# MOTHS OF AFRICA

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## Revision of the genus *Prasinocyma* Warren, 1897 with description of 9 new subgenera, 189 new species and 29 new subspecies

**(Geometridae, Geometrinae)**

by

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**Abstract**

This paper presents an integrated revision of the genus *Prasinocyma* Warren, 1897 which is restricted to the African continent, Madagascar and the southern Arabian Peninsula and which is one of the taxonomically most difficult and most diverse genera in Lepidoptera. More than 6000 specimens of African *Prasinocyma* were examined, of which 1981 specimens were submitted to DNA barcoding (COI 5'), with a sequencing success for 1701 specimens (86%). Based on this data set and on morphological key characters, 365 taxa (325 species and 40 subspecies) are validated. 189 species and 29 subspecies are described as new for science. DNA barcodes of 16 species (5%) with high genetic variability were divided into two or more BINs, pointing to the presence of further cryptic lineages, in five cases the BIN split reflects subspecific rank of the taxon in question. Barcodes of 41 species (13%) were assigned to 18 shared BINs, due to low interspecific divergence or genetic overlaps, while 24 of these BIN-sharing species (7%) showed constant, shallow interspecific COI divergences from their BIN-partner-species. Hence, 309 of 325 *Prasinocyma* species (95%) can be unambiguously be identified by their DNA barcodes, 285 species (87%) by their unique BINs. The morphological information from 1471 genitalia dissections and 72 micro CT-scans generally proved the validity of the DNA barcoding approach for naming species although up to 18% of the species diagnoses would have been erroneous when merely based on BIN concordance/discordance ignoring shallow barcode differences and morphology. With the present integrated taxonomic approach, the number of validated *Prasinocyma* species is raised from 115 species (as by 2015) to now 325 species. The genus is subdivided - mainly based on molecular evidence (mtDNA, nDNA) - into eleven subgenera (*Prasinocyma*, *Amplocyma* subgen. nov., *Tandicyma* subgen. nov., *Megacyma* subgen. nov., *Paraprasina* stat. n., *Niphocyma* subgen. nov., *Bificyma* subgen. nov., *Corrucyma* subgen. nov., *Malgassocyma* subgen. nov., *Microcyma* subgen. nov. and *Claracyma* subgen. nov.) some of them with subordinated species groups.

## Contents

## Introduction

Since our planet suffers from a rapid loss of biodiversity ("6th mass extinction»: Stork 2009; Wagler 2018) while numbers of experts and taxonomists are decreasing, there is a much too slow assessment and description of biodiversity ("taxonomic impediment": de Carvalho et al. 2005; Meier et al. 2021). Therefore, the huge number of undescribed species, in particular in arthropods of the tropics and the deep sea (Raven et al. 2020; Paulus 2021) urgently require simplified species descriptions to assess the species diversity of our planet before it becomes extinct.

Several recent publications highlight the need for speeding up taxonomy ("turbo-taxonomy": Riedel et al. 2013; Forum Herbulot 2014) and various attempts were presented, aiming at accelerating the description process, e.g. in weevils (Riedel et al. 2014; Riedel and Narakusumo 2019) and braconids (Butcher et al. 2012; Sharkey et al. 2021; Meierotto et al. 2019). With reference to these approaches Meier et al. (2021) postulated the need of balancing "taxonomic impediment" and "superficial description impediment". Ahrens et al. (2021) predicted nomenclatural instability with solely DNA barcode based approaches while Sharkey et al. (2026) highlight the urgent need to involve DNA (barcode) data into all revisions of "dark taxa".

The present revision follows an intermediate approach which will be more in harmony with traditional description practice than the "minimalist approach" of Sharkey et al. 2021, thus avoiding the "superficial description impediment" (Meier et al. 2021) by involving short morphological descriptions and diagnoses, but nevertheless saving time (see discussion) for the important task of biodiversity assessment on our planet. In the sense of integrated taxonomy (Dayrat 2005; Padial et al. 2010) molecular and morphological data are combined, including short descriptions and differential diagnoses and thus being in full harmony with the proposals of Forum Herbulot (2014).

The genus *Prasinocyma* Warren, 1897 is – within the Lepidoptera – a perfect example for a megadiverse genus for which a classical, traditional approach of revision is a nightmare, because of the poorness of external differential features. Although the study of genitalia offers good differential features, the huge amount of species and the large number of ambiguous cases of regional populations with small morphological differences hamper the mere morphological approach and require additional data sets like the COI barcodes. In previous times, just two researchers understood the amplitude of diversity and morphological complexity in this genus: Luis B. Prout from the museum in London (NHMUK) and Claude Herbulot from Paris. Both described some species, but both had to leave the large bulk of species in their collections unidentified. Claude Herbulot extensively brushed male abdomina and fixed labels with drawings of sternum A8 to different tentative species groupings in his collection. That way, he differentiated 83 (potential) species in his collection, plus 15 species of *Heterorachis* which are transferred to *Prasinocyma* in this paper. He was able to attribute existing species names only to 22 of these entities, other 25 were newly described by himself and 51 remained without names. Only 95 African species of *Prasinocyma* are listed in Scoble (1999) prior to the DNA barcode-based revision of the Ethiopian fauna (Hausmann et al. 2016a). 8 of these species are no more validated at species rank in *Prasinocyma* (4 downgraded to subspecies, 3 to synonymy, one excluded from genus) while 4 names listed by Scoble (1999) as synonyms or subspecies are now raised to species rank. Hence, Scoble (1999) listed 92 species of *Prasinocyma*, which are still validated at species rank in this revision. Other 22 species were listed in Scoble (1999) under other genus names but are now transferred to *Prasinocyma* leading to an "a priori species number" of 115. This species number is raised by 210 species to 325 species by the recently published faunas of Ethiopia and Yemen (Hausmann et al. 2016; Hausmann & Wildfeuer 2020) and by the present revision. In Hausmann et al. (2016b) a total of 300 species was predicted for the African fauna, which is now even exceeded by this revision.

## Material and Methods

### Material

Species diagnoses are exclusively based on the 2715 specimens with DNA barcodes and/or permanent genitalia slides (see Appendix 1). This taxonomic key information is provided even for 310 name bearing type specimens corresponding to 83% of all 372 named *Prasinocyma* taxa (325 species, 40 subspecies, 7 synonyms). In most of the remaining cases such information (genitalia/barcodes) was retrieved from paratypes and/or the name bearing types were examined externally. In the Natural History Museum London (NHMUK) only type specimens are considered for the present revision as the additional material includes many misidentifications. The material of the Zoologische Staatssammlung Munich (ZSM) – including the collection Herbulot - was thoroughly submitted to DNA barcoding and dissection, additional material was only considered when external characters and collecting data (same locality, same collecting dates) suggested conspecifity. A few additional samples (leg. Michael Ochse, Sille Holm, Dirk Stadie, Timm Karisch, Manfred Sommerer) were submitted to

extensive DNA barcoding and dissection as well. Nearly all the vouchers are deposited in the ZSM, otherwise their depository is stated. When possible, holotypes of new taxa were chosen among dissected specimens with full-length barcodes.

Morphological analysis

The morphological analysis is based on wing shape, wing pattern and coloration which, however, very often do not exhibit clear-cut differential features. Other external features on head and legs were registered and measured under a Zeiss binocular. Wing span was measured from distalmost point of the termen of left to right forewing when mounted horizontally, i.e. with the inner forewing termen in a 90° angle to the body axis. In specimens in different wing position, the forewing length was measured and multiplied by 1.8. The presence or absence of a setal patch on male sternum A3 was registered during dissection and mounting of the abdomen on the permanent slide. Male genitalia of African and Arabian *Prasinocyma* were studied based on 1471 permanent genitalia slides. 834 dissections had been taken from barcoded specimens. More than 300 additional genitalia were dissected in the framework of a project on the fauna of Mt. Cameroon, and are stored in glycerine capsules attached to the pin of the adult voucher. Female genitalia (so far with 84 permanent slides) were not thoroughly studied for all species. This huge task is postponed to a later study. All slides were studied under a Wild M3Z stereomicroscope and photographed under a Leica DM2700M microscope with an Olympus E-M1 digital camera. The images of all barcoded specimens are uploaded and free accessible on BOLD database (DS-PRASINAF; dx.doi.org/ 10.5883/DS-PRASINAF). 72 abdomens were studied with the minimal invasive microCT technique (49 males, 23 females). Photographs of genitalia of selected specimens (in male including the sternum/tergum A8 region) are uploaded in the public dataset on BOLD database (DS-PRASINAF). Structures of sternum A8 are listed in the differential diagnoses under “male genitalia”. A list of all dissected specimens is shown in Appendix 1.

Molecular analysis

The molecular analysis is mainly based on 1981 tissue samples submitted to DNA barcoding (targeting the COI 5’ gene region; cytochrome oxidase I, COI, 658 bp) retrieved from African and Arabian *Prasinocyma* specimens; 1576 samples (80%) were successfully sequenced to sequence lengths of >300bp, 1459 sequences to >450bp (74%). Sequencing was performed at the CCDB using standard protocols Ivanova et al. (2006), except for more than 400 old museum specimens which were barcoded at the CCDB with a special NGS-based protocol for ancient DNA sequencing, using miniprimers and bioinformatics tools to assemble the barcode from smaller amplicons (cf. Prosser et al. 2016). Data analysis and construction of neighbor joining (NJ) and maximum likelihood (ML) trees was performed using the analytical tools on the Barcode of Life Data systems (BOLD; Ratnasingham & Hebert 2007) and the BIN system as implemented on BOLD (Ratnasingham & Hebert 2013). Genetic distances are reported as presented on the BIN-page on BOLD, in cases of missing BIN-assignment the distances are calculated using BOLD barcode gap analysis, in a few cases (marked as such), genetic similarities are reported as resulting from the sequence page on BOLD comparing the sequence with the complete BOLD database. A neighbor joining tree including *Prasinocyma* COI-sequences longer than 450 bp is shown in Appendix 2. Sequences, adult images and related metadata are available open access on BOLD in the dataset DS- PRASINAF (dx.doi.org/ 10.5883/DS-PRASINAF). For selected 190 vouchers, additional markers (wnt1, 18S, 28S-D2) were sequenced. While 179 successful 18S data (rRNA) just revealed two genotypes at only 1bp difference, the 169 wnt1 sequences (nDNA) well resolved species groups and subgenera already supposed from COI data (maximum likelihood tree with bootstrap values: Appendix 3). Out of the 180 successful 28S-D2 (RNA) sequences 162 (>300bp) were considered for analysis and supported most of the conclusions from COI and wnt1 analyses (maximum likelihood tree with bootstrap values: Appendix 4). A list of all barcoded specimens is shown in Appendix 1.

