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***Siccasura*, a new genus for the *Afrasura numida* (Holland, 1893) species-group, with descriptions of six new species (Lepidoptera: Erebiidae: Arctiinae: Lithosiini)**

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Abstract

The present paper contains the description of a new genus *Siccasura* **gen. nov.** established for the members of the *Afrasura numida* (Holland, 1893) species-group. A review of all currently known taxa is provided, including the descriptions of six new species: *S. kongo* **sp. nov.** (DRC), *S. sosta* **sp. nov.** (Ivory Coast, Liberia, Gabon, Congo and CAR), *S. hollandi* **sp. nov.** (Gabon, Congo and DRC), *S. transtillata* **sp. nov.** (Cameroon), *S. morettoii* **sp. nov.** (Ivory Coast and Liberia), and *S. spatulata* **sp. nov.** (Guinea, Ivory Coast, Liberia, Nigeria, Cameroon and Gabon). A lectotype for *Miltochrista numida* Holland, 1893 is designated. All taxa are illustrated in 34 colour and 37 black and white diagnostic figures.

Key words: taxonomy, Nudariina, Sub-Saharan Africa, Afrotropics, lectotype.

Introduction

Afrasura numida (Holland, 1893) was described from Gabon and has been considered a species widely distributed in western and central Africa (Durante 2009). However, examination of the copulatory organs of randomly selected specimens from various localities has revealed that *A. numida* comprises a complex of several cryptic species with confusingly similar external appearances but substantial differences in genitalia morphology. Further detailed studies of a large series of specimens resembling *A. numida* shed light on the existence of a further six mostly sympatric and hitherto undescribed species. As the genitalia of these species bear a number of diagnostic characters which cannot be assigned to the genus *Afrasura* Durante, 2009 or with any other genera, it is necessary to establish a new genus for *A. numida* and its congeners. The new genus *Siccasura* **gen. nov.** described in this paper currently contains seven species, six of them described

here as new to science. Based on genital morphology, the genus is subdivided into three, well-separated species-groups.

Material and methods

Abbreviations of the depositories used: ANHRT = African Natural History Research Trust, Leominster, UK; CKC = private collection of Karel Černý (Innsbruck, Austria; designated for ZSM); CMNH = Carnegie Museum of Natural History (Pittsburgh, United States); MWM/ZSM = Museum Witt in the Bavarian State Collection of Zoology (Museum Witt München / Zoologische Staatssammlung München), Munich, Germany; NHMUK (formerly BMNH) = Natural History Museum, London, UK; MFN = Museum of Natural History, Berlin (Museum für Naturkunde), Berlin, Germany; ZSM = the Bavarian State Collection of Zoology (Zoologische Staatssammlung München), Munich, Germany. Other abbreviations used: AV = genitalia slide prepared by Anton V. Volynkin; LG = genitalia slide prepared by Gyula M. László, HT = holotype; LT = lectotype; PT = paratype.

The genitalia were dissected and mounted in euparal on microscope slides. The photos of adults were taken using a Nikon D3100/AF-S camera equipped with a Nikkor, 18–55 mm lens. The photos of genitalia were taken by the same camera attached to a microscope with an LM-scope adapter. All pictures were processed using the Adobe Photoshop CC 2018 software. Matching of males and females was based on assessment of DNA barcodes. Leg tissue from specimens were submitted to the Canadian Centre for DNA Barcoding (CCDB, Guelph) for extraction, amplification and sequencing of the COI-5P gene region and the resulting sequences analysed in BOLD using Mega 6.06 (Tamura *et al.* 2013).

Systematics

Siccasura Volynkin & László, **gen. nov.**

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Type species: *Miltochrista numida* Holland, 1893 by present designation.

Diagnosis. Adults of *Siccasura* (Figs 1–24) differ clearly from most species of the genus *Afrasura* (Figs 25–30) except members of the *Afrasura submarmorata* species-group (Figs 31, 32) which have similar wing pattern and colouration. However, *Siccasura* is distinguished from the latter taxa by the more contrasting forewing pattern, the presence of clusters of long black scales on the legs and the several dark grey spots along the outer margin of the hindwing which are much paler or absent in the *A. submarmorata* species-group.

The male genitalia of *Siccasura* (Figs 33–50) display considerably diverse structures, but the genus is characterized by the combination of the following common diagnostic features: the sacculus is markedly wider than in *Afrasura* (Figs 51–54); the vesica has a basal dentate plate (absent in *Afrasura*) and lacks cornuti whereas it is armed with one robust cornutus or one or two clusters of spines in *Afrasura*. The configuration of the female genitalia of *Siccasura* (Figs 55–66) displays even more conspicuous differences compared to other genera: the 7th abdominal segment is heavily sclerotized, its tergite and sternite are fully fused laterally and the ostium bursae has sclerotized margins fused with the anterior section of the 7th sternite, which is a unique, presumably autapomorphic character within the *Asura* / *Miltochrista* generic complex. A similarly sclerotized 7th sternite is known only in the Asiatic genus *Fossia* Volynkin, Ivanova & Huang, 2019 (Figs 70, 71), but in the latter the ostium bursae is positioned on the posterior margin of the 7th sternite. Despite their somewhat similar configuration of the female genitalia, the imagoes and the male genitalia of *Fossia* (Figs 67–69) and *Siccasura* are fundamentally different. Unlike in *Siccasura*, the 7th tergite and sternite of *Afrasura* are weakly sclerotized and connected by a lateral membrane. The ostium bursae of *Afrasura* is positioned in the intersegmental area between the 8th and 7th sternites, its dorsal margin is fused with the 8th sternite while the ventral margin is connected to the 7th sternite by a thin membrane. Additionally, the corpus bursae of *Siccasura* is membranous, weakly spinulose or scobinated bearing only two weakly sclerotized rounded or ribbon-like signa bursae covered in tiny denticles while that of *Afrasura* has sclerotized plates of various shape and more extensive scobinated areas.

Remark. The species of the new genus are confusingly similar in external habitus and at the same time vary in size, forewing colouration and pattern even within the same population rendering the identification impossible based exclusively on external features. Reliable identification of the *Siccasura* species in all cases requires the examination of the genitalia.

Description. External morphology of adults (Figs 1–24). Small moths with forewing length 6–8.5 mm in males and 7–9.5 mm in females. Sexual dimorphism limited: females slightly larger than males. Antennae of both sexes sparsely ciliate. Body ochreous-yellow, thorax with two black dots. Forewing ground colour ochreous-yellow with intense pink suffusion in medial and postmedial areas, transverse lines dark grey. Subbasal dot small and rounded. Antemedial line broad consisting of two lines and strongly undulating. Medial line sinuous, thin connected with postmedial line at costal and ventral margin and with antemedial line in the cell. Postmedial line wide, curved in the costal third, inner margin irregularly zigzagged, outer margin diffuse. Subterminal area with several diffuse black dots of different sizes. Discal spot reniform. Costa and cilia yellow. Hindwing pale ochreous-yellow but may be slightly pinkish. Medial line indistinct represented by a weak grey suffusion at costa. Terminal area with several diffuse dark spots of various sizes. Cilia as ground colour. **Male genitalia** (Figs 33–50). Uncus long, thin, dorso-ventrally flattened and apically rounded. Tuba analis broad, scaphium thin. Tegumen relatively short, narrow and weakly sclerotized. Vinculum short and broad U-shaped. Juxta may be dorso-ventrally swollen or flattened, triangular or shield-like. Valva elongate with well-developed ventro-distal process and cucullus. In certain species, valvae asymmetrical expressed by different length of left and right valvae and configuration of the left and right sacculus and costa. Distal section of costal margin densely covered in spines of variable sizes or may be smooth in certain species. Cucullus well-developed, membranous, elongate and apically pointed. Ventro-distal process of valva long, narrow, heavily sclerotized and may be nearly straight or strongly curved. Sacculus wide, relatively short, terminating before the base of ventro-distal process. Aedeagus relatively short and narrow with short but laterally dilated coecum. Vesica broad with several small diverticula, a wide granulated or spinulose area, a heavily sclerotized basal plate but without distal plate. Basal plate covered in several tiny denticles. **Female genitalia** (Figs 55–62). Papillae anales trapezoidal with rounded corners and weakly setose. Apophyses long and thin. Membrane between 8th segment and papillae anales weakly granulated. 7th segment heavily sclerotized, tergite and sternite laterally fused, sternite with short antero-ventral fold. In certain species 7th segment with dorso-lateral pockets and subostial lobes or sclerotized crests ventrally. Ostium bursae with sclerotized margins fused with 7th sternite, aperture positioned posteriorly. Dorsal plate of posterior section of ductus bursae present in all species, short, reaching the posterior or middle third of ductus bursae. Postvaginal plate of various shapes in different species-groups. Antevaginal plate present only in *S. spatulata* and is horseshoe-shaped. Ductus bursae short, tubular, membranous, with spinulose scobination anteriorly or antero-laterally, continuing into the posterior section of the corpus bursae where it widens. Corpus bursae elliptical, with two rounded or ribbon-like weakly sclerotized, spinulose signa. Appendix bursae membranous, conical, apically rounded and projecting postero-laterally.

Distribution. The genus is widespread in western and central Africa.

Etymology. *Siccasura* is an aggregate of the two generic names *Siccia* and *Asura*. The name refers to the vague similarity of the spotted wing pattern and the asymmetrical male genitalia of certain *Siccasura* species to those of *Siccia*.

Species content of *Siccasura* gen. nov.

the *S. numida* species-group

– *numida* (Holland, 1893)

