

Review

Diversity of the Subfamily Torodorinae (Lepidoptera: Lecithoceridae) in Afrotropical Region

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Abstract: Torodorinae is the second largest subfamily of Lecithoceridae, comprising more than 600 species worldwide. In the Afrotropical Region, 116 species of the subfamily have been known, of which 90 species were described by the author and his co-authors since 2018. In this article, the generic synopsis of the subfamily Torodorinae in Afrotropical Region is discussed and reviewed, providing lists of all known species of each genus.

Keywords: Lepidoptera; Lecithoceridae; review; taxonomy; world

1. Introduction

The subfamily Torodorinae (Lepidoptera, Lecithoceridae) is the second largest subfamily among the four subfamilies of Lecithoceridae (Ceuthomadarinae, Lecithocerinae, Torodorinae, and Crocanthinae), comprising more than 600 species (Table 1) belonging to 47 genera worldwide. However, the subfamily is still poorly known in the Afrotropical Region as well as other related micro-moths. Adults of the subfamily are usually small to medium size (wingspan of 8–25 mm) and mostly nocturnal, as well as those of other subfamilies, except some brightly coloured species such as *Torodora epicharis* Park, 2002; and the larvae mostly feed on dead leaves [1,2]. The subfamily is morphologically defined by the absence of a bridge-like structure connecting the tegumen and the valva, and by the uncus, which is usually thorn-like and directed caudally in the male genitalia. Representative species of the genera of Torodorina are given in the Figure 1.

Among the known species of the subfamily, more than 410 species have been reported from the Oriental Region, 40 species from the Palaearctic Region, 5 species from the Oceanian and the Australian Region, and about 150 species from the Afrotropical and Madagascar regions (Tables 1 and 2) [1–3]. The available data for the Afrotropical Region has been based on very limited material, and little work had been performed until the author started to study this fauna since 2018 [4,5]. Thus, the number of species inhabiting this region can be expected to be at least more than 10 times greater than that corresponding to our current knowledge [2]. Even though the adjacent big island, Madagascar, is fairly close to this continent, none of the described species of Malagasy Lecithoceridae has been found on the African continent. The fauna of Madagascar could be another example showing a very high level of endemism despite the relative proximity with a large neighbouring area for the faunas of the Australian and Oceanian regions [6].

Since Walsingham (1881, 1891) described *Idiopterix obliquella* (Walsingham, 1881) and *Protolychnis maculata* (Walsingham, 1891) from Rep. South Africa [7,8] and Meyrick (1908–1938) described 12 species belonging to the subfamily from various area in Afrotropical Region [9–16], Park (or with his co-authors) described three new genera (*Thubdora* Park, 2019; *Viperinus* Park, 2021; and *Spiniola* Park, 2022) and 90 new species of the subfamily Torodorinae from the Afrotropical Region [4,5,17–25]. Of these genera, *Thubdora* Park is



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the most diverse genus in the subfamily Torodorinae with 46 known species, the next is *Ptilothyris* Walsingham with 19 known species, followed by *Dragmatucha* Meyrick with 18 described species and *Torodora* Meyrick with 14 species. It is known that six genera: *Dragmatucha* Meyrick, *Idiopteryx* Walsingham, *Ptilothyris* Walsingham, *Thubdora* Park, *Spiniola* Park and *Viperinus* Park, are endemic to the Afrotropical Region.

