

Article III.—NEUROPTERA, PANORPATA, AND TRICHOPTERA
COLLECTED BY THE AMERICAN MUSEUM CONGO
EXPEDITION, WITH LISTS OF THE SPECIES KNOWN
FROM THE BELGIAN CONGO¹

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The collections brought from the Congo by Messrs. Lang and Chapin contain nineteen species of true Neuroptera, one of Panorpata, and five of Trichoptera. Many of these forms are widely distributed in tropical Africa, but the collection, small as it is, adds several species to the fauna of the Belgian Congo. A list of the Congo species hitherto known from the three orders here considered has been compiled by Dr. J. Bequaert and incorporated in the paper. While the neuropterous fauna of that country is too incompletely known to give much information with regard to its affinities, yet the occurrence of several forms from southern Abyssinia in the extreme northeastern Congo Basin, as shown by this collection, is noteworthy.

APPROXIMATE LOCATION OF PLACES MENTIONED IN THIS PAPER²

Barumbu.—1° 10' N., 23° 20' E.	Lisala.—2° 10' N., 21° 30' E.
Beni.—0° 30' N., 29° 30' E.	Matadi.—5° 50' S., 13° 35' E.
Bumba.—2° 10' N., 22° 30' E.	Medje.—2° 25' N., 27° 30' E.
Faradje.—3° 40' N., 29° 40' E.	Niagara.—3° 40' N., 27° 50' E.
Garamba.—4° 10' N., 29° 40' E.	Rungu.—3° N., 28° E.
Kabare.—0° 35' S., 29° 30' E.	Rutshuru.—1° 15' S., 29° 30' E.
Kasindi.—0°, 29° 40' E.	Stanleyville.—0° 30' N., 25° 15' E.

NEUROPTERA

Myrmeleonidæ

PALPARES Rambur

1. Palpares hamatus Kolbe

Palpares hamatus KOLBE, 1898, Entom. Zeitg. Stettin, LIX, p. 232.

Twenty-four specimens: Faradje, November 1912; Niagara, November 1910; Rungu, October 1910.

Not previously recorded from the Belgian Congo.—Described from Abyssinia. According to P. Esben-Petersen, 1916, Ark. f. Zool., X, No. 15, p. 10, this is a synonym of *P. tigris* Dalman; if the other synonymy

¹Scientific Results of the Congo Expedition. Entomology, No. 4.

²Most of these localities are shown on the map accompanying the reports on Congo Vespidae (1918, Bull. Amer. Mus. Nat. Hist., XXXIX, p. 9) and on land mollusks (1919, Bull. Amer. Mus. Nat. Hist., XL, p. 13).

proposed by that author prove correct, the species has a wide distribution on the African continent. Navás' genus *Nosa* (1911, Rev. Zool. Afric., I, p. 239) is based on a specimen of this species.

2. *Palpares abyssinicus* Kolbe

Palpares abyssinicus KOLBE, 1898, Entom. Zeitg. Stettin, LIX, p. 233.

Six specimens: Barumbu, July 1909; Niangara, November 1910; Faradje, December 1910.

Not previously recorded from the Belgian Congo.—Abyssinia, Eritrea.

3. *Palpares latro* Navás

Palpares latro NAVÁS, 1911, Rev. Zoolog. Afric., I, p. 238, Pl. xvi, fig. 3.

One specimen: Niangara, April 1913.

This species was described from a specimen without locality, probably from Central Africa; no other records of it have been published thus far. But, according to P. Esben-Petersen (1916, Ark. f. Zool., X, No. 15, p. 11), it is identical with *P. festivus* Gerstæcker.

CENTROCLISIS Navás, 1909

{(=*Sogra* Navás, 1912)

4. *Centroclisis mordax* (Navás)

Sogra mordax NAVÁS, 1912, Mem. R. Ac. Cienc. Barcelona, (3) X, p. 151, fig. 7.

One specimen: Matadi, June 1915.

