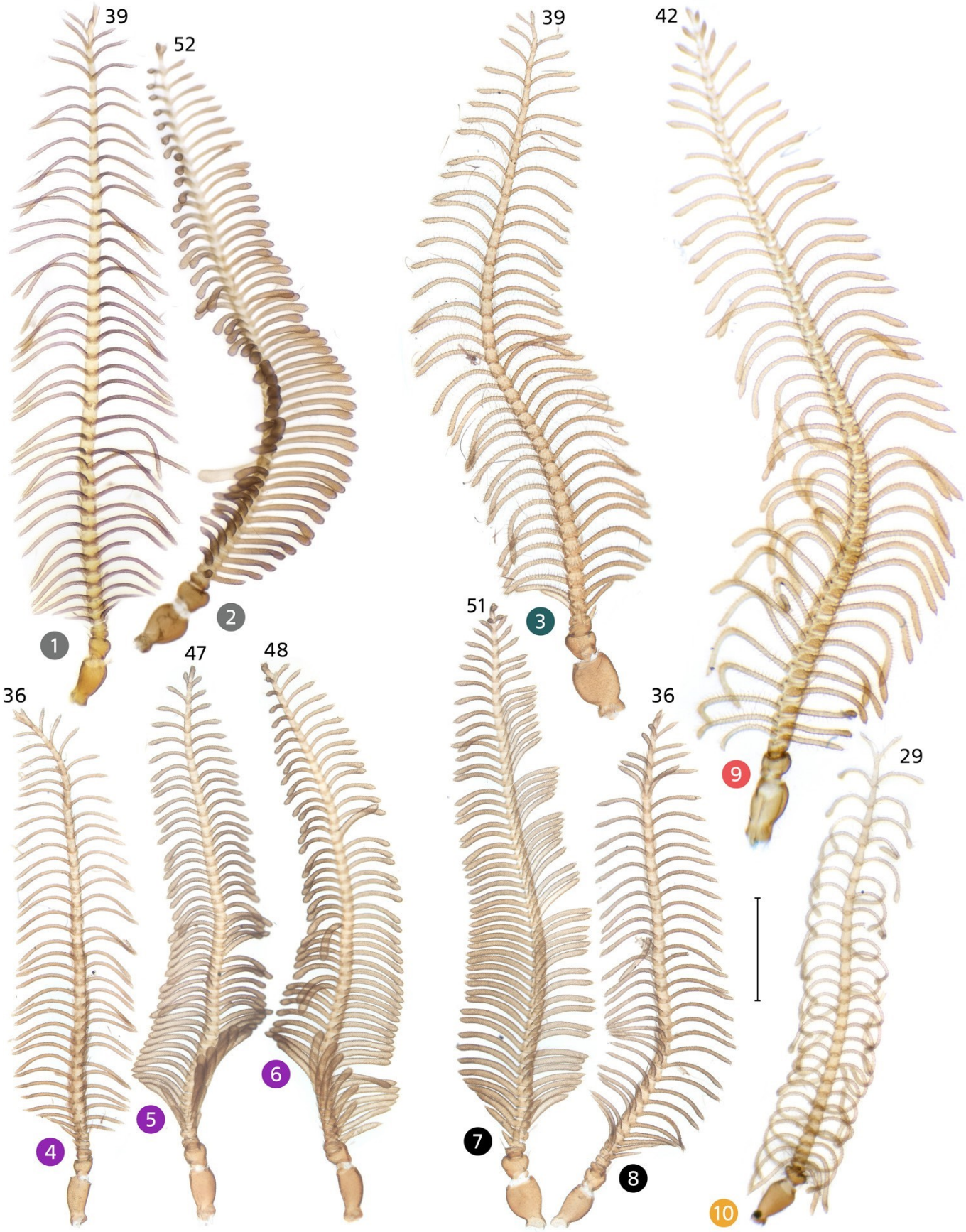

Figure 1. ***Figures 1–10.*** *Antennae of adults. 1–3. Haplopacha. 1–2. H. cinerea, Zimbabwe (NHMZ). 1. ♀, Bulawayo, slide Las-12. 2. ♂, Umtali District, slide Las-11. 3. H. mason* ***sp. n.****, HT ♂, Tanzania, Singida region, slide 0470 (CGM/USTTB). 4–8. Eudoumbia. 4–6. E. thorogood* ***sp. n.*** *4. ♀, Namibia, Ghaub Nature Reserve and Guest Farm, slide HL035 (CGM/USTTB). 5. PT ♂, Botswana, 45 km SW Kachikau, slide 1277 (CGM/USTTB). 6. PT ♂, Namibia, Popa Falls, slide HL034 (CGM/USTTB). 7–8. E. nduomoi, RSA. 7. ♂, Weener Game Reserve, slide 0467 (CGM/USTTB). 8. ♀, Medike, slide 0466 (CGM/USTTB). 9. Auripluvia sophia* ***sp. n.****, PT ♂, Ethiopia, Weyto, slide HL028 (CGM/USTTB). 10. Dasychirinula julia* ***sp. n.****, PT ♂, Ethiopia, Aluweya, slide 0116 (CGM/USTTB). Number of flagellomeres is set in italic near the distal top of each antenna. Scale bar – 1 mm.*

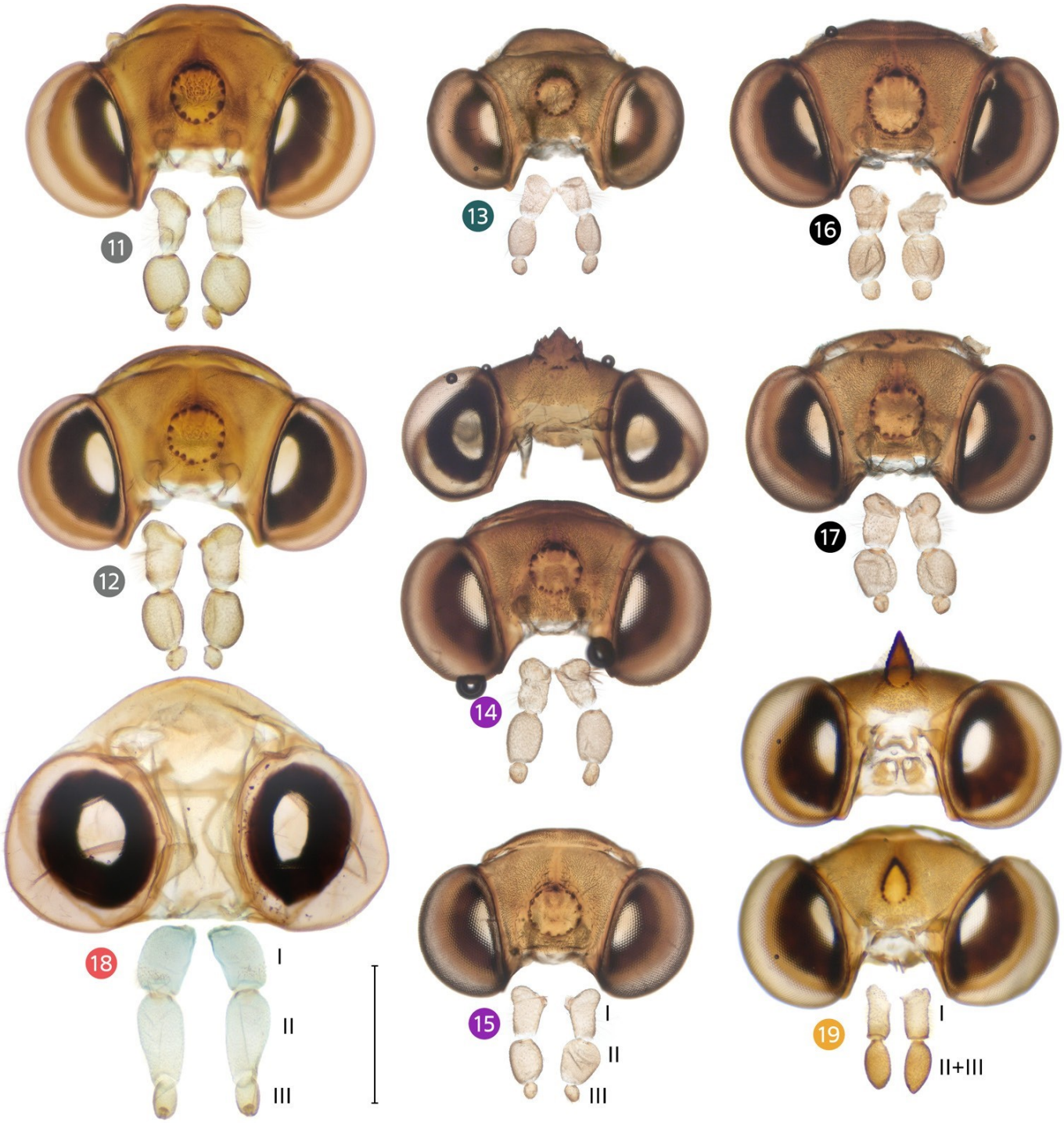

Figure 2. ***Figures 11–19.*** *Heads and maxillary palps of adults. 11–13. Haplopacha. 11–12. H. cinerea, Zimbabwe (NHMZ). 11. ♂, Umtali District, slide Las-11. 12. ♀, Bulawayo, slide Las-12. 13. H. mason* ***sp. n.****, HT ♂, Tanzania, Singida region, slide 0470 (CGM/USTTB). 14–17. Eudoumbia. 14–16. E. thorogood* ***sp. n.*** *14. PT ♂, Namibia, Popa Falls, slide HL034 (CGM/ USTTB). 15. PT, ♀, Namibia, Ghaub Nature Reserve and Guest Farm, slide HL035 (CGM/ USTTB). 16–17. E. nduomoi, RSA. 16. ♂, Weener Game Reserve, slide 0467 (CGM/USTTB). 17. ♀, Medike, slide 0466 (CGM/USTTB). 18. Auripluvia sophia* ***sp.***

***n.**, PT ♂, Ethiopia, Weyto, slide HL028 (CGM/USTTB). 19. Dasychirinula julia **sp. n.**, PT ♂, Ethiopia, Aluweya, slide 0116 (CGM/USTTB). Scale bar – 1 mm.*


20
21
22
25
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24
26

Figure 3. ***Figures 20–26.*** *Legs of adults. 20–21. Haplopacha. 20. H. cinerea, ♂, Zimbabwe, Umtali District, slide Las-11 (NHMZ). 21. H. mason* ***sp. n.****, HT ♂, Tanzania, Singida region, slide 0470 (CGM/USTTB). 22–24. Eudoumbia. 22. E. nduomoi, ♂, RSA ,Weener Game Reserve, slide 0467 (CGM/USTTB). 23–24. E. thorogood* ***sp. n.****, Namibia (CGM/USTTB). 23. PT ♂, Popa Falls, slide HL034. 24. PT ♀, Ghaub Nature Reserve and Guest Farm, slide HL035. 25. Auripluvia sophia* ***sp. n.****, PT ♂, Ethiopia, Weyto, slide HL028 (CGM/USTTB). 26. Dasychiri- nula julia* ***sp. n.****, HT ♂, Ethiopia, Aluweya, slide 0116 (CGM/USTTB). Scale bar – 1 mm.*

Diagnosis. *Haplopacha* differs from: 1) *Eudoumbia* **gen. n.** by less sclerotized uncus and gnathos, lack of clustered cornuti on vesica, and well-pronounced postvaginal plate; 2) *Auripluvia* **gen. n.** by presence of extension on frons, dark hindwings, less sclerotized uncus, dents on top of sacculus, dorsally membranous aedeagus without bulbous basis, much shorter vesica without cornuti, undivided sterigma, and wider ductus without sclerotization; and 3) *Dasychirinula* by circular extension on frons, discal spot on forewings, dark hindwings, well-developed gnathos, well-developed cucullus, lacking basal extension of aedeagus, and shorter vesica without cornuti.