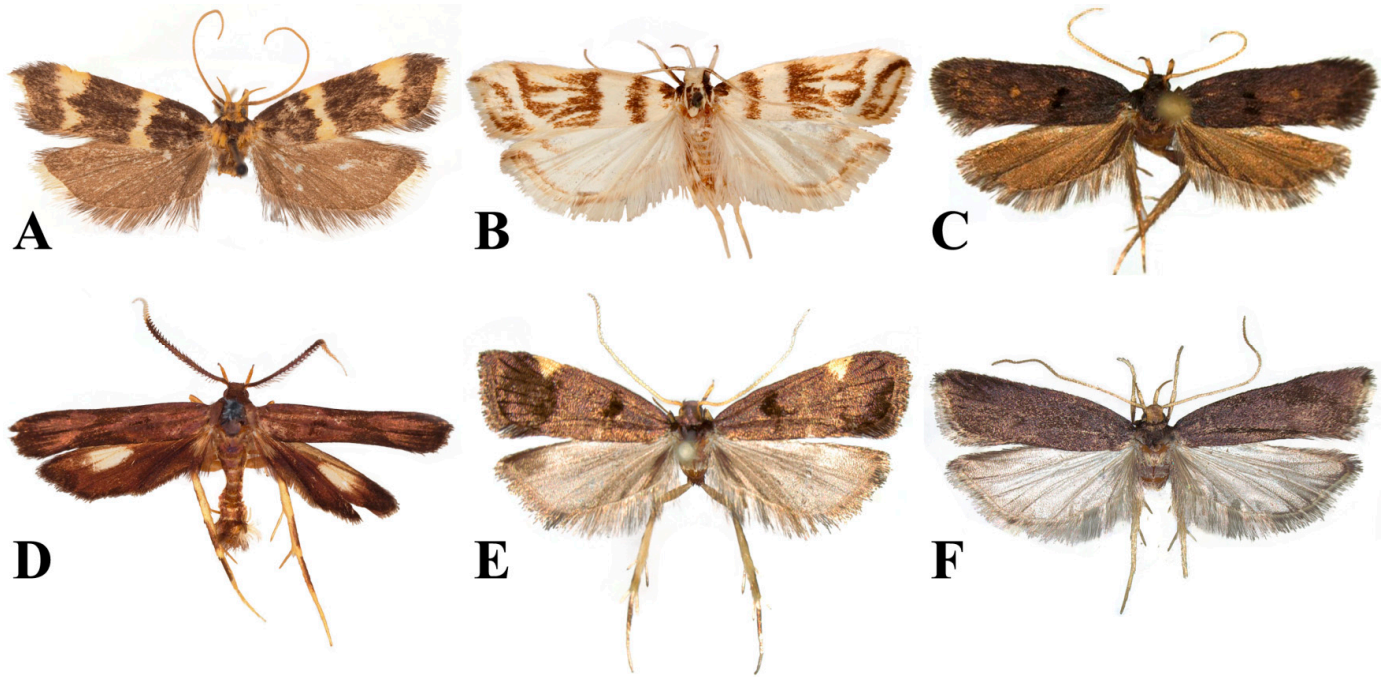


Figure 1. Representative species of the genera of Torodorinae: (A), *Dragmarucha proaula* Meyrick, 1908; (B), *Idiopteryx obliquella* (Walsingham, 1881); (C), *Protolychnis morogoroensis* Park & Koo, 2021; (D), *Ptilothyris purpurea* Walsingham, 1897; (E), *Thubdora mufindiensis* Park & Cho, 2021; (F), *Torodora batillana* Park & Koo, 2022.

Recently, Sterling et al. (2023) described a new genus, *Xenotorodor* Sterling, Lees & Grundy, based on the type species, *X. stygioxanthus* sp. nov. from the southern Spain [26], considering the replacement of the genus within the subfamily Crocanthinae or Torodorinae. A further study is needed.

Table 1. The number of species of Lecithoceridae by each subfamily in the World.

Subfamily	Region					Subtotal
	OR	PL	AF + MA	AU	OC	
Ceuthomadarinae	-	8	-	-	-	8
Lecithocerinae	592	63	105	28	90	878
Torodorinae	411	40	152 *	2	3	608
Crocanthinae	3	-	-	17	71	91
Total	1006	111	256 *	47	164	1585
(%)	(63.5)	(7.0)	(16.1)	(3.0)	(10.4)	(100%)

* 24 species of the genus *Parkiana* Cho, 2020 [27] and *Torodora* Meyrick, 1894, and 12 species not assigned their generic status, which were described from Madagascar, are included. OR: Oriental Region; PL: Palaearctic Region; AF: Afrotropical Region; MA: Madagascar Region; AU: Australian Region; OC: Oceanian Region.