## Acronyms and abbreviations

BHL = Biodiversity Heritage Library
BIN = Barcode Index Number
BOLD = Barcode of Life Data Systems
CAR = Central African Republic
DR Congo = Democratic Republic of the Congo
PR Congo = People’s Republic of the Congo
Max. var. = maximum variation (maximum pairwise distance from BOLD data)
NHMUK = Natural History Museum, London, U.K.
NN = Nearest neighboring species (on BOLD)

ZSM = SNSB - Zoologische Staatssammlung München, Germany

## Systematic account

### Genus *Prasinocyma* Warren, 1897

Warren (1897): 44. BHL https://www.biodiversitylibrary.org/page/3219393#page/34/mode/1up
**Type species:** *Thalassodes vermicularia* Guenée, 1858. Histoire naturelle des insectes 9: 359. By original designation.

**Synonyms:** *Eretmopus* auct. nec Turner, 1910 (type species: *Thalassodes marinaria* Guenée, 1858, type locality Borneo), 'synonymy' restricted to African taxa. *Chlorocoma* auct. nec Turner, 1910 (type species: *Chlorochroma dichloraria* Guenée, 1858, type locality Tasmania), 'synonymy' restricted to African taxa, as earlier already suggested by Prout (1930). The following three genus names mentioned in Janse (1935) as "synonyms" are based on Indo-Pacific type species, which are not regarded as congeneric here (see below): *Pauresthes* Warren, 1903; *Poecilostigma* Warren, 1903; *Pyrrhaspis* Warren, 1903. *Paraprasina* Warren, 1897 (type species: *Paraprasina discolor* Warren, 1897), is downgraded from genus to subgenus level, nomenclatorial priority is discussed in this paper.

**Synapomorphies and common characters** (African species): Forewing frenulum usually present in male, but often weak and small, in some species and species groups (e.g. *P. salutaria, P. differens* and allies) absent. Frenulum always absent in female. Ground colour of wings green, with whitish striation, transverse lines absent; exception: deserticolous, pale brown *P. perpulverata* and a very few species without whitish striation (e.g. *P. trematerrai, P. tranquilla*). Many species with a pale spot at 1/2 of forewing inner termen. Male antennae bipectinate, female antennae usually filiform, in a few species distinctly bipectinate (e.g. *P. manderensis, P. pasii, P. heinrichi, P. monochroma, P. perineti*, *P. volsellata*), in several other species from Madagascar shortly bipectinate or, in other species, distinctly dentate (e.g. *P. stictimargo, P. oculata septentrionalis, P. falcata, P. caudata, P. albifimbriata, P. herbuloti, P. nigrimacula*). The coloration of frons is often diagnostic for fresh specimens, but the fading of green coloration (to beige or even brownish) may lead to confusion and misinterpretation in collection specimens. A patch of stiff setae is present on the centre of the male abdominal sternum A3 in many but not all species, often correlated with presence of a hair pencil on the hindtibia, supposedly of correlated olfactory function. This setal patch should not be confused with the sometimes similarly stiff setae at the posterior edge of the sternum. These setae very easily get lost during the dissection procedure, thus presence/absence of this character should be investigated before descaling the abdomen. The presence of a setal patch often can be recognized in completely descaled abdomina by the perforated cuticula at the centre of sternum A3, the holes possibly corresponding to the endings of sub-cuticular olfactory glands. Male hindtibia often with pencil and small terminal projection, usually with 4 spurs, just with a few exceptions (*P. eremica, P. discolor, P. concolor*). Male genitalia show an extraordinary diversification in the shape of the sacculus and the posterior margin of sternum A8, but also in other structure details. Anterior margin of male tergum A2 sometimes with paired apodemes of potentially diagnostic shape, meriting further attention. Female genitalia with less conspicuous differential features, mainly concerning shape and sclerotization of the sterigma. Corpus bursae membranous, signum usually lacking. Discussion of female differential characters are postponed for subsequent studies.

In Hausmann et al. (2016) the Ethiopian species of this genus were sub-divided into four species groups. The present data largely confirms three of these groups (*immaculata*, *bifimbriata* and *aetheraea* species groups) but reveals the "*nereis* species group" (Hausmann et al. 2016) as polyphyletic. A tentative classification into eleven subgenera (*Prasinocyma*, *Amplocyma* subgen. nov.*, Tandicyma* subgen. nov.*, Megacyma* subgen. nov.*, Paraprasina* stat. n.*, Niphocyma* subgen. nov.*, Bificyma* subgen. nov.*, Corrucyma* subgen. nov.*, Malgassocyma* subgen. nov., *Microcyma* subgen. nov. and *Claracyma* subgen. nov.) with some subordinated species groups is established here, mainly based on corresponding, monophyletic clustering in mtDNA (COI) and nDNA (mainly wnt1), as well as on correlated morphological traits. Nevertheless, further in depth analysis is required, including multilocus mtDNA/nDNA/RNA data, male and female genitalia structures. The species are listed in this paper in the order of their position in the neighbor joining tree (cf. Appendix 2), since COI data are usually well resolving the relationships at the level of species, sister species and species groups. However, in this tree (cf. Appendix 2) just the sequences of 450+ bp are considered for minimizing topology errors due to incompatibility of shorter fragments. Taxa which are not yet represented by longer fragments were positioned aside their nearest genetic neighbors. Taxa without any genetic information are placed to their nearest neighbors according to their morphology. With this approach, closely related species are brought together. In a very few cases, the position of species was modified when morphology strongly suggested to

be more reliable than molecular data.

The COI data suggested the transfer of all African species, so far attributed to the genus *Chlorocoma* auct. nec Turner, 1910 (otherwise Indo-Pacific). Similarly, the (so far) monobasic genus *Paraprasina* is subordinated as subgenus under *Prasinocyma*, several African species are transferred from *Eretmopus* to *Prasinocyma*, the two species *Prosomphax anomala* and *Chlorosterrha monochroma* are transferred to *Prasinocyma* as well, as also a diverse species complex from Madagascar which previously had been classified as members of the genus *Heterorachis*. All taxonomic changes are supported by morphological and molecular data, as well as by a multi-gene phylogenetic analysis (Leidys Murillo-Ramos and Pasi Sihvonen, pers. comm.). Genus boundaries and relationships with sister genera need to be re-examined in a comprehensive integrative approach including nDNA-analysis of many genera, including e.g. *Heterorachis, Prosomphax, Gelasmodes* and *Thalassodes*. For instance, the species *Prosomphax callista* (Warren, 1911) shows a relatively great similarity in the COI gene to several *Prasinocyma* species (p-distance approx. 6.5%).

After transferring a bulk of Indopacific species from *Prasinocyma* to the new genera *Orothalassodes* and *Albinospila* (Holloway 1996), some Indopacific species are still formally combined with the genus *Prasinocyma*, but the genus name bears quotation-marks in the World Catalogue (Scoble 1999) and question mark suffixes in the updated catalogue (Scoble & Hausmann 2007; Rajaei et al. 2022). As shown in Hausmann et al. (2016b), these species should be removed - from a molecular point of view - from *Prasinocyma* and transferred to *Orothalassodes*, *Albinospila* or other (new) genera which is out of the scope of this present revision. We therefore suggest - in accordance with Scoble (1999) - to list them with a status of uncertain position, awaiting further integrative taxonomic study involving morphometry and nDNA analyses.

In a multigene analysis (7 markers, including nuclear genes; Murillo-Ramos et al. 2019; Leidys Murillo-Ramos and Pasi Sihvonen, pers. comm.) the investigated eleven African species of the genus *Prasinocyma* - including the subgenera *Amplocyma* (four species), *Bificyma* (three species), *Microcyma* (three species) and *Paraprasina* (one species) - were monophyletic against all other Geometrinae, with members of the Asian genera *Albinospila* and *Orothalassodes* branching far outside in the phylogenetic tree. The remote position of *Orothalassodes* is in agreement with the results in Plotkin et al. (2025).

Two multigene analyses included African *Prasinocyma* species into a wider phylogenetic context (Murillo-Ramos et al. 2019, Plotkin et al. 2025). Both studies confirmed the position of genus *Prasinocyma* within the tribe Hemitheini, while the genus cannot be assigned clearly to a subtribe. Sister group relationships are suggested with subtribe Heliotheina (Murillo-Ramos et al. 2019) or subtribe Comostolina (Plotkin et al. 2025).

### Subgenus *Prasinocyma* Warren, 1897

Warren (1897): 44.
BHL https://www.biodiversitylibrary.org/page/3219393#page/34/mode/1up
**Type species:** *Thalassodes vermicularia* Guenée, 1858. Histoire naturelle des insectes 9: 359. By original designation.

**Description and diagnosis:** The subgenus is mainly based on COI (Appendix 2) and wnt1 sequence patterns (Appendix 3) consistently forming one single, monophyletic clade. The genetic data are supported by common male genitalia characters, e.g. broadly spinulose tip of sacculus and shallowly bilobous posterior margin of sternum A8 in the species cluster around *P. vermicularia*, and a narrow long tip of sacculus in the species cluster around *P. inconspicuata*.

### 1 *Prasinocyma vermicularia* (Guenée, 1858) (Plate 1)

Guenée (1858): 359 (*Thalassodes*)
BHL: https://www.biodiversitylibrary.org/page/9812038#page/421/mode/1up
= *dilucida* Walker (1861): 548 (*Thalassodes*)
BHL: https://www.biodiversitylibrary.org/page/39713449#page/64/mode/1up

**DNA data:** Three BINs: BIN BOLD:AAZ7528 (n=37; max. var. 0.33% in South Africa, 1.70% when including BIN-sharing populations from Zimbabwe and Tanzania); nearest species (1.60%): *P. permitis* (BOLD:ABU6976). – BIN BOLD:ADL1456 (n=1; South Africa, KZN; max. var. N/A): distance from main cluster BOLD:AAZ7528 3.56%. – BIN BOLD:ADL2039 (n=1; NHMUK specimen from S Malawi, misidentified in NHMUK as "*P. permitis*"; max. var. N/A): distance from main cluster BOLD:AAZ7528 1.69%. The two BINs based on singletons are both NGS-sequenced, thus not excluding sequencing errors, requiring further research. Despite the heterogeneous barcode pattern, the male genitalia clearly separate *P. vermicularia* and *P. permitis* into two separate species.