Not previously recorded from the Belgian Congo.—Described from German East Africa. According to P. Esben-Petersen (1916, Ark. f. Zool., X, No. 15, p. 14) a synonym of *C. distincta* (Rambur) which has a wide range in Africa.

MYRMELEON Linné

5. *Myrmeleon obscurus* Rambur

Myrmeleon obscurus RAMBUR, 1842, Hist. Nat. Ins. Névroptères, p. 403.

One specimen: Stanleyville, March 1915.

Recorded from the Kasai (Lukombe, Dima), Manyema (Kibombo), and Katanga (Bukama).—A common species in tropical and South Africa.

CUETA Navás

6. *Cueta misteriosa* (Gerstæcker)

Myrmeleon misteriosus GERSTÆCKER, 1894, Mitth. naturw. Ver. Neu-Vorpommern, XXV (1893), p. 141.

One specimen: Niangara, April 1913.

Not previously recorded from the Belgian Congo.—German and British East Africa.

NEUROLEON Navás

7. **Neuroleon filiformis** (Gerstæcker)

Myrmeleon filiformis GERSTÆCKER, 1885, Mitth. naturw. Ver. Neu-Vorpommern, XVI, p. 31.

One specimen: Faradje, January 1913.

Not previously recorded from the Belgian Congo.—Sierra Leone, Cameroon, French Congo.

FORMICALEON Banks

8. **Formicaleon harpalyce** Banks

Formicaleon harpalyce BANKS, 1911, Ann. Entom. Soc. America, IV, p. 17.

Four specimens: Niangara, November 1910; Faradje, December 1910.

Not previously recorded from the Belgian Congo.—Togo.

9. **Formicaleon turbidus** (Navás)

Formicaleo turbidus NAVÁS, 1915, Mem. Acc. Rom. Nuovi Lincei, XXXIII, p. 11.

Two specimens: Medje, March 1910; Stanleyville, March 1915.

Not previously recorded from the Belgian Congo.—Described from the Congo without more definite mention of locality; probably from the French Congo.

MACRONEMURUS Costa

10. **Macronemurus lepidus** Kolbe

Macronemurus lepidus KOLBE, 1898, Deutsch Ost Afr., IV, Netzflügler, p. 23.

Two specimens: Kabare, August 1914 (J. Bequaert Coll.); Faradje, December 1912.

Not previously recorded from the Belgian Congo.—German East Africa.

CREAGRIS Hagen

11. **Creagris nubifer** Kolbe

Creagris nubifer KOLBE, 1898, Deutsch Ost Afr., IV, Netzflügler, p. 25.

One specimen: between Beni and Kasindi, August 1914 (J. Bequaert Coll.).

Known from the northeastern Congo (Kinjawanga, north of Lake Albert Edward, a locality close to Beni) and Katanga (Bunkeya).—Togo, Abyssinia, German and British East Africa, South Africa.

12. **Creagris africana** (Rambur)

Myrmeleon africanus RAMBUR, 1842, Hist. Nat. Ins. Névroptères, p. 395.

Eleven specimens: Faradje, January 1913; Niangara, November 1910.

Not previously recorded from the Belgian Congo.—Widely distributed in Africa south of the Sahara.

CYMOTHALES Gerstæcker

13. **Cymothales johnstoni** Kirby

Cymothales johnstoni KIRBY, 1902, in H. Johnston, The Uganda Protectorate, I, p. 469.

One specimen: Stanleyville, March 1915.

Not previously recorded from the Belgian Congo.—The species was known from Uganda (Entebbe) only.

This is the only specimen I have seen, except the type, with which it agrees closely. It is most nearly related to *C. dulcis* Gerstæcker, but is paler throughout.

Ascalaphidæ

TMESIBASIS MacLachlan

14. **Tmesibasis waelbroecki** van der Weele

Tmesibasis waelbroecki van der Weele, 1908, Cat. Coll. Zoolog. de Selys Longchamps, Fasc. 8, Ascalaphiden, p. 92, fig. 58.

Garamba, June 1912.