Table 2. The number of the known species of the genus *Torodorinae*.

Genus	Known No. in the World	Known No. in the Afrotropical Region
<i>Dragmatucha</i> Meyrick, 1908	18	18
<i>Hyperochtha</i> Meyrick, 1925	5	1
<i>Idiopteryx</i> Walsingham, 1891	4	4
<i>Protolychnis</i> Meyrick, 1925	13	10
<i>Ptilothyris</i> Walsingham 1897	19	19
<i>Spiniola</i> Park, 2022	1	1
<i>Thubana</i> Walker, 1864	62	1
<i>Thubdora</i> Park, 2018	46	46
<i>Torodora</i> Meyrick, 1894	247	14 *
<i>Viperinus</i> Park, 2021	2	2
Total	417	116

* The 18 known species from Madagascar are not included.

2. Material and Methods

This review was based on all publications of the taxonomic and faunal studies of the subfamily *Torodorinae*, which were previously published for the fauna of the Afrotropical Region. The generic synopsis of the subfamily was given and discussed. The lists of the known species for the genera were prepared separately, with their type localities and depositories of the types. Also, all references concerning the information for the species of the subfamily were listed, along with the order of their citation.

3. Generic Synopsis of the Subfamily *Torodorinae*

3.1. *Dragmatucha* Meyrick, 1908

Type species: *Dragmatucha proaula* Meyrick, 1908: 726. TL: Rep. South Africa, Petersburg. *Dragmatucha* Meyrick is one of the African genera and similar to *Idiopteryx* Walsingham, 1881 in the general morphology, but it can be distinguished from *Idiopteryx* by M_3 coincident with CuA_1 in the forewing and the hind tibia is surrounded by long hairs. The following 18 species of the genus have been known in the Afrotropical Region (Table 3).

Table 3. Species list of *Dragmatucha* Walsingham with the type locality and depository of the types.

Species	Type Locality	Depository
<i>cochliana</i> Park, 2020—Park et al., 2020b: 163.	Uganda, Kibale Nat. Park	NHMO
<i>crinifrutalis</i> Park, 2020—Park et al., 2020b: 168.	Uganda, Kibale Nat. Park	NHMUK
<i>dizostera</i> Park, 2020—Park et al., 2020b: 169.	Uganda, Mpigi	MfN
<i>flavoaurea</i> Park & Karisch, 2022—Park et al., 2022b: 373.	Ivory Coast, Montagne	SDEI
<i>galbinea</i> Park, 2020—Park et al., 2020b: 155.	Uganda, Kibale Nat. Park	NHMO
<i>ghanaensis</i> Park, 2020—Park et al., 2020b: 166.	Ghana, Kakum	NHMUK
<i>goniotes</i> Park, 2020—Park et al., 2020: 160.	DR Congo, Eala	RMCA
<i>hispidula</i> Park, 2018—Park et al., 2018b: 160.	Cameroon, Efulen	CMNH
<i>kabarolensis</i> Park, 2020—Park et al., 2020b: 154.	Uganda, Kabarole	NHMO
<i>kakumensis</i> Park, 2020—Park et al., 2020b: 164.	Ghana, Kakum	NHMO
<i>mediolinea</i> Park & Karisch, 2022—Park et al., 2022b: 370.	Ivory Coast, Montagne	SDEI
<i>ovartiella</i> Park & Karisch, 2022—Park et al., 2022b: 372.	Ivory Coast, Montagne	SDEI
<i>pedalis</i> Park, 2020—Park et al., 2020b: 171.	Uganda, Kibale Na. Park	NHMUK
<i>polystriana</i> Park & Karisch, 2022—Park et al., 2022b: 369.	Ivory Coast, Montagne	SDEI
<i>proaula</i> Meyrick, 1908: 726.	South Africa, Transvaal	TMSA
<i>saltualis</i> Park, 2020—Park et al., 2020b: 157.	Kenya, Central	NHMUK
<i>vittatella</i> Park, 2020—Park et al., 2020b: 159.	Uganda, Kibale Na. Park	MfN
<i>vulcaniella</i> Park & Karisch, 2021: 591.	Equatorial Guinea, Bioko	SDEI

3.2. *Hyperochtha* Meyrick, 1925

Type species: *Onebala butyropha* Meyrick, 1910: 458. TL: Sri Lanka, Maskeliya.