Species score. Four species are included: *H. cinerea* (TS), *H. tangani*, *H. riftensis*, and *H. mason* **sp. n.**

Haplopacha cinerea **Aurivillius, 1905**

https://zoobank.org/6A489673-0A4B-497E-A0B0-0A262A2A3406

Figs 1–2, 11–12, 20, 27–35, 42–44, 49, 53, 98, 103–105

Haplopacha cinerea Aurivillius, 1905, The Transactions of the Entomological Society of London, 1905, 323. HT of unknown sex, “RHODESIA / Sebakwe,” GS not found (NHMUK).

Taxonomic note. The primary type was collected in Zimbabwe, near the Sebakwe river. Dupont with co-authors (2016) examined three specimens from Zimbabwe: HT and non-type specimen with missing abdomens and a female that was dissected but for some reason considered as “*Haplopacha* sp. [unassigned].” Having no other Zimbabwean specimens in hands, Dupont with co-authors attributed to *H. cinerea* several South African adults, even though they had no meaningful distinction from South African *H. ndoumoi*. Later, Delabye with co-authors (2020) identified their Namibian specimens as *H. cinerea* having similar male genitalia with the ones from South Africa pictured by Dupont with co-authors. To clarify what belongs to what, we dissected few specimens from Zimbabwe, RSA, and Namibia. Genitalia of Zimbabwean specimens (Figs 44, 49) belong to true *H. cinerea*, whilst South African ones to *E. ndoumoi* **stat. n.**, and Namibian ones to *E. thorogood* **sp. n.** (see under *Eudoumbia* **gen. n.** below). The aforementioned unassigned “*Haplopacha* sp.” from Zimbabwe is a female of *H. cinerea*. Two dissected Mozambican male specimens also appeared to belong to *H. cinerea*.

Redescription. General features see above under the genus redescription. Male antenna (Fig. 1) consists of 52 flagellomeres, whereas female’s (Fig. 2) of 39, each of them bears pair of rami, except for the first flagellum; male rami thicker, especially towards their tops, than of female. II segment of male labial palpi significantly larger than I (Fig. 11), female’s one nearly similar in size (Fig. 12). Male foreleg does not have epiphysis (Fig. 20). Adults vary in size (Figs 28–35), forewing length – 9.5 to 12.5 mm. In male genitalia (Figs 42–44) gnathos slightly narrower than uncus; tegumen proximally has two apices; cucullus wide basally; sacculus relatively wide too; vesica medially bears minute cornuti. Female genitalia (Fig. 49) follow the generic redescription above (ductus in our slide is poorly spread and seems narrow, although it is similar to the slide pictured by Dumont with co-authors).

Diagnosis. *Haplopacha cinerea* differs from: 1) *H. tangani* by, in general, lighter and less contrasting wing coloration; somewhat wider and shorter cucullus; and thicker slightly bent sacculus; 2) *H. riftensis* by, in general, lighter and less contrasting wing coloration; and different sterigma; and 3) *H. mason* **sp. n.** by thicker sacculi of equal length; and southern distribution.

Distribution (Fig. 105). Zambezian-Limpopo mixed woodlands and dry miombo woodlands in Zimbabwe; southern Swahili coastal forests and woodlands, and Zambezian mopane woodlands in Mozambique.

Biology. Adults were collected in January, February, and November from altitudes of 340–1370 m.

Examined adults. *Type*: HT, [Zimbabwe, Sebakwe river or, possibly, a dam on it, 19.03241 S, 30.26293 E] “RHODESIA / Sebakwe” (NHMUK). *Non-type*. *ZIMBA-BWE*: sex unknown, “S. RHODESIA / Sebakwe,” “D. Dods. / 190[...]” (SNHM); ♂, “Umtali District / S. Rhodesia / 11.1.1934 / P. A. Sheppard,” GS Las-11 (NHMZ); ♀, “Matsheamhlope / Bulawayo / S. Rhodesia / 25-I-1976 / Nat. Museum, S. R. / D. K.B. Wheeler,” GS Las-12 (NHMZ); ♂, 30 km W Masvingo, Muchandike Sanctuary, 20.13 S, 30.617 E, 940 m, 8.01.2012, leg. V. Anikin, GS 0465 (CGM/USTTB); ♂, 50 km S Bulawayo, Big Cave Camp, 20.504 S, 28.4361 E, 1370 m, 24.02.2016, leg. H. Sulak, S. Naumann & E. Ott, GS 1283 (CGM/USTTB); 7♂, Matabeleland South Province, 40 km SSW Bulawayo, Matobo NP, Big Cave Camp, 20.504801 S, 28.441385 E, 1275 m, 24–25.11.2016, leg. H. Sulak, A. Prozorov & R. Yakovlev, GS 1284 (CGM/USTTB); 5♂, Masvingo, Glenlivet, Muunza Forest Lodge, 20.139050 S, 31.066117 E, 1074 m, 21–25.11.2017 leg. A. Kingston, K. Larsen & A. Cipolla (CAC); 2♂, Masvingo Province, Glenlivet Hotel, 20.161650 S, 31.086967 E, 1120 m, 23–24.11.2017, leg. A. Kingston, K. Larsen & A. Cipolla (CAC). *MOZAMBIQUE*: ♂, Zambeze river, 20 km S Tete, 16.278 S, 33.52972 E, 340 m, 6.01.2012, leg. V. Anikin, GS 1281 (CGM/USTTB); ♂, Gaza Province, 40 km SW Espungabera, 20.50555 S, 32.79138 E, 800 m, 18.02.2016, leg. H. Sulak, S. Naumann & E. Ott, GS 1282 (CGM/USTTB); and a series of specimens deposited in DMNH and NHMZ (Figs 95, 100).

Haplopacha tangani

https://zoobank.org/402B6AA5-8913-4B91-8E06-A946EB8A80AE

Figs 39–41, 45, 48, 51, 105

Haplopacha tangani Dupont, Simonsen & Zilli, 2016, Zootaxa, 4109 (4), 452. HT ♂, “Mlingano Tanga, Tanzania,” GS Lasiocampidae #1569 (NHMUK).

Taxonomic note. Three males and one female from NHMO were examined (Figs 39–41), their attribution is proved by two genitalia preparations (Figs 45, 48). One male is known from MfNB (Fig. 38) but we did not dissect it and cannot attribute it neither to *H. tangani* nor to *H. mason* **sp. n.** We have a concern that *H. tangani* may be synonymous to *H. riftensis*. The PT female of *H. tangani* (Fig. 51) originates from exactly the same location and looks exactly like the HT male and PT female of *H. riftensis*. Authors are right that sterigmata of both females look different but they are pictured under different angles; and, if they are so different, the connection between East Tanzanian HT male and Malawian PT female of *H. tangani* is not obvious. Male genitalia of *H. riftensis* remains unknown and could not be compared with the ones of *H. tangani*. So, at this point, nothing to do unless Malawian male specimens are obtained and dissected.

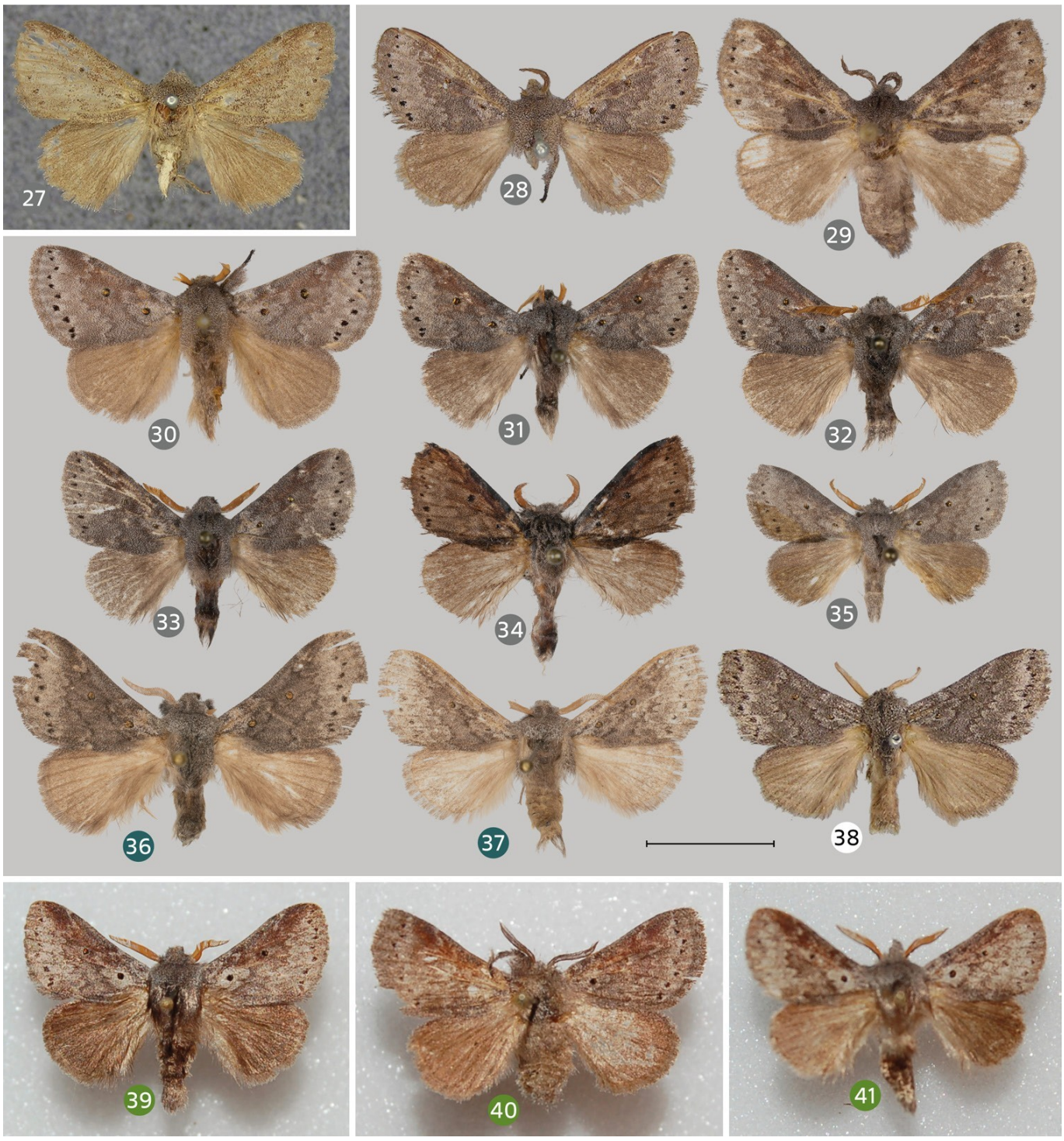

Figure 4. ***Figures 27–41.*** *Adults of Haplopacha spp. 27–35. H. cinerea. 27. HT ♂, "Rhodesia / Sebakwe" (NHML). 28. ♀?, "S. Rhodesia / Sebakwe" (SNHM). 29. ♀, Zimbabwe, Bulawayo, GS Las-12 (NHMZ). 30. ♂, Zimbabwe, Umtali District, GS Las-11 (NHMZ). 31–33. ♂, Zimbabwe, Matobo National Park, GS 1284 (CGM/USTTB). 34. ♂, Mozambique, 40 km SW Espungabera, GS 1282 (CGM/USTTB). 35. ♂, Mozambique, 20 km S Tete, GS 1281 (CGM/USTTB). 36–37. H. mason* ***sp. n.****, ♂, Tanzania. 36. HT, Singida region, slide 0470 (CGM/USTTB). 37. PT, Singida region, slide 0471 (CGM/USTTB). 38. H. sp., ♂, Mkalama (MfNB). 39–41. H. tangani, Tanzania (NHMO). 39. ♂, Basanza, GS 3323m. 40. ♀, Sibwesa, GS 4469f. 41. ♂, Basanza. Scale bar – 1 cm.*

