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New records of Gracillariidae (Lepidoptera) from the islands of Madagascar, Mauritius and Réunion

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Summary: 7 species of Gracillariidae (Lepidoptera) are recorded as new for the island of Réunion, one species new for Mauritius and two species for the island of Madagascar. Nine named species are illustrated by their imago, 15 images of genitalia preparations of 7 species are provided as well as the wing venations of 2 species. The larvae or mines are illustrated for 5 species.

Keywords: Lepidoptera, Gracillariidae, Madagascar, Mauritius, La Reunion, Malagasy region.

Introduction

Many families of micro-lepidoptera from tropical countries have only been studied occasionly. This is the case for the family of Gracillariidae in African countries, including the islands of the Indian Ocean. Only 280 species of Gracillariidae are known from the Afrotropical ecozone while 506 species are known from the Oriental region and 617 species from the Palearctic region (de Prins & de Prins, 2019). Many of the African species are only known from few or single records. In many cases there is no, or few, images available and even fewer have been illustrated by their genitalia. This renders their identification even more difficult. Little data on the biology or hostplants are known for most described African species.

This is also true for the species known from the Malagasy ecozone. Only 21 species had been described or reported from Madagascar, 6 species from Mauritius, 8 from La Réunion, none from the Comoros and 12 species are known from the Seychelles islands (de Prins & de Prins, 2019).

In this publication I illustrate nine species of Gracillariidae (Lepidoptera) that were collected during the past six years on the islands of Madagascar, Mauritius and Réunion. Two of these species are reported for the first time from Madagascar, one species that was collected for the first time in Mauritius as well as 7 species that are reported to occur in Réunion. Four of these species had been raised from larvae on their respective hostplants.

Collection sites

Réunion: Most specimens found in the island of Réunion were bred from larvae that were collected in the field. Most of them were found in La Possession along CD41, a mountain road that leads from sealevel to the neighbouring town of La Montagne (Saint-Denis). Larvae of a few species were also found in other localities that are indicated

in the text.
Specimens taken at light were mostly collected in La Possession, Ravine à Malheur in an altitude of 400 meters. Geographical coordinates: 20°55'37''S/55°21'45''E.
Other localities are indicated in the text.
Madagascar: Andasibe, 18°56'51''S/48°25'4''E, alt.945m, between 24.xi.-03.xii.2016.
Mauritius: Mahébourg (Tyvabro, Rue Marianne), 21°31'6''S/57°42'16''E, alt.15 m, 24.iv.2017.
I also prospected in Mauritius in June 2016 but did not spot any Gracillariidae in this period.

Methods

Some of the recorded species were taken at light. Though for many species these are only attracted occasionally and were mostly represented by single specimens.

In Réunion their larvae were also collected in nature on their respective hostplants. This method appears to be far more successful for obtaining larger series. Some species were found abundantly on their hostplants while they were only rarely or occasionly attracted by light.

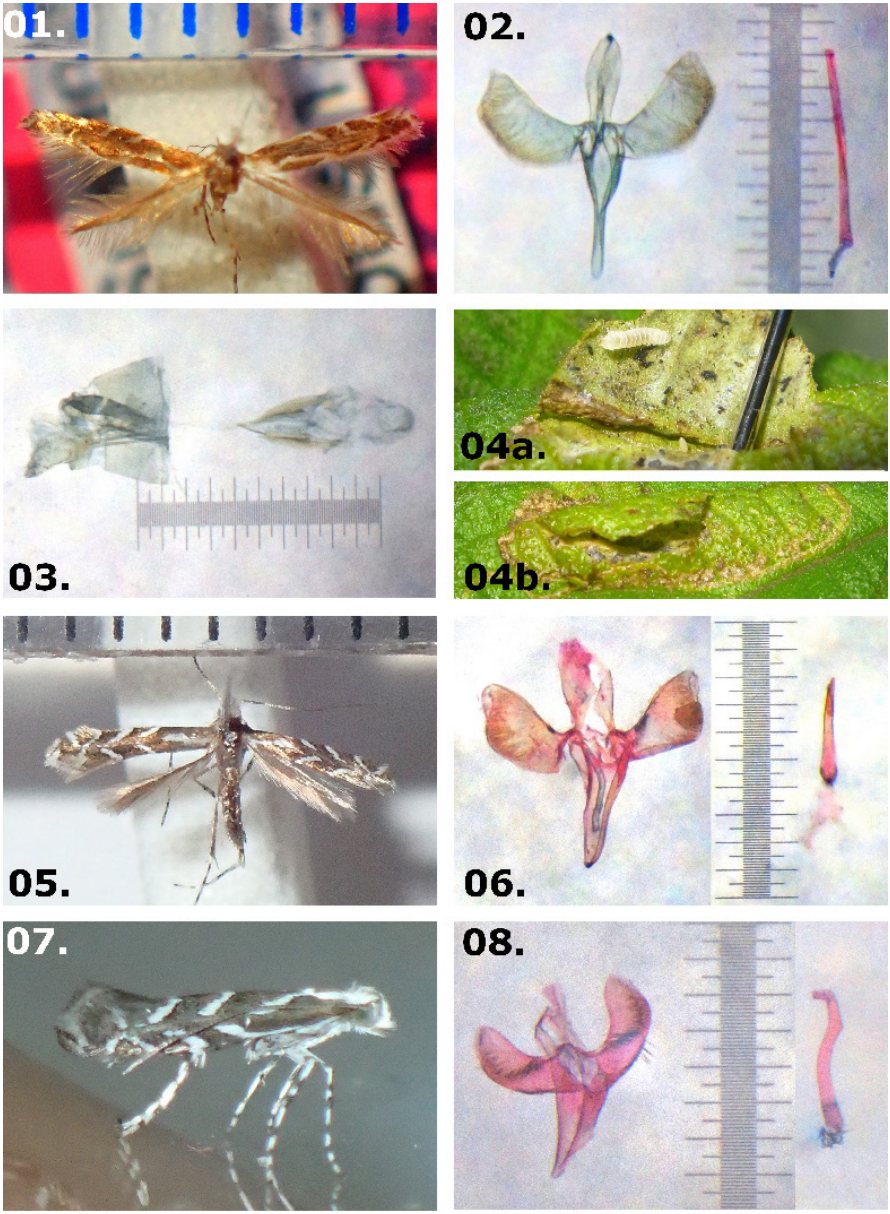
Genitalia preperations: I attribute a different prefix for my dissection slides corresponding to the country of collection followed by a number. For Madagascar I use the prefix: MG-, for specimens collected in Mauritius I use the prefix: MRU- and for Reunion the prefix: RE-.