Hyperochtha Meyrick is somewhat similar to *Philharmonia* Gozmány, 1978 and *Eccedoxa* Gozmány, 1973 by the absence of M_2 in both wings, but it can be distinguished from *Philharmonia* by M_3 arising from near the middle of the cell, whereas in the latter, it arises

from the lower corner of the cell. Only a single species has been known in the Afrotropical Region (Table 4).

Table 4. Species list of *Hyperochtha* Meyrick with the type locality and depository of the type.

Species	Type Locality	Depository
<i>dischema</i> (Meyrick, 1916: 576) (<i>Onebala</i>).	Malawi, Nyassaland	NHMUK

3.3. *Idiopteryx* Walsingham, 1891

Type species: *Cryptolechia obliquella* Walsingham, 1881: 254. TL: Rep. South Africa, KwaZulu-Natal.

=*Isotypa* Janse, 1954.

Idiopteryx Walsingham is characterized by the forewing venation with R_3 stalked with R_{4+5} , R_5 to costa, M_3 , CuA_1 , and CuA_2 on a common stalk; the hindwing with M_2 well-developed; the hind tibia with long, rough scales beyond half all around. It is differentiated from *Dragmatucha* Meyrick by having CuA_1 and CuA_2 , whereas CuA_1 and CuA_2 are coincident in the latter (Table 5).

Table 5. Species list of *Idiopteryx* Walsingham with the type locality and depository of the types.

Species	Type Locality	Depository
<i>bivia</i> (Meyrick, 1918: 25) (<i>Dragmatucha</i>).	RSA, KwaZulu-Natal	TMSA
<i>discopuncta</i> (Janse, 1949: 383) (<i>Isotypa</i>).	RSA, Cape, Grootvadersbos	TMSA
<i>jansei</i> Park & De prins, 2019b: 79.	RSA, Cape, Transkei	TMSA
<i>obliquella</i> (Walsingham, 1881: 254).	RSA, KwaZulu-Natal	NHMUK

3.4. *Protolychnis* Meyrick, 1925

Type species: *Lecithocera maculata* Walsingham, 1881: 276. TL: Rep. South Africa, KwaZulu-Natal.

Protolychnis Meyrick is one of the small genera of the subfamily Torodorinae, comprising 11 described species: eight species from the Afrotropical Region, two species (*lychnocentra* (Meyrick, 1904) and *trigonias* (Meyrick, 1904)) from Australia, and one species (*ipnosa* Wu, 1994) from China. The wing venation is similar to that of the Oriental genus *Abrachmia* Amsel, 1968, but it can be distinguished from the latter by the thick antenna, shorter than the forewing. Ten species have been reported from the Afrotropical Region (Table 6).

Table 6. Species list of *Protolychnis* Meyrick with the type locality and depository of the types.

Species	Type Locality	Depository
<i>bastini</i> Park, 2020—Park & Koo, 2020: 272.	DR Congo, Tervuren	RMCA
<i>chlorotoma</i> (Meyrick, 1914: 200) (<i>Onebala</i>).	Malawi, Nyasaland	MHMUK
<i>circuliella</i> Park, 2024—Park & Yu, 2024: 2.	Tanzania, Tanga	NHMUK
<i>maculata</i> (Walsingham, 1891: 104) (<i>Lecithocera</i>).	RSA, KwaZulu-Natal	NHMUK
<i>marginata</i> Walsingham, 1891: 104.	Gambia, Banjul	NHMUK
<i>morogoroensis</i> Park & Koo, 2021: 366.	Tanzania, Morogoro	NHMO
<i>natalensis</i> Park & De Prins, 2019: 84.	RSA, KwaZulu-Natal	TMSA
<i>oculiella</i> Park & Koo, 2021a: 363.	Kenya, Kajaido	NHMO
<i>petiliella</i> Park, 2020—Park & Koo, 2020: 270.	Uganda, Mpigi	NIBR
<i>tangaensis</i> Park, 2022—Park & Koo, 2022: 2.	Tanzania, Tanga	MHMUK

3.5. *Ptilothyris* Walsingham, 1897

Type species: *Ptilothyris purpurea* Walsingham, 1897: 37. TL: Nigeria, Idanre.