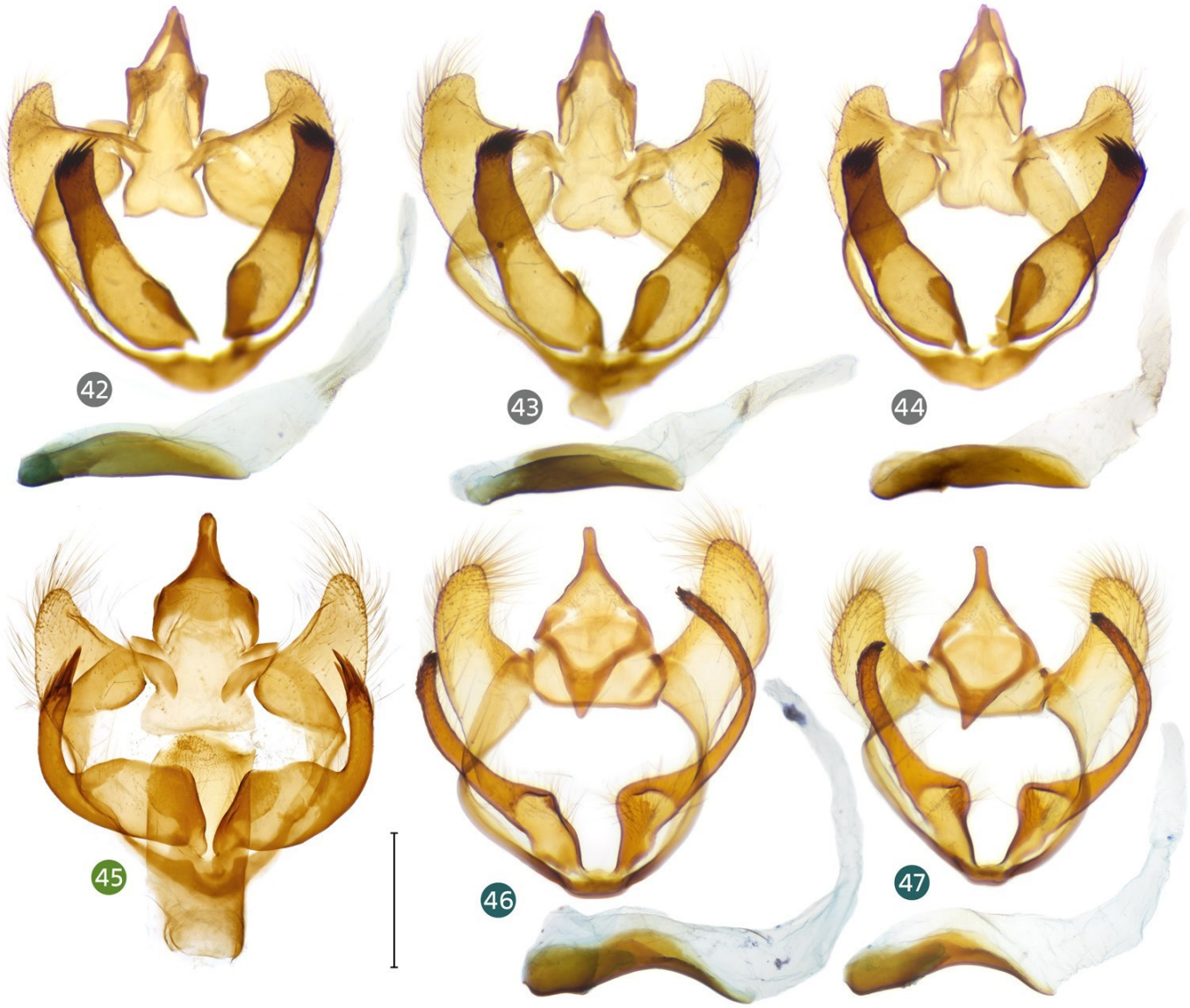

Figure 5. ***Figures 42–47.*** *♂ genitalia of Haplopacha spp. 42–44. H. cinerea. 42. Mozambique, 20 km S Tete, GS 1281 (CGM/USTTB). 43. Mozambique, 40 km SW Espungabera, GS 1282 (CGM/ USTTB). 44. Zimbabwe, Matobo National Park, GS 1284 (CGM/USTTB). 45. H. tangani, Tanzania, Basanza, GS 3323m (NHMO). 46–47. H. mason* ***sp. n.****, Tanzania, Singida region (CGM/USTTB). 46. HT, slide 0470. 47. PT, slide 0471. Scale bar – 1 mm.*

Diagnosis. *Haplopacha tangani* differs from: 1) *H. cinerea* by, in general, more contrasting and darker wing coloration; more elongated and narrower cucullus; narrowing from the middle to top sacculus; shape of sterigma; and northern distribution; 2) *H. riftensis* by different shape of sterigma; and 3) *H. mason* **sp. n.** by, in general, more contrasting and darker wing coloration; shorter and equal in length sacculi with wider base.

Distribution (Fig. 105). Northern Swahili coastal forests in Tanzania and dry miombo woodlands in Malawi.

Examined adults. *Non-type*. *TANZANIA*: 3♂, Kigoma District, 5 km N Basanza, 1180 m, 5.01.1990, leg. A. Bjørnstad, GS 3323m (NHMO); ♀, Mpanda District, Sibwesa, 10.1973, leg. J. Kielland, GS 4469f (NHMO).

Figure 6. ***Figures 48–50.*** ♀ *genitalia. 48–49. Haplopacha. 48. H. tangani, Tanzania, Sibwesa, GS 4469f (NHMO). 49. H. cinerea, Zimbabawe, Bulawayo, GS Las-12 (NHMZ). 50. Eudoumbia thorogood* ***sp. n.****, Namibia, Ghaub Nature Reserve and Guest Farm, slide 2024 0684 (CGM/ USTTB). Scale bar for Figs 49–50 – 1 mm.*

Haplopacha riftensis

https://zoobank.org/A2D19FC3-B1BE-438E-9724-8406626BBCED

Figs 52, 100, 105

Haplopacha riftensis Dupont, Simonsen & Zilli, 2016, Zootaxa, 4109 (4), 450. HT ♂, “Nyasaland, Mt Mlanje [= Mulanje],” GS absent (NHMUK).

Taxonomic note. Unfortunately, no specimens were at our disposal. We have only seen one photo of a female from the collection of Raymond Murphy (Fig. 52) and another from NHMZ (Fig. 100, label data in unavailable). The first specimen originates from the northern part of country in contrary to the type specimens of the species that have been collected in southern Malawi. We attribute it to *H. riftensis* by geographic proximity, otherwise it equally may be *H. tangani* since the two have some differences in the shape of sterigma. See the Taxonomic note under *H. tangani* above.

Diagnosis. *Haplopacha riftensis* differs from: 1) *H. cinerea* by, in general, more contrasting and darker wing coloration; shape of sterigma; 2) *H. tangani* by different shape of sterigma; and 3) *H. mason* **sp. n.** by, in general, more contrasting and darker wing coloration and southern distribution.

Distribution (Fig. 105). Central Zambezian wet miombo woodlands and dry miombo woodlands in Malawi.

Examined adult. Non-type. MALAWI: ♀, Mzimba District, Vwaza Game Reserve, lake Kazuni, 1090 m, 11.13 S, 33.63 E, 24.12.2007, leg. R. J. Murphy (CRM).

Haplopacha mason **sp. n.**

https://zoobank.org/3455A6B9-5034-4B1C-B2C6-E48295FF57ED

Figs 3, 13, 21, 36–37, 46–47, 103–105

Holotype: ♂, Tanzania, Singida Region, road Singida to Babati, 4.748483 S, 34.9668 E, 1695 m, 4.04.2010, GS 0470 (CGM/USTTB).

Paratype: ♂, same data as HT, GS 0471 (CGM/USTTB).

Description. General features see above under the genus redescription. Male antenna (Fig. 3) consists of 39 flagellomeres, first flagellum bears rami. II segment of male labial palpi nearly similar in size with I (Fig. 13). Foreleg bears long, slender epiphysis (Fig. 21). Adults vary in size (Figs 36–37), forewing length 11.5 to 13 mm. In male genitalia (Figs 46–47) uncus slightly narrower than gnathos; tegumen proximally has smooth edge; cucullus c-shaped with rounded apex; sacculi long, narrow, left one shorter and slightly thicker; vesica medially lacks cornuti. Female genitalia remain unknown.

Diagnosis. *Haplopacha mason* **sp. n.** differs from: 1) *H. cinerea* by thinner sacculi of unequal length; and northern distribution; 2) *H. tangani* by, in general, less contrasting and lighter wing coloration; longer and unequal in length sacculi with smaller base; and 3) *H. riftensis* by, in general, less contrasting and lighter wing coloration and northern distribution.

Distribution (Fig. 105). Southern Acacia-Commiphora bushlands and thickets in Tanzania.

Biology. Adults were collected in April from an altitude of 1695 m.

Etymology. The species is named in honor of Mason Rain Svarc (Melbourne, Australia).

Eudoumbia **gen. n.**

https://zoobank.org/38FD5A6B-D8B2-4AF8-8B6E-52B32AE78740

Figs 4–8, 14–17, 22–24, 50, 54–75

TS: *Eudoumbia thorogood* **sp. n.**, **by present designation**.

Description. Moths sexually dimorphic: female larger than male and has thinner antennal rami. *Antenna* (Figs 4–8). Scape ovoid or bulbous; pedicel tubercle-like; male antenna consists of 47, 48 or 51 flagellomeres, whereas female – 36, each of them bears pair of rami, except sometimes for the first and second flagellum; rami rapidly grow in length in basal fifth of antenna and then gradually shorten towards top. *Head* (Figs 14–17). Frons bears crown-like extension with dents on its edge, dorsal dent rather largest. Eyes naked. Labial palpi 3-segmented: I segment basally swollen, cylinder-like; II segment barrel-like, almost equal to I in size; III segment somewhat ovoid, smallest. Maxillary palpi reduced. *Legs* (Figs 22–24). Foreleg does not bear epiphysis, spur formula 0-2-2. *Habitus* (Figs 54–66). Flagellum, head, thorax and abdomen covered with pale brownish, brown and greyish brown scales. Forewing somewhat triangular with smooth outer margin and rounded apex, speckled pale brownish and brown or greyish brown. Pattern consist of dark crenulated medial lines and dark spotted submarginal fascia; basal and discal golden spots present. Fringe of wing color. Hindwing somewhat oval with slightly wavy outer margin. Background color brown or greyish brown. Fringe of wing color. *Male genitalia* (Figs 67–72). Uncus hardly sclerotized, somewhat triangular with slightly widened apex. Gnathos hardly sclerotized, somewhat semi-oval or semi-rounded. Tegumen somewhat a rectangle or oval plate. Vinculum a narrow band, slightly thickening ventrally. Cucullus somewhat reniform, covered with setae, completely separate from sacculus. Sacculus somewhat claw-shaped, basally bears a nipple-like extension covered with setae, apex more sclerotized with minute dents. Juxta reduced. Aedeagus with ventroapical extension with blunt apex. Vesica compact, bears oval cluster of densely packed cornuti on either lateral side. *Female genitalia* (Figs 50, 73–75). Papillae anales semi-oval, densely covered with setae. Anterior and posterior apodemes equal in size. Antevaginal plate reduced; postvaginal plate somewhat M-shaped. Dustus proximally sclerotized and wrinkled, wrinkles even out towards bursa. Bursa small, ovoid, bears two lunate signi. Ductus with bursa of 15–16 mm length.