**Material examined:** *vermicularia*: Lectotype, male ([Namibia or Northern Cape in South Africa]: "Pays des Namaquois"; BMNH E 1377555; BMNH E 1377555_NGS (both failures); NHMUK; slide nr. Geom. 2647 (male; labelled by Guenée as "Namaquois", herewith designated as lectotype); the female syntype with NHMUK slide nr. Geom. 2648 (labelled by Guenée as "Afrique centrale") herewith designated as paralectotype.
— syn. *dilucida*: 2 syntypes (South Africa; NHMUK; female slide nr. Geom. 2646).
— *Additional material on BOLD:* South Africa: BC ZSM Lep 69698_NGS; BC ZSM Lep 109733; BC ZSM Lep 109687; BC ZSM Lep 109690; BC ZSM Lep 89572; BC ZSM Lep 89689; BC ZSM Lep 89619; BC ZSM Lep 89569; BC ZSM Lep 89658; BC ZSM Lep 89566; BC ZSM Lep 89547; BC ZSM Lep 105750; BC ZSM Lep 89548; BC ZSM Lep 89617; BC ZSM Lep 109687; BC ZSM Lep 64543; BIOUG02077-E12; BC ZSM Lep 64984; BC ZSM Lep 64985; BC ZSM Lep 89568; BC ZSM Lep 89571; BC ZSM Lep 89591; BC ZSM Lep 109747; CCDB-22955-C10; BC ZSM Lep 89561; BC ZSM Lep 89573; BC ZSM Lep 89664; BC ZSM Lep 89629; BC ZSM Lep 89670; BC ZSM Lep 109692; BC ZSM Lep 109734; BC ZSM Lep 114465; BC ZSM Lep 89592 (failure; resampled: BC ZSM Lep 110660); BC ZSM Lep 89628; BC ZSM Lep 89641; BC ZSM Lep 109688; BC ZSM Lep 89557; BC ZSM Lep 89667 (the last four failures, dissected); BC_ZSM_Lep_115211; BC_ZSM_Lep_115212; BC_ZSM_Lep_119610; BC_ZSM_Lep_121298. - Zimbabwe: BC ZSM Lep 91370; BC ZSM Lep 62254; BC ZSM Lep 91384; BC ZSM Lep 97664. - Malawi (south): BMNH E 1377534; BMNH E 1377554_NGS (misidentified in NHMUK as *P. permitis*); BC ZSM Lep 89558. - Tanzania (south)): BC ZSM Lep 45561; BC_ZSM_Lep_115298; BC_ZSM_Lep_115344.
— *Additional material examined:* Malawi: 4 males, 2 females (slide nr. ZSM G 21678). - Tanzania: 2 females. - Zimbabwe: 1 male, 1 female (ZSM G 22403). - South Africa: 8 males, 2 females (ZSM G 21762, 21502, 21873, 22170).

**Re-description:** External characters see colour plates and figures (DS-PRASINAF) in BMNH E 1377554; BC ZSM Lep 69698; BC ZSM Lep 109733; BC ZSM Lep 109687; BC ZSM Lep 109690; BC ZSM Lep 45561; BC ZSM Lep 91370; BC ZSM Lep 62254; BC ZSM Lep 91384; BC ZSM Lep 97664; BC ZSM Lep 89572; BC ZSM Lep 89689; BC ZSM Lep 89619; BC ZSM Lep 89569; BC ZSM Lep 89658; BC ZSM Lep 89566; BC ZSM Lep 89547; BC ZSM Lep 105750; BC ZSM Lep 89548; BC ZSM Lep 89617; BC ZSM Lep 109687; BC ZSM Lep 64543; BIOUG02077-E12; BC ZSM Lep 64984; BC ZSM Lep 64985; BC ZSM Lep 89568; BC ZSM Lep 89571; BC ZSM Lep 89558; BC ZSM Lep 89591; BC ZSM Lep 109747; CCDB-22955-C10; BC ZSM Lep 89561; BC ZSM Lep 89573; BC ZSM Lep 89664; BC ZSM Lep 89629; BC ZSM Lep 89670; BC ZSM Lep 109692; BC ZSM Lep 109734; BMNH E 1377534; BC ZSM Lep 114465; BC ZSM Lep 89592; BC ZSM Lep 89628; BC ZSM Lep 89641; BC ZSM Lep 110660; BC_ZSM_Lep_115211; BC_ZSM_Lep_115212; BC_ZSM_Lep_115298; BC_ZSM_Lep_115344; BC_ZSM_Lep_119610; BC_ZSM_Lep_121298.
— Additional characters: wingspan 20.5–26.5 mm in male, 22–29 mm in female; upperside of palpi reddish-brown to brown, length 0.8–1.3 times diameter of eye in male, 1.9–2.6 times in female; frons green, paler towards proboscis, reddish towards vertex, occasionally entirely reddish-brown; male hindtibia with 4 spurs, pencil and terminal projection; male sternum A3 with setal patch.
— Male genitalia see genitalia plate 1.

**Diagnostic characters** from NN on BOLD (*P. permitis*): No difference in external appearance; male genitalia of *P. vermicularia* with the spinose dorso-terminal crest on sacculus longer and narrower.

**Biology:** Larva found on *Buddleja salviifolia* (Scrophulariaceae) (South Africa; H. Staude, pers. comm.).

**Remarks:** In male genitalia the shape of sacculus shows two types without transitions: one with spinulose part restricted to apex (restricted to Gauteng and Limpopo provinces), the other one with a long row of spines down the dorsal margin of sacculus, the latter corresponding to the lectotype specimen slide of *P. vermicularia*. Since no correlated feature in other parts of the genitalia nor in external appearance was found, and since the DNA barcodes of both types are exactly matching, no taxonomical description is done here, however, requiring further research.

### 2 *Prasinocyma permitis* Prout, 1932 (Plate 1)

Prout (1932): 380
Not in BHL

**DNA data:** BIN BOLD:ABU6976 (n=4; max. var. 0.33%); nearest species (1.60%): *P. vermicularia* (BOLD:AAZ7528).

**Material examined:** Holotype, female ([Tanzania]: Tanganyika Territory, Kilimanjaro: Kilima, 1440 m; MNHN; genitalia slide nr. Cl. Herbulot 2016).

— *Additional material on BOLD:* Kenya: BC ZSM Lep 89627; BC ZSM Lep 89587; BC ZSM Lep 41257; BC ZSM Lep 89656; BC ZSM Lep 89660; BC ZSM Lep 110700; BC ZSM Lep 89648 (contaminated); BC_ZSM_Lep_115367.
— *Additional material examined:* Kenya: 8 males, 1 female (slide nr. ZSM G 21435, 21631, 21887, 21972, 22302). - Tanzania: 4 males, 10 females (ZSM G 22304). - Mozambique: 1 female (BC ZSM Lep 89563, resampled to BC_ZSM_Lep_120299).

**Re-description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 89627; BC ZSM Lep 89587; BC ZSM Lep 41257; BC ZSM Lep 89656; BC ZSM Lep 89660; BC ZSM Lep 89648; BC ZSM Lep 110700; BC_ZSM_Lep_115367.
— Additional characters: wingspan 23–28 mm in male, 24–30 mm in female; upperside of palpi reddish, length of palpi 0.8–1.4 times diameter of eye in male, 2.0–3.0 times in female; frons green, paler towards proboscis, reddish towards vertex; male hindtibia with 4 spurs, pencil and short terminal projection; male sternum A3 with setal patch.
— Male genitalia see genitalia plate 1.

**Diagnostic characters** from *P. vermicularia*: No difference in external appearance; male genitalia of *P. permitis* with the spinose dorso-terminal crest on sacculus shorter and broader.

### 3 *Prasinocyma trapezoides* spec. nov. (Plate 1)

**DNA data:** BIN BOLD:AGE9885 (n=1; max. var. N/A); nearest species (4.33%): *P. virgata* (BOLD:AFC7442); next-nearest species in BOLD barcode gap analysis: *P. rotundata* (BOLD:ADB0039, 4.62%) and *P. lutulenta* (BOLD:ACL9893; 6.14%). Distance from *P. duplex* 6.57% in BOLD barcode gap analysis.

**Material examined:** Holotype: Male, BC ZSM Lep 113565 (failure, resampled to BC_ZSM_Lep_120308) (Uganda, Western: Kibale Forest, 14km SE Fort Portal).
— *Paratypes on BOLD:* Uganda: BC ZSM Lep 114447 (failure); BC_ZSM_Lep_119320.

**Etymology:** The name refers to the trapezoid shape of sternum A8.

**Description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 113565; BC ZSM Lep 114447; BC_ZSM_Lep_119320; BC_ZSM_Lep_120308.
— Additional characters (male): wingspan 25–27 mm; upperside of palpi pale brown to reddish-brown, length 0.9–1.3 times diameter of eye; frons green, white towards proboscis, reddish towards vertex; male hindtibia with 4 spurs, pencil and terminal projection; male sternum A3 with setal patch.
— Male genitalia see genitalia plate 1.

**Diagnostic characters** from NN on BOLD (*P. virgata*): Little difference in external appearance. Male genitalia of *P. trapezoides* with small spinose patch at the tip of sacculus (a long patch in *P. virgata*). - Little difference from *P. rotundata* in external appearance, but forewing termen of *P. trapezoides* less rounded, in male genitalia tip of sacculus with rounded, less elongate spinose lobe, posterior margin of sternum A8 poorly sclerotized, trapezoid. - Differing from *P. duplex* by the single spinose lobe of sacculus, the broader membranous apical part of valva, and the bilobous posterior margin of sternum A8.

### 4 *Prasinocyma safiani* spec. nov. (Plate 1)

**DNA data:** BIN BOLD:ADQ8965 (n=2; max. var. 0.16%); nearest species (2.61%): *P. pugilis* (BOLD:AEO7219); next-nearest species (3.88%): *P. vermicularia* (BOLD:AAZ7528).

**Material examined:** Holotype: Male, BC ZSM Lep 103891 (Cameroon, South-West: Mt. Cameroon, Planty Camp).
— *Paratypes on BOLD:* Kenya: BC ZSM Lep 89614.
— *Additional paratypes:* Cameroon (Mt. Kupe; slide nr. ZSM G 21607, 21815): 2 males, 1 female. - PR Congo (Odzala NP; ZSM G 21664): 1 male. - Kenya (Kakamega Forest; ZSM G 21632): 1 male.
— *Additional material on BOLD:* Uganda: MG767955 (mined from GenBank, deposition of voucher unclear).

**Etymology:** The name refers to one of the collectors of the holotype (Szabolcs Safian).

**Description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 89614; BC ZSM Lep 103891.
— Additional characters: wingspan 24–27 mm in male, 30.5 mm in female; upperside and tip of palpi reddish-brown, length 1.2–1.4 times diameter of eye in male, 2.2 times in female; frons green, paler towards proboscis, sometimes reddish towards vertex; male hindtibia with 4 spurs, pencil and short terminal projection;

male sternum A3 with setal patch.
— Male genitalia see genitalia plate 1.

**Diagnostic characters** from NN on BOLD (*P. pugilis*): No difference in external appearance, but male palpi of *P. safiani* longer, frons green; male genitalia of *P. safiani* with tip of sacculus more rounded, sternum A8 not concave posteriorly. Differing from *P. vermicularia* in the globular spinose tip of sacculus.