Ptilothyris Walsingham is an Afrotropical genus which was described based on *Ptilothyris purpurea* Walsingham from Lagos, Nigeria. The genus is superficially similar to *Thubdora* Park, 2018 in the wing pattern, but it can be distinguished by the forewing

being more elongated and the antenna strongly bipectinate. Nineteen species have been known from the Afrotropical Region (Table 7).

Table 7. Species list of *Ptilothyris* Walsingham with the type locality and depository of the types.

Species	Type Locality	Depository
<i>aglaocrossa</i> Meyrick, 1935: 564.	DR Congo, Lubumbashi	RMCA
<i>climacista</i> Meyrick, 1926: 289.	Cameroon, Bitje	NHMUK
<i>crassiella</i> Park, 2019—Park et al., 2019: 222.	Uganda, Kibale Nat. Park	MfN
<i>crossoceros</i> Meyrick, 1934: 452.	DR Congo, Kivu	NHMO
<i>drepanodes</i> Park, 2019—Park et al., 2019: 218.	Uganda, Kibale Nat. Park	MfN
<i>enormisella</i> Park, 2019: 217.	Ghana, Western Region	NHMO
<i>galbiplatella</i> Park, 2021: 594.	Uganda, Kabale	NHMO
<i>hylodes</i> Park, 2019—Park et al., 2019: 219.	Uganda, Kibale Nat. Park	MfN
<i>leifaarviki</i> Park, 2019—Park et al., 2019: 223.	Uganda, Kibale Nat. Park	NHMO
<i>loxocasis</i> Meyrick, 1938: 18.	DR Congo, N. Kivu	RMCA
<i>nausicaa</i> Meyrick, 1926: 288.	DR Congo, Marungu Plat	NHMUK
<i>neuroplaca</i> (Meyrick, 1933: 359) (<i>Idiopteryx</i>).	Zambia, Zambezi-Congo	NHMUK
<i>pilosa</i> Park, 2019—Park et al., 2019: 212.	Uganda, Kibale Nat. Park	MfN
<i>porphyrea</i> Ghesquière, 1940: 107.	DR Congo, Equateur	RMCA
<i>purpurea</i> Walsingham, 1897: 38.	Nigeria, Lagos	NHMUK
<i>ruicheensis</i> Park & Karisch, 2021: 590.	Equatorial Guinea, Isl. Bioko	SDEI
<i>serangota</i> Meyrick, 1932: 205.	Uganda, Kampala	NHMUK
<i>subcucullata</i> Park, 2019: 224.	Cameroon, Efulen	CMNH
<i>vokaensis</i> Park, 2019: 215.	Congo Rep., Pool Region	CMNH

3.6. *Spiniola* Park, 2022

Type species: *Spiniola hanaro* Park, 2022: 578. TL: Malawi, Mulanje.

Spiniola Park resembles superficially *Torodora* Meyrick and has a similar wing venation with *Eccedoxa* Gozmány, 1973 (R_5 absent in the forewing and M_2 absent in both wings), but it can be distinguished from *Torodora* by lacking vein M_2 in both wings and with well-developed, spine-like saccus in male genitalia. The main diagnostic character of this genus distinguished from its related genera is the well-developed, large spine-like saccus in the male genitalia (Table 8).

Table 8. Species list of *Spiniola* Park with the type locality and depository of the types.

Species	Type Locality	Depository
<i>hanaro</i> Park, 2021: 578.	Malawi, Mulanje	NHMO

3.7. *Thubana* Walker, 1864

Type species: *Thubana bisignatella* Walker, 1864: 814. TL: Malaysia, Sarawak.

=*Titana* Walker, 1864: 813. Type species: *Titana adelella* Walker, 1864.