Species of Gracillariidae:

Aristaea bathracma (Meyrick, 1912) – Figs. 1-3
Distribution: Afrotropical and Oriental regions
Afrotropical: Mozambique, South Africa, Uganda, recorded new for Madagascar and La Réunion.
Oriental: China, Japan, Russia (Far East), Thailand

Wingspan: 8-9mm.
Examined specimens:
One female (Fig. 1) in Sainte-Suzanne, Reunion, 17.xi.2015, gen.prep.RE-2366, one specimen in La Possession, 01.xii.2017.
1 female and 1 male in Andasibe, Madagascar, 25.xi-03.xii.2016.
Gen.prep. MG-031 (female; Fig. 3) and MG-600 (male; Fig. 2)

Hostplant: *Aster ageratoides* Turcz. (Asteraceae) in Japan (Kumata, 1977)
No hostplant is known from Madagascar and Reunion but *Aster ageratoides* seems to be unknown on these islands.



Figs. 1-3: *Aristaea bathracma* (Meyrick, 1912). Fig. 1: adult female, Réunion. Fig. 2: male genitalia, Madagascar. Fig. 3: female genitalia, Madagascar.

Fig. 4: Mines on *Lantana camara*

Figs. 5-7: *Aristaea onychota* (Meyrick, 1908). Fig. 5: adult male, Reunion. Fig. 6: male genitalia, Reunion (same as Fig. 5). Fig. 7: adult, in-situ

Fig. 8: *Aspilapteryx pentaplaca*, male genitalia, Mauritius

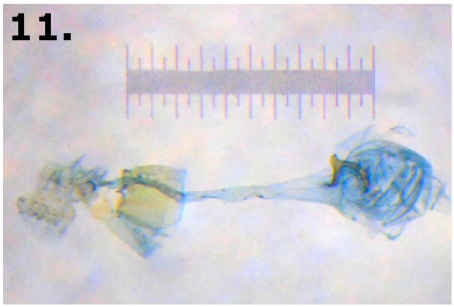
Aristaea onychota (Meyrick, 1908) – Figs. 5-7
Distribution: Nigeria (Bland, 1980), São Tomé (Type locality), South Africa, Botswana, Zimbabwe (Vári, 1961); recorded new for La Réunion.

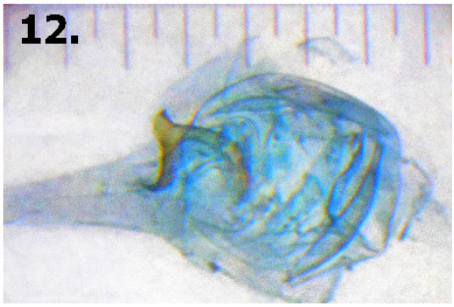
Wingspan: 8mm
Examined specimens:
One male (Figs. 5-7), 04.xi.2016, dissected, gen.prep. RE-2935 (Fig. 6), at light in Réunion, La Possession, alt. 400m.

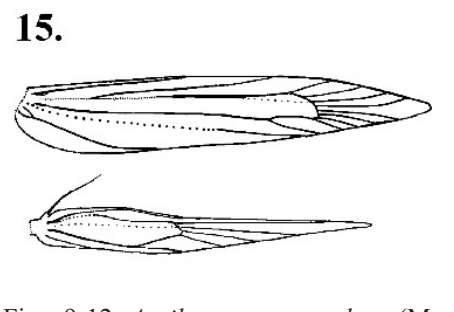
Hostplants: *Lantana camara* L.*, Lantana rugosa* Thunb., *Lippia asperifolia* Rich and *Lippia javanica* (Burm.) Spreng (Verbenaceae) had been recorded for this moth in continental Africa (de Prins & de Prins, 2019).
I did not identify its hostplant in La Réunion but I found a larva (Fig. 4) of an undetermined species of Gracillariidae on *Lantana camara* L. on 27.x.2015. No adult was bred successfully from this larva as it was paratized by an unidentified Ichneumonidae. I believe that this larva may belong to *Aristaea onychota* as it had been recorded as feeding on this plant by other authors.

Aspilapteryx pentaplaca (Meyrick 1911) – Figs. 8-12
Junior syonyme: ***Aspilapteryx filifera*** (Meyrick, 1912) TL: Mahé, Seychelles (Triberti, 1987)
Distribution: Seychelles, South Africa, Namibia, Nigeria (de Prins & de Prins, 2019). Type locality Pretoria, South Africa.. Recorded new for Mauritius and Réunion.

Wingspan: 6mm
The original description by Meyrick (1911), page 291 for *Aspilapteryx pentaplaca* reads as follows:
"6-7mm. Head white, Palpi white, second joint suffused with fuscous towards apex, terminal joint with dark fuscous median ring. Abdomen light grey, anal tuft ochreous-whitish. Forewings very narrow, elongate-lanceolate; brownish-ochreous, suffused with dark fuscous towards costa; a white dot on costa near base; five somewhat oblique shining white transverse fasciae edged with dark fuscous, second before, third beyond middle, forth sometimes interrupted beneath costa, last two sometimes narrow; a white mark across apex: cilia grey (imperfect). Hindwings rather dark grey; cilia whitish-grey".
Aspilapteryx filifera (Meyrick, 1912) had been treated as a junior synonyme of *A.pentaplaca* by Triberti (1987) though after de Prins & de Prins (2019) this synonymy had not been accepted by Vári.
The imago of *A.pentaplaca* from the Seychelles had been illustrated by Legrand (1966). Imago and genitalia of *A. filifera* from South Africa were illustrated by Vári (1961). De Prins & de Prins (2019) also illustrate a metallotype of this species from South Africa on their website.