– *kongo* **sp. nov.**

– *sosta* **sp. nov.**

– *hollandi* **sp. nov.**

the *S. transtillata* species-group

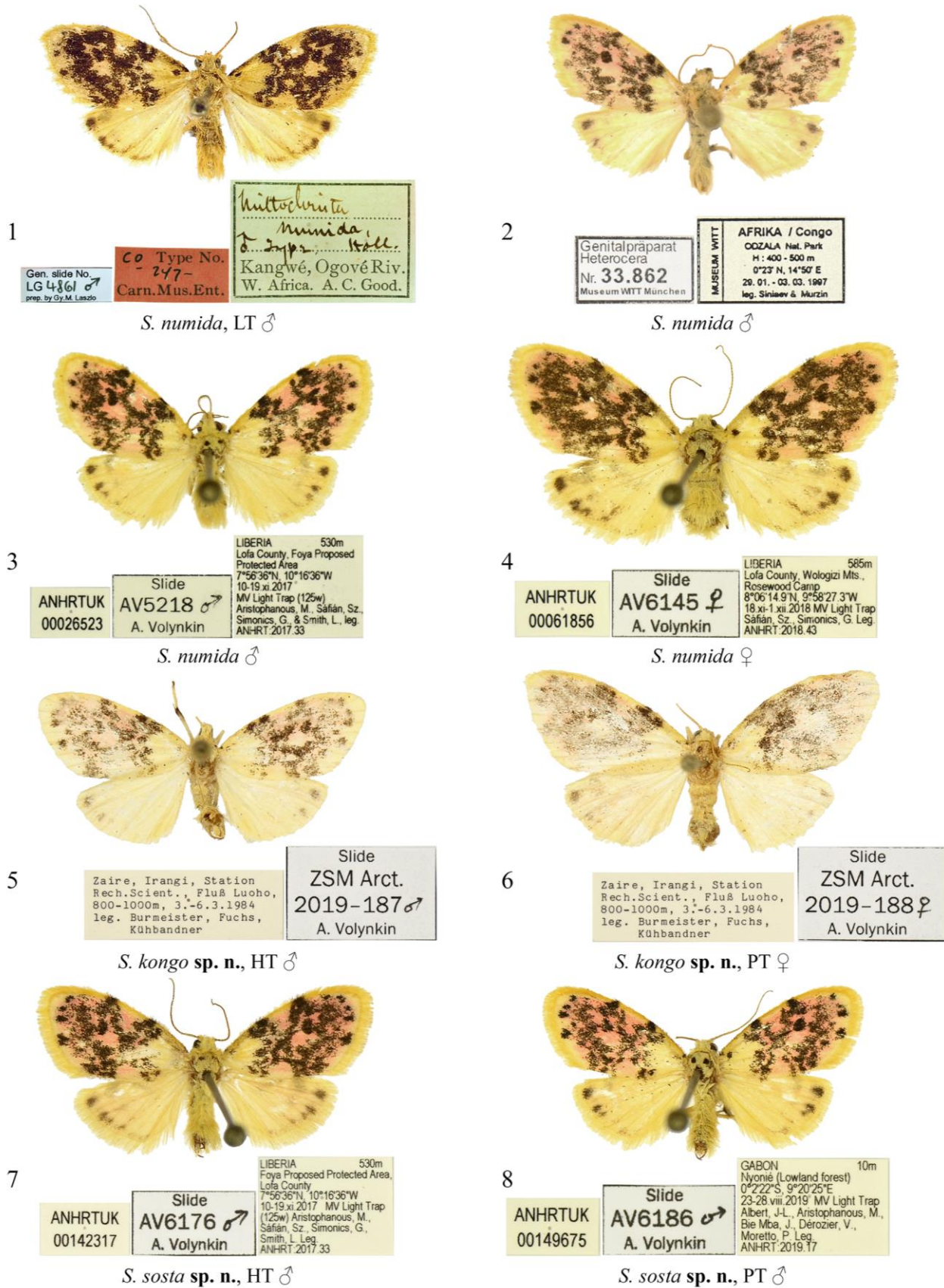
– *transtillata* **sp. nov.**

the *S. morettoii* species-group

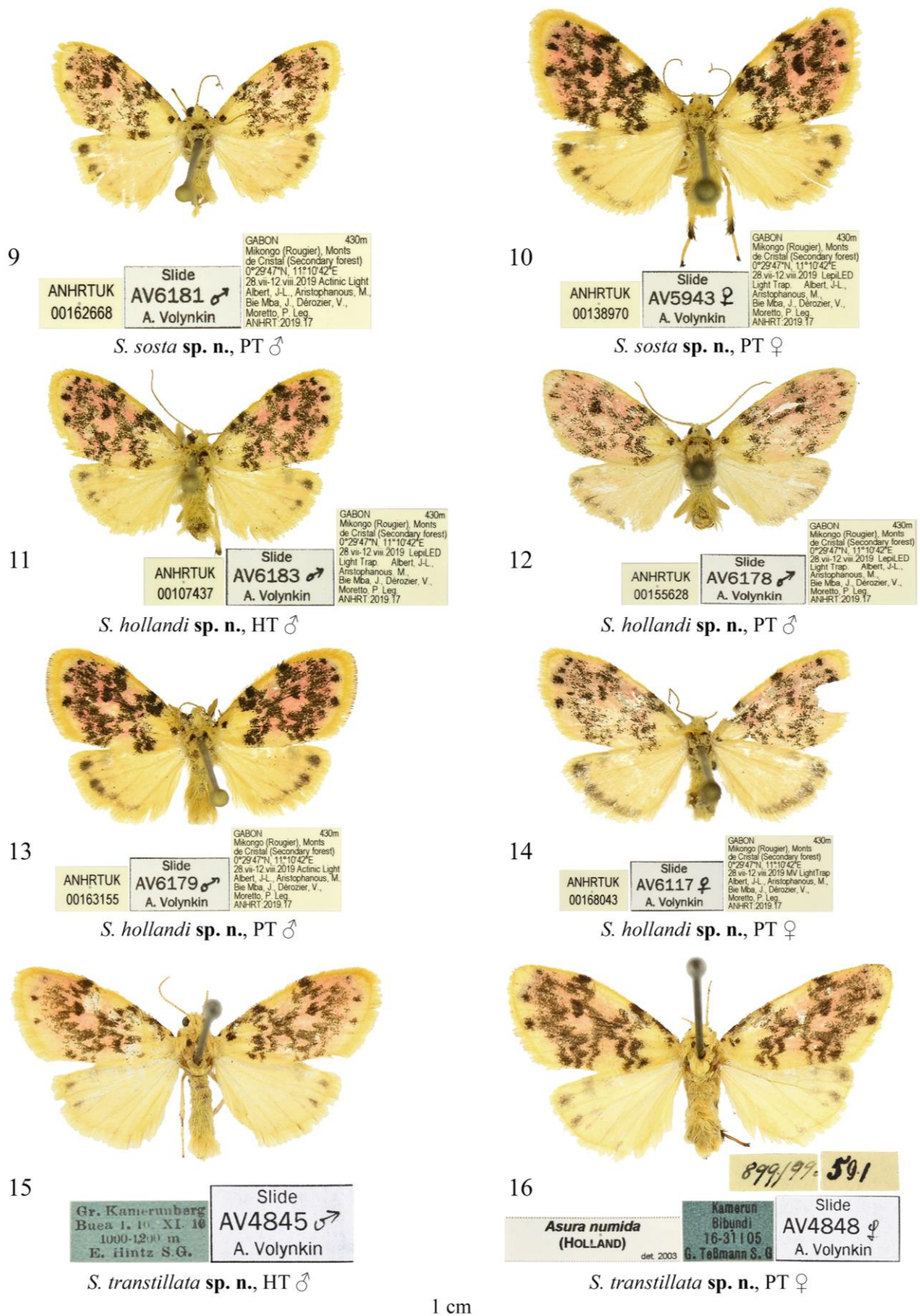
– *morettoii* **sp. nov.**

– *spatulata* **sp. nov.**

SICCASURA, A NEW GENUS FOR THE AFRASURA NUMIDA SPECIES-GROUP

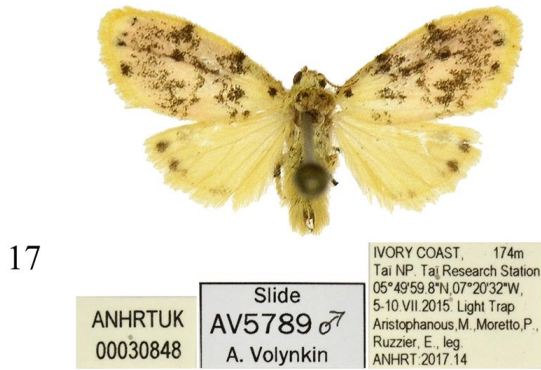


Figures 1–8. *Siccasura* spp.: adults. Depositories of the specimens: 1 in CMNH; 2 in MWM/ZSM; 3, 4, 7 and 8 in ANHRT; 5 and 6 in ZSM.

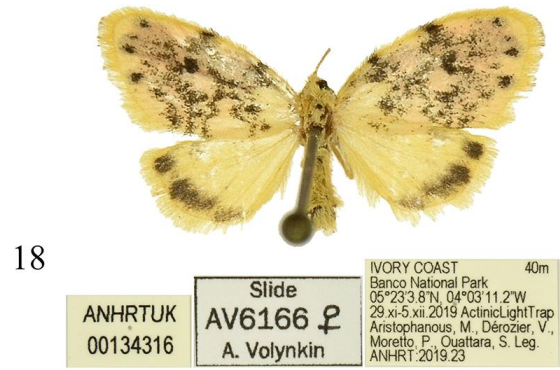


Figures 9–16. *Siccasura* spp.: adults. Depositories of the specimens: 9–14 in ANHRT; 15 and 16 in MFN.

SICCASURA, A NEW GENUS FOR THE AFRASURA NUMIDA SPECIES-GROUP



S. morettoii sp. n., HT ♂



S. morettoii sp. n., PT ♀



S. morettoii sp. n., PT ♂



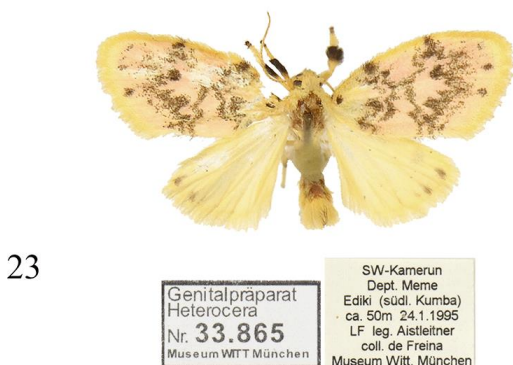
S. morettoii sp. n., PT ♀



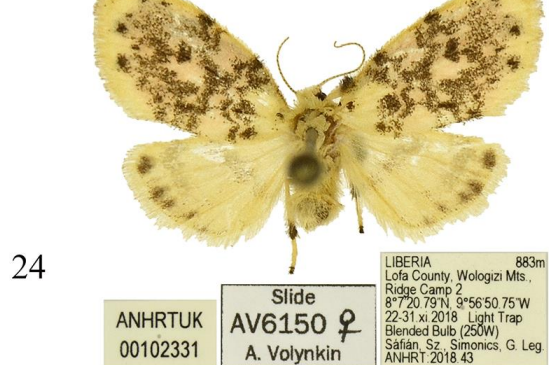
S. spatulata sp. n., HT ♂



S. spatulata sp. n., PT ♀



S. spatulata sp. n., PT ♂



S. spatulata sp. n., PT ♀

1 cm

Figures 17–24. *Siccasura* spp.: adults. Depositories of the specimens: 17–22 and 24 in ANHRT; 23 in MWM/ZSM.



25

IVORY COAST, 174m
Tai NP, Tai Research Station,
05°49'59.8"N; 07°20'32.0"W,
14-23.xi.15. Light Trap
Aristophanous, M.,
Moretto, P., Ruzzier, E., leg.

A. discocellularis discocellularis ♂



26

IVORY COAST, 174m
Tai NP, Tai Research Station,
05°49'59.8"N; 07°20'32.0"W,
14-23.xi.15. Light Trap
Aristophanous, M.,
Moretto, P., Ruzzier, E., leg.

A. discocellularis discocellularis ♀



27

MOZAMBIQUE, 22m
Maputo Special Reserve,
West Gate, (Sand Forest)
26°30'14.2"S; 32°42'59.6"E
30.V-9.VI.2017 ActinicLightTrap
Aristophanous M. László, G.
Miles, W., Velina A. leg
ANHRT 2017.26

A. ichorina ♂



28

MOZAMBIQUE, 22m
Maputo Special Reserve,
West Gate, (Sand Forest)
26°30'14.2"S; 32°42'59.6"E
30.V-9.VI.2017 IM Light Trap
Aristophanous M. László, G.
Miles, W., Velina A. leg
ANHRT 2017.26

A. ichorina ♀



29

S-AFRICA, Krüger N.P.
P. Krüger Gate, Garden
of Protea Hotel, 300 m,
22-23.III.2014 leg.
M. Hluchý & Gy.M. László

A. rivulosa ♂



30

NHMTUK 010914352
Type
Noval. 46-27
Arctiidae ♀
genitalia slide
No. 5645
2. *SICCIA RIVULOSA*.

A. rivulosa, HT ♀



31

GABON 430m
Mikongo (Rougier), Monts
de Cristal (Secondary forest)
0°29'47"N, 11°10'42"E
26.viii-12.viii.2019 Actinic Light
Albert, J.L., Aristophanous, M.,
Bie Mica, J., Derozier, V.,
Moretto, P. Leg.
ANHRT 2019.17

A. camilla ♂



32

GABON 430m
Mikongo (Rougier), Monts
de Cristal (Secondary forest)
0°29'47"N, 11°10'42"E
26.viii-12.viii.2019 Lepid.ED
Light Trap Albert, J.L.,
Aristophanous, M.,
Bie Mica, J., Derozier, V.,
Moretto, P. Leg.
ANHRT 2019.17

A. camilla ♀

1 cm

Figures 25–32. *Afrasura* spp.: adults. 25 and 26 are the type species of the genus. Depositories of the specimens: 25–29, 31 and 32 in ANHRT; 30 in NHMUK (© The Trustees of NHMUK).

The *S. numida* species-group

Diagnosis. The male genitalia of the species-group (Figs 33–45) are characterized by the combination of the following features: (1) the intertranstillar membrane is enlarged, weakly sclerotized and rugose; (2) the valva is elongate, with an almost straight costal margin; (3) the cucullus is of moderate size, its costal margin is smooth or finely spinulose; (4) the sacculus is elongate and tapering distally; (5) the ventro-distal process of the valva is moderately long, slightly tapering distally, rounded apically and curved inwards, the gap between it and the cucullus is relatively narrow; (6) the vesica bears a large and heavily sclerotized basal plate covered in tiny denticles. In the female genitalia (Figs 55–59), the 7th abdominal segment has a deep subostial incision and well-developed dorso-lateral pockets, the postvaginal plate is very small and weakly sclerotized, and the ductus bursae is straight.

Siccasura numida (Holland, 1893)

(Figs 1–4, 33–37, 55, 56)

Mitochrista numida Holland, 1893, *Psyche*, 6 (201): 400 (Type locality: [Gabon] “Valley of the Ogové River”).