=*Tiva* Walker, 1864: 821. Type species: *Tiva binotella* Walker, 1864.

=*Inapha* Walker, 1864: 999. Type species: *Inapha lampronialis* Walker, 1864.

=*Stelechoris* Meyrick, 1925: 243. Type species: *Pachnistis exaema* Meyrick, 1911.

Thubana Walker is one of the Oriental genera, distributed from North India to Sri Lanka, and the Philippines, and extended to the Indonesian Archipelago in the south. Of the 54 known species worldwide, only a single species has been known in Afrotropical Region (Table 9).

Table 9. Species list of *Thubana* Walker with the type locality and depository of the types.

Species	Type Locality	Depository
<i>amphisticta</i> Meyrick, 1914: 279.	Mozambique, Mt. Mlanje	NHMUK

3.8. *Thubdora* Park, 2018

Type species: *Thubdora acutalis* Park, 2018a: 1088. TL: Congo Rep., Pool Region.

Thubdora Park is an Afrotropical genus. It is similar to that of the African genus *Isotypa* Janse with R₅ absent in the forewing, but it differs by the hindwing with M₂ absent and M₃ stalked with CuA₁. The male genitalia are also specialized by the short uncus, bilobed apically; gnathos with large, modified broad basal plate; juxta broad with large triangular or semiovate plate distally. A total of 46 species have been known in the Afrotropical Region (Table 10).

Table 10. Species list of *Thubdora* Park with the type locality and depository of the types.