Figs. 9-12: *Aspilapteryx pentaplaca* (Meyrick, 1911), Mauritius. Fig. 9: adult, in-situ. Fig. 10: adult. Fig. 11*:* female genitalia. Fig. 12: female genitalia, bursae

Figs. 13-16*: Callicercops triceros* (Meyrick, 1926). Fig. 13: adult, in-situ, e.l.*Bauhina monandra.* Fig. 14: adult, female, e.l.*Bauhina monandra.* Fig. 15: wing venations. Fig. 16: larva

The specimens collected in Mauritius and Reunion correpond in all points to the original description of Meyrick (1912) for *A.filifera* as well as to the imago illustrated by Legrand (1966) for this species. The male and female genitalia as well as the imago also correspond to those provided by Vári (1961) as *A.pentaplac*a of South African specimens.
I therefore follow Triberti (1987) and treat *A.filifera* (Meyrick, 1912) as being a junior synonym of *Aspilapteryx pentaplaca* (Meyrick, 1911).

Examined material:
Twenty specimens were collected in Mauritius, Mahéboug (Hotel Tyvabro) at light on 24.iv.2017. Two females and one male from Mauritius were dissected, gen.prep. Mru-108, Mru-109, Mru-110.
Two additional specimens were also found at light in Réunion, La Possession, 400m on 16.ii.2016 and 27.iii.2016.

Hostplant: unknown.
The collection site in Mauritius is situated in a residential area in the town of Mahébourg near a small river. It is likely that this species might be associated with an ornamental or agricultural garden plant. An aquatic plant may even be considered as being a possible hostplant, but these were absent from my collection site in Réunion.

One of the specimens collected in Mauritius was placed in the Musée d´Histoire Naturelle, Saint-Denis, Réunion in ix.2017.

Callicercops triceros (Meyrick, 1926) – Fig. 13-18
Distribution: Mauritius, Namibia, South Africa, Zambia, Zimbabwe, recorded new for Réunion.

Wingspan: 9-10mm.
A rather common species in Reunion where its hostplant, *Bauhinia monandra* Kurz has been widely planted as an ornamental plant along roadsides and in residential areas.

Biology: The larvae (Fig. 16) of *Callicercops tricers* have a lengths of 4-5mm and are cremish-beige with a blackish head. They form an irregular gallery mine on the leaves of its hostplant *Bauhinia monandra* Kurz. (Fabaceae). Mostly there are several mines on the same leaf. At maturity the larvae quit their mines and roll the edge of the leaf where they form a white cocoon.
Hostplant: *Bauhinia monandra* Kurz (Fabaceae).

Collection dates: raised from larvae (La Possession, alt. 90-270m) on 13.i.2015, 16.1.2015, 18.ii.2015, 20.ii.2015, 04.iv.2015, 06.iv.2015, 18.xi.2015, 27.xi.2015 and in iii. and ix.2016
2 specimens at light (alt. 400m) on: 23.xi-2013, 25.xii-2014

Months of the year: i, ii, iii, iv, ix, xi, xii.

Observations: I also found the leafs of Bauhinia monandra with gallery mines in other places near sealevel (St.Paul, Le Port). Similar *Bauhinia* sp. trees were also found in Mauritius, Blackriver, next to the river bridge and at Vanilla House Hotel in 2016 that showed the same kind of mines. I believe they may be *Bauhinia monandra* as well but as they did not carry flowers or fruits I prefer not to attribute them to a species name.
All *Bauhinia* species occuring in the Mascarene islands had been introduced by man and therefore also this moth is likely to be an introduced species in the islands of Mauritius and Réunion.

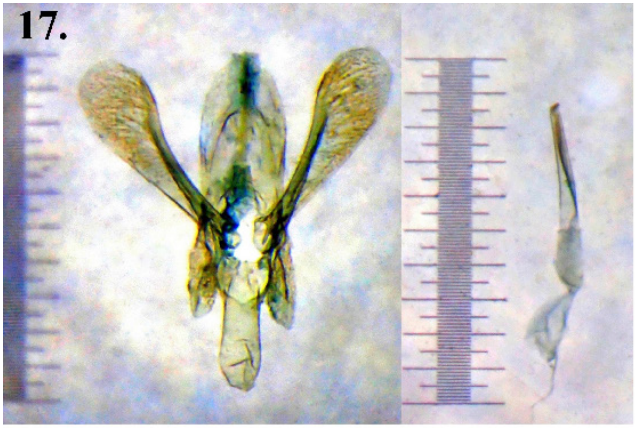
Additional note: Viette (1951b) described another species from Madagascar whose larva was reported from *Bauhinhia* sp.: *Callicercops milloti* (Viette, 1951b). He illustrated the male genitalia and a drawing of the forewing. In my opinion this species is a junior synonym of *Callicercops triceros* (Meyrick, 1926). I could not find any type material of this species. A photograph of *Callicercops milloti* Viette had recently been published by de Prins & de Prins (2019).
I wonder why Viette did not take reference to another synonyme o*f Callicercops triceros* whose holotype is found of the collections of the MNHN, Paris: *Callicercops triactis* (Meyrick, 1930). He had mentioned the type material from the MNHN collections only a few months later and designated a lectotype in another publication (Viette, 1951c). *Callicercops triactis* (Meyrick, 1930) was described from the neighboring island of Mauritius and is now considered being a junior synonym of *Callicercops triceros*.
Unfortunately I noticed that from some other publications of Viette, that he often did not take account of the species described earlier by Meyrick, including those of which his institute helds the type material described from Mauritius in 1930 and earlier. He seems to have described several other junior-synonyms particularly of species that were described by Meyrick.

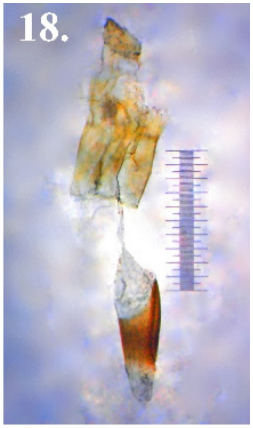
Additional note: Three of my specimens ex-larvae were donated to the Museum für Naturkunde, Berlin,, Germany and two specimens t to BMNH, London.