Type material examined. **Lectotype** (hereby designated) (Figs 1, 33): male, “*Mitochrista numida*, ♂ type Holl., Kangwé, Ogové Riv. W. Africa. A.C. Good” / red label “co Type No. -247- Carn. Mus. Ent.”, gen. slide No.: LG 4861 (CMNH); **paralectotype**: female, “*M. numida*, ♀ type Holl., Kangwé, Ogové Riv. W. Africa. A.C. Good” / red label “co Type No. -247- Carn. Mus. Ent.” / “197”, gen. slide No.: LG 4862 (CMNH).

Additional material examined. **GABON:** 24 males, 6 females, Mikongo (Rougier), Monts de Cristal (Secondary Forest), 430m, 0°29'47"N, 11°10'42"E, 28.vii.–12.viii.2019, LepiLED, Actinic and MV Light Trap, Albert, J.-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, gen. slide Nos.: AV5941 (male), AV6119 (female); 5 males, 2 females, Nyonié (Lowland Forest), 10m, 0°2'22"S, 9°20'25"E, 23–28.viii.2019, MV Light Trap, Albert, J.-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, gen. slide Nos.: AV5942 (male), AV6118 (female) (ANHRT); 1 male, Assok, 0°20'43"N 10°10'15"E, 29–30.v.2011, leg. Viktor Sinyaev & Yury Bezverkhov, gen. slide No.: MWM 33870 (prepared by Volynkin) (MWM/ZSM). **REPUBLIC OF THE CONGO:** 2 males, Odzala Nat. Park, 400–500m, 0°23'N 14°50'E, 29.i.–03.iii.1997, leg. Sinyaev & Murzin, gen. slide Nos.: MWM 33862, MWM 33863 (prepared by Volynkin) (MWM/ZSM). **CAMEROON:** 1 male, 1 female, Johann Albrechtshöhe, L. Conradt S.G., gen. slide Nos.: AV4843 (male), AV4844 (female); 1 male, Bibundi, 16–31.x.[19]04, G. Tessmann S.G., gen. slide No.: AV4847 (MFN). **IVORY COAST:** 6 males, Tai NP, Tai Research Station, 174m, 05°49'59.8"N, 07°20'32.0"W, 14–23.XI.2015, Light Trap, Aristophanous, M., Moretto, P., Ruzzier, E. leg., ANHRT:2017.16, gen. slide Nos.: AV2925, AV3062, AV3069, AV3073, AV3075, AV3078 (males), DNA barcoded specimen id.: ANHRTUK 00073590 (ANHRT). **LIBERIA:** 3 males, 2 females, Nimba county, Nimba Mts., ENNR, Grassfield FDA Field Station, 494m, 7°29'32.45"N, 8°34'54.05"W, 22.xi.2018 Light Trap, Blended Bulb (250W), Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, gen. slide Nos.: AV6143, AV5793 (females), DNA barcode id: ANHRT022-20/ANHRTUK-00061968 ; 37 males, 8 females, Lofa County, Foya Proposed Protected Area, 530m, 7°56'36"N, 10°16'36"W, 10–19.xi.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg., ANHRT:2017.33, gen. slide Nos.: AV5221, AV5219, AV5218, AV5217, AV6137 (males), AV6142, AV6136, AV6162, AV6158, AV6157, AV5213, AV5216, AV5215 (females), DNA barcode ids: ANHRT009-20/ANHRTUK-00026307, ANHRT010-20/ANHRTUK-00026485, ANHRT011-20/ANHRTUK-00037544; 3 females, Lofa county, Wologizi Mts, Rosewood Camp, 585m, 8°06'14.9"N, 9°58'27.3"W, 18.xi.–1.xii.2018, MV Light Trap, Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, gen. slide Nos.: AV6145, AV6147, AV6148; 7 males, 3 females, Lofa County, Wologizi Mts, base camp forest, 611m, 8°07'17"N, 9°57'42"W, 20.xi.–01.xii.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg. ANHRT:2017.33, gen. slide No.: AV6153, AV6154, AV6155, (females); 1 female, Lofa County, Wologizi Mts, Ridge Camp 2, 883m, 8°07'20.79"N, 9°56'50.75"W, 22–31.xi.2018, Light Trap (blended bulb 250W), Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, gen. slide No.: AV6151 (female); 1 female, Lofa County, Wologizi Mts, Ridge Camp, 865m, 8°07'10"N, 9°57'11"W, 24–29.xi.2017, Cold Cathode Light Bucket, Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg.,

ANHRT:2017.33, gen. slide No.: AV 6149 (female); 9 males, 1 female, Krahn-Bassa Reserve, Sinoe County, Juboe River, 7.5km South West Pellokon Town, 140m, 5°39'4"N, 8°39'4"W, 14–21.I.2018, MV and Cold Cathode UV Bucket Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, gen. slide No.: AV5796 (female), DNA barcode id: ANHRT024-20/ANHRTUK-00101851 (ANHRT). **GUINEA:** 1 male, 619km ESE of Conakry, Nzerekore Region, Préfecture de Lola, Ziela env., 540–600m, 7°42'N; 8°21'W, x.2017, local collectors leg., ANHRT:2020.6, unique number: ANHRTUK 00192364 (ANHRT).

Remarks. Holland (1893) described *Miltochrista numida* based on both sexes without specifying the number of syntype specimens. As several externally undistinguishable species of *Siccasura* occur sympatrically in Gabon, the designation of a lectotype of *M. numida* is necessary in order to stabilize the nomenclature.

Diagnosis. The forewing length is 7–8 mm in males and 7–9.5 mm in females. The male genital capsule is easily recognized by the densely spinulose costal margin of the cucullus and the asymmetrical valvae. The left valva is longer and wider than the right one, having a larger ventro-distal process and an extensive cluster of short but robust spines on the sacculus which is either absent or consisting of only a few spines on the right sacculus. The male and female genitalia of *S. numida* are most similar to those of *S. kongo*, the distinctive characters are discussed under the diagnosis of the latter species.

Distribution. The species is known from Ghana (Durante 2009, fig. 54), Cameroon (Strand 1912a, partim), Gabon (Holland 1893) and reported here for the first time from the Republic of the Congo, Ivory Coast, Liberia and Guinea. Due to the lack of any external distinctive characters of the *Siccasura* species, all previous records of ‘*numida*’ (Aurivillius 1904; Hampson 1900; Strand 1912a (partim), 1912b (partim); Durante 2009 (partim), 2012) require verification.

***Siccasura kongo* Volynkin & László, sp. nov.**

(Figs 5, 6, 38, 39, 57)

Type material. Holotype (Figs 5, 38): male, [Democratic Republic of the Congo, North Kivu Province] “Zaire, Irangi, Station Rech. Scient., Fluss Luoho, 800–1000m, 3.–6.iii.1984, leg. Burmeister, Fuchs, Kühbandner”, gen. slide No.: ZSM Arct. 2019-187 (prepared by Volynkin) (ZSM).

Paratypes (1 male and 1 female). **DEMOCRATIC REPUBLIC OF THE CONGO:** 1 female, with the same data as in the holotype, gen. slide No.: ZSM Arct. 2019-188 (prepared by Volynkin) (ZSM); 1 male, [Tshopo Province] 35 km SSE Kisangani, village Yoko, 413m, 12–15.ii.2008, leg. Gurkovich & Zolotuhin, gen. slide No.: MWM 33867 (prepared by Volynkin) (MWM/ZSM).

Diagnosis. The forewing length is 7.5–8 mm in males and 8.5 mm in the female. The male genital capsule of *S. kongo* is similar to that of *S. numida* but the cucullus is less dentate, the ventro-distal processes of the valvae are longer and thicker and the left sacculus bears a much smaller cluster of short spines. The basal plate of the vesica of *S. kongo* bears smaller denticles and the subbasal diverticulum of the vesica is markedly wider compared to those of *S. numida*. The female genitalia of *S. kongo* are very similar to those of *S. numida* but are distinguished by the anteriorly wider dorsal plate of the posterior section of the ductus bursae, the fully spinulose anterior section of the ductus bursae (it is covered in spinules only laterally in *S. numida*) and the smaller signa bursae.

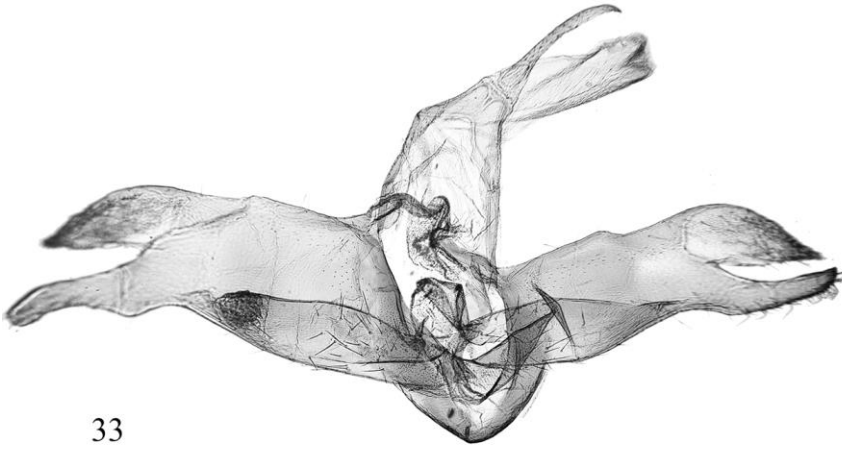
Distribution. The new species is currently known from two localities in North Kivu and Tshopo Provinces of the Democratic Republic of the Congo. The record of ‘*Asura numida*’ from North Kivu by Kiriakoff (1963) probably refers to *S. kongo*.

Etymology. The species is named after the Kongo people, one of the major ethnic groups of the Congo Basin.

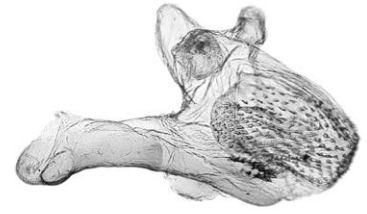
***Siccasura sosta* Volynkin & László, sp. nov.**

(Figs 7–10, 40–43, 58)

Type material. Holotype (Figs 7, 40): male, “Liberia, 530m, Foya Proposed Protected Area, Lofa County, 7°56'36"N, 10°16'36"W, 10–19.xi.2017 MV Light Trap (125w), Aristophanous, M., Sáfián, Sz., Simonics, G., Smith, L. Leg. ANHRT:2017.33”, unique number: ANHRTUK 00142317, gen. slide No.: AV6176 (ANHRT).