Species	Type Locality	Depository
<i>aciphalla</i> Park, 2018: 1090.	Congo Rep., Pool, Voka	NMNH
<i>acutalis</i> Park, 2018: 1088.	Congo Rep., Pool, Voka	CMNH
<i>afropyralidis</i> Park, 2020—Park et al., 2020: 454.	Uganda, Kibale Nat. Park	CMNH
<i>amblisodes</i> Park, 2018: 1091.	Cameroon, Efulen	CMNH
<i>angustiala</i> Park & Karisch, 2021: 587.	Equatorial Guinea, Bioko	SDEI
<i>barbata</i> (Meyrick, 1933: 356).	DR Congo, Haut-Uele	RMCA
<i>bilobella</i> Park, 2018: 1089.	Cameroon, Efulen	CMNH
<i>biocoica</i> Park & Karisch, 2021: 583.	Cameroon, Efulen	MNVD
<i>brachysema</i> (Meyrick, 1938: 18).	DR Congo, Orientale	NHMUK
<i>bythota</i> (Meyrick, 1916: 576).	Ghana, Gold Coast, Aburi	NHMUK
<i>cameroona</i> Park, 2018: 1093.	Cameroon, Efulen	CMNH
<i>corystos</i> Park, 2020—Park et al., 2020: 471.	Uganda, Mpigi.	MNHO
<i>crocophracta</i> (Meyrick, 1938: 18).	DR Congo, Orientale	NHMUK
<i>cuneiformis</i> Park & Karisch, 2022—Park et al., 2022b: 365.	Ivory Coast, Montagne	SDEI
<i>ealaensis</i> Park & De Prins, 2019: 455.	DR Congo, Equateur, Eala	RMCA
<i>elgozmanyi</i> Park, 2021: 591.	Uganda, Kabale	NHMO
<i>forficatalis</i> Park & Cho, 2021: 401.	Tanzania, Kigoma	NHMO
<i>fruticosa</i> Park, 2020—Park et al., 2020: 458.	Uganda, Kibale Nat. Park	MfN
<i>ghesquierei</i> Park & De Prins, 2019: 456.	DR Congo, Equateur, Eala	RMCA
<i>gladiator</i> Park & De Prins, 2019: 457.	DR Congo, Katanga	RMCA
<i>ivoryensis</i> Park & Karisch, 2022—Park et al., 2022b: 360.	Ivory Coast, Montagne	SDEI
<i>kapangaensis</i> Park & De Prins, 2019: 459.	DR Congo, Katanga	RMCA
<i>kibalensis</i> Park, 2020—Park et al., 2020: 459.	Uganda, Kibale Nat. Park	NHMO
<i>klenodes</i> Park, 2020—Park et al., 2020: 461.	Uganda, Kibale Nat. Park	MfN
<i>laticucullusa</i> Park, 2023—Park et al., 2023: 9.	Ghana, Bia nat. Park	TMCA
<i>latidiscalis</i> Park, 2020—Park et al., 2020: 462.	Uganda, Kibale Natl. Park	MfN
<i>mirinae</i> Park, 2020—Park et al., 2020: 463.	Uganda, Mpigi.	MfN
<i>mufindiensis</i> Park & Cho, 2021: 402.	Tanzania, Mufindi	NHMO
<i>muhezaica</i> Park, 2022—Park & Koo, 2022: 5.	Tanzania, Meheza	NHMO
<i>narusia</i> Park, 2020—Park et al., 2020: 475.	Uganda, Kibale Nat. Park	MfN
<i>nemophorella</i> (Ghesquière, 1940: 107).	DR Congo, Equateur, Eala	RMCA
<i>nemorosa</i> Park, 2020—Park et al., 2020: 465.	Uganda, Mpigi	NIBR
<i>neobarbata</i> Park & De Prins, 2019: 460.	DR Congo, Equateur	RMCA
<i>nubidiella</i> Park, 2023—Park et al., 2023: 10.	Ghana, Bia Nat. Park	RMCA
<i>ochrospilosa</i> Park & Cho, 2021: 404.	Tanzania, Morogoro	NHMO
<i>onsemi</i> Park, 2021: 591.	Uganda, Kabale, Ruhija	NHMO
<i>pulchella</i> Park & Karisch, 2022—Park et al., 2022b: 362.	Ivory Coast, Montagne	SDEI
<i>retusicalva</i> Park, 2020—Park et al., 2020: 467.	Uganda, Kibale Nat. Park	MfN
<i>seydeli</i> Park & De Prins, 2019: 4652.	DR Congo, Elisabethville	RMCA
<i>tanzaniana</i> Park & Cho, 2021: 405.	Tanzania, Morogoro	NHMO
<i>tonkpiensis</i> Park & Karisch, 2022—Park et al., 2022b: 363.	Ivory Coast, Montagne	SDEI
<i>trigonoides</i> Park, 2020—Park et al., 2020: 476.	Uganda, Kibale Nat. Park	MfN
<i>umbratilis</i> Park, 2020—Park et al. 2020: 468.	Uganda, Mpigi	MfN
<i>vernaculella</i> Park & Karisch, 2021: 585.	Equatorial Guinea, Bioko	MNVD
<i>villosiphalla</i> Park, 2020—Park et al., 2020: 479.	Uganda, Mpigi	NIBR
<i>wooriana</i> Park, 2020: 469—Park et al., 2020.	Uganda, Kibale Nat. Park	NHMO

3.9. *Torodora* Meyrick, 1894

Type species: *Torodora characteris* Meyrick, 1894.

=*Habrogenes* Meyrick, 1918: 102. TS: *Lecithocera eupatris* Meyrick, 1910.

=*Panplatyceros* Diakonoff, 1951: 76. TS: *Panplatyceros serpentina* Diakonoff, 1951.

Torodora Meyrick is the most diverse genus in the subfamily Torodorinae and is distributed worldwide. The genus comprises more than 240 described species which are mostly distributed in the Oriental Region and only a few species are known from the Palaearctic Region. The genus is generally defined by the wing venation with R_3 , R_4 , and R_5 usually on a common stalk in the forewing, and M_2 is present in both wings. The male genitalia are characterized by the hooked gnathos and the foot-shaped or variously elongated valva. Due to its wide diversity, its defining characteristics often overlap with those of other genera. A total of 14 species have been known in the Afrotropical Region (Table 11).

Table 11. Species list of *Torodora* Meyrick with the type locality and depository of the types.