### 5 *Prasinocyma pugilis* spec. nov. (Plate 1)

**DNA data:** BIN BOLD:AEO7219 (n=1; max. var. N/A); nearest species (2.61%): *P. safiani* (BOLD:ADQ8965).

**Material examined:** Holotype: Male, BC ZSM Lep 110683 (Cameroon, Centre: 18km W Yaounde, vill. Kala).
– *Additional paratypes:* Cameroon: 3 males (same collecting site 'vill. Kala', same wing pattern).

**Etymology:** The name refers to the shape of the tip of sacculus reminiscent of a boxing glove (latin pugil, gen. pugilis = boxer).

**Description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 110683.
— Additional characters (male): wingspan 26–27 mm; upperside of palpi reddish, length 1.0–1.1 times diameter of eye; frons reddish-brown, with a few green scales; hindtibia with 4 spurs, pencil and terminal projection; sternum A3 with setal patch.
— Male genitalia see genitalia plate 1.

**Diagnostic characters** from NN on BOLD (*P. safiani*): No significant difference in external appearance, male palpi of *P. pugilis* shorter, frons reddish-brown; in male genitalia tip of sacculus less rounded, sternum A8 bilobous, deeply concave between.

### 6 *Prasinocyma lutulenta* Hausmann, Sciarretta & Parisi, 2016 (Plate 1)

Hausmann et al. (2016): 27, figs 27, 95
Not in BHL

**DNA data:** BIN BOLD:ACL9893 (n=6; max. var. 1.61%); nearest species (2.88%): *P. manicensis* (BOLD:ADC6307).

**Material examined:** Holotype, male (Ethiopia [Southern Nations], Gemu Gofa, Omo, Arba Minch, 1335 m; ZSM; slide nr. ZSM G 16040; BC ZSM Lep 81481; BC ZSM Lep 85809).
— *Additional material on BOLD:* Ethiopia: BC ZSM Lep 98323; BC ZSM Lep 93894; BC ZSM Lep 59299; BC ZSM Lep 106706; BC ZSM Lep 114536.
— *Additional material examined:* Ethiopia: 1 male, 2 females. - Rwanda: 1 male (slide nr. ZSM G 21354).

**Re-description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 98323; BC ZSM Lep 81481; BC ZSM Lep 85809; BC ZSM Lep 93894; BC ZSM Lep 59299; BC ZSM Lep 106706; BC ZSM Lep 114536.
— Additional characters: wingspan 24.5–28 mm in male, 27–32.5 mm in female; upperside of palpi reddish-brown, length 1.2–1.7 times diameter of eye in male, 1.9–2.8 times in female; frons green, broadly reddish-brown towards vertex, often covering the dorsal half, sometimes with only a few green scales; male hindtibia with 4 spurs, pencil and terminal projection; male sternum A3 with setal patch.
— Male genitalia see genitalia plate 2.

**Diagnostic characters** from NN on BOLD (*P. manicensis*): No difference in external appearance, but female genitalia of *P. lutulenta* with sclerotized lamella antevaginalis larger, ductus bursae broader, not exceeding length of lamella antevaginalis (in *P. manicensis* twice length of lamella antevaginalis).

### 7 *Prasinocyma manicensis* spec. nov. (Plate 1)

**DNA data:** BIN BOLD:ADC6307 (n=1; max. var. N/A); nearest species (2.89%): *P. lutulenta* (BOLD:ACL9893).

**Material examined:** Holotype: Female, BC ZSM Lep 91375 (Zimbabwe, Manicaland: Nyanga NP).
— No paratypes.

**Etymology:** The name refers to the province of the type locality.

**Description:** External characters: See colour plates and figures (DS-PRASINAF) in BC ZSM Lep 91375.
— Additional characters (female): wingspan 23.5 mm; length of palpi 2.3 times diameter of eye; frons with lower half green, upper half red.

## Plates 1–16

## Figs 1–365

**African and Arabian species of Prasinocyma (scale bar = 1 cm)**

**Plate 1** – all specimens in 1.35 x natural size, scale bar = 1 cm

Genus *Prasinocyma* Warren, 1897 - Subgenus *Prasinocyma* Warren, 1897

**1 *Prasinocyma vermicularia*** (Guenée, 1858)

Male, South Africa, Western Cape, Plettenberg Bay, Piesang river forest, 100m, 26.xii.2011, leg. H.S. Staude, BC ZSM Lep 89619

**2 *Prasinocyma permitis*** Prout, 1932

Female, Tanzania, Mt. Meru, Momella, 1600-1800m, 10.-19.ii.1964, leg. W. Forster

**3 *Prasinocyma trapezoides*** spec. nov.

Male, **HT**, Uganda, Klbale Forest, 1510m, 22.x.2014, leg. T. Karisch, gen.prep. ZSM G 21217, BC ZSM Lep 113565 + 120308

**4 *Prasinocyma safiani*** spec. nov.

Male, **HT**, Cameroon, Mt. Cameroon, Planty Camp, 1100m, 2.ii.2016, leg. V. Maicher et al., gen.prep. ZSM G 21292, BC ZSM Lep 103891

**5 *Prasinocyma pugilis*** spec. nov.

Male, **PT**, Cameroon, Village Kala, 730m, leg. A. Evoé, 18.ix.1972

**6 *Prasinocyma lutulenta*** Hausmann et al., 2016

Female, Ethiopia, Reg. Southern Nations, Bonga Guesthouse, 1800m, 11.-13.v.2016, leg. D. Stadie & R. Fiebig, BC ZSM Lep 59299

**7 *Prasinocyma manicensis*** spec. nov.

Female, **HT**, Zimbabwe, Eastern Highlands, Nyanga NP, 1820m, 3.xii.2015, leg. J. Lenz, gen.prep. ZSM G 21290, BC ZSM Lep 91375

**8 *Prasinocyma duplex*** spec. nov.

Male, **HT**, Uganda, Ruwenzori Mts. NP, Equator Snow Lodge, 1740m, 16.-18.iii.2023, leg. E. Ott & H. Sulak, gen.prep. ZSM G 22547, BC_ZSM_Lep_119315

**9 *Prasinocyma livingstonei*** spec. nov.

Male, **HT**, Tanzania, Iringa, Livingstone Mts., Mlangali, 2070m, 7.xi.2004, leg. Ph. Darge, gen.prep. ZSM G 19921, BC ZSM Lep 45568

**10 *Prasinocyma neavei*** Prout, 1912

Male, Tanzania, Morogoro, Kaguru Mts., Mamiwa Forest, 1890m, 3.vi.2004, leg. Ph. Darge, gen.prep. ZSM G 19920, BC ZSM Lep 45605

**11 *Prasinocyma strigulata*** spec. nov.

Male, **HT**, Cameroon, Radio Tower, Bonakanda station, 2450m, 28.iii.2015, leg. V. Maicher et al., gen.prep. ZSM G 20693, BC ZSM Lep 96833

**12 *Prasinocyma virgata*** spec. nov.

Male, **HT**, Tanzania, E Kilimanjaro, Marangu Forest, 2000m, 26.vii.2009, leg. Ph. Darge, gen.prep. ZSM G 22397, BC_ZSM_Lep_116244

**13 *Prasinocyma rotundata*** spec. nov.

Male, **HT**, South Africa, Western Cape, Hoekwil, 376m, 19.ii.2017, leg. H. Staude, BC ZSM Lep 109749

**14 *Prasinocyma maicheri*** spec. nov.

Female, **PT**, Guinea Equatorial, Isla de Bioko, Moca Malabo, 1400m, 19.ii.2002, leg. H. Hoppe, BC ZSM Lep 113056

**15 *Prasinocyma niveata*** spec. nov.

Female, **HT**, Tanzania, Udzungwa NP, 1400m, leg. Ph. Darge, gen.prep. ZSM G 19924, BC ZSM Lep 45582

**16 *Prasinocyma kerkhofi*** spec. nov.

Male, **HT**, Tanzania, Iringa, Kipengere Mts., Uwemba, 2130m, 10.xii.2005, leg. Ph. Darge, gen.prep. ZSM G 21755, BC ZSM Lep 45597 + 114659

**17 *Prasinocyma consimilis*** spec. nov.

Male, **HT**, Rwanda, Nyungwe Forest Reserve, Uwinka, 2450m, 20.-23.vi.2009, leg. H. Staude, gen.prep. ZSM G 19932, BC ZSM Lep 36107

**18 *Prasinocyma lineata*** spec. nov.

Male, **HT**, Rwanda, Nyungwe Forest, Wincka, 2500m, 16.xi.1974, leg. B. Turlin, gen.prep. ZSM G 21501, BC_ZSM_Lep_115294

**19 *Prasinocyma inornata*** Fletcher, 1958

Male, Uganda, Ruwenzori Mts. NP, Equator Snow Lodge, 1740m, 16.-18.iii.2023, leg. E. Ott & H. Sulak, gen.prep. ZSM G 22559

**20 *Prasinocyma innotata*** spec. nov.

Male, **HT**, Rwanda, Wincka, 2700m, 23.iii.1974, leg. B. Turlin, gen.prep. ZSM G 21523, BC ZSM Lep 110703

**21 *Prasinocyma prima*** spec. nov.

Female, **PT**, Uganda, Bwindi Forest, Cuckooland Lodge, 1700m, 27.-30.iii.2013, leg. R. Fiebig & D. Stadie, BC ZSM Lep 115193