Diagnosis. *Eudoumbia* **gen. n.** differs from: 1) *Haplopacha* by highly sclerotized uncus and gnathos, clustered cornuti on vesica, and undivided sterigma; 2) *Auripluvia* **gen. n.** by presence of extension on frons, dark hindwings, less sclerotized gnathos, aedeagus without bulbous basis, compact vesica with clustered numerous cornuti, reduced antevaginal plate, membranous ductus, and pair of signi situated on bursa medially; and 3) *Dasychirinula* by discal dot, dark hindwings, hardly sclerotized uncus and gnatos, well-developed gnathos, well-developed cucullus, and compact vesica with clustered cornuti.

Species score. Two species are included: *E. thorogood* **sp. n.** (TS) and *E. ndoumoi*. **Etymology**. The genus name is devoted to Dr. Seydou Doumbia (USTTB, Mali) with prefix *Eu*-like in *Eupagopteryx* Lajonquière, 1972; *Eutricha* Hübner, 1814; and *Euwallengrenia* Fletcher, 1968.

Eudoumbia thorogood **sp. n.**

https://zoobank.org/68D6AB0C-3CD6-459D-87C4-488ABB03C05A

Figs 4–6, 14–15, 23–24, 50, 61–66, 70–72, 99, 105 **Holotype**: ♂, Angola, Cunene Province, ca. 5 km N Humbe, 16.59656 S, 14.91336 E, 1116 m, 27.11.2013, leg. S. Naumann, H. Sulak & E. Ott, GS 1274 (CGM/USTTB). **Paratypes** (24♂, 3♀). *ANGOLA*: ♂, same data as HT, GS 1275 (CGM/USTTB); *NAMIBIA*: 4♂, Zambezi Region, Camp Mazambala Island Lodge, 17.80836 S, 23.34593 E, 875 m,

30.11–1.12.2016, leg. H. Sulak, A. Prozorov & R. Yakovlev, GS 1278, 1279 (CGM/USTTB); ♂, ♀, Oshikoto Region, Ghaub Nature Reserve and Guest Farm, 19.4703 S, 17.74876 E, 1425 m, 5–6.12.2016, leg. H. Sulak, A. Prozorov & R. Yakovlev, GS 1280, 2024 0684 (CGM/USTTB); ♂, Kavango Region, Popa Falls, Ocowango River, 18.120250 S, 21.533674 E, 1190 m, 13.11.2012, leg. E. Ott & H. Sulak (CGM/USTTB); ♂, Okatjikona, Waterberg National Park, 14–18.02.2008, leg. W. Mey (MfNB); ♀, Odjiwarongo, Damaraland, S. O. [unreadable], 1500 m, 10.02.1931, leg. Ramenout [?] (MNHN); ♂, Kavango East, Bwabwata National Park, 18.1118 S, 21.6717 E, 1026 m, 18.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); 6♂, 2♀, Kavango East, Bwabwata National Park, 18.1170 S, 21.6797 E, 1018 m, 18.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); ♂, Kavango East, Bwabwata National Park, 18.1237 S, 21.6862 E, 1009 m, 18.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); ♂, Kavango East, Bwabwata National Park, 18.1308 S, 21.6923 E, 1009 m, 18.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); ♂, Kavango East, Bwabwata National Park, 18.1375 S, 21.6990 E, 1009 m, 18.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); ♀, Khomas Region, Namibgrens, 23.6517 S, 16.2934 E, 1769 m, 4.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); 3♂, Otjozondjupa Region, Grootfontein, 19.2951 S, 18.7968 E, 1210 m, 4.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); ♂, Otjozondjupa Region, Grootfontein, 19.3909 S, 18.8282 E, 1219 m, 16.11.2016, leg. S. Delabye, O. Sedláček, V. Maicher & R. Tropek (ZMJU); *BOTSWANA*: 3♂, North-West District, 45 km SW Kachikau, 18.36024 S, 24.18375 E, 905 m, 29.11.2016, leg. H. Sulak, A. Prozorov & R. Yakovlev, GS 1276, 1277 (CGM/USTTB); ♂, 18 km N Nata, 1000 m, 13.03.2005, leg. A. Legrain (CAC). Specimens mentioned by Delabye with co-authors (2020) are added here to the paratype series.

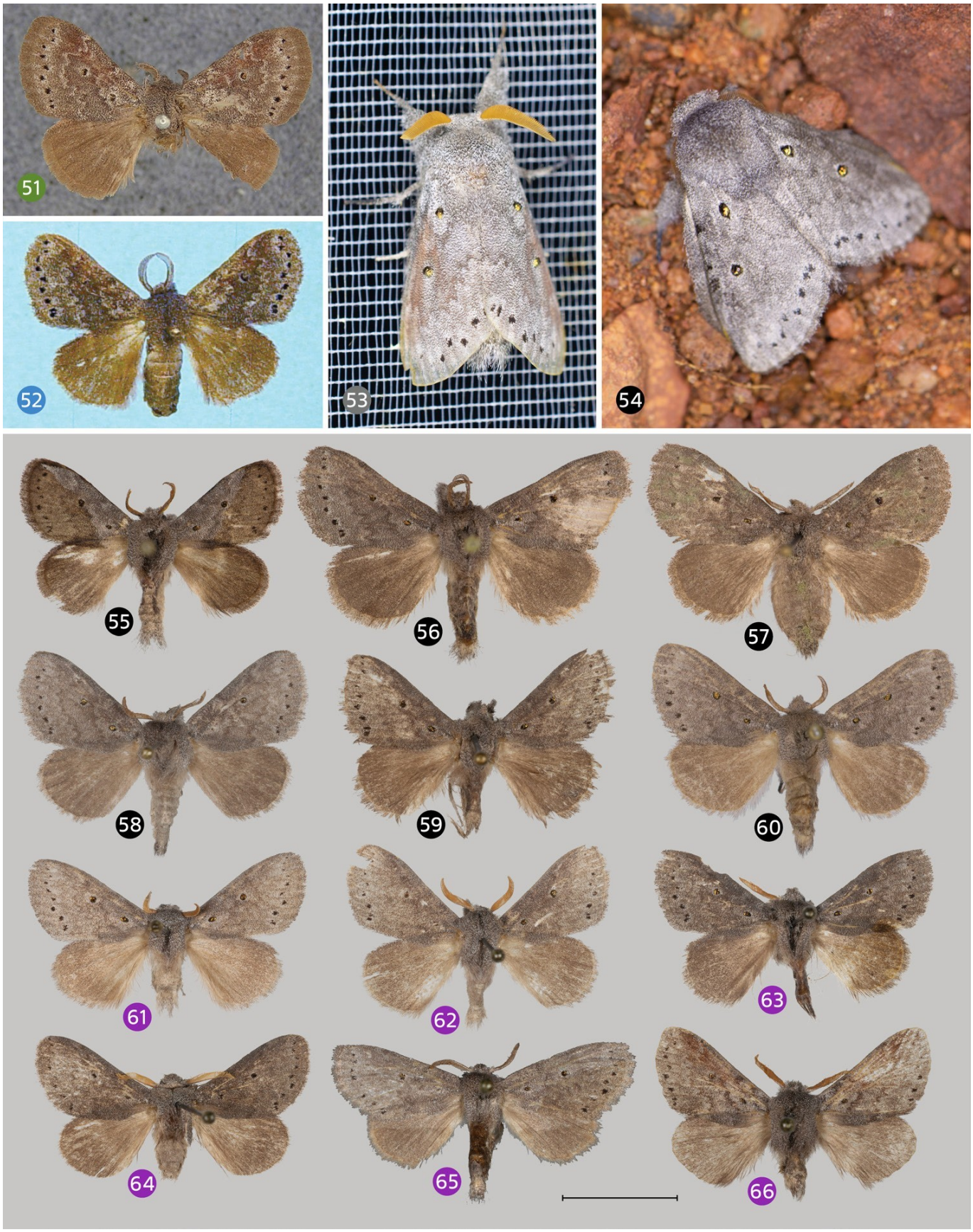

Figure 7. ***Figures 51–66.*** *Adults. 51–52. Haplopacha spp. 51. H. tangani, PT ♀, Malawi, Mulanje, GS #1561 (NHML). 52. H. riftensis, ♀, Malawi, Lake Kazuni (CRM). 53. H. cinerea, Matobo National Park (25.11.2016). 54–66. Eudoumbia spp. 54–60. E. ndoumoi, RSA. 54. Rust-der-Winter Nature Reserve (19.11.2016). 55. ♂, Medike, GS 29.287 (CGM/USTTB). 56. ♂,*

Ben Lavin Nature Reserve, GS 29.288 (CGM/USTTB). 57. ♀, Pongola Game Reserve, GS 29.289 (CGM/USTTB). 58. ♂, Tamboti Camp (SMNS). 59. ♂, Pongola Game Reserve (CGM/USTTB). 60. ♀, Medike, GS 0466 (CGM/USTTB). 61–66. E. thorogood ***sp. n.*** *(CGM/USTTB). 61. HT ♂, Angola, Humbe, GS 1274. 62. PT ♂, Angola, Humbe, GS 1275. 63. PT ♂, Botswana, 45 km SW Kachikau, GS 1276. 64. PT ♂, Namibia, Camp Mazambala, GS 1278. 65. PT ♀, Namibia, Ghaub Nature Rezerve and Guest Farm, GS 2024 0684. 66. PT ♂, Namibia, Ghaub Nature Rezerve and Guest Farm, GS 1280. Scale bar for spread specimens – 1 cm.*