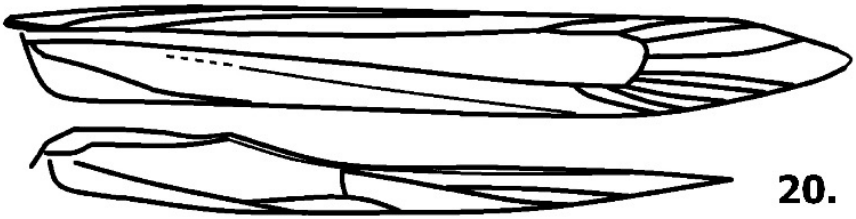
Macarostola eugeniella (Viette, 1951a)
Distribution: Madagascar (TL), Mauritius (Triberti, 1987) and Réunion

Wingspan: 9-10mm
I had repoirted this soecues earlier from Réunion (Bippus, 2016) but did not publish any images and collection data.

Hostplants: *Syzygium jambos* (L.) Alston and *Syzygium cumini* (L.) Skeels (Myrtaceae). Both hostplants are considered being introduced species to the Malagasy region.
Most of my specimens were reared from larvae on *Syzygium jambos* (L.) Alston (Myrtaceae) that I collected in altitudes between 500 and 550 metres in La Possession.

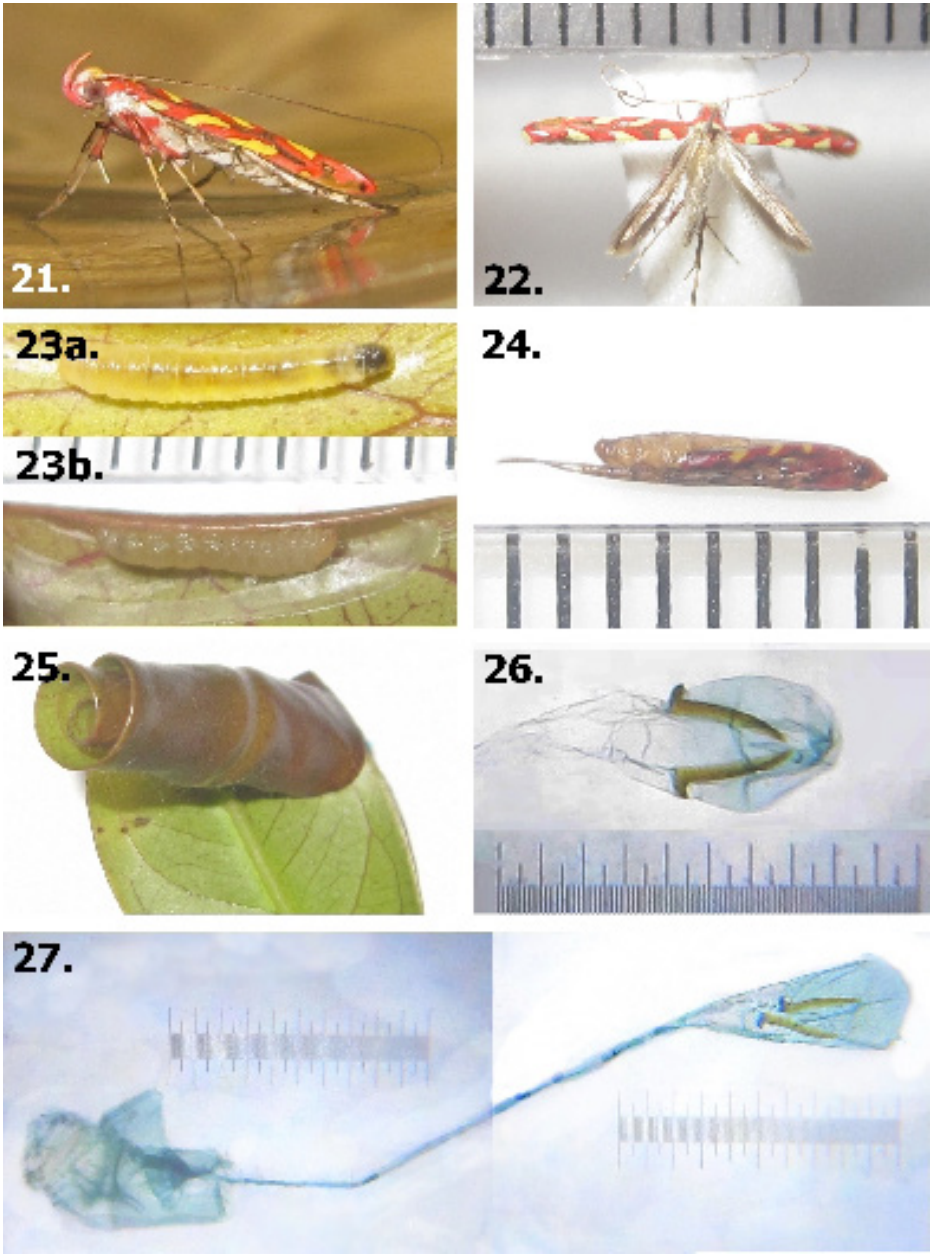






Figs. 17-18.: *Callicercops triceros.* Fig. 17: e.l., male genitalia. Fig. 18: e.l., female genitalia.

Figs. 19-20 *Macarostola eugeniella.* Fig. 19: e.l., male genitalia. Fig. 20: wing venations



Figs. 21-27: *Macarostola eugeniella.* Fig. 21: adult, in-situ, e.l.*Syzygium jambos*, 07.VIII.2015. Fig. 22: adult, e.l.*Syzygium jambos*, 24.ii.2015. Fig. 23: a) larvae, b) pupating larva on edge of the leaf. Fig. 24: larvae extracted from pupae. Fig. 25: rolled tip of *Syzygium jambos* leaf. Fig. 26: bursae. Fig. 27: female genitalia

Other sites of collection of larvae are Salazie (La Cayenne) and La Montagne, Réunion (alt. 700-750m)
It seems to be a common species on this plant and often I could collect more than 10 larvae along roadsides within a few minutes. Far more rarely it also feeds on *Syzygium cumini* (L.) Skeels on which I only collected two larvae in ix.2015. One specimen was also found at light in Sainte-Suzanne, Réunion, alt. 700m.
Its hostplants also grow in lower altitudes from sealevel to above 1000m altitude though I never found larvae below an altitude of 500 metres.
The young larvae forms a gall at the central vein of the young leaves of *Syzygium jambos* that are recognizable by their reddish colouration on their upper side. Mature larvae leave their galls and roll the tip of the leaf (Fig. 25) were they feed for a few more days. Often they also pupate inside this rolled tip but some of my raised specimens rolled the lateral edge of the leaf for pupation.
The larvae does not seem to feed on older leaves that show a dark greenish colouration on their upper side and a lighter greenish on their bottom side. Pupal stage: 12-14 days.