Known only from the Belgian Congo: Kinshasa.

HELICOMITUS MacLachlan

15. **Helicomitus festivus** (Rambur)

Bubo festivus RAMBUR, 1842, Hist. Nat. Ins. Névroptères, p. 356.

Three specimens: Niangara, November 1910; Faradje, November 1912.

Recorded from the Manyema (Kibombo, 245 kilom. south of Kindu), Uele (Bambili) and Katanga (Bukama, Watura-Katwe, Kapiri).—A common species in Africa from the Senegal and Egypt to Natal; also on Madagascar.

16. **Helicomitus rutilus** (Gersæcker)

Suphalasca rutila GERSTÆCKER, 1894, Mitth. naturw. Ver. Neu-Vorpommern, XXV (1893), p. 105.

Two specimens: Faradje, December 1912.

Not previously recorded from the Belgian Congo, but doubtfully distinct from *H. festivus*, with which it is united by van der Weele (1908, Cat. Coll. Zoolog. de Selys Longchamps, Fasc. 8, p. 175).—German East Africa.

DISPAROMITUS van der Weele17. **Disparomitus bacillus** (Gerstæcker)

Suphalasca bacillus GERSTÆCKER, 1885, Mitth. naturw. Ver. Neu-Vorpommern, XVI, p. 5.

Three specimens: Medje, April 1910.

Recorded from the Lower Congo (Congo da Lemba).—A West African species: Togo, Sierra Leone, Cameroon, French Congo.

Chrysopidæ**CHRYSOPA** Leach18. **Chrysopa bequaerti** Navás

Chrysopa bequaerti Navás, 1912, Rev. Zoolog. Afric., I, p. 409, fig. 4.

One specimen: Faradje, November 1912.

Known from the Belgian Congo only, where it is recorded in the Lower Congo (Kitobola) and Katanga (Kongolo).

NOTHOCHRYSA MacLachlan19. **Nothochrysa rufostigma** (MacLachlan)

Chrysopa rufostigma MACLACHLAN, 1868, Journ. Linn. Soc. London, Zool., IX, p. 253.

One specimen: Faradje, November 1912.

Not previously recorded from the Belgian Congo.—South Africa.

NEUROPTERA RECORDED FROM THE BELGIAN CONGO

Myrmeleonidæ**PALPARES** Rambur

Africa, Madeira, Southern Europe, Persia, India.

Palpares abyssinicus Kolbe. See above.

Palpares agrotus Gerstæcker.—Congo (?)

- Palpares bayeri* Navás.—Northeastern Congo (Beni). Probably a synonym of *P. obsoletus* Gerstæcker.
- Palpares cognatus* Rambur.—Belgian Congo.
- Palpares hamatus* Kolbe. See above.
- Palpares ictericus* Navás.—Lower Congo (Kitobola). Probably a synonym of *P. ægrotus* Gerstæcker.
- Palpares latipennis* Rambur.—Lower Congo (Banana), between Leopoldville and Stanleyville.
- Palpares latro* Navás. See above.
- Palpares nigrescens* Navás.—Katanga (Sankisia).
- Palpares normalis* Navás.—Katanga.
- Palpares obsoletus* Gerstæcker.—Stanley Pool.
- Palpares radiatus* Rambur.—Congo (?).
- Palpares stuhlmanni* Kolbe.—Northeastern Congo (Vichumbi).
- Palpares tigris* Dalman.—Katanga (Punga, Sankisia). According to P. Esben-Petersen, *Nosa leonina* Navás was based on an aberrant specimen of the same species. See above.

PALPARELLUS Navás

Africa. P. Esben-Petersen (1916, *op. cit.*, p. 11) is of the opinion that this is not generically distinct from *Palpares*.

Palparellus obscuripennis (E. Schmidt).—Kasai, Katanga (Lusindoi).