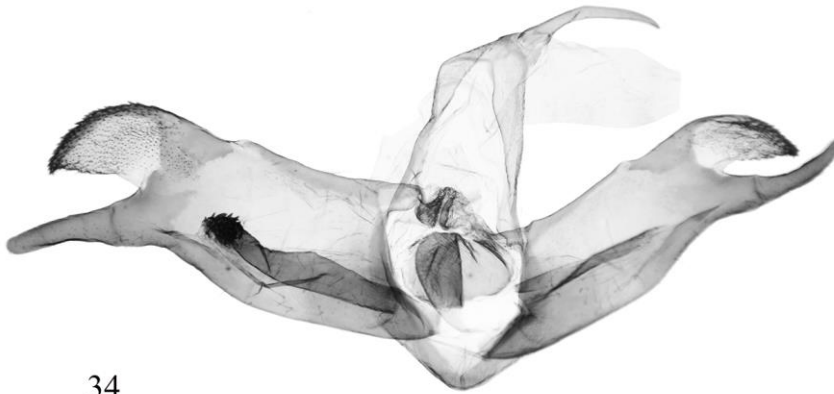


33

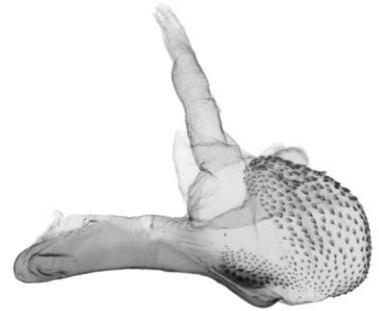


S. numida, LT

Gabon, Ogooué River, Kangwé, slide LG 4861

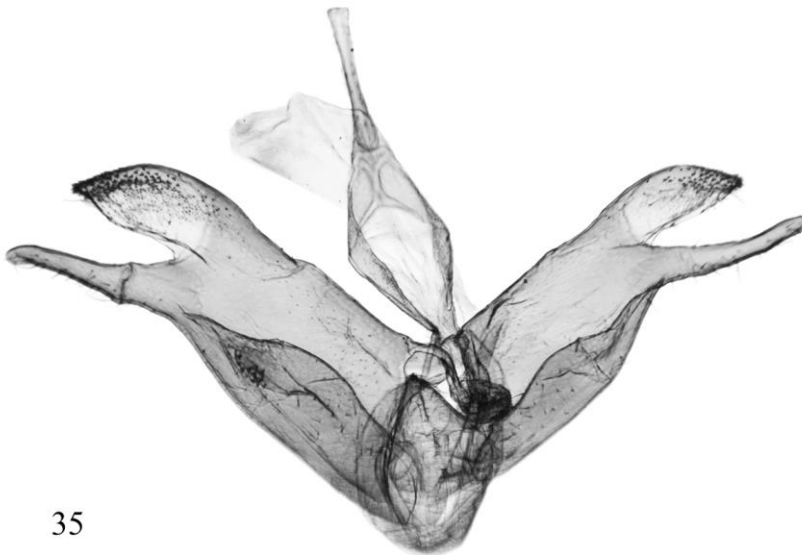


34

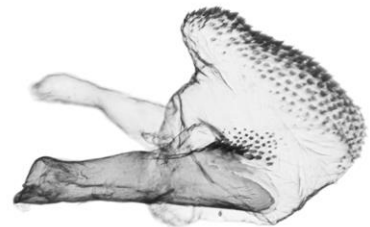


S. numida

Gabon, Nyonié, slide AV5942



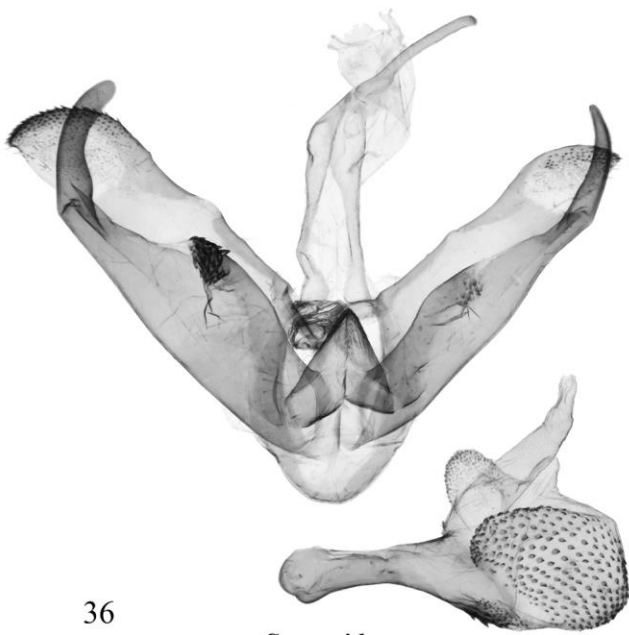
35



S. numida

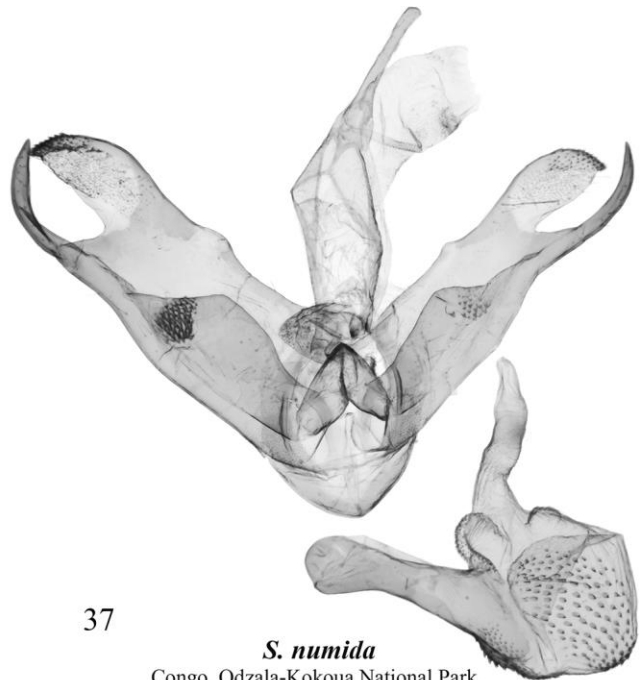
Ivory Coast, Tai National Park, slide AV2925

Figures 33–35. *Siccasura numida*: male genitalia. Depositories of the specimens: 33 in CMNH; 34 and 35 in ANHRT.



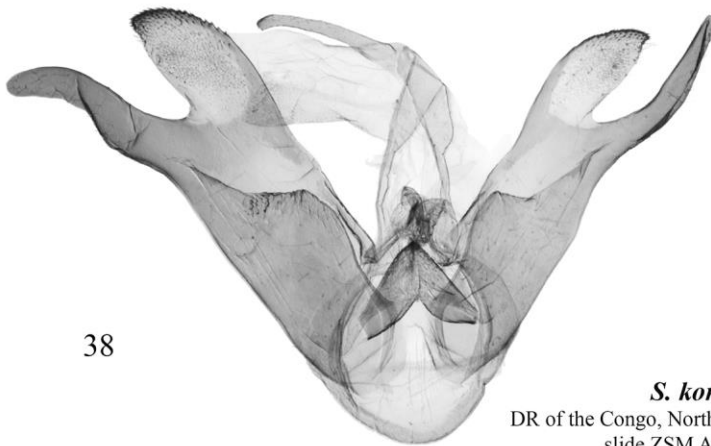
36

S. numida
Liberia, Lofa County, Foya,
slide AV6137



37

S. numida
Congo, Odzala-Kokoua National Park,
slide MWM 33862



38

S. kongo sp. n., HT
DR of the Congo, North Kivu Prov., Luoho River, Irangi,
slide ZSM Arct. 2019-187 Volynkin



39

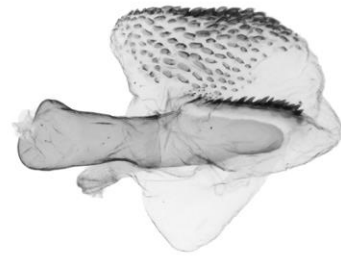
S. kongo sp. n., PT
DR of the Congo, Tshopo Prov., 35 m SSE Kisangani,
slide MWM 33867 Volynkin

Figures 36–39. *Siccasura* spp.: male genitalia. Depositories of the specimens: 36 in ANHRT; 37 and 39 in MWM/ZSM; 38 in ZSM.



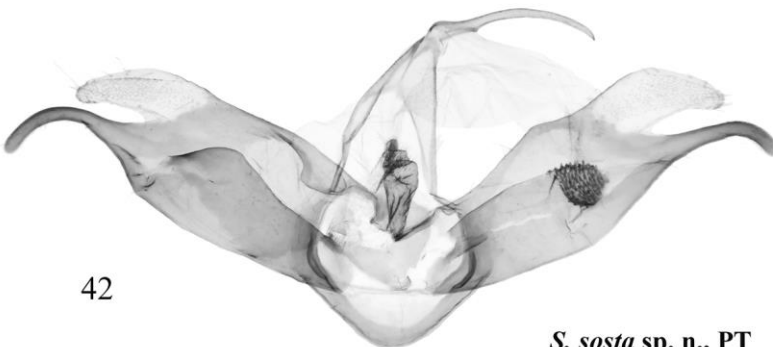
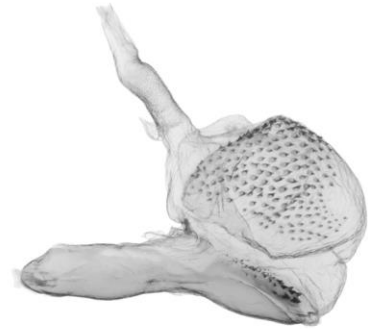
40

S. sosta sp. n., HT
Liberia, Lofa County, Foya, slide AV6176



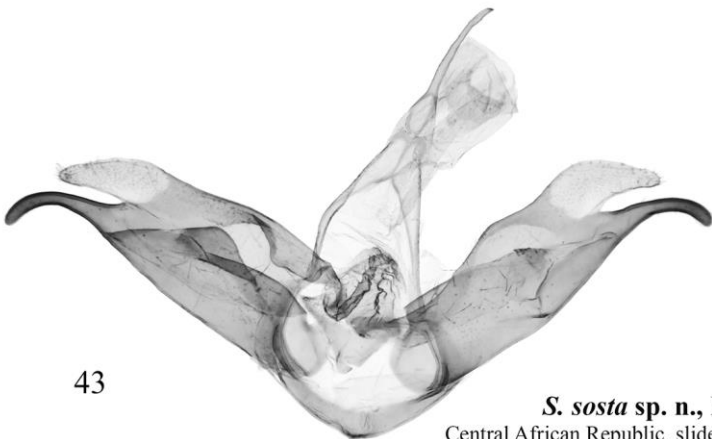
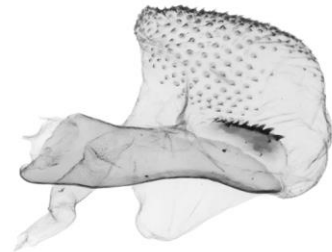
41

S. sosta sp. n., PT
Liberia, Lofa County, Wologizi Mts, slide AV5952



42

S. sosta sp. n., PT
Gabon, Crystal Mts, Mikongo, slide AV6181



43

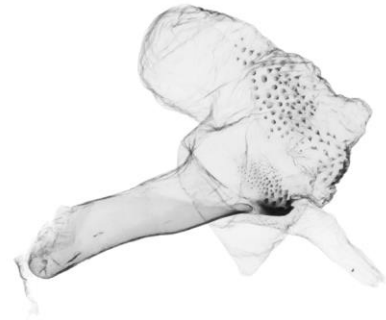
S. sosta sp. n., PT
Central African Republic, slide MWM 33871



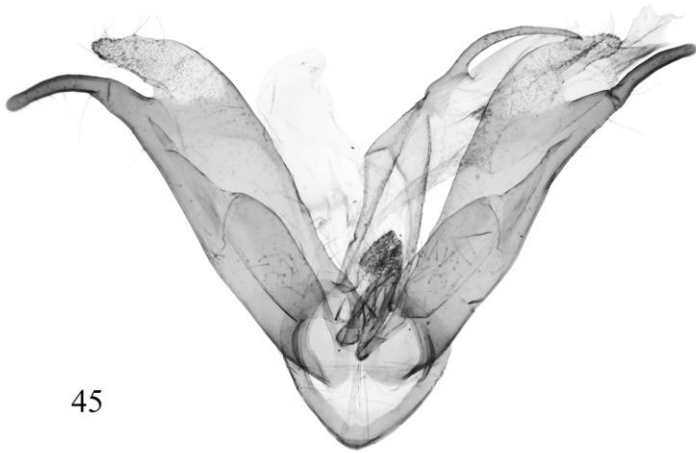
Figures 40–43. *Siccasura sosta*: male genitalia. Depositories of the specimens: 40–42 in ANHRT; 43 in MWM/ZSM.