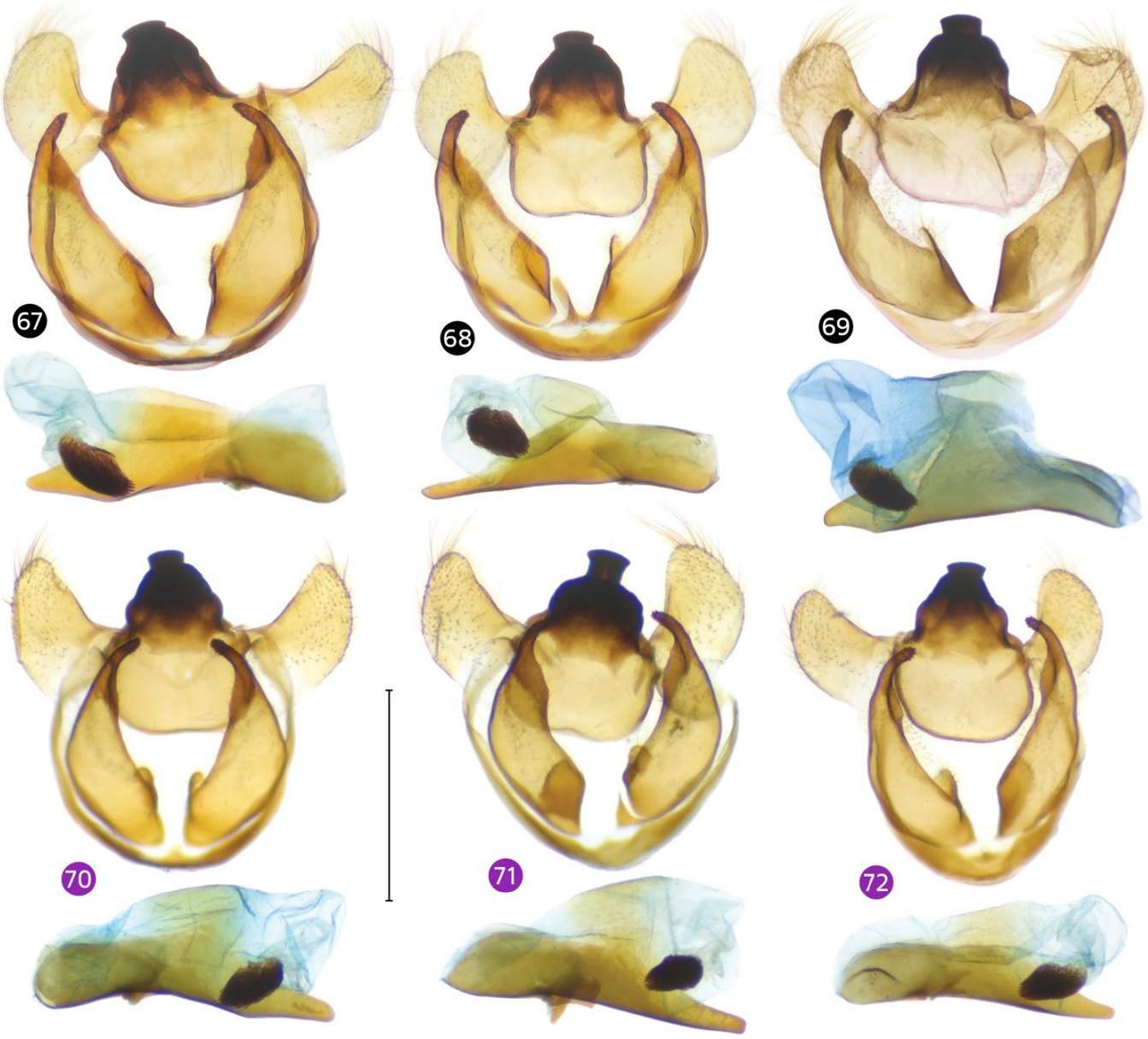

Figure 8. ***Figures 67–72.*** *♂ genitalia of Eudoumbia spp. (CGM/USTTB). 67–69. E. ndoumoi, RSA. 67. Weenen Game Reserve, GS 0467. 68. Near Port St. Johns, GS 0469. 69. Medike, GS 29.287. 70–72. E. thorogood sp. n. 70. HT, Angola, Humbe, GS 1274. 71. PT, Botswana, 45 km SW Kachikau, GS 1277. 72. PT, Namibia, Ghaub Nature Rezerve and Guest Farm, GS 1280. Scale bar – 1 mm.*

Description. General features see above under the genus redescription. Male antenna (Figs 5–6) consists of 47–48 flagellomeres, whereas female – 36, first flagellum may bear rami. Adults vary in size (Figs 61–66), forewing length 11 to 12 mm. In male genitalia (Figs 70–72) cornuti situated on left side of vesica.

Diagnosis. Eudoumbia thorogood differs from its sister species by mirrored position of cornuti and northwestern distribution.

Distribution. Zambezian Baikiaea woodlands in Angola; Angolan mopane woodlands, Kalahari xeric savanna, Kalahari Acacia woodlands, and Gariep Karoo in Namibia; Zambezian mopane woodlands in Botswana.

Biology. Adults were collected in February, November, and December from altitudes of 875–1769 m.

Etymology. The species is named in honor of George Thorogood (Wilmington, DE, USA).

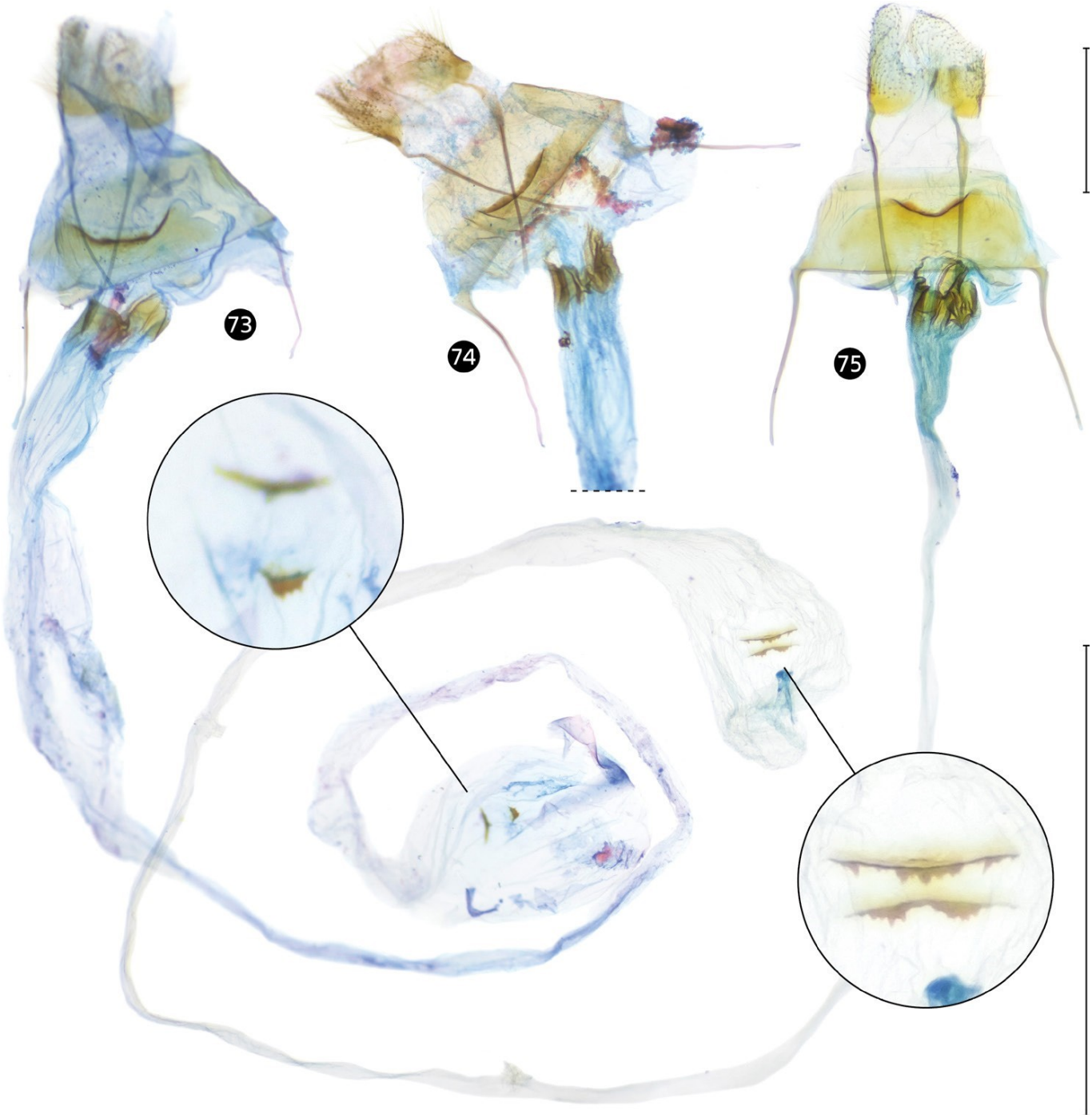

Figure 9. ***Figures 73–75.*** *♀ genitalia of Eudoumbia nduomoi (CGM/USTTB). 73. Pongola Game Reserve, GS 29.289. 74. Ben Lavin Nature Reserve, GS 29.288. 75. Ben Lavin Nature Reserve, GS 0468. Scale bar – 1 mm.*

Eudoumbia ndoumoi

https://zoobank.org/B46CF3D5-E54A-482F-A335-0C33226EC3B4

Figs 7–8, 16–17, 22, 54–60, 67–69, 73–75, 101, 105

Haplopacha ndoumoi Dupont, Simonsen & Zilli, 2016, Zootaxa, 4109 (4), 454. HT ♂, “Ndumo Game Reserve, Kwazulu Natal, South Africa,” GS number is not mentioned (DMNH).

Taxonomic note. *Haplopacha ndoumoi* is placed here to *Eudoumbia* **gen. n.** with consequent change of the status to *E. ndoumoi* **stat. n.** due to the morphologic differences from *Haplopacha*, see Diagnosis below. Few South African specimens of *E. ndoumoi* were misattributed to *H. cinerea* by Dupont with co-authors (2016) and thus led to misconception of *Haplopacha*, but above we showed that all South African specimens, at least the ones studied by us, belong to *E. ndoumoi*.

Diagnosis. *Eudoumbia ndoumoi* differs from its sister species by mirrored position of cornuti and southeastern distribution.

Distribution. Central bushveld, highveld grasslands, Maputaland coastal forests and woodlands, Drakensberg escarpment savanna and thicket, and Kwazulu Natal-Cape coastal forests in RSA, and Limpopo lowveld in Eswatini.

Examined adults. *Non-type*. *RSA*: ♂, ♀, Limpopo Province, W Southpansberge, Sandriver Valley, Medike, 1000 m, 26.12.2008–4.01.2009, GS 0466, 29.287 (CGM/USTTB); 2♀, Limpopo Province, 8 km S Louis Trichard, Ben Lavin Nature Reserve, 1000 m, 21–28.12.2008, GS 0468, 29.288 (CGM/USTTB); ♂, Limpopo, Blouberg Nature Reserve, Tamboti Camp, 22.989028 S, 29.150861 E, 850 m, 12.02.2017, leg. D. Bartsch & J. Berg (SMNS); ♂, Kwazulu Natal, Weenen Game Reserve, 28.84527 S, 29.98694 E, 950 m, 4.12.2011, leg. V. Anikin, GS 0467 (CGM/USTTB); ♂, 2♀, Kwazulu Natal, Pongola Game Reserve, 27.3425 S, 31.90722 E, 140 m, 5.12.2011, leg. V. Anikin, GS 29.289 (CGM/USTTB); ♂, Eastern Cape province, near Port St. Johns, 55 m, 10.01.2002, leg. S. Murzin, GS 0469 (CGM/USTTB); ♂, Mpumalanga Province, Barberton Nature Reserve, Berghuisi, 2.5 km S Barberton, 25.8075 S, 31.04722 E, 1130 m, 14–16.11.2014, leg. R. & S. Fiebig (CRF); ♂, Mpumalanga Province, Barberton Nature Reserve, Berghuisi, 2.5 km S Barberton, 25.80 S, 31.03 E, 900–1200 m, 7–9.11.2015, leg. Fiebig, Schellhorn & Stadie (CRF); ♂, ♀, KwaZulu-Natal Province, 10 km SSE Volkrust, 27.447500 S, 29.931667 E, 1630 m, 15.02.2020, leg. K. Larsen & A. Kingston (CAC); ♂, KwaZulu-Natal Province, Jozini, Cycad Rock, 27.415833 S, 32.061667 E, 160 m, 23–25.02.2020, leg. K. Larsen, A. Kingston & A. Cipolla (CAC); ♂, NW Gauteng Province, Rust de Winter Road, Didimala Lodge, 1200 m, 30.11.2003, leg. A. Legrain (CAC). *ESWATINI*: 2♂, Manzini Province, Dombeya Wildlife Estate, 26.358056 S, 31.549444 E, 415 m, 16–19.02.2020, leg. K. Larsen & A. Kingston (CAC).

Auripluvia gen. n.

https://zoobank.org/2397FADA-4A7B-4F66-BA04-5DB4D0415BB2

Figs 9, 18, 25, 76–83, 88–92

TS: *Auripluvia sophia* **sp. n.**, **by present designation**.