HAGENOMYIA Banks

(= *Nelees* Navás)

- Hagenomyia imperator* (Navás).—Katanga (Kapiri).
- Hagenomyia indistincta* (Navás).—Katanga (Sankisia).
- Hagenomyia lyncea* (Fabricius).—Kasai (Lukombe).
- Hagenomyia tristis* (Hagen).—Lower Congo (Kunga, Leopoldville, Tchoa), Kasai (Lukombe), Katanga (Kongolo, Katwamba, Katolo, Kapiri, Shinsenda).

SYNGENES Kolbe

Syngenes longicornis (Rambur).—Congo (?).

CENTROCLISIS Navás

(including *Sogra* Navás)

Africa.

Centroclisis brachygaster (Rambur).—Lower Congo (Leopoldville), Kasai (Lulua-bourg).

Centroclisis lineatipennis (Peringuey).—Kasai (Hemptinne-St.-Benoit near Luluabourg).

Centroclisis mordax Navás. See above.

Centroclisis perversa (Navás).—Uele.

Centroclisis rufescens (Gerstæcker)—Lake Albert.

MYRMELEON Linné

Cosmopolitan.

Myrmeleon atlas Banks.—Northeastern Congo (Kwidjwi).

Myrmeleon lethifer Walker.—Northeastern Congo (Kwidjwi).

Myrmeleon obscurus Rambur. See above.

Myrmeleon simplicissimus Gerstæcker.—Katanga (Kapiri).

GYMNOLEON Banks

Africa.

Gymnoleon (?)*cognatus* Navás.—Katanga (Bukama).

GIBRELLA Navás

Africa.

Gibrella congolana Navás.—Katanga (Kapiri).

MACROLEON Banks

Macroleon polyzonus (Gerstæcker).—Equator (Busira).

CREAGRIS Hagen

Creagris africanus (Rambur). See above.

Creagris nubifer Kolbe. See above.

NETEJA Navás

Neteja sollicita Navás.—Katanga (Kapiri).

FORMICALEON Banks

Formicaleon harpalyce Banks. See above.

Formicaleon lethalis (Walker).—Kasai (Dima), Lake Leopold II, Katanga.

Formicaleon recurvus (Navás).—Kasai (Lodima).

Formicaleon scolius (Navás).—Lower Congo (Congo da Lemba).

Formicaleon turbidus (Navás). See above.

Formicaleon tholloni (Navás).—Kasai.

GRIALA Navás

Griala macilenta Navás.—Katanga (Kapiri).

NEMOLEON Navás

Nemoleon kituanus (Kolbe).—Northeastern Congo (Kwidjwi).

MACRONEMURUS Costa

Macronemurus interruptus Kolbe.—Northeastern Congo (Buginda).

Macronemurus iolanthe Banks.—Belgian Congo.

Macronemurus lepidus Kolbe. See above.

CYMOTHALES Gerstæcker

Africa, including Madagascar.

Cymothales congolensis Navás.—Katanga (Kapiri).

Cymothales delicatus Banks.—Congo (?).

Cymothales johnstoni Kirby. See above.

Cymothales liberiensis van der Weele.—Lower Congo (Lukula).

Cymothales mirabilis Gerstæcker.—Congo (?).

MOSSA Navás

Africa.

Mossa externa Navás.—Katanga (Bukama).

MAULA Navás

Africa.

Maula stigmatus Navás.—Katanga (Kalengwe).

CUETA Navás

Cueta cridai Navás.—Kasai.

Cueta mysteriosa (Gerstæcker.) See above.

Cueta punctatissima (Gerstæcker).—Katanga (Elisabethville).

Cueta styczynskii Navás.—Lower Congo (Boma).

NEUROLEON Navás

Neuroleon alcidice (Banks) (= *Creagris latens* Navás).—Lower Congo (Boma, Kitobola, Leopoldville), Katanga (Bukama).

Neuroleon filiformis (Gerstæcker). See above.

NYUTUS Navás

Nyutus lombardi Navás.—Lower Congo (Matadi).

BANYUTUS Navás

Banyutus acutus Navás.—Katanga (Katwamba, Kapiri, Lubumbashi River).