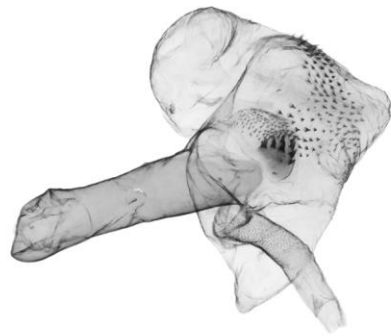
44



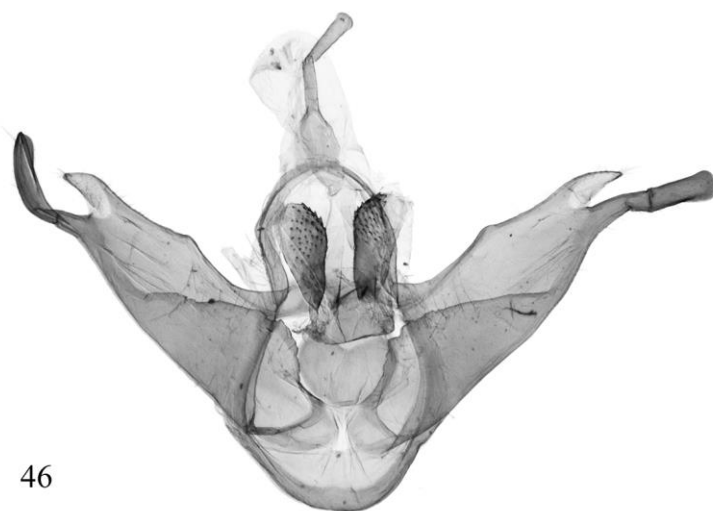
***S. hollandi* sp. n., HT**
Gabon, Crystal Mts, Mikongo, slide AV6183



45



***S. hollandi* sp. n., PT**
Congo, Odzala-Kokoua National Park, slide MWM 33866

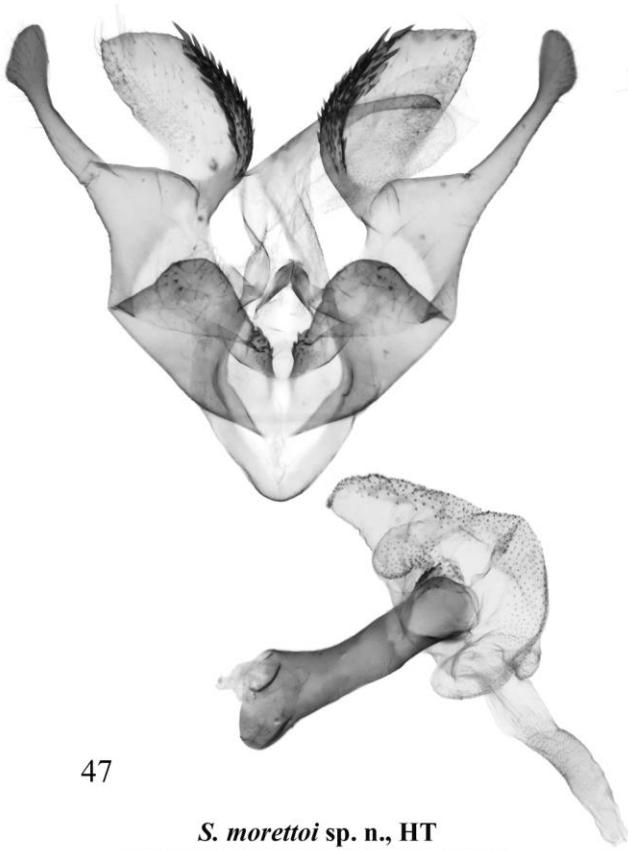


46



***S. transtillata* sp. n., HT**
Cameroon, Cameroon Mt., slide AV4845

Figures 44–46. *Siccasura* spp.: male genitalia. Depositories of the specimens: 44 in ANHRT; 45 in MWM/ZSM; 46 in MFN.



47

S. morettoii sp. n., HT
Ivory Coast, Tai National Park, slide AV5789



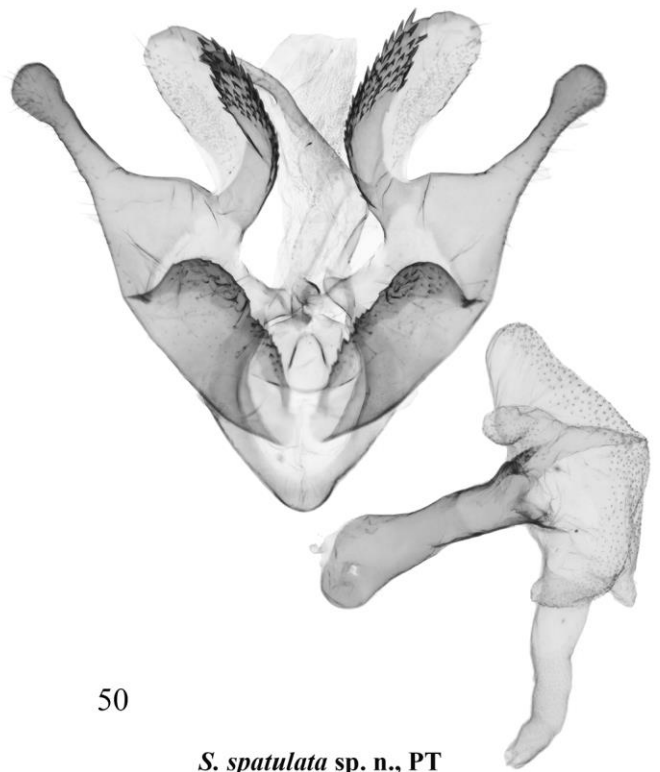
48

S. morettoii sp. n., PT
Liberia, Lofa County, Foya, slide AV5220



49

S. spatulata sp. n., HT
Gabon, Nyonié, slide AV6189



50

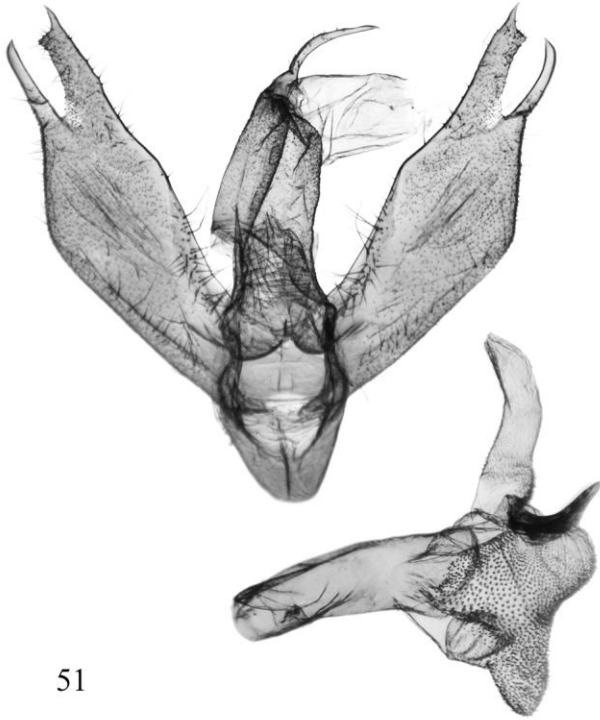
S. spatulata sp. n., PT
Gabon, Crystal Mts, Mikongo, slide AV5931

Figures 47–50. *Siccasura* spp.: male genitalia. The specimens are deposited in ANHRT.

Paratypes (46 males, 7 females in total). **LIBERIA**: 15 males, 1 female, with the same data as in the holotype, unique numbers: ANHRTUK 00020531, 00020542, 00026275, 00026278, 00026284, 00026286, 00026310, 00026472, 00026491, 00026495, 00037408, 00037538, 00037620, 00142316, 00148261, 00148412, gen. slide Nos.: AV5940, AV5951, AV5953 (males), AV6156 (female); 2 females, Lofa county, Wologizi Mts, Rosewood Camp, 585m, 8°06'14.9"N, 9°58'27.3"W, 18.xi.–1.xii.2018, MV Light Trap, Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, unique numbers: ANHRTUK 00061854, 00062204, gen. slide Nos.: AV6144, AV6146 (females); 1 male, Lofa County, Wologizi Mts, base camp forest, 611m, 8°07'17"N, 9°57'42"W, 20.xi.–01.xii.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg., ANHRT:2017.33, unique number: ANHRTUK 00148411, gen. slide No.: AV5952; 5 males, Krahn-Bassa Reserve, Sinoe County, Juboe River, 7.5km SW Pellokon Town, 140m, 5°39'4"N, 8°39'4"W, 14–20.I.2018, MV Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00100809, 00100829, 00100830, 00100840, 00101862, gen. slide Nos.: AV5954, AV6177; 2 males, same data but collected by blended bulb (250W) light trap, unique numbers: ANHRTUK 00095306, 00095311 (ANHRT). **IVORY COAST**: 4 males, Tai NP, Tai Research Station, 174m, 05°49'59.8"N, 07°20'32.0"W, 14–23.XI.2015, Light Trap, Aristophanous, M., Moretto, P., Ruzzier, E. leg., ANHRT:2017.16, unique numbers: ANHRTUK 00073591, 00073592 (DNA barcode id: ANHRT013-20/ANHRTUK-00073592), 00073593 (DNA barcode id: ANHRT014-20/ANHRTUK-00073593), 00073594 (DNA barcode id: ANHRT015-20/ANHRTUK-00073594), gen. slide Nos.: AV3061, AV3063, AV3072, AV3074 (males) (ANHRT). **CENTRAL AFRICAN REPUBLIC**: 1 male, Bangui, N4°20' E18°32', 20.ix.2000, leg. local collector, ex coll. Th. Greifenstein, gen. slide No.: MWM 33871 (prepared by Volynkin) (MWM/ZSM). **REPUBLIC OF THE CONGO**: 1 female, Odzala Nat. Park, 400–500m, 0°23'N 14°50'E, 29.i.–03.iii.1997, leg. Sinyaev & Murzin, gen. slide No.: MWM 33864 (prepared by Volynkin) (MWM/ZSM). **GABON**: 4 males, Nyonié (Lowland Forest), 10m, 0°2'22"S, 9°20'25"E, 23–28.viii.2019, MV Light Trap, Albert, J.-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, unique numbers: ANHRTUK 00149674, 00149675, 00149686, 00152663, gen. slide Nos.: AV6184, AV6186, AV6187 (males); 2 males, same data but collected by actinic light trap, unique numbers: ANHRTUK 00111396, 00162877, gen. slide No.: AV5939; 1 male, same data, but collected by LepiLED light trap, unique number: ANHRTUK 00155670, gen. slide No.: AV6185; 6 males, 1 female, Mikongo (Rougier), Monts de Cristal (Secondary Forest), 430m, 0°29'47"N, 11°10'42"E, 28.vii.–12.viii.2019, MV Light Trap, Albert, J.-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, unique numbers: ANHRTUK 00167793, 00167811, 00167814, 00168049, 00168085, 00192541, 00192571, gen. slide No.: AV6116 (female); 3 males, same data but collected by actinic light trap, unique numbers: ANHRTUK 00160509, 00162692, 00162668, gen. slide No.: AV6181 (male); 1 male, 1 female, same data but collected by LepiLED light trap, unique numbers: ANHRTUK 00138970, 00156182, gen. slide No.: AV5943 (female); 1 male, same data but collected by house light, unique number: ANHRTUK 00149367; 1 female, Ogooue Ivindo P.N., Ivindo Station de Recherche d'Ipassa, 450m, 0°30'43"N, 12°48'12"E, 14–26.vi.2016, Light Trap, Ruzzier, E., Tasane, T. leg., ANHRT:2017.19, unique number: ANHRTUK 00050692 (ANHRT).

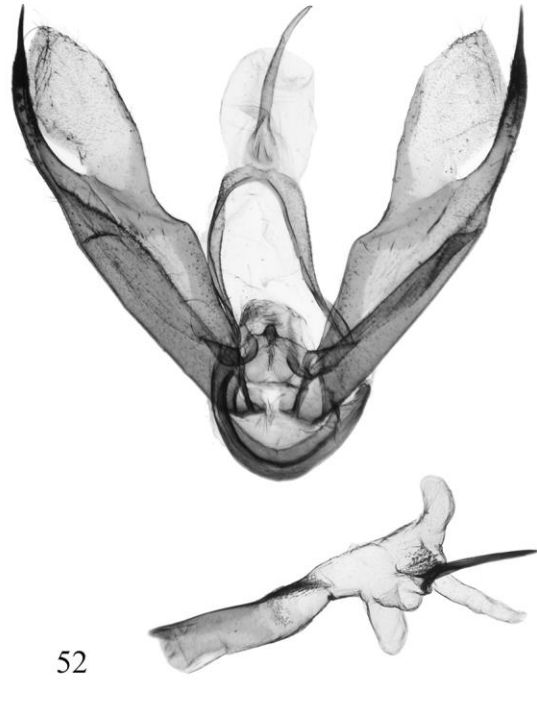
Diagnosis. The forewing length is 7–8 mm in males and 8–9 mm in females. The male genital capsule of *S. sosta* is reminiscent to that of *S. numida* but can easily be distinguished by the wider valva, the somewhat wider sacculus and the cluster of short spines which are situated on the right sacculus (it is positioned on the left sacculus in *S. numida*). The valva costa is distally pointed, reaching only the base of the cucullus without marginal dentation, while in *S. numida* it stretches to the tip of the cucullus and finely spinulose. The costa of the left valva bears a conspicuous, rounded subbasal lobe in *S. sosta*, a character which is absent in *S. numida*. Additionally, the V-shaped juxta of the new species is flattened dorso-ventrally whereas it is dorso-ventrally swollen and triangular with a wide but short basal depression in *S. numida*. Compared to *S. numida*, the vesica of *S. sosta* has a longer basal plate, a broader main chamber and a much wider and longer membranous distal diverticulum which is granulated in its congener. The female genitalia of *S. sosta* are distinguished from those of *S. numida* by the absence of the large and swollen subostial ventral lobes, the markedly shorter and narrower lateral pockets of the 7th abdominal segment and the considerably shorter ventral fold of the 7th sternite. In the new species, the dorsal sclerotized plate of the distal section of the ductus bursae is shorter and wider and the signa bursae are smaller.