Months of the year: raised and recorded in the months of: ii, iv, vi, xiii, ix, x, xi, xii

Genitalia: the male genitalia (Fig. 19) and its valvae are very weakly sclerotized. The aedeagus is longer than the genitalia itself.
The female genitalia is weakly sclrotized, the ductus bursae is slim and filiform with a length of approx. 2.1/2-3 times the diameter of the bursae (Fig. 27). There are 2 hammer-like signa in the oval or drop-shaped bursae (Fig. 26).

Additional note: 3 specimens were donated to the Museum für Naturkunde, Berlin, Germany, 2 specimens to BMNH, London, and 5 specimens to Naturalis, Leiden, Netherlands. A single specimen was also desposited in the Natural History Museum of Port Louis, Mauritius and Saint-Denis, Réunion as well as to the Madagascar Biodiversity Center, Antananarivo, Madagascar.

Phyllonorycter lemarchandi (Viette, 1951a) – Fig. 42
Distribution: Madagascar (TL) and Réunion (new record)

Wingspan: 4.8mm.
Two male specimens were bred from larvae on 06.x.2015, La Possession, Ravine à Malheur, alt. 500m from *Sida rhombifolia* L. (Malvaceae).
I could not determine exactly the duration of its pupal stage but it must have been less than 16 days.
Additional larvae were collected on the same plant in xi.2015 but proved to be paratized.

Hostplant: *Sida rhombifolia* L. (Malvaceae).

Phodoryctis caerulea (Meyrick, 1912) – Figs. 28-35
Distribution: a widespread species; records in the Afrotropica region include: Cape Verde, Réunion, Uganda, West Africa (de Prins & de Prins, 2019); Mauritius (Mamet & Williams, 1993) and Madagascar; in the Oriental region recorded from India, Indonesia, Japan, Malaysia, Taiwan and from Oceania recorded in Fiji, Guam and Solomon islands.

Wingpsan: 6mm.
This is the most abundant species of Gracillariidae that I recorded from Réunion where I found its larvae (Figs. 31-33) on 7 different plants. I also found its larvae in Mauritius and Madagascar on two of the plants that I had recorded earlier in Réunion as being its hostplants.

Hostplants: De Prins & de Prins (2019) list more than 20 hostplant records for this species of Gracillariidae, mostly from Asia. Most records were made on Fabaceae species though they also list records on plants of the families of Apocynaceae, Caesalpiniaceae, Dioscoreaceae, Menispermaceae but note that some or all of the plants belonging to Menispermaceae, Dioscoraceae and Apocynaceae might have bene erroneously recorded.
Below I will only refer to the plants on which I found its larvae in Reunion, Madagascar or Mauritius. Most of these plants belong to the family of Fabaceae (six) and only one species belongs to the family of Plumbaginaceae: *Plumbago zeylanica* L.
Hostplants recorded in Mauritius: *Phaseolus lunatus* L., *Phaseolus vulgaris* L. (Mamet & Williams, 1993) and *Macroptilium atropurpureum* (DC.) Urb. (Fabaceae), vi.2016 in Flic-en-Flac; alt. estim. 10-15m (this publication).
Hostplants recorded in Réunion: Fabaceae: *Desmodium incanum* DC., *Desmodium intortum* (Mill.) Urb., *Lablab purpureus* (L.) Sweet, *Macroptilium atropurpureum* (DC.) Urb. (Fig.32), *Phaseolus lunatus* L. and *Phaseolus vulgaris* L. Plumbaginaceae: *Plumbago zeylanica* L
Hostplant recorded in Madagascar: *Desmodium incanum* DC. in Andasibe, place de la gare, 26.xi.2016.

Biology: In Reunion *Phodoryctis caerulea* (Meyrick, 1912) appears to feed most abundantly on *Desmodium intortum* (Mill.) Urb. and *Macroptilium atropurpureum* (DC.) Urb. (Fabaceae) (Fig. 32). These seem to be its principal hostplants on this island. Frequently I also found its larvae on *Desmodium incanum* DC.. Both *Desmodium* species are found mostly along roadsides or in other disturbed areas, often also on residencial grounds.
Macroptilium atropurpurem inhabits the same habitat but occurs in much larger stands in river beds near their mouth to the ocean. In some of these rivers (e.g. Rivière des Galets, Ravine à Marquet, Ravine des Lataniers and Ruisseau Noir, all located in La Possession) I find patches of 50-200m² entirely covered by this plant. On other sites, like roadsides, it is mostly limited to small patches of 2-5m² or single plants.
On these 3 plants it is rather frequent to collect more than 10 larvae on a few square metres of vegetaton. As *M. atropurpureum* is found in much larger stands, it might

be possible to collect even a few hundreds of larvae within an hour or two. Though I mostly restricted to a dozen or two collected on a few square metres on each site.
At one occassion I found its larvae also in a very important quantity on *Lablab purpureus* (L.) Sweet (Fabaceae) that was growing at the seashore near the entrance of the commercial harbour of Port-Ouest (Le Port, Réunion, 02.xii.2017). On a few dozens of leaves I had collected some two dozens of larvae but certainly there had been at least 3 times as many on a small surface of about 12-18m².
On *Phaseolus lunatus* L. (Lima beans, or locally called in French: Haricot du Cap or Pois du Cap) it appears to be a little less frequent than on the previously mentioned hostplants. Also on *Phaseolus vulgaris* L. (common bean; Fabaceae) I bred only 2 specimens in xii.2015. Apparently this moth is far less common on that plant. *Phaseolus vulgaris* grows permanently in my own garden but except for these two specimens I could never find any larvae on it again.
In Madagascar, Andasibe (place de la gare, alt.estim.945m, 26.xi.2016) I found its larvae also on *Desmodium incanum* DC.
In Mauritius I found its larvae to be common on *Macroptilium atropurpureum* (DC.) Urb. (Fabaceae) (Flic-en-Flac, alt.10-15m, 11.vi.2016). *P. caerulea* had been reported earlier from this island by Mamet & Williams (1993) to occur on *Phaseolus lunatus* L. and *Phaseolus vulgaris* L.