Banyutus insidiosus Navás.—Katanga (Katwamba, Kapiri).

Banyutus lethalis (Walker).—Katanga (Kasenga).

Banyutus maynei Navás.—Lower Congo (Malela).

Banyutus neuter Navás.—Katanga (Katolo).

Nemopteridæ**NEMOPISTHA** Navás

Africa.

Nemopistha hennini Navás.—Belgian Congo; exact locality unknown.

Ascalaphidæ**ALLOCORMODES** MacLachlan

Africa

Allocormodes intractabilis (Walker).—Lower Congo (Lukula), Kwango (Popa-cabacca), Kasai (Kondue, Lodima):

TMESIBASIS MacLachlan

Africa.

Tmesibasis alberti Navás.—Katanga (Kasenga).

Tmesibasis waelbroeckii van der Weele. See above.

SUHPALACSA Lefèbvre

Australia, Malayan Archipelago, West Africa.

Suupalacsa haullevillei (Navás).—Kasai (Dima).

Suupalacsa recondita (Navás).—Lower Congo (Malela).

Suupalacsa subcostalis (Navás).—Kasai (Dima).

HELICOMITUS MacLachlan

Africa, Southern Asia.

Helicomitus (?) *bequaerti* Navás.—Katanga (Sankisia).

Helicomitus festivus (Rambur). See above.

NANOMITUS Navás

Africa.

Nanomitus sellatus Navás.—Katanga (Lukonzo).

DISPAROMITUS van der Weele

Africa.

Disparomitus bacillus (Gerstæcker). See above.

Disparomitus longus Navás.—Katanga (Kapiri).

NAGACTA Navás

Africa.

Nagacta leplaei Navás —Katanga (Kapiri).

Nagacta schoutedeni Navás.—Katanga (Kapiri).

NEPHONEURA MacLachlan

Africa.

Nephoneura clavata Navás.—Katanga (Lukonzolwa).

ENCYOPOSIS MacLachlan

Africa.

Encyoposis hemistigma van der Weele.—Katanga (Sankisia).

Encyoposis nigrostigma Navás.—Northeastern Congo (Gangara between Dungu and Faradje).

PHALASCUSA Kolbe

Africa.

Phalascusa vassei van der Weele.—Katanga (Kasenga, Elisabethville).**DICOLPUS** Gerstæcker

Tropical Africa.

Dicolpus volucris Gerstæcker.—Manyema (Nyangwe).**Osmylidæ****LYSMUS** Navás*Lysmus leucomatodes* Navás.—Congo (?).**Mantispidæ****NECYLA** Navás*Necyla cercata* Navás.—Katanga (Mufungwa-Sampwe).
Necyla perparva (Esben-Petersen).—Lower Congo (Boma).**MANTISPILLA** Enderlein*Mantispilla umbripennis* Navás.—Katanga (Elisabethville).**Hemerobiidæ****NOSYBUS** Navás*Nosybus nobilis* Navás.—Katanga (Bukama).**Chrysopidæ****CHRYSOPA** Leach*Chrysopa bequaerti* Navás. See above.
Chrysopa congrua Walker.—Lower Congo (Ganda Sundi).
Chrysopa ducissa Navás.—Katanga (Kapiri).**NOTHOCHRYSA** MacLachlan*Nothochrysa rufostigma* (MacLachlan). See above.
Nothochrysa temerata Navás.—Katanga (Kapiri).

PANORPATA

Bittacusidæ**BITTACUS** Latreille1. **Bittacus weelei** Esben-Petersen*Bittacus weelei* ESBEN-PETERSEN, 1913, Rev. Zoolog. Afric., III, p. 142, figs. 7 and 8.

One specimen: Rutshuru, September 1914 (J. Bequaert Coll.).

Recorded from the Manyema (Kindu) and Katanga (Lubumbashi River) —German East Africa.