Species	Type Locality	Depository
<i>amplignathosa</i> Park & De Prins, 2019: 463.	DR Congo, Katanga	RMCA
<i>batillana</i> Park & Koo, 2022: 580.	Kenya, Central	NHMUK
<i>chrysotes</i> Park & Koo, 2022: 582.	Uganda, Mpigi	MfN
<i>efulenensis</i> Park, 2018: 1086.	Cameroon, Efulen	CMNH
<i>hybrista</i> (Meyrick, 1922)	Senegal, Kati	MNHN
<i>lichanosa</i> Park & De Prins, 2019: 465.	DR Congo, Katanga	RMCA
<i>manalis</i> Park & Koo, 2021: 584.	Uganda, Kibale Nat. Park	MfN
<i>melanonota</i> Park & Koo, 2021: 407.	Tanzania, Morogoro	NHMO
<i>monobyrsa</i> Meyrick, 1931: 80 (<i>Lecithocera</i>).	Uganda, Madi	NHMUK
<i>nixcrinis</i> Park, 2022—Park & Koo, 2022: 4.	Tanzania, Morogoro	NHMO
<i>ochrometra</i> (Meyrick, 1933: 356) (<i>Lecithocera</i>).	Zambia, N. Rhodesia	NHMUK
<i>planusa</i> Park & De Prins, 2019: 465.	DR Congo, Equateur	RMCA
<i>semnodora</i> (Meyrick, 1933: 357) (<i>Lecithocera</i>).	DR Congo, Katanga	RMCA
<i>triloba</i> Park & De Prins, 2019: 467.	DR Congo, Orientale	RMCA

Note. Ghesquiere (1940) reported *T. iresia* Meyrick, 1911 from DR Congo [28], but it is not included herein, due to its uncertain distributional information.

3.10. *Viperinus* Park, 2021

Viperinus orbiosus Park & Koo, 2021a: 360. TL: Kenya, Rift Valley.

Viperinus has similar external morphological characteristics to *Protolychnis*, but the male genitalia can be distinguished by having uniquely specialized, two arched processes, each at the base of the valva. A polygonal signum plate in the female genitalia can also be a diagnostic character against the crescent signum plate of *Protolychnis*. In addition, a preliminary analysis result using the COI barcode sequences strongly supported that the genus *Viperinus* is a genus related to *Protolychnis* (Table 12).

Table 12. Species list of *Viperinus* Park with the type locality and depository of the types.

Species	Type Locality	Depository
<i>orbiosa</i> Park & Koo, 2021: 360.	Kenya, Rift Valley	NHMO
<i>pycnoistus</i> Park & Koo, 2021: 363.	Uganda, Murchison Fall N.P.	NHMUK

4. Discussion

According to the recent update of Wallace's zoogeographic regions of the world by Holt et al. (2013) [29], Madagascar Region was separated from Afrotropical Region. The two regions are geographically close to each other, but the fauna of Lecithoceridae in the Afrotropical and Madagascan regions is quite different, even though the fauna has been poorly studied yet, with a high percentage of the endemism in the composition like in the Australian and the Oceanian regions. Thus, the species of the subfamily Torodorinae known from Madagascar are not included in this article.

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Abbreviations

CMNH	Carnegie Museum of Natural History, Pittsburg, USA.
MfN	Zoologisches Museum für Naturkunde, Humboldt-Universität, Berlin, Germany.
MNHN	Muséum national d’Histoire naturelle, Paris, France.
MNVD	Museum für Naturkunde und Vorgeschichte, Dessau, Germany.
NHMO	The Natural History Museum, University of Oslo, Oslo, Norway.
NHMUK	The Natural History Museum, London, UK.
NHMW	Naturhistorisches Museum, Wien, Germany.
NIBR	National Institute of Biological Resources, Incheon National University, Incheon, Korea.
RMCA	Royal Museum for Central Africa, Tervuren, Belgium.
RMNH (=NCB)	Netherlands Centre for Biodiversity Naturalis (formerly Rijksmuseum van Natuurlijke Historie), Leiden, The Netherlands.
SAMA	South Australian Museum, Adelaide, Australia.
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.
TMSA	Ditsong National Museum of Natural History (former Transvaal Museum), Pretoria, Rep. of South Africa.

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