

Fauna of Pterophoridae (Lepidoptera) of Sierra Leone (Western Africa)

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Abstract

The faunal review of Pterophoridae species is given for the fauna of Sierra Leone for the first time the type localities and world distribution (with new data) are specified. The information on the collected materials is given. Eleven species, previously unknown for this territory – *Ochyrotica africana*, *Platyptilia farfarella*, *Bipunctiphorus dimorpha*, *Stenoptilodes taprobanes*, *Sphenarches erythrodactylus*, *Exelastis pumilo*, *E. tenax*, *E. vuattouxi*, *Hellinsia madecasseus*, *Pterophorus albidus* and *P. lampra* – are added to the two known Pterophoridae species of Sierra Leone (*Megalorhipida leucodactylus* and *Pterophorus candidalis*).

Key words: Lepidoptera, Pterophoridae, plume moths, Sierra Leone, distribution, new data.

Introduction

The Pterophoridae (Lepidoptera) of Western Africa are studied quite superficially and unevenly. Some data on the plume moths of adjacent territories are published in the articles on the Republic of Côte d'Ivoire (Bigot 1962, 1970; Bigot & Boireau 2002, 2006), Ghana (Ustjuzhanin & Kovtunovich 2015), Liberia (Ustjuzhanin *et al.* 2017). Until present, there were no special studies on the plume moths of Sierra Leone. In the World Catalogue of Insects (Gielis 2003) only two species were reported for Sierra Leone: *Megalorhipida leucodactylus* (Fabricius, 1794) and *Pterophorus candidalis* (Walker, 1864), which are absent in our materials. In our study we have processed the plume moths' specimens collected by Viktor Sinyaev in December 2019 – February 2020 in the vicinity of Kono, eastern province of Sierra Leone. As a result, we have found 11 Pterophoridae species, all of them are recorded for Sierra Leone for the first time. The plume moths were collected at twilight and at night,

using light traps. The collections were carried out in secondary forest biocenoses that had undergone significant anthropogenic transformation (Fig. 1). The studied specimens are deposited in the collection of the Zoological Institute St. Petersburg, Russia (ZISP) and in the Collection of P. Ustjuzhanin and V. Kovtunovich (Novosibirsk and Moscow, Russia, CUK).

List of collecting localities

Bodu – Sierra Leone. Kono province, Gori Hills, near Bodu, 08.4767° N, 10.7424° E, 385 m.

Bongema – Sierra Leone. East Kono province, Gori Hills, near Bongema, 08.4886° N, 10.7738° E, 370 m.

Coidu – Sierra Leone. Kono province, Coidu, 08.6292° N, 13.9944° E, 300 m.

Giehum – Sierra Leone. Kono province, Gori Hills, Near Giehum, 08.4631° N, 10.7714° E, 373 m.

List of species

Ochyrotica africana (Bigot, 1969)

Steganodactyla africana Bigot, 1969: 170 (Type locality: [Democratic Republic of Congo, North Kivu] Congo, Rutshuru Zaire).

Material examined: 1 ♀, Giehum, 22–29.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution. Congo, Gabon, Ghana, Liberia, Malawi, Tanzania, Uganda (De Prins, De Prins 2020), Sierra Leone.

Platyptilia farfarella Zeller, 1867

Platyptilus farfarellus Zeller, 1867: 334 (Type locality: Poland).

Platyptilia periacta Meyrick, 1910: 411. (Type locality: [South Africa, Western Cape], Cape Colony, Cape Town).

Platyptilia claripicta Fletcher, 1910: 400 (Type locality: Seychelles).

Material examined: 1 ♀, Coidu, 04–15.xii.2019; 1 ♂, Bongema, 16–28.xii.2019; 1 ♀, Giehum, 03–12.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Europe, India, Sri Lanka, Bhutan, Indonesia, Philippines, New Guinea, Solomon Islands, New Hebrides, Rep. S. Africa, Eswatini, Madagascar, Mauritius, Uganda, Kenya, Tanzania, São Tomé Isl., Nigeria, Ghana, Sierra Leone.

Bipunctiphorus dimorpha (Fletcher, 1910)

Platyptilia dimorpha Fletcher, 1910: 401 (Type locality: Seychelles).

Platyptilia patriarcha Meyrick, 1912: 54 (Type locality: Mfongosi, Natal, S. Africa).

Bipunctiphorus etiennei Gibeaux, 1994: 57–58, fig. 50 (Type locality: Reunion Isl.).

Material examined: 1 m #, Bongema, 16–28.xii.2019, Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Seychelles, Madagascar, Rep. S. Africa, Reunion Isl., Kenya, Tanzania, Zimbabwe, Malawi, (De Prins, De Prins 2020), Sierra Leone.

Stenoptilodes taprobanes (Felder & Rogenhofer, 1875)

Amblyptilia taprobanes Felder & Rogenhofer, 1875: Pl. 140, fig. 54 (Type locality: [Sri Lanka], Ceylon).

Platyptilia legrandi Bigot, 1962: 86 (Type locality: Seychelles).

Stenoptilodes vittata Service, 1966: 11 (Type locality: Nigeria).

Material examined: 4 ex., Giehum, 03–12.ii.2020; 1 ♂, 22–29.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Southern Europe, Indonesia, Sri Lanka, India, New Guinea, Australia, Hawaiian Islands, Chad, Sao Tome, Côte d'Ivoire, Nigeria, Tanzania, Kenya, Ghana, Madagascar, Seychelles, U.S.A., Paraguay, Bolivia (De Prins, De Prins 2020), Sierra Leone.