Larvae (Figs. 31-33):
In all Fabaceae species its larvae have a greyish-pinky to light reddish colouration (Figs. 31, 33). They can be easily spotted inside their mines (Fig. 32). Often I found 2-3 larvae in the same mine or leaf. At maturity they turn vivid red (Fig. 31) and quit their mines to build a whitish, oval cocoon (Fig. 33) of 5–6mm lenght that they mostly attached on a wall or the bottom of my larvae containers, though some cocoons were also attached to another leaf.
In contrast to the larvae collected on Fabaceae species, the larvae found on *Plumbago zeylanica* L (Plumbaginaceae, ii. and iv.2015) were light-greenish and also did not turn reddish at maturity. I therefore had some doubts if they really belong to the same species but could not state any differences in imago, size and male genitalia (Figs. 34-35). I believe that this difference in colouration of the larvae may be the result of some biological differnces of its hostplant compared to Fabaceae species.

Altitudes: I collected larvae from sea-level (0m) to 900m altitude (La Montagne, Colorado).

Collection dates: Recorded in the months of : iii, iv, v, vi, viii, ix, xi, xii
Specimens recorded at light in Réunion, La Possession, alt.400m on: 13.iv.2015, 11.viii.2015, 06.xi.2015, 04.iii.2016, 08.iii.2016, 06.iv.2016 and 26.iv.2016
Bred from *Desmodium intortum* or *Desmodium incanum* on: 20.iv.2015, 14.v.2015 (Colorado, alt. 900m), 29/30.xi.2015 (Colorado, alt.900m.

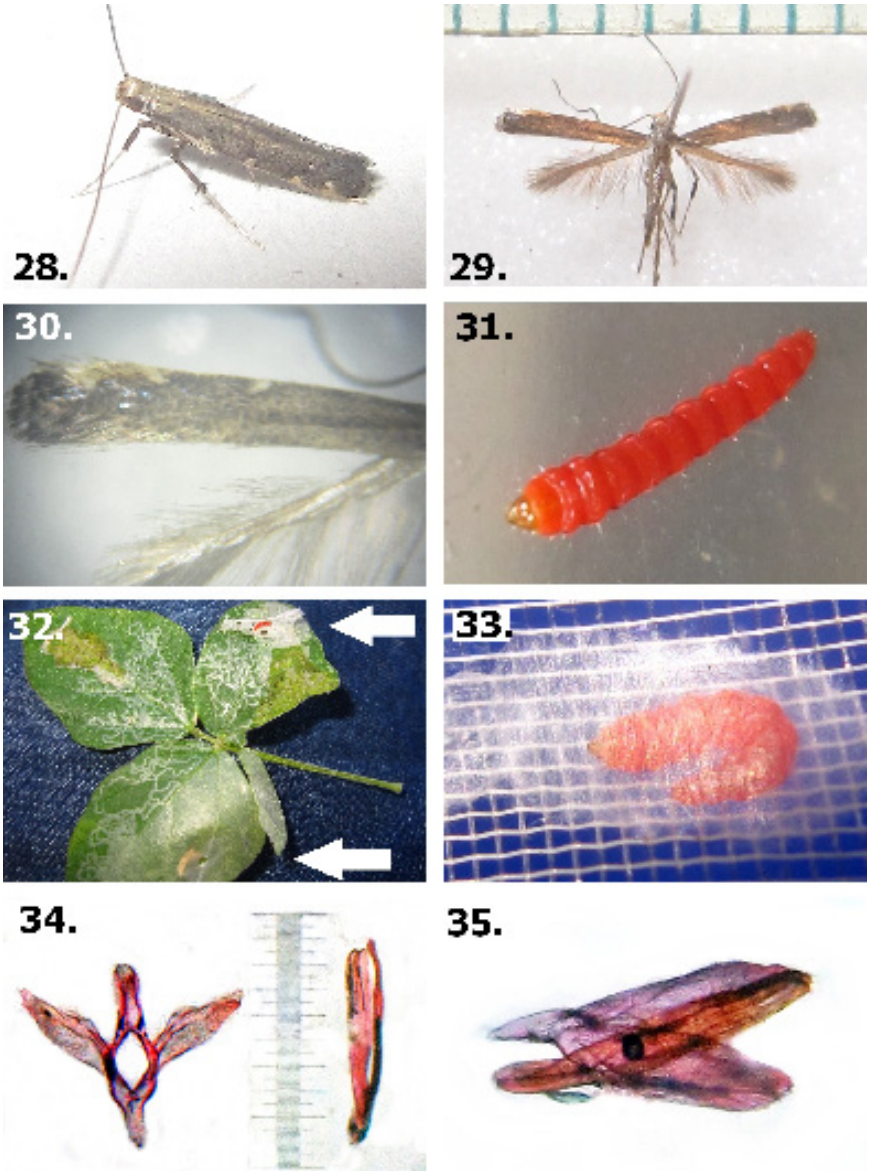


Plate 5: *Phodoryctis caerulea* (Meyrick, 1912) Wingspan: 6-6.5mm. Fig. 28: adult, e.l.*Macroptilium atropurpureum*, Réunion. Fig. 29: adult, wingspan: 6.5mm, e.l. *Desmodium incanum.* Fig. 30: left forewing, same specimen as Fig.29. Fig. 31: mature larvae, Réunion, on *Macroptilium atropurpureum.* Fig. 32: *Macroptilium atropurpureum* leaves with mine. Arrows: top: red larva on opened mine; bottom: pinkish larva in mine. Fig. 33: pupating larva. Fig. 34: male genitalia, aedeagus at right. Fig. 35: male genitalia, lateral view (unpressed, aed.in-situ)

Bred from *Macroptilium atropurpureum*: 23.x.2013, 05.xii.2014, 07.vi.2015, 18.vii.2015, 01.viii.2015, 10.ix.2015 and 19.xi.2015
Bred from *Phaseolus vulgaris*: xii.015 (2 specimens only) and from *Phaseolus lunatus* in iii.2016.