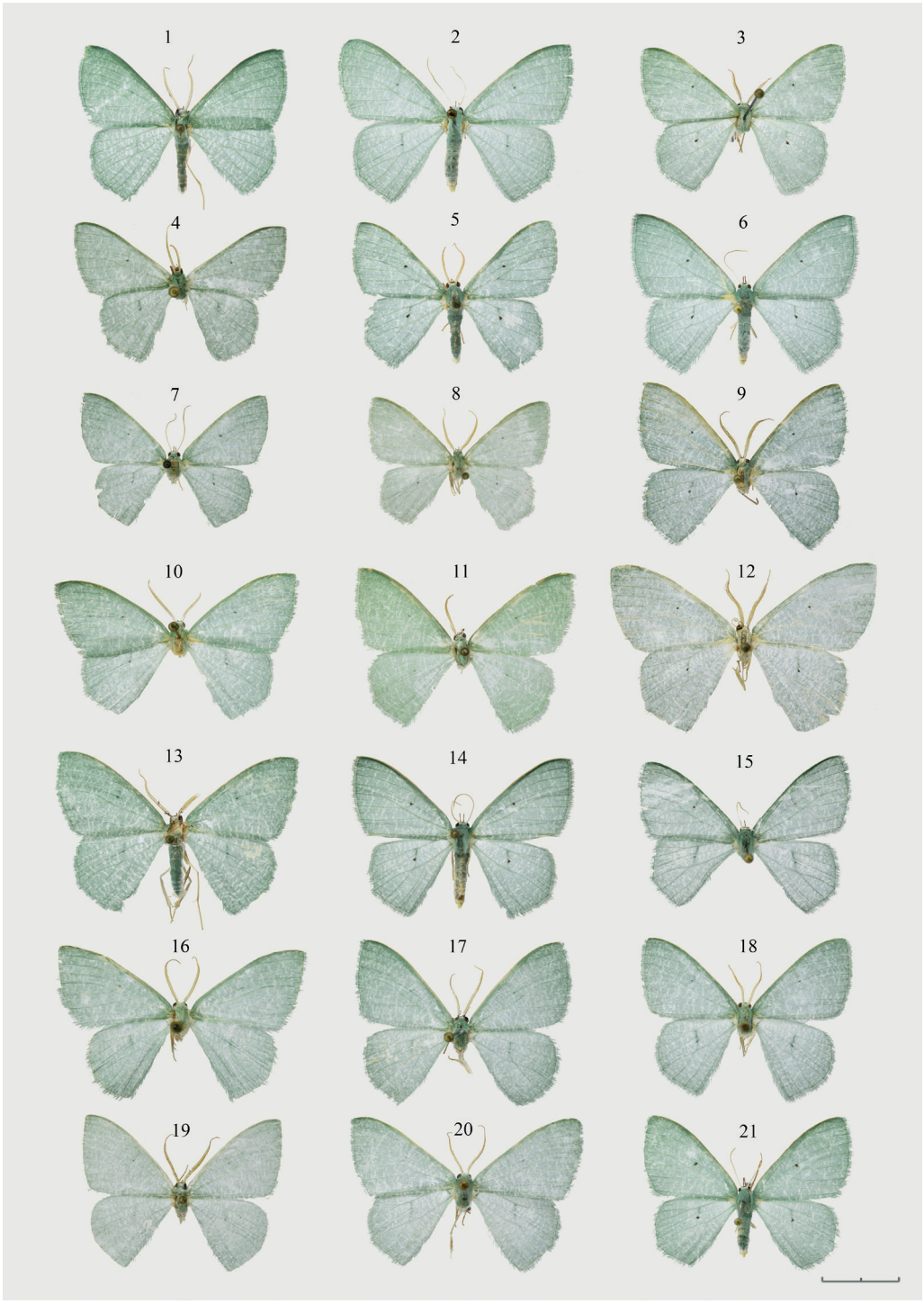
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**Plate 2** – all specimens in 1.35 x natural size, scale bar = 1 cm

**22 *Prasinocyma recurvata*** spec. nov.

Male, **HT**, Uganda, Ruwenzori, Equator Snow Lodge, 1740m, 16.-18.iii.2023, leg. E. Ott & H. Sulak, gen.prep. ZSM G 22548, BC_ZSM_Lep_119316

**23 *Prasinocyma inconspicuata*** Fletcher, 1958

Male, Uganda, Ruwenzori Mts., Equator Snow Lodge, 1740m, 16.-18.iii.2023, leg. E. Ott & H. Sulak, gen.prep. ZSM G 22634

**24 *Prasinocyma inconspicuata ruandensis*** subspec. nov.

Male, **HT**, Rwanda, Wincka, 19.i.1974, leg. B. Turlin, gen.prep. ZSM G ####, BC ZSM Lep ####

**25 *Prasinocyma inconspicuata stadiei*** subspec. nov.

Male, **HT**, Kenya, Mt. Kenya, Castle Forest, 1900-2100m, 29.-31.iii.2019, , leg. D. Stadie et al., gen.prep. ZSM G 21897, BC ZSM Lep 114501

Subgenus *Amplocyma* subgen. n. - The *aetheraea* species group

**26 *Prasinocyma meruensis*** spec. nov.

Male, **HT**, Tanzania, Mt. Meru, Miriakamba Hut, 2500m, 19.i.2005, leg. Ph. Darge, gen.prep. ZSM G 21293, BC ZSM Lep 20167

**27 *Prasinocyma vulcania*** spec. nov.

Male, **HT**, Tanzania, Ngorongoro, 2.i.1971, gen.prep. ZSM G 21492, BC ZSM Lep 110691

**28 *Prasinocyma amharensis*** Hausmann et al., 2016

Male, **PT**, Ethiopia, Debark, Simien Mts., 3250m, 31.x.2011, leg. H. Staude, gen.prep. ZSM G 19595, BC ZSM Lep 83217

**29 *Prasinocyma albivenata*** Herbulot, 1983

Male, **PT**, Ethiopia, Marais de Dinsho, 3100m, 28.x.1976, leg. P-C. Rougeot

**30 *Prasinocyma edwardsi*** Fletcher, 1958

Male, **HT**, Kenya, Mt. Elgon, ii.1935, leg. F.W. Edwards, gen.prep. BMNH Geom. 2628, BMNH E 1377506_NGS

**31 *Prasinocyma tricolorifrons*** Prout, 1913

Male, Ethiopia, Oromia, Harena Forest, Catcha Camp, 2316m, 1.-3.v.2016, leg. R. Fiebig & D. Stadie

**32 *Prasinocyma trematerrai*** Hausmann et al., 2016

Female, Ethiopia, Oromia, Sanetti Plateau above Rira, 3550m, 3.v.2016, leg. R. Fiebig & D. Stadie

**33 *Prasinocyma trematerrai simienensis*** Hausmann et al., 2016

Male, **PT**, Ethiopia, Debark, Simien Mts., Sankaber Camp, 3250m, 31.x.2011, leg. H: Staude

**34 *Prasinocyma becki*** spec. nov.

Female, **HT**, Ethiopia, S, 10km NE Bonga, 2400m, 17.viii.2017, leg. R. Beck & G. Riedel, gen.prep. ZSM G 22190, BC ZSM Lep 114529

**35 *Prasinocyma fallax*** Hausmann et al., 2016

Male, **HT**, Ethiopia, Oromia, by Debre Sina, 2730m, 6.iv.2010, leg. H. Sulak, gen.prep. ZSM G 19457, BC ZSM Lep 40508

**36 *Prasinocyma aetheraea*** Debauche, 1937

Male, Ethiopia, Bale Mts., Harenna, Katcha, 1810m, 21.ii.2014, leg. D. Wiersbowski, gen.prep. ZSM G 19650, BC ZSM Lep 84636

The *jefferyi* species group

**37 *Prasinocyma murphyi*** spec. nov.

Male, **HT**, Zambia, Manyanjere Forest, Nyika NP, 2080m, 18.-20.x.2012, leg. R.J. Murphy, gen.prep. ZSM G 21305, BC ZSM Lep 89618

**38 *Prasinocyma segereri*** spec. nov.

Male, **HT**, Tanzania, Nguu Mts., Tamota Forest, 15.viii.2004, leg. Ph. Darge, gen.prep. ZSM G 19931, BC ZSM Lep 45603

**39 *Prasinocyma ypsilon*** spec. nov.

Male, **HT**, Tanzania, Mbeya, Mt. Rungwe, 1710m, 27.v.2004, leg. Ph. Darge, gen.prep. ZSM G 21391, BC ZSM Lep 110658

**40 *Prasinocyma louisae*** spec. nov.

Female, **HT**, Burundi, Kitega, 12.xi.1962, leg. M. Fontaine, gen.prep. ZSM G 22500, BC_ZSM_Lep_115363

**41 *Prasinocyma robusta*** Hausmann et al., 2016

Female, Djibouti, Massif du Day, 1500m, 8.iv.1975, leg. P.C. Rougeot

**42 *Prasinocyma acutipennis*** Wiltshire, 1994

Male, Saudi Arabia, near Taif, Shafa, 2400m, 22.-23.x.1998, leg. M. Legrain & F. Aullombard, gen.prep. ZSM G 19862, BC ZSM Lep 58930

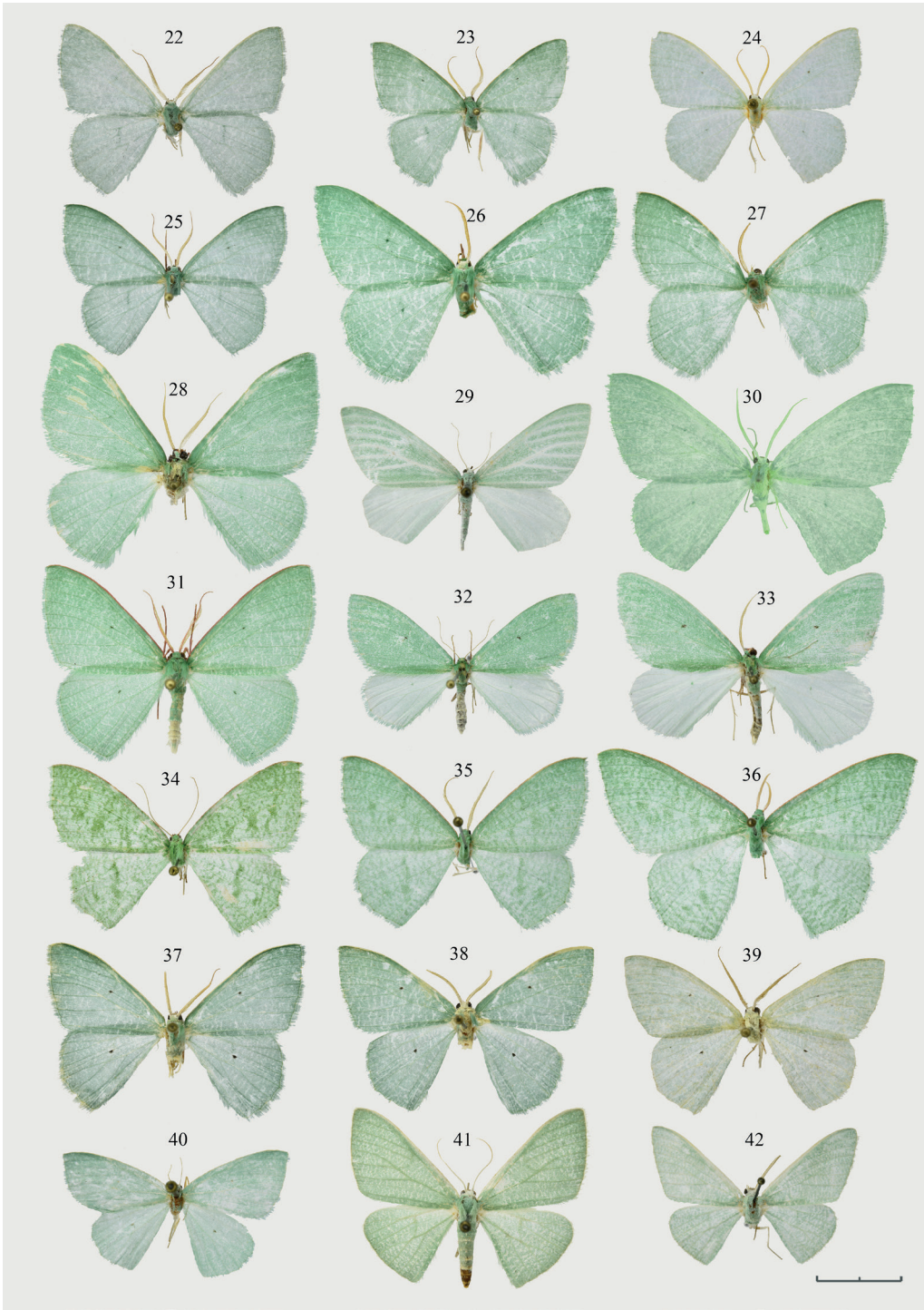
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**Plate 3** – all specimens in 1.35 x natural size, scale bar = 1 cm