Description. Moths sexually dimorphic: female larger than male. *Antenna* (Fig. 9). Scape bulbous; pedicel tubercle-like; male antenna consists of 42 flagellomeres, each of them bears pair of rami, except for the first flagellum; basal rami relatively long, grow in length in basal third of antenna and then gradually shorten towards top. *Head* (Fig. 18). Frons even. Eyes naked. Labial palpi 3-segmented: I segment somewhat oval, cylinder-like; II segment elongated ovoid, longer than I; III segment ovoid, smallest. Maxillary palpi reduced. *Legs* (Fig. 25). Foreleg bears thick epiphysis with nearly pointed apex, spur formula 0-2-2. *Habitus* (Figs 76–83). Flagellum, head, thorax and abdomen covered with pale brownish, brown and greyish brown scales. Forewing somewhat

triangular with smooth outer margin and rounded apex, speckled pale brownish and brown or greyish brown. Pattern consist of dark crenulated medial lines and more or less pronounced dark spotted submarginal fascia; basal and discal golden spots present; submarginal field may get light colored. Fringe of wing color. Hindwing somewhat oval with slightly wavy outer margin. Straw in males and brown in females. Fringe of wing color. *Male genitalia* (Figs 88–90). Uncus hardly sclerotized, somewhat triangular with bilobed apex. Gnathos somewhat semi-oval or semi-rounded. Tegumen a somewhat trapezoid plate. Vinculum a narrow band. Cucullus somewhat semioval, covered with setae, separate from sacculus. Sacculus somewhat claw-shaped, apex more sclerotized, basally bears a nipple-like extension covered with setae. Juxta reduced. Aedeagus somewhat bulbous, expanded basal half contains vesica. Vesica slender, 26–40 mm long, apically bears a pair of similar claw-like cornuti. *Female genitalia* (Figs 91–92). Papillae anales semi-oval, densely covered with setae. Posterior apodemes may be slightly longer than anterior ones. Antevaginal plate somewhat w-shaped; postvaginal plate somewhat 8-shaped. Dustus very long, medially sclerotized and spiralled (between four and five turns). Bursa ovoid, bears one signum near junction with ductus another at bottom, both oval or round with a pair of lateral spines.

Diagnosis. *Auripluvia* **gen. n.** differs from: 1) *Haplopacha* by lack of extension on frons, light-colored hindwings, more sclerotized uncus, lack of dents on top of sacculus, fully sclerotized aedeagus with bulbous basis, much longer vesica with cornuti, pronounced ante- and postvaginal plates, and narrower ductus with medial sclerotization; 2) *Eudoumbia* **gen. n.** by lack of extension on frons, light-colored hind-wings, more sclerotized gnathos, aedeagus with bulbous basis, very long vesica with apical pair of cornuti, presence of antevaginal plate, medially sclerotized ductus, and pair of signi situated on top and bottom of bursa; and 3) *Dasychirinula* by discal dot on forewing, bifurcate uncus, better developed gnathos and cucullus, lacking dents on sacculus, larger base of aedeagus, much longer vesica with pair of apical cornuti.

Species score. Monotypic with *A. sophia* **sp. n.** (TS).

Etymology. The name is combined from modified Latin *aurum* for gold and *pluvia* for rain.

Auripluvia sophia **sp. n.**

https://zoobank.org/EEB9D885-FF20-4BCB-9031-7AD7AB3735BC

Figs 9, 18, 25, 76–83, 88–92, 105

Holotype: ♂, Ethiopia, Southern Nations, Turmi, Emerald lodge, 4.96934 N, 36.49682 E, 915 m, 30.04–8.05. 2023, leg. R. Beck & A. Prozorov, GS 1257 (CGM/USTTB).

Paratypes (99♂, 21♀). *ETHIOPIA*: 85♂, 19♀, same data as HT (CGM/USTTB); ♂, Southern Nations, 15 km W Turmi, 4.49.42 N, 36.24.32 E, 865 m, 2.06.2019 (CGM/USTTB); 2♂, Rift Valley, Gamu Goffa Province, 12 km NNE Arba Minch, 6.138517 N, 37.582550 E, 1620 m, 22.05.2012, leg. M. Dietl & R. Beck (CGM/USTTB); ♀, Rift Valley, Oromia/Sidamo Region, Lake Langano, 2 km NNE Langano, 7.65 N, 38.7 E, 1590 m, 25.05.2012, leg M. Dietl, S. & R. Beck, GS 1262 (CGM/USTTB); ♀, Rift Valley, Southern Nations Region, Gamu Goffa Region, Lake Chamo, 2 km NNE Bussa, 5.793950 N, 37.449567 E, 1120 m, 23.05.2012, leg. M. Dietl, S. & R. Beck, GS 1263 (CGM/USTTB); ♂, Southern Province, road Konso – Weyto, 5 km SE Weyto, 1600 m, 13.11.2010, GS 1256 (CGM/USTTB). *KENYA*: 3♂, Kibwezi, 5.01.1992, 8–14.05.1995, GS 0472, 29290 (CGM/USTTB); 5♂, Eastern Province, Rift Valley, 64 km SW Nairobi, 1.57293 S, 36.44035 E, 1800 m, 5–6.05.2010, GS 0473, 1259, 1260, 29291 (CGM/USTTB).

Description. See above under the genus redescription.

Diagnosis. See above under the genus redescription.

Distribution. Djibouti xeric shrublands, Somali *Acacia-Commiphora* bushlands and thickets, and east Sudanian savanna in Ethiopia, and northern *Acacia-Commiphora* bushlands and thickets in Kenya.

Biology. Adults were collected in January, February, March, April, May, June, and November, from altitudes of 865–1800 m

Etymology. The species is named in honor of Tatiana and Alexey Prozorovs' daughter Sophia.

Dasychirinula Hering, 1926

https://zoobank.org/A70811AA-8E6B-4BFE-B8BC-85D6297B9205

Figs 10, 19, 26, 81–84, 90–94

Die Großschmetterlinge der Erde, 14, 187.

Type species: *Dasychirinula chrysogram ma* Hering, 1926, ibidem, by monotypy. See Watson, Fletcher, Nye 1980.

Taxonomic note. No female specimen is known for sure, the PLT female of *D. chrysogramma* may belong to *Auripluvia* **gen. n.** due to genitalia similarity (Fig. 90). Further investigation is required.

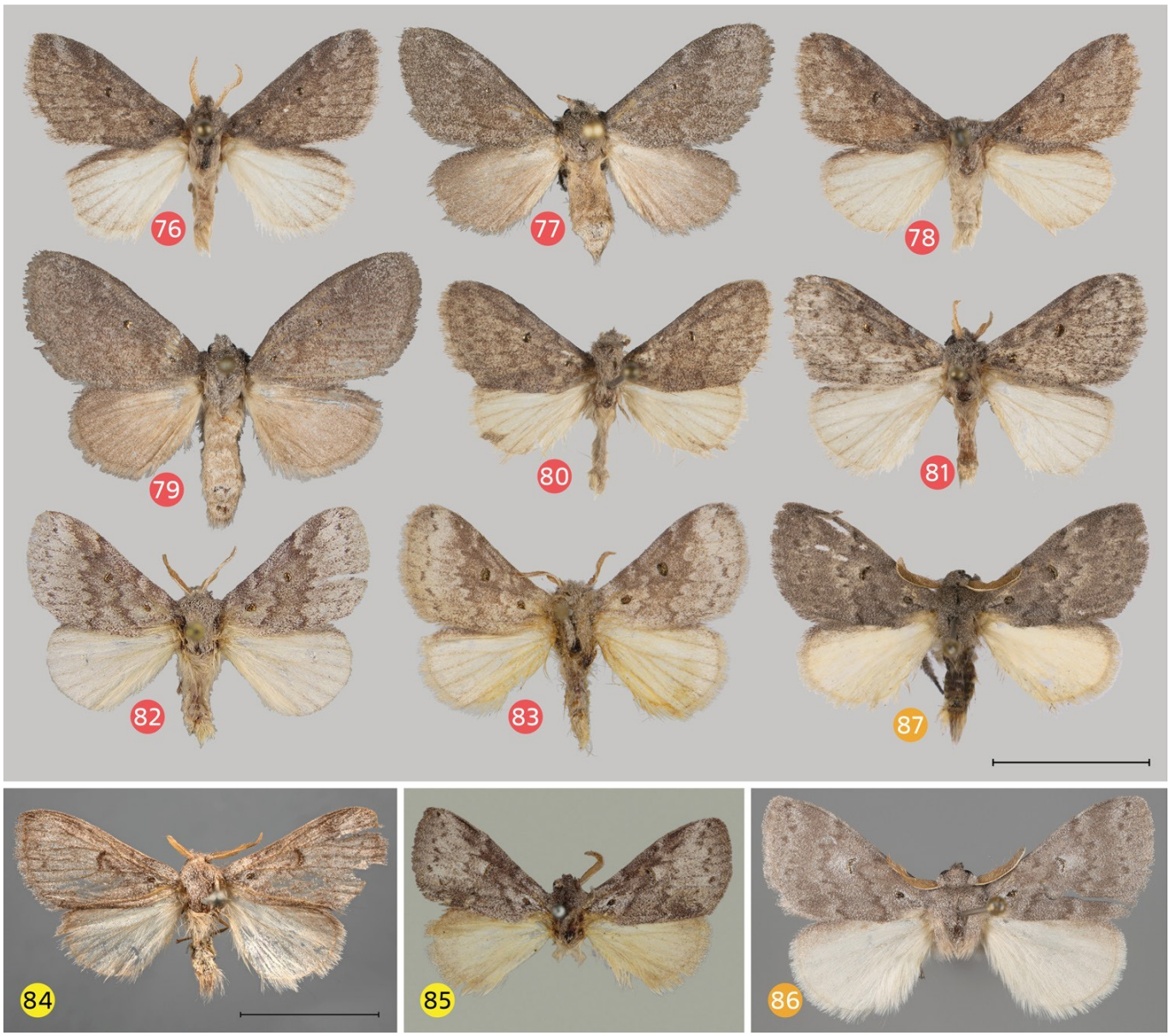

Figure 10. ***Figures 76–87.*** *Adults. 76–83. Auripluvia sophia* ***sp. n.*** *(CGM/USTTB). 76. HT ♂, Ethiopia, Turmi, GS 1257. 77. PT ♀, Ethiopia, Turmi. 78. PT ♂, Ethiopia, 5 km SE Weyto, GS 1256. 79. PT ♀, Ethiopia, Turmi. 80–81. PT ♂, Kenya, 64 km SW Nairobi, GS 1259. 82–83. PT ♂, Kenya, Kibwezi, GS 0472. 84–87. Dasychirinula spp., ♂. 84–85. D. chrysogramma. 84. LT, Kilimatinde, GS MFN LEP 928 (MfNB). 85. HT of Haplopacha lunata Dupont et al. 2016. 86–87. D. julia* ***sp. n.****, Ethiopia, near Yabelo (CGM/USTTB). 86. PT, GS 1258. 87. HT, GS 0116. Scale bar – 1 cm.*

Redescription. *Antenna* (Fig. 10). Scape ovoid; pedicel tubercle-like; male antenna consists of 29 flagellomeres, each of them bears pair of rami; rami rapidly grow in length in basal sixth of antenna and then gradually shorten towards top. *Head* (Fig. 19). Frons bears drop-shaped elongated extension with dents on its edge and prominent dorsal apex. Eyes naked. Labial palpi 2-segmented: I segment basally swollen, cylinder-like; II and III segments fused together, somewhat ovoid, nearly equal in size with I segment. *Legs* (Fig. 26). Foreleg does not bear epiphysis, spur formula 0-2-2. *Habitus* (Figs 81–84). Flagellum, head, thorax and abdomen covered with pale brownish, brown and greyish brown scales. Forewing somewhat triangular with smooth outer margin and rounded apex, speckled pale brownish and brown or greyish brown. Pattern consist of dark crenulated medial lines and dark spotted submarginal fascia; basal and discal golden spots present, discal spot lunate. Fringe of wing color. Hindwing somewhat oval with smooth outer margin, straw but gets darker along costa. Fringe of wing color. *Male genitalia* (Figs 91–94). Uncus elongated, gnathos small or reduced. Tegumen basically united with uncus. Socii reduced. Vinculum a rather narrow band.