Additional note: 2 specimens ex-larvae were donated to the Museum für Naturkunde, Berlin, Germany and 14 specimens to Naturalis, Leiden, Netherlands (including dissection slides).

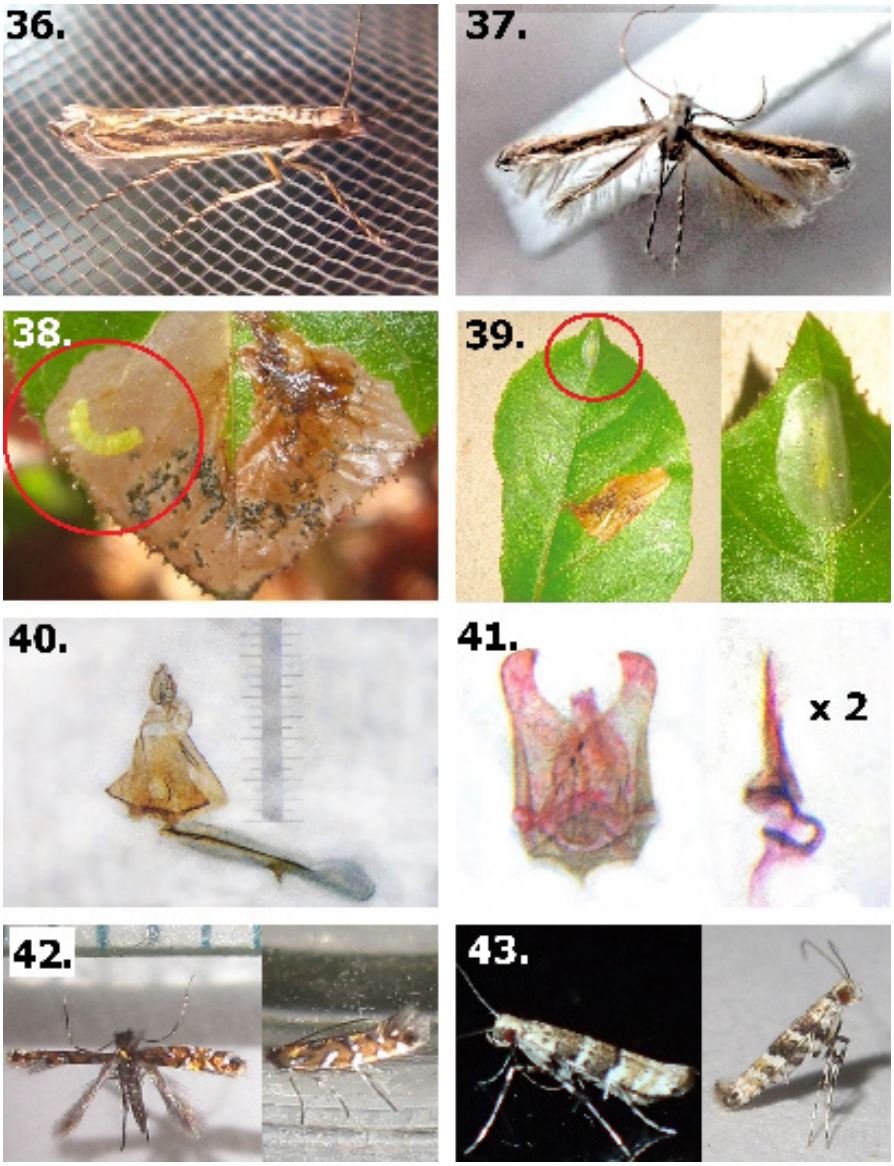
Stomphastis thraustica (Meyrick, 1908) – Figs. 36-41
Distribution: recorded from 13 Afrotropical countries, including Madagascar (de Prins & de Prins, 2019), as well as the Oriental region in China, India, Indonesia and Malaysia. Regionally found in Madagascar and Réunion (new record).

Wingspan: 9.0-9.5mm
This is a common species in Réunion that I raised from larvae collected on *Jatropha gossypiifolia* L. (Euphorbiaceae) in the months of ii, xi and xii.2014 and 30.x.2017 in La Possession (Petit Ruisseau, alt. 50m) but found its larvae also in other places in the same town near sea-level.
At light I collected additional specimens in Réunion, La Possession, alt. 400m on 10.ix.2015, 06.iv.2016, 26.iv.2016, 13.viii.2016, 17.xi.2017 and 01.vii.2018

Collection dates: recorded in the months of: ii, iv, vii, viii, ix, xi and xii.

Hostplants: *Jatropha gossypiifolia* L. (Euphorbiaceae) in Réunion and in India (Fletcher, 1921). In several other countries recorded on *Jatropha curcas* L (Euphorbiaceae) (de Prins & de Prins, 2019).This plant is also found in Reunion but was not be examined.
Vári (1961) also mentioned a record by Meyrick (1914) on *Microstachys chamaelea* (L.) Müll.Arg.(Euphorbiaceae) from India.

Biology: The larvae of *Stomphastis thraustica* are light greenish and form an irregular blotch mine on the leaves of its hostplant (Figs. 38-39).
Many leaves of its hostplant, *Jatropha gossypiifoli*a L only show a single larvae and blotch mine though in some cases I found up to 3 mines and larvae on a single leaf. The mature larvae quits its mine to form an oval cocoon (Fig. 39) on the same or a neighboring leaf. Some cocoons were found on leaves that did not show any blotch-mine but in these cases these were well present on a neighbouring leaf. The cocoons are oval and fairely transparent when new. They turn a little more opaque-whitish after a few days. The cocoons use to be placed near the edge of the leaf, mostly at the central vein at the tip of the leaf (Fig. 39). An estimated number of 75-80% of the coocons are placed on the upper side of the leaves but some can be found on the under side of the leaf as well.
One larvae was infested by an unidentified exo-parasite.