Distribution. *Siccasura sosta* is widespread in western and central Africa and currently known from Ivory Coast, Liberia, Gabon, Republic of the Congo and Central African Republic.



51

Afrasura discocellularis discocellularis
Ivory Coast, Tai National Park,
slide AV2949



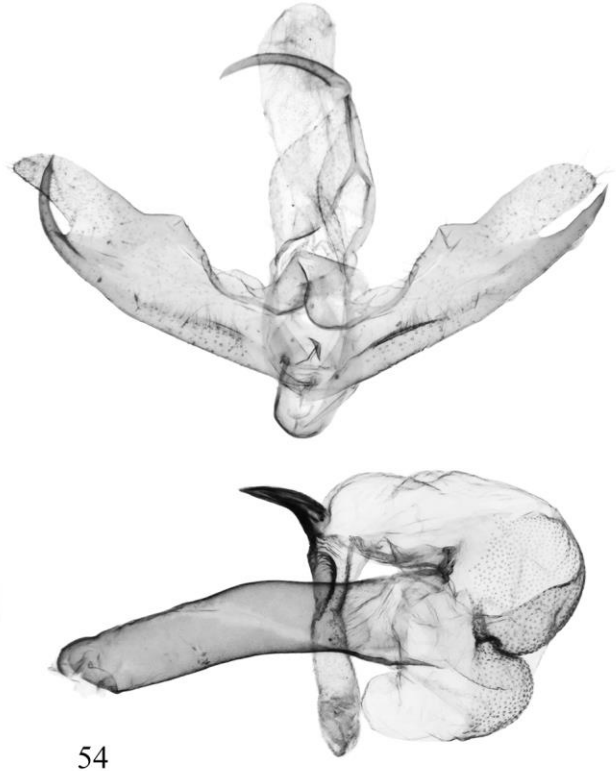
52

Afrasura ichorina
Mozambique, Manica Province, Chimanimani Mts,
slide AV4935



53

Afrasura rivulosa rivulosa
South Africa, KwaZulu-Natal Province,
slide NHMUK010315712 Volynkin



54

Afrasura camilla
Gabon, Crystal Mts, Mikongo,
slide AV6072

Figures 51–54. *Afrasura* spp.: male genitalia. 51 is the type species of the genus. Depositories of the specimens: 51, 52 and 54 in ANHRT; 53 in NHMUK (© The Trustees of NHMUK).



55

S. numida

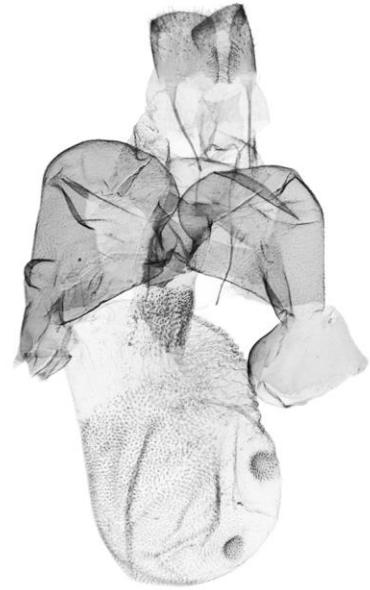
Liberia, Lofa County, Wologizi Mts,
slide AV6151



56

S. numida

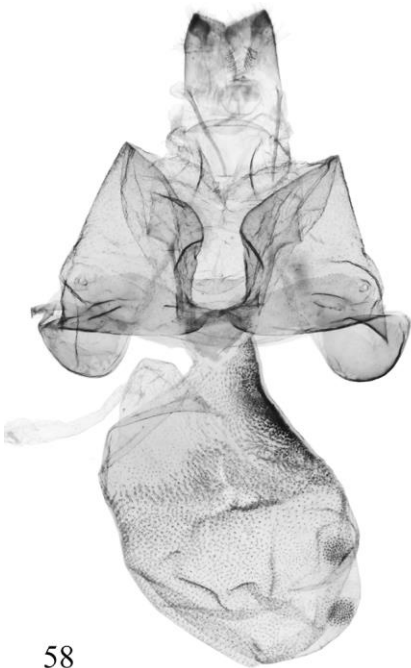
Gabon, Crystal Mts, Mikongo,
slide AV6119



57

S. kongo sp. n., PT

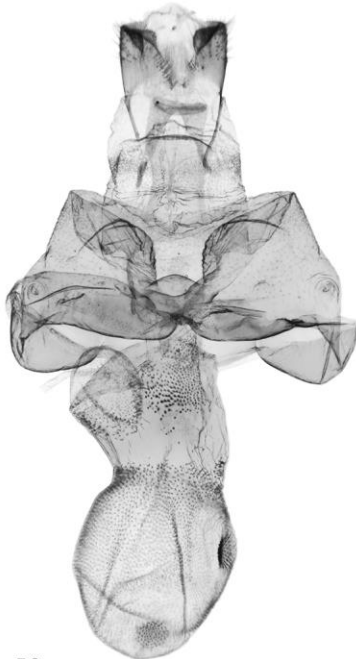
DR of the Congo, North Kivu Prov.,
slide ZSM Arct. 2019-188 Volynkin



58

S. sosta sp. n., PT

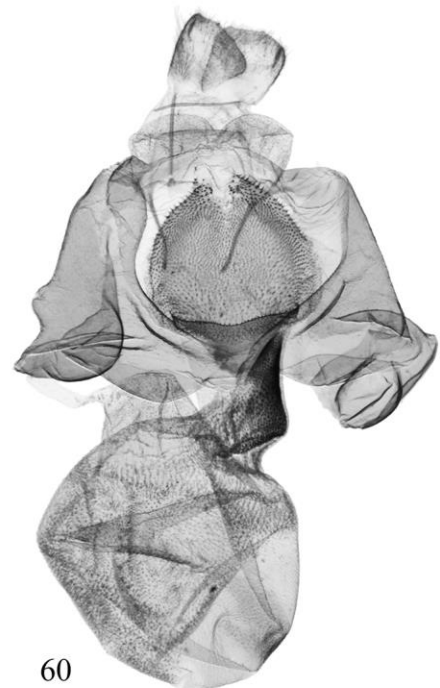
Gabon, Crystal Mts, Mikongo,
slide AV6116



59

S. hollandi sp. n., PT

Gabon, Crystal Mts, Mikongo,
slide AV5946



60

S. transtillata sp. n., PT

Cameroon, Cameroon Mt.,
slide AV4846

Figures 55–60. *Siccasura* spp.: female genitalia. Depositories of the specimens: 55, 56, 58 and 59 in ANHRT; 57 in ZSM; 60 in MFN.

Etymology. ‘Sosta’ is the Latin transliteration of the Greek word ‘σωστά’ meaning ‘right’. The specific epithet refers to the presence of a diagnostic cluster of spines on the right sacculus.

Siccasura hollandi Volynkin & László, **sp. nov.**
(Figs 11–14, 44, 45, 59)

Type material. Holotype (Figs 11, 44): male, “Gabon, 430m, Mikongo (Rougier), Monts de Cristal (Secondary Forest), 0°29'47"N, 11°10'42"E, 28.vii.–12.viii.2019, LepiLED Light Trap, Albert, J-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. Leg., ANHRT:2019.17”, unique number: ANHRTUK 00107437, gen. slide No.: AV6183 (ANHRT).

Paratypes (54 males, 3 females in total). **GABON**: 17 males, 1 female, with the same data as in the holotype, unique numbers: ANHRTUK 00111221, 00137796, 00137808, 00138966, 00138967, 00138969, 00155624, 00155625, 00155628, 00156184–00156186, 00156188–00156191, 00156192, 00156197, gen. slide Nos.: AV6178, AV6180 (males), AV5946 (female); 26 males, same data but collected by actinic light trap, unique numbers: ANHRTUK 00110926, 00110927, 00110958, 00138773, 00138781, 00138782, 00138784–00138786, 00138788–00138790, 00139165, 00142024, 00152730, 00152731–00152733, 00158171, 00158173, 00158174, 00162693, 00162715, 00162717, 00162719, 00163155, gen. slide Nos.: AV6172, AV6173, AV6179, AV5938, AV5937; 10 males, 1 female, same data but collected by MV light trap, unique numbers: ANHRTUK 00110994, 00165233, 00165234, 00165236, 00165273, 00165502, 00165513, 00165613, 00167802, 00167815, 00168043, 00192293, 00192557, 00192730, gen. slide Nos.: AV6174, AV6175 (males), AV6117 (female) (ANHRT). **REPUBLIC OF THE CONGO**: 1 male, D'Ozala National Park, 400–500m, 0°23'N 14°50'E, 29.i.–03.iii.1997, leg. Sinyaev & Murzin, ex coll. A. Schintlmeister, gen. slide No.: MWM 33866 (prepared by Volynkin) (MWM/ZSM). **DEMOCRATIC REPUBLIC OF THE CONGO**: 1 female, [Tshopo Province] 17km S Kisangani, Masako Field Stat., 00°36'N 25°15'E, 388m, 2–8.ii.2008, leg. Gurkovich & Zolotihin, gen. slide No.: MWM 33868 (prepared by Volynkin) (MWM/ZSM).

Diagnosis. The forewing length is 7–8 mm in males and 7–8.5 mm in females. The genital capsule of *S. hollandi* is most similar to that of *S. sosta* based on the pointed distal section of the valva costa reaching only the base of the cucullus and lacking a dentation. The new species can easily be distinguished from *S. sosta* as well as from the other species of the *S. numida* species-group by its symmetrical valvae with the right sacculus lacking a cluster of spines. The ventro-distal process of the valva of the new species is longer than in *S. sosta*, the juxta is considerably shorter and the intertranstillar membrane is markedly longer and wider. In comparison with *S. sosta*, the vesica of *S. hollandi* is distinguished by the more rounded basal plate, the narrower main chamber covered in thinner spinules, the presence of a large lateral diverticulum and the tapering distal diverticulum which is apically wider and more rounded in *S. sosta*. The female genitalia of the two species are distinguished by the shorter 7th abdominal segment with shorter lateral pockets, as well as the considerably shallower subostial incision of the 7th sternite in *S. hollandi*. The corpus bursae of the new species is considerably narrower and medially constricted with a wide postmedial area lacking scobination, whereas that of *S. sosta* is sack-like and evenly covered in spinules except for the area at the base of the appendix bursae. Additionally, the appendix bursae of *S. hollandi* is globular and positioned ventro-laterally while it is conical and situated laterally in *S. sosta*.

Distribution. The new species is currently known from Gabon, the Republic of the Congo and the Democratic Republic of the Congo (Tshopo Province).

Etymology. The species is named after Dr William Jacob Holland (1848–1932) an outstanding American lepidopterist and paleontologist, a former director of the Carnegie Museums of Pittsburgh and author of countless Lepidoptera taxa including the type species of the genus *Siccasura*.

The *S. transtillata* species-group

Diagnosis. The male genitalia of the species-group (Fig. 46) are similar to those of the *S. numida* species-group but differ by the configuration of the transtillae which are fused into a rectangular medio-ventral plate bearing two elongate lobe-like processes projecting posteriorly which are densely covered in tiny denticles distally. The cucullus of the species-group is considerably smaller and the sacculus is shorter, basally wider and more tapering distally than in the *S. numida* species-group. Additionally, the ventro-distal process of the valva is somewhat dilated apically, while it is slightly tapering in the *S. numida* species-group. The female genitalia of the *S. transtillata* species-group (Fig. 60) are characterized by the very broad subostial depression of the 8th abdominal segment (which is much narrower in the *S. numida* species-group), the large

heavily sclerotized and densely spinulose postvaginal plate (which is very small and weakly sclerotized in the *S. numida* species-group), and the medially curved ductus bursae which is straight in the *S. numida* species-group. The signa bursae of the *S. transtillata* species-group are ribbon-like while those are rounded in its congeners.