Cucullus nipple-like, mainly membranous, covered with setae, completely separate from sacculus. Sacculus elongated, apically has pronounced curved extension, basally with an additional extension covered with setae. Juxta reduced. Aedeagus more of less c-shaped, may expand basally. Vesica elongated to long, conical, apically bears one rather big cornutus.

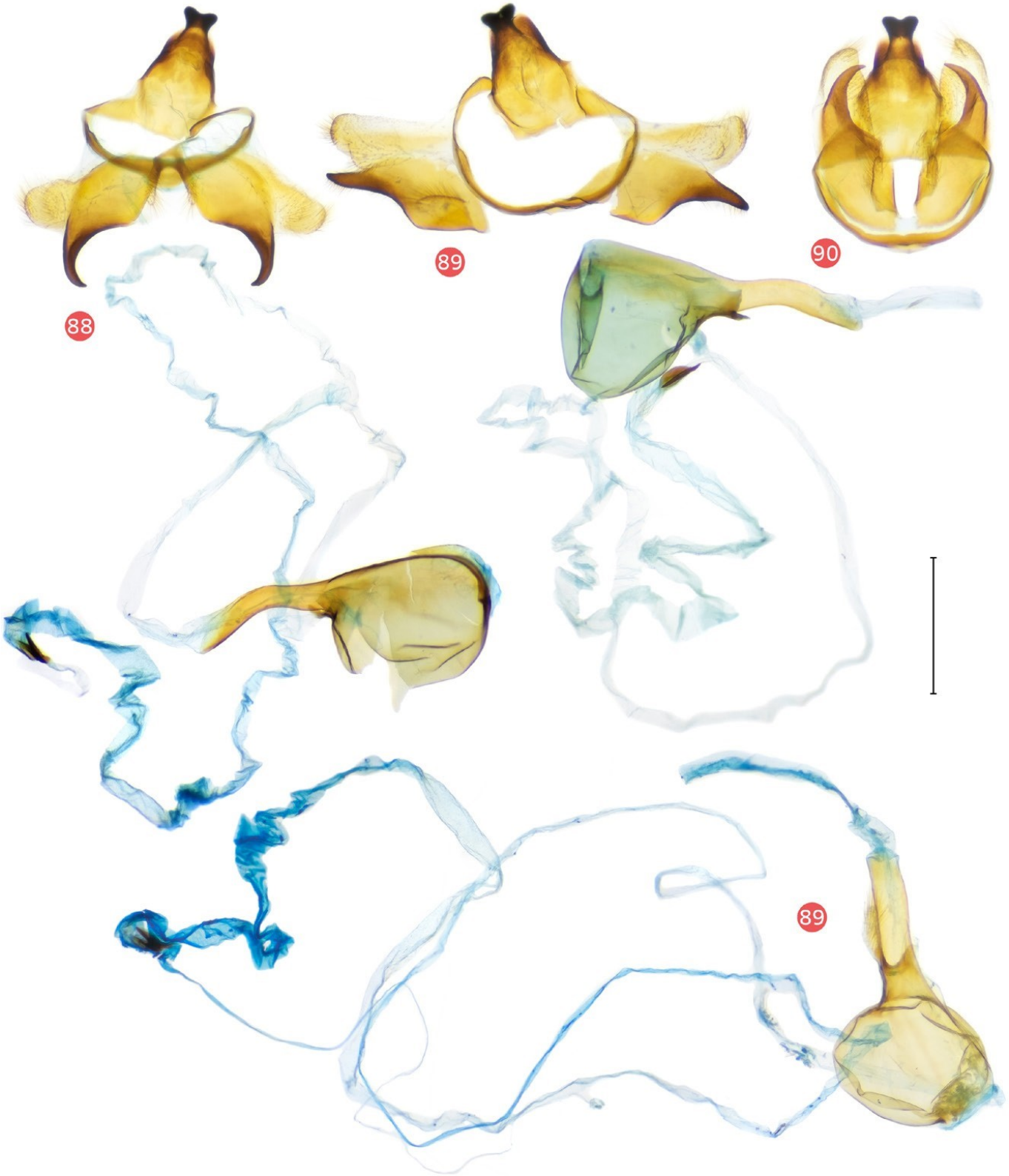

Figure 11. ***Figures 88–90.*** *♂ genitalia of Auripluvia sophia* ***sp. n.*** *(CGM/USTTB). 88. HT, Ethiopia, Turmi, GS 1257. 89–90. PT, Kenya, 64 km SW Nairobi, GS 1260, 0473. Scale bar – 1 mm.*

Diagnosis. *Dasyhirinula* differs from: 1) *Haplopacha* by drop-like shaped extension on frons, lunate discal stroke, light-colored hindwings, lacking or undeveloped gnathos, undeveloped cucullus, presence of basal extension of aedeagus, and longer vesica with apical cornutus; 2) *Eudoumbia* **gen. n.** by drop-like shaped extension on frons, lunate discal stroke, light-colored hindwings, less sclerotized uncus, undeveloped gnatos, undeveloped cucullus, presence of basal extension of aedeagus, and long vesica with one apical cornutus; and 3) *Auripluvia* **gen. n.** by presence of extension on frons, lunate discal stroke, undivided uncus, undeveloped gnathos and cucullus, presence of dents on sacculus, smaller basal extension of aedeagus, much shorter vesica with one apical cornutus.

Species score. Two species are included: *D. chrysogramma* (TS) and *D. julia* **sp. n.**

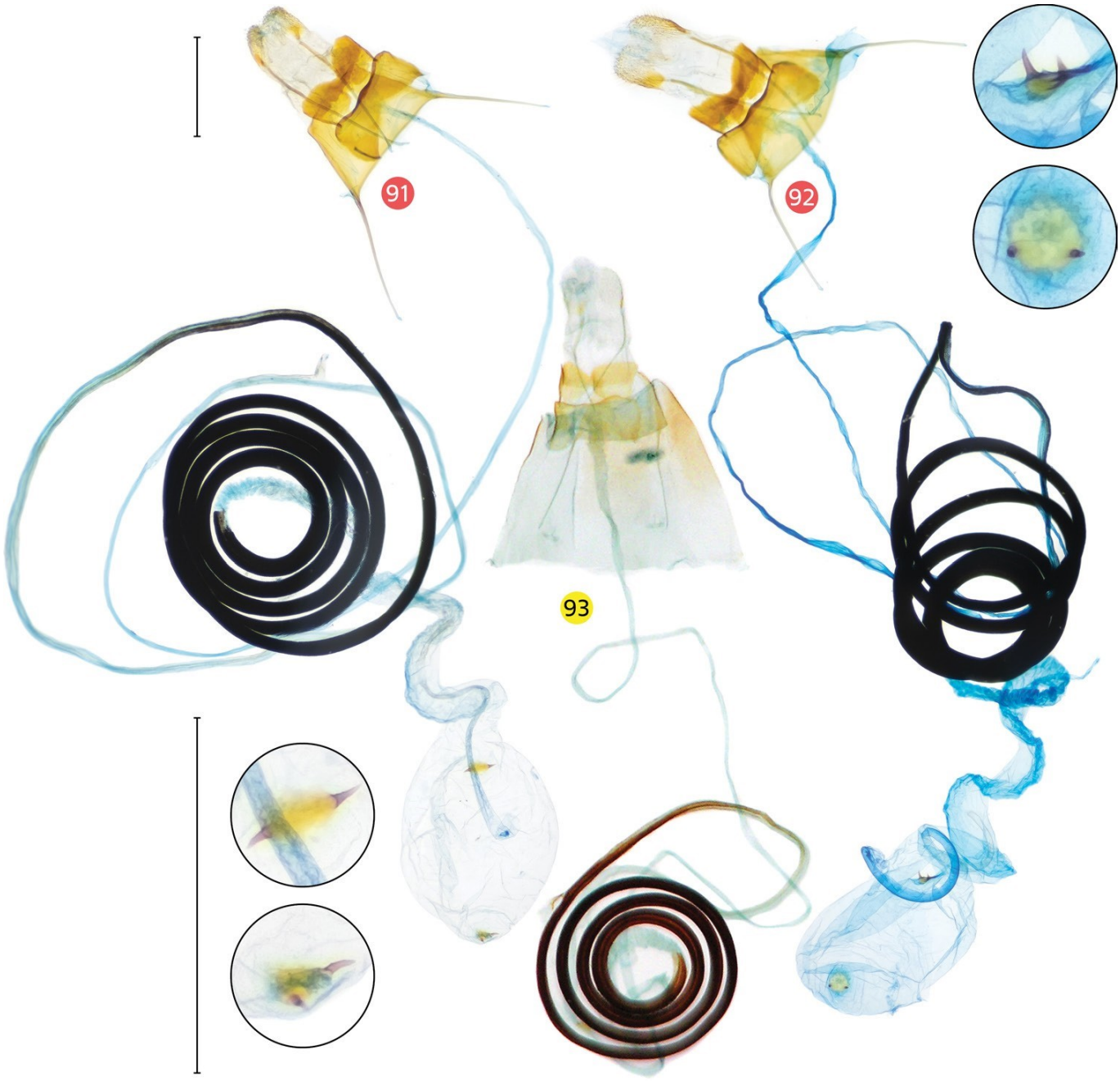

Figure 12. ***Figures 91–93.*** *♀ genitalia. 91–92. Auripluvia sophia* ***sp. n.*** *91. PT, Ethiopia, Bussa, GS 1263 (CGM/USTTB). 92. PT, Ethiopia, Langano, GS 1262 (CGM/USTTB). 93. Dasychirinula chrysogramma, PLT, Kenya, Kibwezi, GS 1142 (NHMUK). Scale bar for Figs 91–92 – 1 mm.*

Figure 13. *Figures 94–97. ♂ genitalia of Dasychirinula spp. 94–95. D. chrysogramma. 94. LT, Kili- matinde, GS MFN LEP 928 (MfNB). 95. HT of Haplopacha lunata Dupont et al. 2016. 96–97. D. julia, Ethiopia (CGM/USTTB). 96. HT, GS 0116. 97. PT, Aluweya, GS 1258. Scale bar – 1 cm.*