Figs. 36-41: *Stomphastis thraustica* (Meyrick, 1908). Wingspan: 8.5-9mm. Fig. 36: adult, female, Réunion, e.l.*Jatropha gossypiifolia.* Fig. 37: adult, female, Réunion, e.l. *Jatropha gossypiifolia.* Fig. 38: larvae & mine on *Jatropha gossypiifolia.* Fig. 39: mine & pupa o*n Jatropha gossypiifolia*

Figs. 40-41: *Stomphastis thraustica,* Fig. 40: female genitalia. Fig. 41: male genitalia. Aedaegus doubled in size.

Fig. 42: *Phyllonorycter lemarchandi* (Viette, 1951), e.*l.Sida rhombifolia*

Fig. 43: *Spulerina cf. hexalocha*, Réunion 21-xi-17 (left); 02.v.2014 (right)

Spulerina cf. hexalocha (Meyrick, 1912) – Fig. 43
TL: South Africa (Barberton), Sierra Leone (Bland, 1980), recorded new for Réunion

Wingspan: 7.5mm.
This species will need supplentary investigations.
The only specimen and holotype from South Africa (female, Barberton) has lost its abdomen (Vari, 1961). Vari only illustrated it wings. The image of the holotype was also recently published by de Prins & de Prins (2019).
In absence of genitalia images for *Spulerina hexalocha* my specimens cannot be compared in a satisfactory manner and this record will need further investigations.

Collection dates: 02.v.2014; 09.iv.2016 and 24.xi.2017, Reunion, La Possession, alt. 400m.

Hostplant: *Sclerocaya birrea* (A. Rich.) Hochst. (Anacardiaceae) for the South African holotype.
This species of plant had been introduced in Réunion and Mauritius but is rare and localized. I do not know if any trees are found in the sourroundings of the place of collection. No larvae of this species have been collected.

Distribution: South Africa (TL), Sierra Leone and Réunion

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Table 1 – Checklist -by country: Gracillariidae recorded in the Malagasy region
In bold: species treated and illustrated in this publication

Réunion: 8 species + 7 new records *Acrocercops coffeifoliella* (Motschulsky, 1859) *Corythoxestis pentarcha* (Meyrick, 1922) *Dialectica anselmella* Guillermet, 2011 * *Dialectica geometra* (Meyrick, 1916) ***Macarostola eugeniella*** (Viette, 1951) ***Phodoryctis caerulea*** (Meyrick, 1912) *Phyllocnistis citrella* Stainton, 1856 *Phyllonorycter ruizivorus* De Prins, 2012 New records: ***Aristaea bathracma*** (Meyrick, 1912) ***Aristaea onychota*** (Meyrick, 1908) ***Aspilapteryx pentaplaca*** (Meyrick, 1911) ***Callicercops triceros*** (Meyrick, 1926) ***Phyllonorycter lemarchandi*** (Viette, 1951) ***Spulerina hexalocha*** (Meyrick, 1912) ***Stomphastis thraustica*** (Meyrick, 1908)	**Mauritius:** 6 species + 1 new record *Acrocercops macrochalca* Meyrick, 1910 ***Callicercops triceros*** (Meyrick, 1926) ***Macarostola eugeniella*** (Viette, 1951) ***Phodoryctis caerule****a* (Meyrick, 1912) ** *Phyllocnistis citrella* Stainton, 1856 *Phyllonorycter trochetellus* De Prins, 2012 New record: ***Aspilapteryx pentaplaca*** (Meyrick, 1911)
Madagascar.: 21 species + 2 new records *Acrocercops coffeifoliella* (Motschulsky, 1859) *Acrocercops guttiferella* (Viette, 1951) *Acrocercops hormista* Meyrick, 1916 *Acrocercops loxias* Meyrick, 1918 *Acrocercops theaeformisella* Viette, 1955 *Acrocercops tricyma* Meyrick, 1908 *Aristaea atrata* Triberti, 1985 *Callicercops milloti* (Viette, 1951) *Caloptilia infaceta* Triberti, 1987 *Caloptilia modica* Triberti, 1987 *Caloptilia scaenica* Triberti, 1987 ***Macarostola eugeniella*** (Viette, 1951) *Phyllocnistis saligna* (Zeller, 1839) ***Phyllonorycter lemarchandi*** (Viette, 1951) *Phyllonorycter madagascariensis* (Viette, 1949) *Stomphastis adesa* Triberti, 1988 *Stomphastis dodonaeae* Vári, 1961 *Stomphastis eugrapta* Vári, 1961 ***Stomphastis thraustica*** (Meyrick, 1908) *Telamoptilia cathedraea* (Meyrick, 1908) *Telamoptilia hemistacta* (Meyrick, 1924) New reocrds: ***Aristaea bathracma*** (Meyrick, 1912) ***Phodoryctis caerulea*** (Meyrick, 1912)	**Seychelles:** 12 species *Acrocercops angelica* Meyrick, 1919 *Acrocercops largoplaga* Legrand, 1966 *Acrocercops martaella* Legrand, 1966 *Acrocercops rhombocosma* Meyrick, 1911 ***Aspilapteryx pentaplaca*** (Meyrick, 1911) *Caloptilia megalaurata* Legrand, 1966 *Caloptilia prosticta* (Meyrick, 1909) *Caloptilia tirantella* Legrand, 1966 *Cryptolectica euryphanta* (Meyrick, 1911) *Cuphodes tridora* Meyrick, 1911 *Macarostola parolca* Meyrick, 1911 *Neolithocolletis pentadesma* (Meyrick, 1919) * = not listed by de Prins & de Prins (2019) ** =not listed by de Prins & de Prins,(2019) but recorded by Mamet & Williams (1993).

No Gracillariidae have been recorded in the Comoros and in Rodrigues.
Source previously recorded species: de Prins & de Prins (2019), acc. 29.vii.2019)

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