Sphenarches erythroductylus (Fletcher, 1911)

Oxyptilus erythroductylus Fletcher, 1911: 281 (Type locality: Transvaal, S. Africa).

Material examined: 1 ♀, Bongema, 16–28.xii.2019. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Rep. S. Africa, Sierra Leone.

Exelastis pumilo (Zeller, 1873)

Mimeseoptilus pumilio Zeller, 1873: 324 (Type locality: Texas, USA).

Material examined: 2 ♀, Bongema, 16–28.xii.2019; 1 ♀, Bodu, 21–30.i.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Chad, The Gambia, Tanzania, Mali, Zimbabwe, Eswatini, Rep. S. Africa, Seychelles, Reunion Island, Madagascar, Nigeria, Kenya (De Prins, De Prins 2020), Sierra Leone; Nepal, Cambodia, Myanmar, Philippines, New Guinea; USA, Argentina, Brazil, Ecuador, Bolivia, Colombia, Surinam, Costa Rica, Cuba, Puerto Rico, Guadeloupe, Mexico, Jamaica, Virgin Islands, Fatu-Hiva, Guam, Palau (Ustjuzhanin *et al.* 2019)

Exelastis tenax (Meyrick, 1913)

Marasmarcha tenax Meyrick, 1913: 268 (Type locality: Mpumalanga, Barberton, Rep. S. Africa).

Exelastis bergeri Bigot, 1969: 176. (Type locality: Dem. Rep. Congo, Equateur, Eala 5 km E of Mbandaka).

Material examined: 1 ♂, 1 ♀, Bongema, 16–28.xii.2019; 1 ♂, 01–09.i.2020; 1 ♂, 13–20.i.2020; 1 ♂, Bodu, 21–30.i.2020; 1 ♂, Giehum, 03–12.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Rep. S. Africa, Sierra Leone.

Exelastis vuattouxi Bigot, 1970

Exelastis vuattouxi Bigot, 1970: 761 (Type locality: Côte d'Ivoire, Lamto, near Toumodi).

Material examined: 2 ex., Coidu, 04–15.xii.2019; 9 ex., Bongema, 16–28.xii.2019, 01–10.i.2020, 13–20.i.2020; 5 ex., Bodu, 21–30.i.2020; 122 ex., Giehum, 03–12.ii.2020, 14–21.ii.2020, 22–29.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Côte d'Ivoire, Ghana, Rep. S. Africa, Eswatini, Uganda, Nigeria, Tanzania, Malawi, Zimbabwe (De Prins, De Prins 2020), Sierra Leone.

Hellinsia madecasseus (Bigot, 1964)

Pterophorus madecasseus Bigot, 1964: 34 (Type locality: Madagascar, Ambatofinandrahana, Fianarantsoa).

Paulianilus madecasseus (Bigot, 1964).

Leioptilus devius Bigot, 1969: 197 (Type locality: Democratic Republic of Congo, Katanga, Elisabethville [Lubumbashi]).

Paulianilus lolibai Arenberger, 2011: 279 (Type locality: South Sudan, East Equatorial State, Akoros Province, Lolibai Mts).

Material examined: 1 ♀, Coidu, 04–15.xii.2019; 1 ♂, 22–29.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Madagascar, Rep. S. Africa, Congo, Uganda, Kenya, Tanzania, Sudan, Malawi, Zimbabwe (De Prins, De Prins 2020), Sierra Leone.

Pterophorus albidus (Zeller, 1852)

Aciptilus albidus Zeller, 1852: 397 (Type locality: S. Africa, KwaZulu-Natal).

Alucita endophaea Meyrick, 1930: 567 (Type locality: Mozambique, Laurenço Marques).

Material examined: 1 ♂, Bongema, 16–28.xii.2019; 1 ♂, Giehum, 22–29.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Rep. S. Africa, Gambia, Mozambique, Nigeria, Kenya, Malawi, Tanzania, Zaire, Uganda, Cameroon, Chad, Côte d'Ivoire, Zimbabwe, Zanzibar, Madagascar, Reunion Isl., Botswana, Ethiopia, Somalia, Sierra Leone; Japan, Thailand, Vietnam, Indonesia, Philippines, Kei Island, Irian Jaya, Fiji Islands.

Pterophorus lampra (Bigot, 1969)

Aciptilia lampra Bigot, 1969: 204 (Type locality: Democratic Republic of Congo, Equateur, Busira).

Material examined: 1 ♂, Bongema, 16–28.xii.2019; 9 ex., Giehum, 03–12.ii.2020; 3 ex., 14–21.ii.2020. Leg. Viktor Sinyaev & Gennady Kalnoi.

Distribution: Democratic Republic of Congo, Cameroon, Côte d'Ivoire, Gabon, Ghana, Uganda (De Prins, De Prins 2020), Sierra Leone.

Discussion

Examining the specimens and studying the publications, we recorded 13 Pterophoridae species for Sierra Leone, eleven of which are new for the fauna of the country. To compare, the Cossidae of Sierra Leone include 16 species (Yakovlev *et al.* 2019). For the adjacent Liberia, 13 species of Pterophoridae are already known (Ustjuzhanin *et al.* 2017). There is no doubt that further study on plume moths in Sierra Leone will significantly enlarge the number of species at least twice.



Figure 1. Sierra Leone. Kono province, Gori Hills, Biotope. Photo by Viktor Sinyaev

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