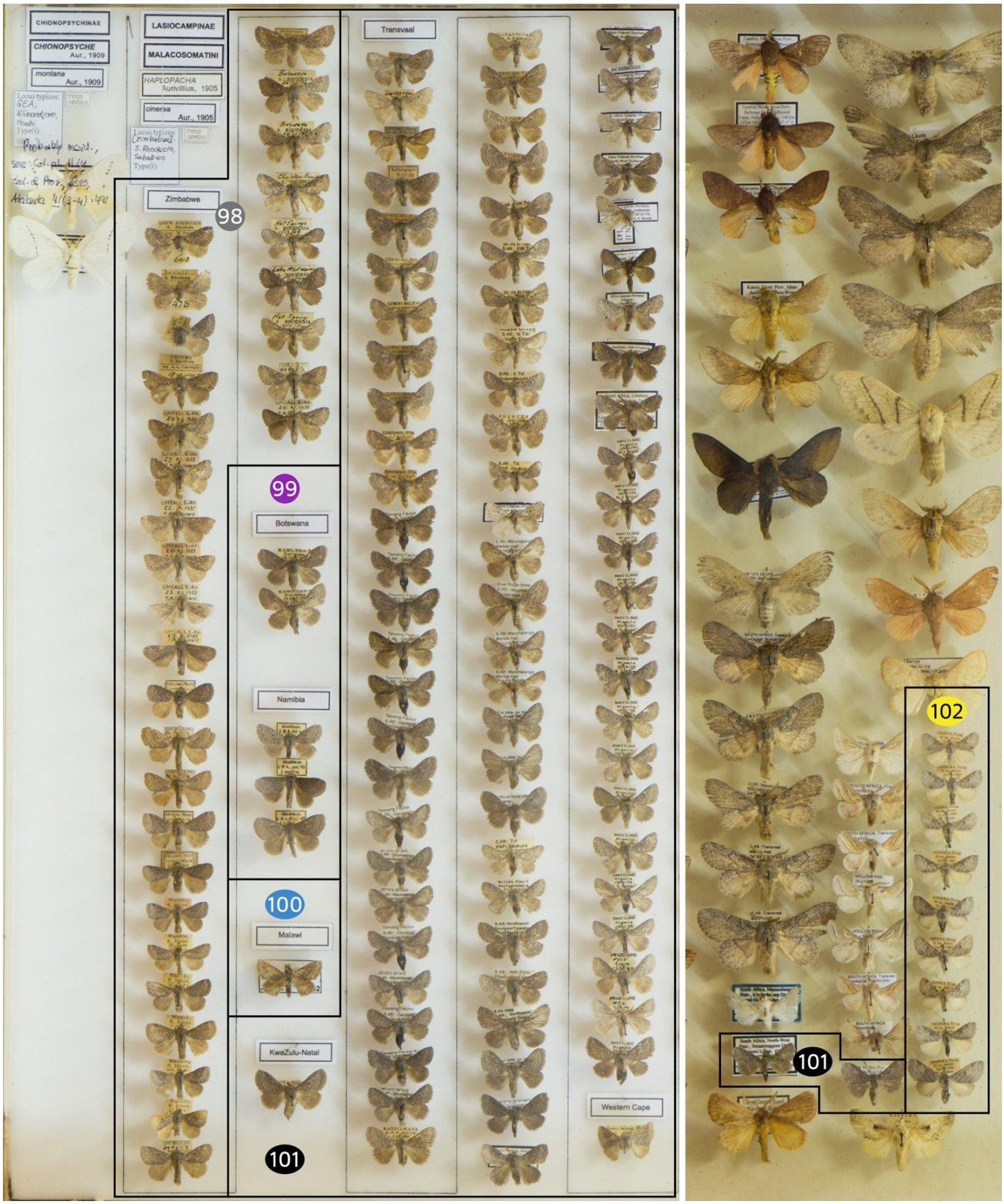

Figure 14. ***Figures 98–102.*** *Adults stored in DMNH: Haplopacha cinerea (98), Eudoumbia thorogood* ***sp. n.*** *(99), E. riftensis (100), E. ndoumoi (101), and Dasychirinula chrysogramma (102).*

Dasychirinula chrysogramma **Hering, 1926**

https://zoobank.org/3098020A-F29A-44FF-82BF-8B3C0A80A5F2

Figs 81–82, 90–92, 99, 102

Dasychirinula chrysogramma Hering, 1926, Die Grossschmetterlinge der Erde, 14, 187. LT ♂, [Tanzania, 5.8335 S, 34.96444 E] “Kilimatinde,” GS MFN LEP 928 (MfNB), **here designated**.

= *Haplopacha lunata* Dupont, Simonsen & Zilli, 2016, **syn. n.**, Zootaxa, 4109 (4), 454. HT ♂, in text type locality is the “District of the Great Craters, Tanganyika Territory,” but authors marked “Ngorongoro crater, Tanzania (Tanganyika)” on the distribution map. GS Lasiocampidae #1572 (NHMUK).

https://zoobank.org/170C3121-5CD9-4BB0-8F9F-2DDEEEE26A0A

Taxonomic note. 1. *Lectotype designation*. Hering described *D. chrysogramma* based on a pair of ST: male from Kilimatinde, Tanzania and female from Kibwezi, Kenya. Female genitalia (Fig. 90) are identical to the ones of *A. sophia* **sp. n.** described above. Thus, to stabilize the nomenclature, the male is designated here a taxon name bearing type specimen, a LT, while female becomes a PLT. The male specimen bears the following labels: 1) red rectangle with typed “Type;” 2) brownish rectangle with handwritten: “Kilimatinde / [unreadable] / Mai 1904;” 3) brownish first four lines handwritten and the last typed “*Dasychirinula* / n. g. / *chrysogramma* / m. ♂-Type / det. Mart. Hering;” and 4) white rectangle with printed QR-code and link http://coln.mfn-berlin.de/u/eab4d6.

2. *New synonymy*. LT male of *D. chrysogramma*, even though worn and damaged (Fig. 81), reminds externally HT male of *H. lunata* (Fig. 82) by lunate medial stroke on forewing and straw hindwings. They both have been collected in Tanzania, 300 km away from each other. Male genitalia of *H. lunata* are, apparently, missing uncus if compared with *D. chrysogramma* and *D. julia* **sp. n.**, while male genitalia of *D. chrysogramma* are missing aedeagus which was irreparably lost during preparation by A. Prozorov but it was identical to the one of *H. lunata*. Considering morphologic similarities and geographic proximity of the collecting sites, we establish a new synonymy: *D. chrysogramma* = *H. lunata* **syn. n.**

3. *Female*. We did not see a photo of the PLT female but its collecting location is Kibwezi, Kenya like of a few specimens of *A. sophia* **sp. n.** and its genitalia are nearly identical (compare Figs 88–89 and 90) to *A. sophia* **sp. n.**, so we suggest the PLT female belongs to *Auripluvia* **gen. n.** but of course that needs further clarification.

Diagnosis. Differs from *D. julia* **sp. n.** by thinner and longer uncus; reduced gnathos; longer cucullus; apically shorter claw-like sacculus; larger basal extensions of sacculus; basally smaller aedeagus; shorter vesica; smaller but thicker nearly straight cornutus (compare Figs 91–92 and 93–94); southern distribution.

Figure 15. ***Figures 103–104.*** *Drawer (103) and its magnified lower left corner (104) showing a mix of Haplopacha cinerea, H. tangani and/or H. mason* ***sp. n.*** *stored in NHMZ.*

Dasychirinula julia sp. n.

https://zoobank.org/3EE9F6BF-E6CD-4409-A557-FDE9A18D74A8

Figs 10, 19, 26, 83–84, 93–94, 102

Holotype: ♂, Ethiopia, Oromia Region, near Yabelo, 4.95433 N, 37.96256 E, 1520 m, 10.11.2014, leg. R. Beck, GS 0116 (CGM/USTTB).

Paratypes: 2♂, same data as HT, GS 1258 (CGM/USTTB).

Description. General features see above under the genus redescription. In male genitalia (Figs 93–94) uncus long, claw-like; gnathos reduced; cucullus nipple-like, membranous with narrow sclerotized strip; sacculus elongated, apically has short thick c-shaped extension with dentated outer surface; aedeagus c-shaped; vesica elongated to long, conical, apically bears one rather big c-shaped cornutus.

Diagnosis. Differs from *D. chrysogramma* by thicker and shorter uncus; present gnathos; shorter cucullus; apically longer c-shaped sacculus; smaller basal extensions of sacculus; basally larger aedeagus; longer vesica; longer c-shaped cornutus; northern distribution.

Distribution. Somali *Acacia-Commiphora* bushlands and thickets in Ethiopia.

Biology. Adults were collected in November from an altitude of 1520 m.

Etymology. The species is named in honor of Julia Beck (Munich, Germany), beloved daughter of Robert Beck, collector of the type series of the new species.

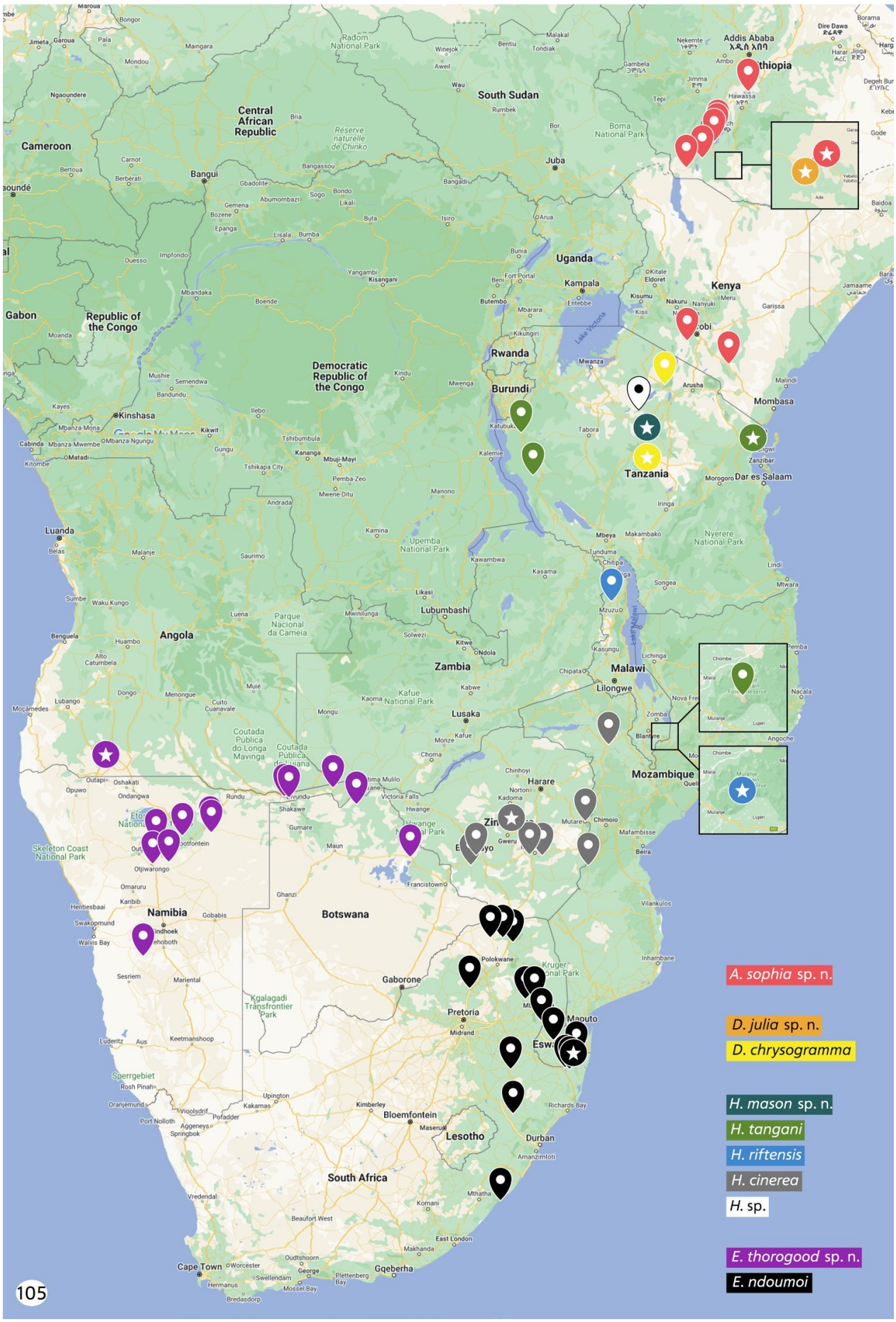
A. sophia sp. n.
D. julia sp. n.
D. chrysogramma
H. mason sp. n.
H. tangani
H. riftensis
H. cinerea
H. sp.
E. thorogood sp. n.
E. ndoumoi
105

Figure 16. ***Figure 105.*** *Collecting localities. Circle with star is for the type locality.*

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We thank Hermann Staude (Magaliesburg, RSA), Ralf Fiebig (CRF), †Martin Krüger (DMNH), Joël Minet and Rodolphe Rougerie (MNHN), Théo Léger, Viola Richter, and Eran Wolff (MfNB), †Martin Honey and Geoff Martin (NHMUK), Moira FitzPatrick (NHMZ), Daniel Bartsch and Hossein Rajaei (SMNS), and Bert Gustafsson (SNHM) for providing access to the material and helping to process it. Geir E. E. Søli and Per Kristian Slagsvold (NHMO) are thanked for taking photos of genitalia slides from the NHMO collection.

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