***Siccasura transtillata* Volynkin & László, sp. nov.**

(Figs 15, 16, 46, 60)

Type material. Holotype (Figs 15, 46): male, [Cameroon, Mount Cameroon] “Gr. Kamerunberg, Buea, 1–10.xi.[19]10, 1000–1200m, E. Hintz S.G.”, gen. slide No.: AV4845 (MFN).

Paratypes (2 females). **CAMEROON**: 1 female, with the same data as in the holotype, gen. slide No.: AV4846; 1 female, Bibundi, 16–31.i.[19]05, G. Tessmann S.G., 899/99, 591, *Asura numida* (Holland) 2003 det., gen. slide No.: AV4848 (MFN).

Diagnosis. The forewing length is 8.5 mm in the holotype male and 9–9.5 mm in females. Although *Siccasura transtillata* has somewhat more elongate forewings in both sexes than in other congeners but owing to the substantial intraspecific variability of the *Siccasura* species, the adequate identification requires the examination of the genitalia morphology. The male genital capsule of the new species is most similar to that of *S. hollandi* but can easily be recognized by the presence of the well-developed transtillar processes, the considerably longer and wider, shield-like juxta (it is V-shaped in *S. hollandi*), the basally broader and distally tapering valva with a conspicuously smaller cucullus and the markedly broader ventro-distal process of the valva. Additionally, compared to *S. hollandi*, the new species has an apically somewhat dilated uncus (it is apically pointed in *S. hollandi*), a shorter tegumen, a medially slightly convex costal margin and a broader sacculus. The aedeagus of *S. transtillata* is slightly curved medially while it is nearly straight in *S. hollandi*. The vesica of the new species differs from that of *S. hollandi* by its elongate basal plate (it is rounded in the latter species), the absence of a lateral diverticulum and the considerably weaker granulation of the main chamber which is covered in tiny but heavily sclerotized spinules in *S. hollandi*. The female genitalia of *S. transtillata* differ from those of *S. hollandi* and other congeners by their very broad subostial area of the 7th sternite, the substantially broad postvaginal plate densely covered in tiny spinules (it is short and elliptical in the *S. numida* species-group and X-shaped in the *S. morettoii* species-group), and the much broader ostium bursae. The ductus bursae of *S. transtillata* is medially curved and heavily scobinated while those of the other congeners are straight and weakly scobinated. Additionally, the signa bursae of the new species are ribbon-like while those of the other congeners are rounded.

Distribution. *Siccasura transtillata* is currently known only from two localities in Cameroon (South West Region) (Strand 1912b as *numida* (partim)).

Etymology. The specific epithet refers to the well-developed transtillar processes, which are unique in the genus.

The *S. morettoii* species-group

Diagnosis. The male genitalia (Figs 47–50) are distinguished from those of the other species-groups by the following features: (1) the intertranstillar membrane is short and weak, it is enlarged, sclerotized and rugose in the *S. numida* species-group, while in the *S. transtillata* species-group the transtillae are medially fused forming a plate with two well-developed distal processes; (2) the distal section of the costal margin of the valva is strongly curved, thickened and densely covered in short but robust spines; (3) the cucullus is conspicuously large and well separated from the ventro-distal process of the valva; (4) the sacculus is relatively short, its dorsal margin is parallel with while its distal margin is perpendicular to the ventral margin of the valva; (5) the ventro-distal process of the valva is robust, long, directed distally, dilated apically; (6) the basal plate of the vesica is considerably smaller than in the other congeners. The female genitalia of the species-group (Figs 61, 62) are also very characteristic and differ from those of the two other groups by the following features: (1) the 8th abdominal segment lacks a subostial depression and the dorso-lateral pockets but bears two pairs of ventral crests; (2) the edge of the ostium bursae is heavily sclerotized and fused with the postvaginal plate whereas it is membranous in the two other groups; (3) the postvaginal

plate is more or less X-shaped, strongly constricted medially, somewhat goblet-shaped, whereas it is plate-like in the two other groups.

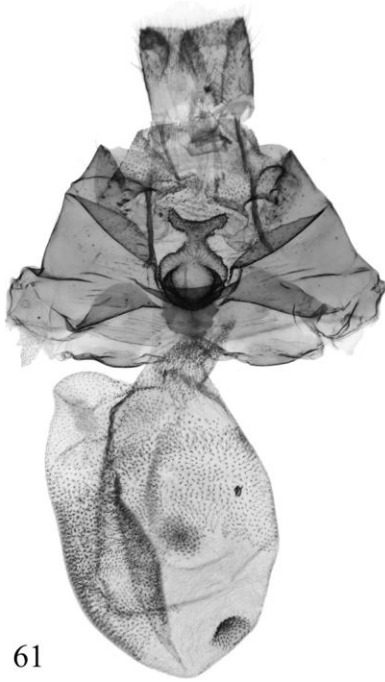
Siccasura morettoii Volynkin & László, **sp. nov.**
(Figs 17–20, 47, 48, 61)

Type material. Holotype (Figs 17, 47): male, “Ivory Coast, 174m Tai NP Tai Research Station, 05°49'59.8"N, 07°20'32"W, 5–10.VII.2015 Light Trap Aristophanous, M., Moretto, P., Ruzzier, E. leg. ANHRT:2017.14”, unique number: ANHRTUK 00030848, gen. slide No.: AV5789 (ANHRT).

Paratypes (31 males, 13 females in total). **IVORY COAST:** 2 males, 3 females, with the same data as in the holotype, unique numbers: ANHRTUK 00030840, 00108191, 00108208, 00109057, 00109116, gen. slide Nos.: AV6169, AV6170, AV6171 (females); 3 males, same site and collectors, 14–23.xi.2015, unique numbers: ANHRTUK 00073596 (DNA barcode id: ANHRT021-20/ANHRTUK-00073596), 00073642, 00073643, gen. slide Nos.: AV 3076, AV3077, AV5790 (males); 3 males, same site, 25.III.–17.iv.2017, leg. Aristophanous, A., Aristophanous, M., Geiser, M., Moretto, P., ANHRT:2017.25. unique numbers: ANHRTUK 00001415 (DNA barcode id: ANHRT018-20/ANHRTUK-00001415), 00161386, 00164900, gen. slide Nos.: AV3349 (male); 1 male, 1 female, Abidjan, Banco Forest (Parc National du Banco), 39–48m, 05°23'03.8"N, 04°03'11.2"W, 21.–30.IV.2017, MV Light Trap, Aristophanous, A., Aristophanous, M., Geiser, M., Moretto, P. leg. ANHRT:2017.25, unique numbers: ANHRTUK 00164925, 00166350, gen. slide No.: AV6164 (female); 2 females, Banco National park, 40m, 05°23'3.8"N, 04°03'11.2"W, 29.xi.–5.xii.2019, Actinic Light Trap, Aristophanous, M., Dérozier, V., Moretto, P., Ouattara, S. leg., ANHRT:2019.23, unique numbers: ANHRTUK 00134315, 00134316, gen. slide Nos.: AV6165, AV6166 (females) (ANHRT). **LIBERIA:** 6 males, 1 female, Sinoe County, Krahn-Bassa Reserve, Juboe River, 7.5km SW Pellokon Town, 140m, 5°39'4"N, 8°39'4"W, 14–20.I.2018, MV Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00095681, 00095683, 00100834, 00100839, 00101861, 00101866 (DNA barcode id: ANHRT023-20/ANHRTUK-00101866), 00101868, gen. slide No.: AV5797 (female); 2 males, 2 females, same data but collected by 250W blended bulb light trap, unique numbers: ANHRTUK 00095315, 00095316, 00095349, 00095352, gen. slide Nos.: AV6128, AV6134 (females); 1 male, same data but collected by cold cathode UV bucket light trap, unique number: ANHRTUK 00101063; 7 males, 4 females, Lofa County, Foya Proposed Protected Area, 530m, 7°56'36"N, 10°16'36"W, 10–19.xi.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00026281, 00026463, 00026466 (DNA barcode id: ANHRT020-20/ANHRTUK-00026466), 00026468, 00037574, 00039102, 00037586, 00037587, 00037589 (DNA barcode id: ANHRT019-20/ANHRTUK-00037589), 00037591, 00142307, gen. slide Nos.: AV5220 (male), AV5214, AV6159, AV6160, AV6161 (females); 1 male, same data but collected by cold cathode light bucket trap, unique number: ANHRTUK 00020488; 1 male, same data but collected by 8 W actinic light bucket trap, unique number: ANHRTUK 00148188; 1 male, Lofa County, Wologizi Mts, base camp forest, 611m, 8°07'17"N, 9°57'42"W, 20.xi.–01.xii.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg., ANHRT:2017.33, unique number: ANHRTUK 00020330; 1 male, Lofa County, Zuwulor Village School, 230m, 7°54'52"N, 9°31'08"W, 8.xi.2017, Light Trap (blended bulb 250W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L., leg. ANHRT:2017.33, unique number: ANHRTUK 00039338; 2 males, Sinoe County, 6.5km NW of Jacksonville, Forest near Solve Problem Village, 103m, 5°26'25"N, 9°7'39.9"W, 23–27.i.2018, MV Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00095724, 00095734 (ANHRT).

Diagnosis. The forewing length is 6–7 mm in males and 7–8 mm in females. The male genitalia of the new species slightly vary in the width of the tip of the ventro-distal process of the valva. The male genital capsule of *S. morettoii* is similar to that of *S. spatulata* but differs from it by the somewhat shorter juxta, the wider cucullus, the slightly longer ventro-distal process of the valva having a boot-shaped tip (it is spatulate in *S. spatulata*), and the somewhat shorter sacculus. The vesica of *S. morettoii* is slightly shorter than in *S. spatulata*. Compared to *S. spatulata*, the female genitalia of *S. morettoii* have longer ventral crests of the 7th sternite, a somewhat more elongate postvaginal plate with a longer constricted medial section and a wider and shorter dorsal plate of the posterior section of the ductus bursae. Additionally, *S. morettoii* lacks a horseshoe-shaped antevaginal plate, which is a specific character of *S. spatulata*.

Distribution. The species is currently known from Ivory Coast and Liberia.