**43** ***Prasinocyma acutipennis juliae*** subspec. nov.

Male, **HT**, Yemen, Sanaa, Nagdal Ahmar, 2280m, 7.iii.2000, leg. F. Aulombard et al., BC ZSM Lep 89847

**44** ***Prasinocyma stictimargo*** Warren, 1902

Female, Kenya, Isiolo, 2.-15.iii.1969, leg. Watulege, BC_ZSM_Lep_115314

**45** ***Prasinocyma coronata*** spec. nov.

Male, **PT**, Cameroon, Bafout-Nguemba, 2000m, 4.-5.iv.1970, leg. C. Herbulot & C. Lemaire

**46** ***Prasinocyma microscannata*** spec. nov.

Male, **HT**, Tanzania, Mt. Meru, Miriakamba Hut, 2500m, 19.i.2005, leg. Ph. Darge, microCT scan nr. WildfeuerJ Pras6, BC ZSM Lep 45779

**47** ***Prasinocyma stictoloma*** Prout, 1928

Male, Uganda, 2km NW Nabugabo Lake, 1160m, 30.x.2014, leg. T. Karisch, BC ZSM Lep 113096

**48** ***Prasinocyma stictoloma ochsei*** subspec. nov.

Male, **HT**, Cameroon, Mt. Cameroon, 9km NW Limbe, 776m, 13.v.2009, leg. M. Ochse, gen.prep. ZSM G 19927, BC ZSM Lep 39773

**49** ***Prasinocyma timmi*** spec. nov.

Female, **HT**, Cameroon, Bafut Nguemba, 1900m, 23.iv.-3.v.1975, leg. Ph. Darge, gen.prep. ZSM G 22490, BC_ZSM_Lep_115329

**50** ***Prasinocyma complexa*** spec. nov.

Male, **HT**, Liberia, Nimba Mts., East Nimba NR, 1000-1100m, 1.-10.vi.2010, leg. Sz. Safian, gen.prep. ZSM G 22036, BC ZSM Lep 114879

**51** ***Prasinocyma kivuensis*** spec. nov.

Male, **HT**, Uganda, Bwindi Forest, Cuckookand Lodge, 1700m, 27.x.-31.xi.2021, leg. R. Fiebig & D. Stadie, gen.prep. ZSM G 22349, BC_ZSM_Lep_116337

**52** ***Prasinocyma nigrimacula*** Prout, 1915

Female, Burundi, Kitega, 13.iii.1962, leg. M. Fontaine, BC_ZSM_Lep_115362

**53** ***Prasinocyma herbuloti*** spec. nov.

Male, **PT**, PR Congo, 5km SW Ouesso, 25.vi.1984, leg. C. Herbulot

**54** ***Prasinocyma abyssinica*** spec. nov.

Female, **PT**, Ethiopia, SN, 6km SW Wushwush, 22.v.2015, leg. D. Stadie & R. Fiebig

**55** ***Prasinocyma paludata*** spec. nov.

Male, **HT**, Tanzania, Iringa, Kipengere Mts., Lugenge, 2060m, 9.xii.2005, leg. Ph. Darge, gen.prep. ZSM G 21893, BC ZSM Lep 114498

**56** ***Prasinocyma paucistrigula*** spec. nov.

Female, **HT**, Rwanda, Bigigi, 2500m, 12.iv.1975, leg. B. Turlin, gen.prep. ZSM G 22501, BC_ZSM_Lep_115366

**57** ***Prasinocyma exilior*** Fletcher, 1958

Female, Tanzania, Arusha, Mt. Meru, 1670m, 21.x.2004, leg. Ph. Darge, gen.prep. ZSM G 21296, BC ZSM Lep 103815

**58** ***Prasinocyma jefferyi*** Prout, 1930

Male, Uganda, Bwindi Forest, Cuckookand Lodge, 1700m, 27.x.-31.xi.2021, leg. R. Fiebig & D. Stadie

**59** ***Prasinocyma vintejouxi*** spec. nov.

Male, **HT**, PR Congo, by Brazzaville, vi.1952, leg. M. Vintejoux, gen.prep. ZSM G 21524, BC ZSM Lep 110704

**60** ***Prasinocyma niphobola*** Prout, 1930

Male, Uganda, Bwindi Forest, Cuckookand Lodge, 1700m, 27.-30.iii.2013, leg. R. Fiebig & D. Stadie, gen.prep. ZSM G 21891, BC ZSM Lep 114499

**61** ***Prasinocyma delicataria*** (Möschler, 1887)

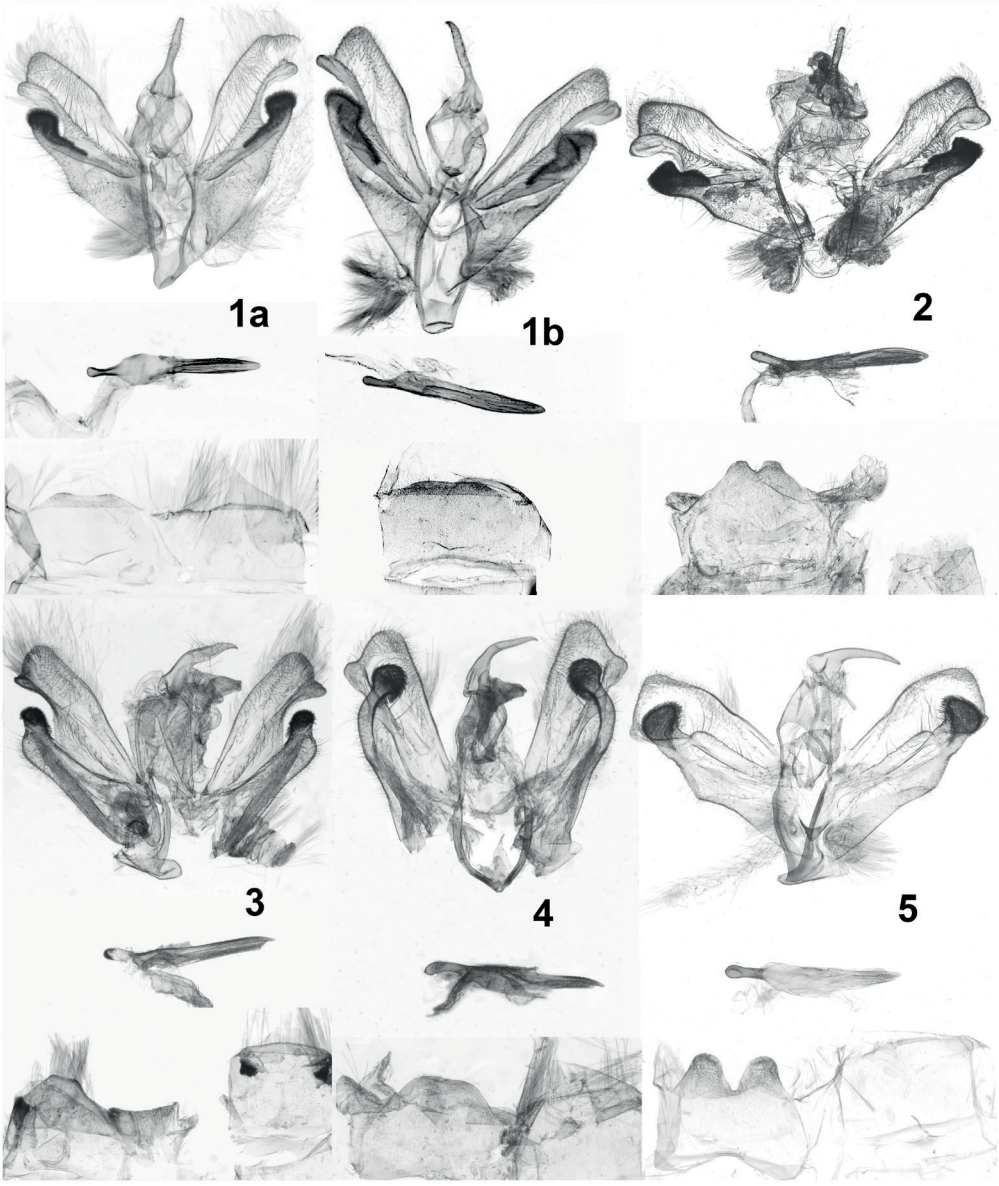
Male, Ivory Coast, Yapo Sud, 12.-18.iv.1969, leg. C. Herbulot, gen.prep. ZSM G 22048

**62** ***Prasinocyma calviniensis*** spec. nov.

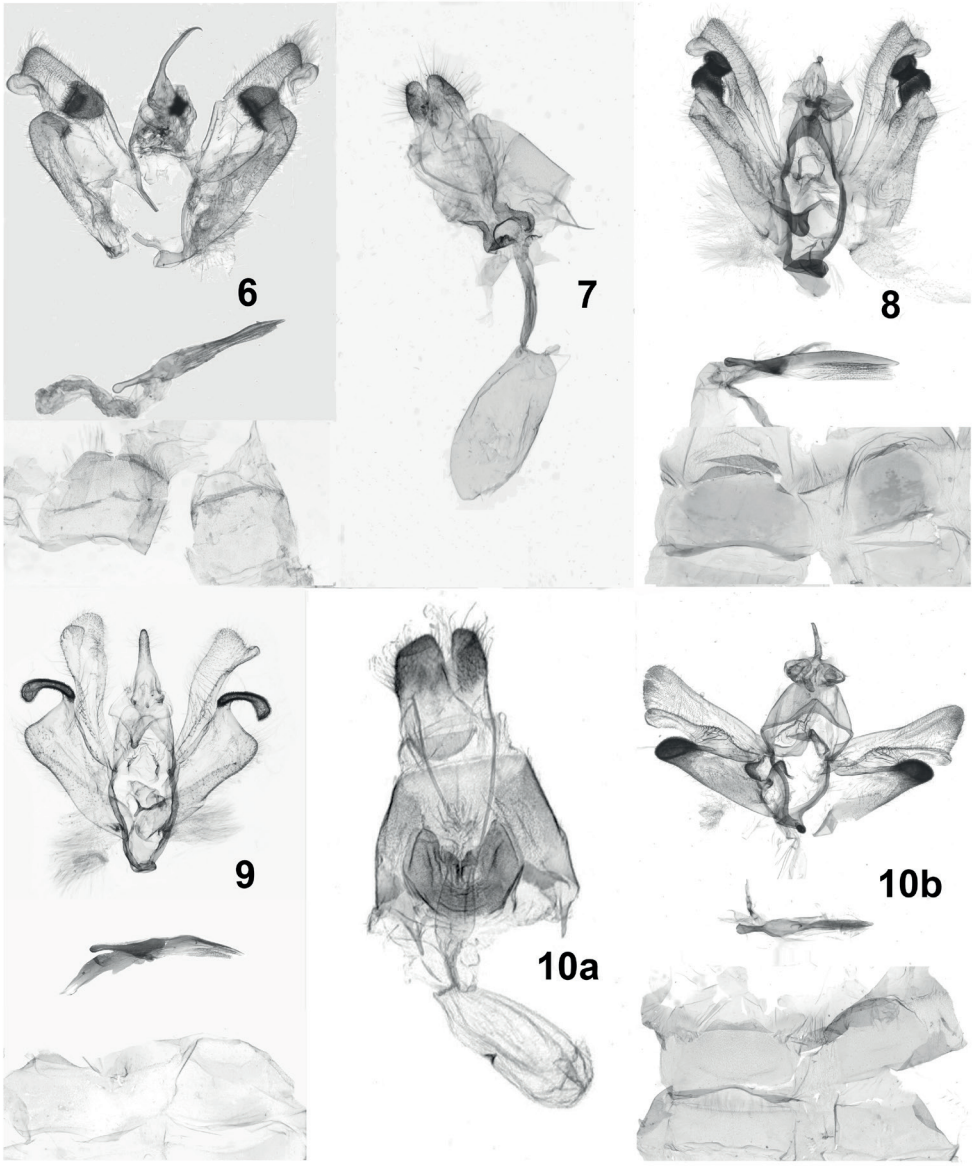
Male, **HT**, South Africa, Northern Cape, Calvinia, 898m, 14.i.2011, leg. A.P. Marais, gen.prep. ZSM G 21711, BC ZSM Lep 114657

**63** ***Prasinocyma sommereri*** spec. nov.

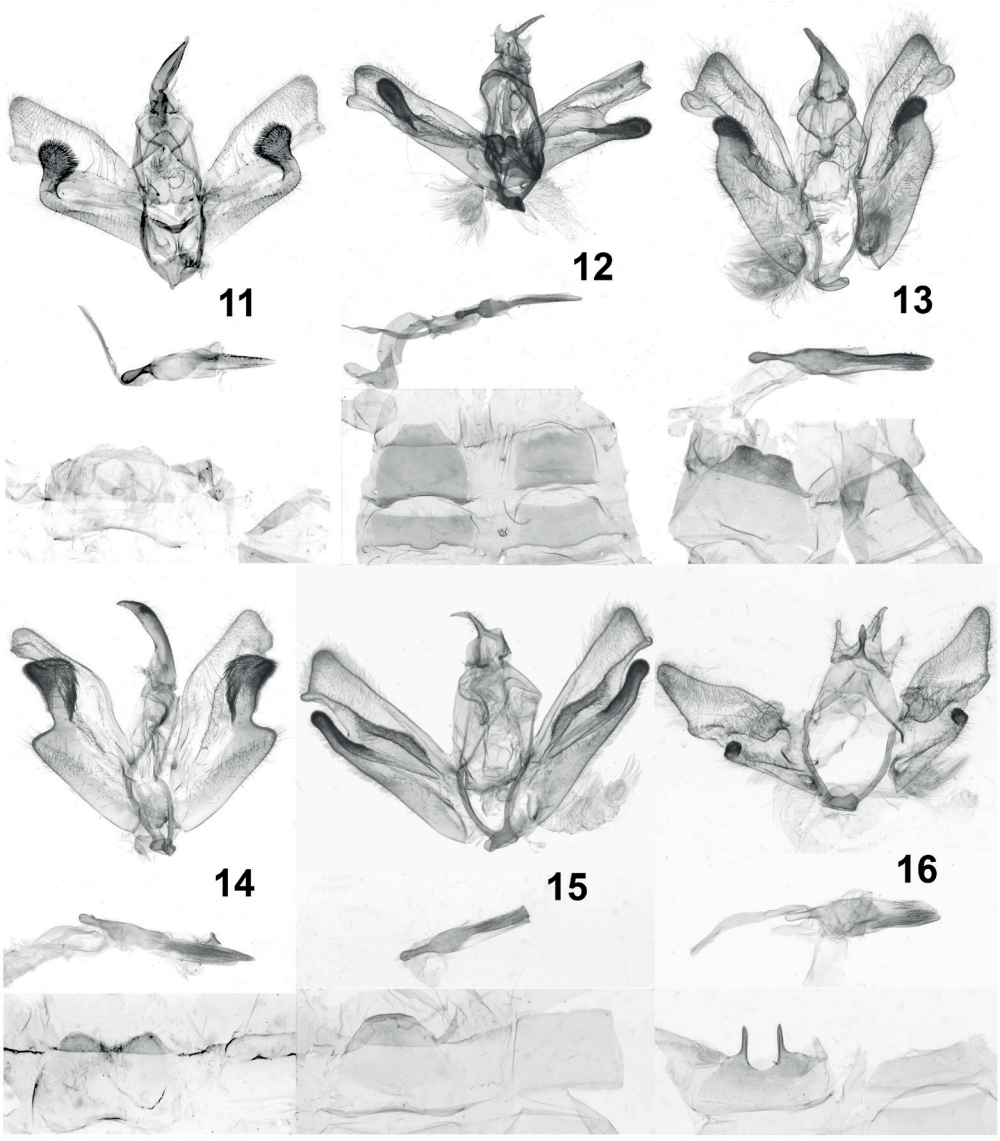
Male, **HT**, South Africa, Sasolburg, Elysium, 23.ii.1985, leg. D.M. Kroon, gen.prep. ZSM G 21413, BC_ZSM_Lep_115315



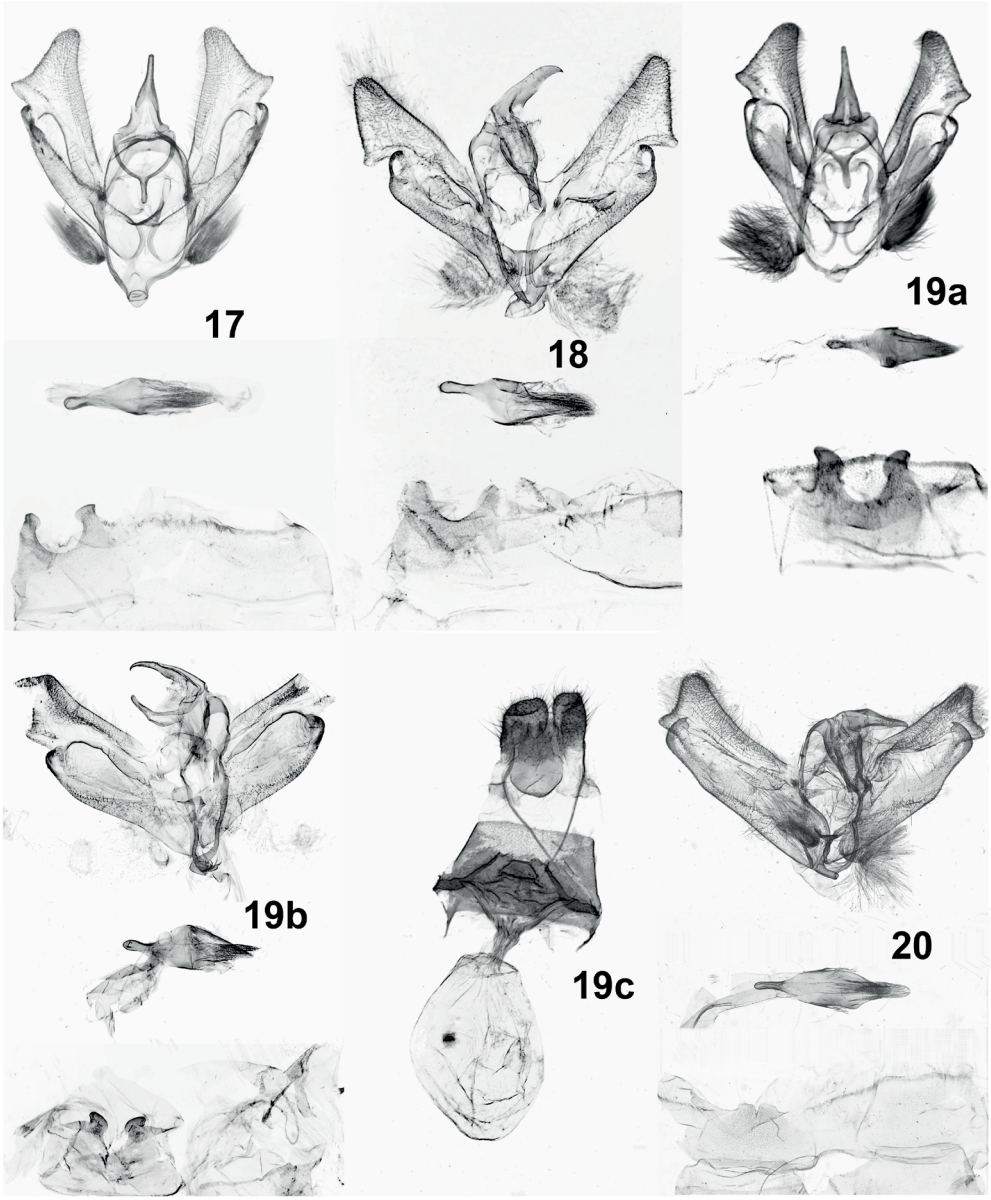

**Genitalia plate 1:** - **Fig. 1a,** ***Prasinocyma vermicularia,*** South Africa, ZSM G 21288, BC ZSM Lep 109687, - **Fig. 1b,** ***P. vermicularia,*** syntype, South Africa, NHMUK prp 2647, BMNH E 1377555, - **Fig. 2,** ***P. permitis,*** Kenya, ZSM G 21519, BC ZSM Lep 110700, - **Fig. 3,** ***P. trapezoides,*** holotype, Uganda, ZSM G 21279, BC ZSM Lep 113565, - **Fig. 4,** ***P. safiani,*** holotype, Kenya, ZSM G 21292, BC ZSM Lep 103891, - **Fig. 5,** ***P. pugilis,*** holotype, Cameroon, ZSM G 21478, BC ZSM Lep 110683