61

S. morettoii sp. n., PT
Ivory Coast, Banco National Park,
slide AV6166



62

S. spatulata sp. n., PT
Gabon, Nyonié,
slide AV6122



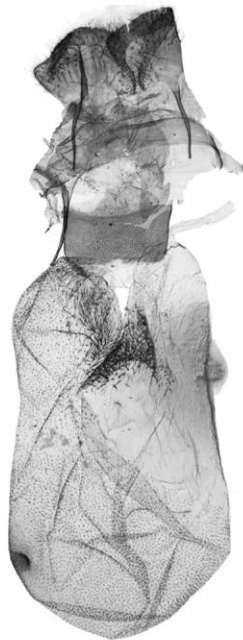
63

A. discocellularis discocellularis
Ivory Coast, Tonkoui Peak,
slide AV2944



64

A. ichorina
Malawi, Kolwe Forest Reserve,
slide AV5268



65

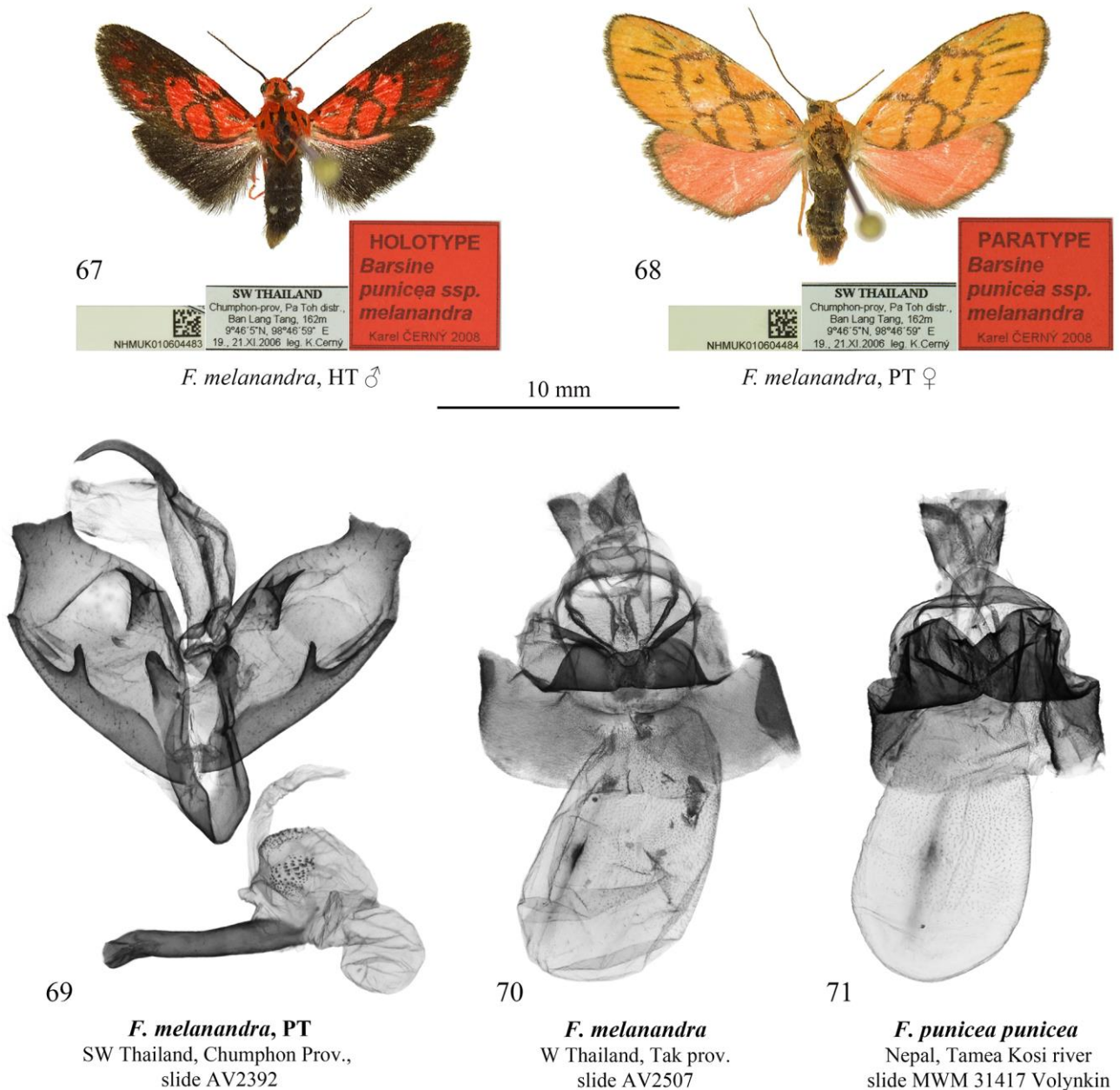
A. rivulosa
South Africa, Mpumalanga Prov.,
slide ZSM Arct. 2019-210 Volynkin



66

A. camilla
Gabon, Crystal Mts, Mikongo,
slide AV6011

Figures 61–66. *Siccasura* (61 and 62) and *Afrasura* (63–66) spp.: female genitalia. 63 is the type species of *Afrasura*. Depositories of the specimens: 61–64 and 66 in ANHRT; 65 in ZSM.



Figures 67–71. *Fossia* spp.: adults (67 and 68), male (69) and female genitalia (70 and 71). 67–70 are the type species of the genus. Depositories of the specimens: 67 and 68 in NHMUK (© The Trustees of NHMUK); 69 and 70 in CKC; 71 in MWM/ZSM.

Etymology. The new species is dedicated to Mr Philippe Moretto, a specialist in Scarabaeinae and one of the collectors of the type series, who has over the years undertaken many entomological surveys throughout Ivory Coast.

Siccasura spatulata Volynkin & László, **sp. nov.**
(Figs 21–24, 49, 50, 62)

Type material. Holotype (Figs 21, 49): male, “Gabon, 10m, Nyonié (Lowland forest), 0°2'22"S, 9°20'25"E, 23–28.viii.2019, MV Light Trap, Albert, J-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. Leg. ANHRT: 2019.17”, unique number: ANHRTUK 00162921, gen. slide No.: AV6189 (ANHRT).

Paratypes (115 males, 93 females in total). **GABON**: 46 males, 61 females, with the same data as in the holotype, unique numbers: ANHRTUK 00139074–00139077, 00149663, 00149664, 00149676–00149679, 00149681–00149683, 00149685, 00149687–00149694, 00149744–00149749, 00149750–00149766, 00152568–00152571, 00152572–00152577, 00152579, 00152580, 00152581–00152587, 00152588–00152594, 00152596–00152599, 00152655–00152662, 00162900–00162920, 00162922, 00162923, 00165252, gen. slide Nos.: AV5934, AV5935, AV5936 (males), AV5947, AV5948, AV5949, AV5950, AV6121, AV6122, AV6123, AV6125, AV6126, AV6139 (females); 1 male, 2 females, same data but collected by LepiLED light trap, unique numbers: ANHRTUK 00155699–00155701; 3 males, Nyonié (Coastal forest / grassland mosaic), 10m, 0°2'22"S, 9°20'25"E, 26.viii.2019, Actinic Light Trap, Albert, J-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. Leg. ANHRT: 2019.17, unique numbers: ANHRTUK 00160563–00160565; 1 male, Dilo ANPN camp, Ivindo (Secondary Forest), 185m, 0°14'1"S, 12°17'49"E, 14–19.viii.2019, LepiLED light trap, Albert, J-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, unique number: ANHRTUK 00111339; 16 males, 6 females, Mikongo (Rougier), Monts de Cristal (Secondary Forest), 430m, 0°29'47"N, 11°10'42"E, 28.vii.–12.viii.2019, MV Light Trap, Albert, J-L., Aristophanous, M., Bie Mba, J., Dérozier, V., Moretto, P. leg., ANHRT:2019.17, unique numbers: ANHRTUK 00110993, 00165235, 00165735, 00165739, 00167799, 00167800, 00168047, 00168063, 00168075, 00168076, 00192286, 00192510, 00192564, 00192570, 00192591, 00192593, 00192734, 00193413, 00193417, 00193427, 00193507, 00193513; 7 males, 2 females, same data but collected by LepiLED light trap, unique numbers: ANHRTUK 00107538, 00111202, 00137798, 00138968, 00142023, 00153076, 00153078, 00153079, 00155630, gen. slide Nos.: AV5931, AV5932 (males), AV5944 (female); 8 males, 2 females, same data but collected by Actinic light trap, unique numbers: ANHRTUK 00138682, 00138772, 00138792, 00138793, 00138780, 00142017, 00152734, 00158162, 00162648, 00163120, gen. slide Nos.: AV5933 (male), AV5945, AV6124 (females); 1 male, same data but collected by House light, unique number: ANHRTUK 00149366 (ANHRT). **NIGERIA**: 1 male, Warri, vi.[18]97 (Dr. Roth), Rothschild Bequest B.M. 1939-1, unique number: NHMUK010318337, gen. slide No.: NHMUK010314041 (prepared by Volynkin) (NHMUK). **CAMEROON**: 1 male, 1 female, SW Cameroon, Dept. Meme, Ediki (S of Kumba) ca. 150m, 21.i.1995, LF, leg. Aistleitner, coll. de Freina, Museum Witt München, gen. slides No.: MWM 33872 (male), MWM 33873 (female) (prepared by Volynkin); 1 male, with the same data but 24.i.1995, gen. slide No.: MWM 33865 (prepared by Volynkin) (MWM/ZSM). **LIBERIA**: 12 males, 4 females, Lofa County, Foya Proposed Protected Area, 530m, 7°56'36"N, 10°16'36"W, 10–19.xi.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg. ANHRT:2017.33, unique numbers: ANHRTUK 00026269, 00026273, 00026287 (DNA barcode id: ANHRT017-20/ANHRTUK-00026287), 00026306, 00026308, 00026311, 00026446, 00026467, 00026486, 00026500, 00037387 (DNA barcode id: ANHRT026-20/ANHRTUK-00037387), 00037407, 00037553, 00037590, 00073644, 00142309, gen. slide Nos.: AV5222, AV5223 (males), AV5212, AV5794, AV6138, AV6141 (females); 1 female, same data but collected by 250 W blended bulb light trap, unique number: ANHRTUK 00145367, gen. slide No.: AV6140; 2 females, same data but collected by cold cathode light bucket trap, unique numbers: ANHRTUK 00020487, 00026908 (DNA barcode id: ANHRT027-20/ANHRTUK-00026908), gen. slide Nos.: AV5792, AV6163; 5 males, 1 female, Lofa County, Wologizi Mts, base camp forest, 611m, 8°07'17"N, 9°57'42"W, 20.xi.–01.xii.2017, MV Light Trap (125W), Aristophanous, M., Sáfián, Sz., Simonics, G. & Smith, L. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00145131, 00020339, 00020342, 00020467, 00020468, 00026549, gen. slide No.: AV6152 (female); 1 female, Lofa county, Wologizi Mts, Rosewood Camp, 585m, 8°06'14.9"N, 9°58'27.3"W, 18.xi.–1.xii.2018, Cold Cathode UV Light Trap (8W), Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, unique number: ANHRTUK 00070539 (DNA barcode id: ANHRT25-20/ANHRTUK-00070539), gen. slide No.: AV5795 (female); 1 male, 1 female, Lofa county, Wologizi Mts, Ridge Camp 2, 883m, 8°07'20.79"N, 9°56'50.75"W, 22–30.xi.2018, Light Trap Blended Bulb (250W), Sáfián, Sz., Simonics, G. leg., ANHRT:2018.43, unique numbers: ANHRTUK 00102329, 00102331, gen. slide No.: AV6150 (female); 1 male, Sinoe County, 6.5km NW of Jacksonville, Forest near Solve Problem Village, 103m, 5°26'25"N, 9°7'39.9"W, 23–27.i.2018, MV Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, unique number: ANHRTUK 00095731; 5 males, 5 females, Krahn-Bassa Reserve, Sinoe County, Juboe River, 7.5km SW Pellokon Town, 140m, 5°39'4"N, 8°39'4"W, 14–20.I.2018, MV Light Trap, Geiser, M., Sáfián, Sz., Simonics, G. leg., ANHRT:2017.33, unique numbers: ANHRTUK 00095678, 00095682, 00095684, 00100805, 00100808, 00100810, 00100835, 00101848, 00101860, 00101870, gen. slide Nos.: AV6130, AV6131, AV6132, AV6133, AV6135 (females); 1 male, 1 female, same data but collected by

250W blended bulb light trap, unique numbers: ANHRTUK 00095327, 00095351, gen. slide No.: AV6129 (female); 1 male, same data but collected by cold cathode UV light bucket trap, unique number: ANHRTUK 00101061 (ANHRT). **IVORY COAST:** 2 males, Tai NP, Tai Research Station, 174m, 05°49'59.8"N, 07°20'32.0"W, 14–23.XI.2015, Light Trap, Aristophanous, M., Moretto, P., Ruzzier, E. leg., ANHRT:2017.16, unique numbers: ANHRTUK 00073595 (DNA barcode id: ANHRT016-20/ANHRTUK-00073595), 00073645, gen. slide Nos.: AV3055, AV3064; 2 females, same locality and collectors, 5–10.VII.2015, ANHRT:2017.14, unique numbers: ANHRTUK 00109047, 00109075, gen. slide Nos.: AV6167, AV6168 (females) (ANHRT). **GUINEA:** 1 male, 1 female, 619km ESE of Conakry, Nzerekore Region, Préfecture de Lola, Ziela env., 540–600m, 7°42'N; 8°21'W, x.2017, local collectors leg., ANHRT:2020.6, unique numbers: ANHRTUK 00167062, 00192426, gen. slide No.: AV6127 (female) (ANHRT).

Diagnosis. The forewing length is 6–7.5 mm in males and 7–8 mm in females. The male genitalia of *S. spatulata* slightly vary in the width of the distal section of the valva costa, the length of the cucullus and the width of the tip of the ventro-distal process of the valva. Based on the configuration of the male and female genitalia, *S. spatulata* is a closely related sympatric sister species of *T. morettoii*. The distinctive characters are discussed under the diagnosis of the latter species.

Distribution. The species is currently known from Guinea, Ivory Coast, Liberia, Nigeria, Cameroon and Gabon.

Etymology. The specific epithet refers to the spatulate tip of the ventro-distal process of the valva.

Remark. The female genitalia of the specimen identified as *Afrasura numida* from Nigeria illustrated by Durante (2009, fig. 66) in fact belong to *S. spatulata*.

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The Authors declare that to the best of their knowledge they conform to the national regulations and meet with the conditions and requirements of International Conventions concerning collecting/export and handling of the specimens presented in this Article.

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