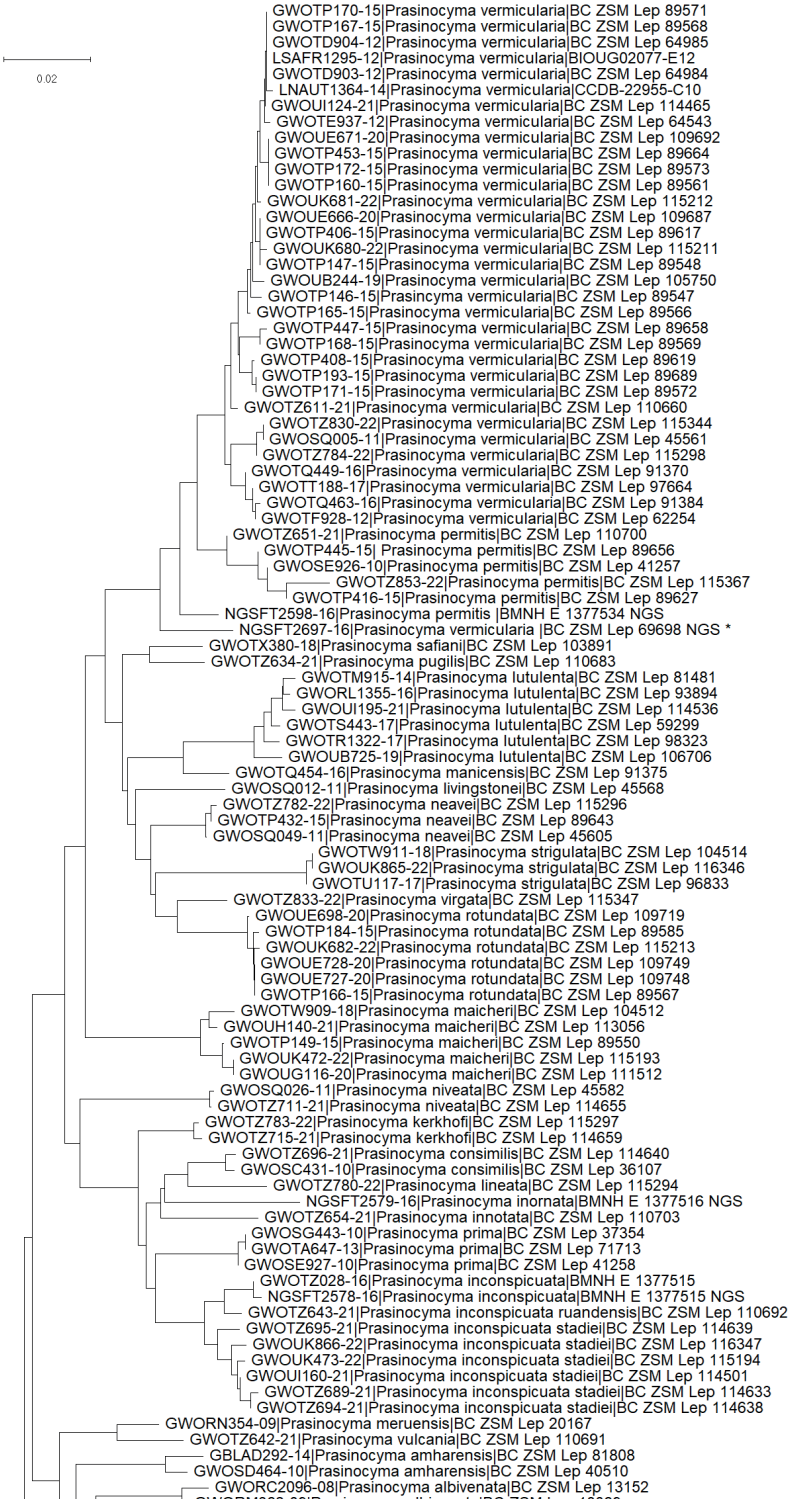

**Genitalia plate 2:** - **Fig. 6, *Prasinocyma lutulenta,*** Ethiopia, ZSM G 21291, BC ZSM Lep 98323, - **Fig. 7, *P. manicensis,*** holotype, Zimbabwe, ZSM G 21290, BC ZSM Lep 91375, - **Fig. 8, *P. duplex,*** holotype, Uganda, ZSM G 22547, BC_ZSM_Lep_119315, - **Fig. 9, *P. livingstonei,*** holotype, Tanzania, ZSM G 19921, BC ZSM Lep 45568, - **Fig. 10a, *P. neavei,*** holotype, Malawi, NHMUK prp 2642, BMNH E 1377522_NGS, - **Fig. 10b, *P. neavei,*** Tanzania, ZSM G 22075, BC_ZSM_Lep_115296



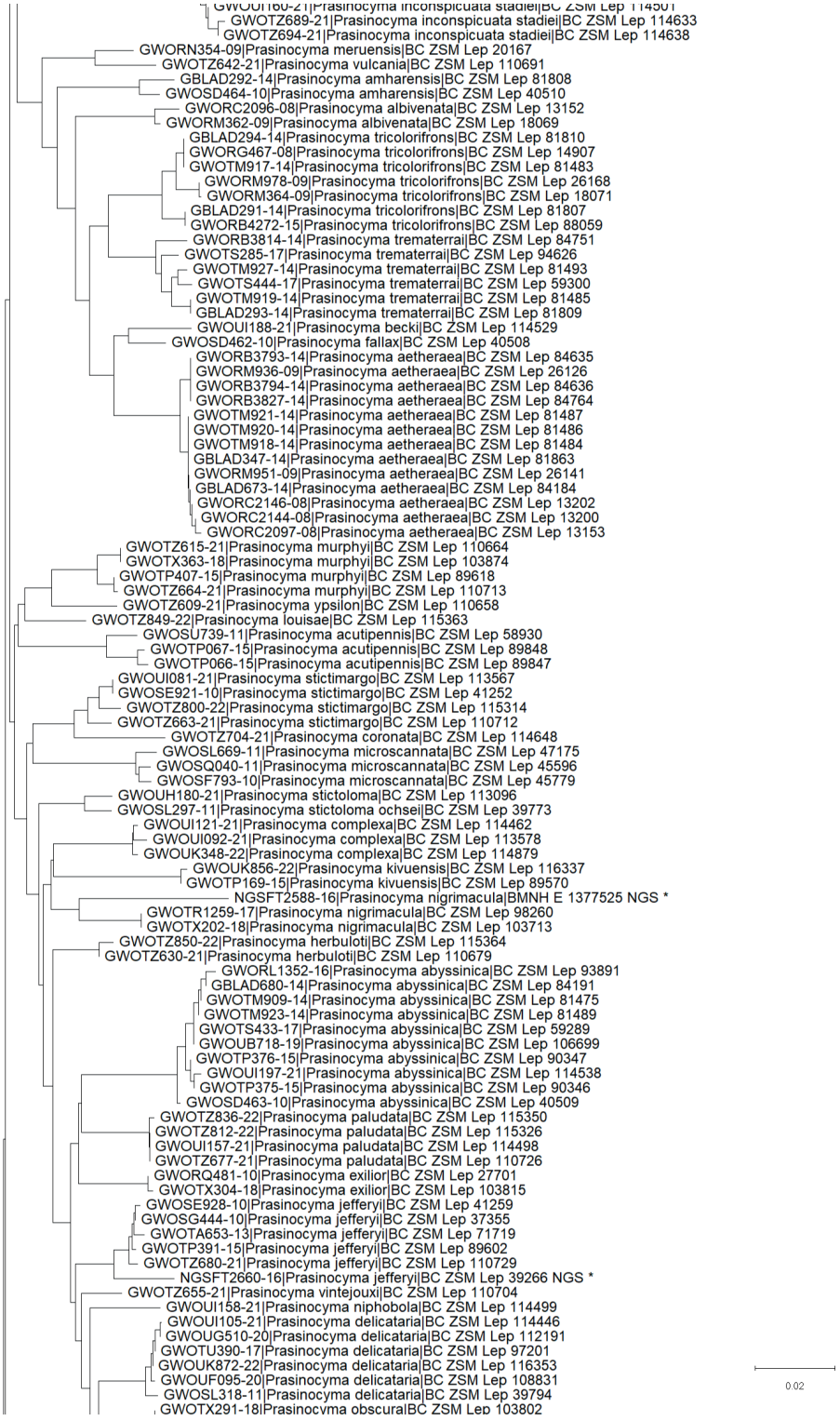

**Genitalia plate 3:** - **Fig. 11,** ***Prasinocyma strigulata,*** holotype, Cameroon, ZSM G 20693, BC ZSM Lep 96833, - **Fig. 12,** ***P. virgata,*** holotype, Tanzania, ZSM G 22397, BC_ZSM_Lep_116244, - **Fig. 13,** ***P. rotundata,*** paratype, South Africa, ZSM G 21284, BC ZSM Lep 109719, - **Fig. 14,** ***P. maicheri,*** paratype, Democratic Republic of the Congo, ZSM G 21285, BC ZSM Lep 89550, - **Fig. 15,** ***P. niveata,*** paratype, Tanzania, ZSM G 21699, BC ZSM Lep 114655, - **Fig. 16,** ***P. kerkhofi,*** holotype, Tanzania, ZSM G 21755, BC ZSM Lep 45597




**Genitalia plate 4:** - **Fig. 17,** ***Prasinocyma consimilis,*** holotype, Rwanda, ZSM G 19932, BC ZSM Lep 36107, - **Fig. 18,** ***P. lineata,*** holotype, Rwanda, ZSM G 21501, BC_ZSM_Lep_115294, - **Fig. 19a,** ***P. inornata,*** holotype, Uganda, NHMUK prp 2612, BMNH E 1377516, - **Fig. 19b,** ***P. inornata,*** Uganda, ZSM G 22559, not barcoded, - **Fig. 19c,** ***P. inornata,*** allotype, Uganda, NHMUK prp 2613, not barcoded, - **Fig. 20,** ***P. innotata,*** holotype, Rwanda, ZSM G 21523, BC ZSM Lep 110703




**Appendix 2 (Part 1, species nr. 1–29):**
Neighbor Joining tree of COI data for African and Arabian *Prasinocyma* with DNA barcodes >450 bp. Some sequences from next generation sequencing (NGS) potentially including sequencing errors, marked by an asterisk. Built with MEGA11.




**Appendix 2 (Part 2, species nr. 26–61):**
Neighbor Joining tree of COI data for African and Arabian *Prasinocyma* with DNA barcodes >450 bp.