PANORPATA RECORDED FROM THE BELGIAN CONGO

Bittacusidæ

BITTACUS Latreille

Bittacus montanus van der Weele (*B. schoutedeni* Esben-Petersen).—North-eastern Congo (between Beni and Lesse), Katanga (Mufungwa), Manyema (Kindu, Vieux-Kassongo).

Bittacus pobeguini Navás.—Katanga (Kongolo).

Bittacus weelei Esben-Petersen. See above.

TRICHOPTERA

Polycentropidæ

DIPSEUDOPSIS Walker

1. **Dipseudopsis fasciata** Brauer

Dipseudopsis fasciata BRAUER, 1875, Verh. Zool. Bot. Ges. Wien, XXV, p. 69, Pl. IV, fig. 3.

Faradje, March and November 1912.

Recorded from various localities of the Belgian Congo: Lower Congo (Leopoldville), island of the Congo River at the confluence of the Ubangi River, Uele River.—Tropical Africa from the Senegal, Sudan and Abyssinia to Rhodesia and German East Africa.

Hydropsychidæ

HYDROPSYCHODES Ulmer

2. **Hydropsychodes sexfasciata** Ulmer

Hydropsychodes sexfasciata ULMER, 1904, Ark. f. Zool., I, p. 421, figs. 10–12.

Stanleyville, January to March 1915.

Recorded from the Aruwimi River (Banalia).—Cameroon, Belgian Congo.

ÆTHALOPTERA Brauer

3. **Æthaloptera dispar** Brauer

Æthaloptera dispar BRAUER, 1875, Verh. Zool. Bot. Ges. Wien, XXV, p. 72, Pl. IV, figs. 4–4 c.

Matadi, June 24, 1909; Stanleyville, March 1915.

Lower Congo (Boma, Leopoldville, Kinshasa, Kwamouth), Middle Congo (Bolobo), Lake Albert Edward, Kwango (Popocabacca).—West Africa: Senegal, Cameroon, French Congo, Anglo-Egyptian Sudan, Belgian Congo.

POLYMORPHANISCUS Walker

4. **Polymorphaniscus bipunctatus** (Brauer)

Estropsis bipunctata BRAUER, 1875, Verh. Zool. Bot. Ges. Wien, XXV, p. 73.

Bumba, May 15, 1915; Lisala, May 6, 1915.

Common in the Belgian Congo: Lower Congo (Kinshasa, Boma), Middle Congo (Irebu), Kasai, Bangala, Aruwimi (Basoko).—Tropical Africa from the Niger and Anglo-Egyptian Sudan to Natal.

PROTOMACRONEMA Ulmer

5. **Protomacronema hyalinum** Ulmer

Protomacronema hyalinum Ulmer, 1904, Zool. Anzeiger, XXVIII, p. 354, fig. 1.

Stanleyville, August 10, 1909.

Common in the Belgian Congo: Lower Congo (Boma, Kinshasa, Leopoldville), Equator (Ikelemba, Baringa), Bangala (Umangi).—French Congo.

TRICHOPTERA RECORDED FROM THE BELGIAN CONGO

Hydroptilidæ

CATOXYETHIRA Ulmer

Catoxyethira fasciata Ulmer.—Lower Congo (Kinshasa).

Polycentropidæ

NYCTIOPHYLAX Brauer

Nyctiophylax occidentalis Ulmer.—Lower Congo (Kinshasa).

PROTODIPSEUDOPSIS Ulmer

Protodipseudopsis sjæstedti Ulmer.—Congo.

DIPSEUDOPSIS Walker

Dipseudopsis africana Ulmer.—Belgian Congo.

Dipseudopsis fasciata Brauer See above.

Dipseudopsis lata Ulmer. Kasai (Dima).

Dipseudopsis schoutedeni Lestage.—Belgian Congo.

Dipseudopsis simplex Ulmer.—Belgian Congo.

Psychomyidæ**ECNOMUS** MacLachlan

Ecnomus tropicus Ulmer.—Lower Congo (Kinshasa).

Ecnomus deceptor MacLachlan.—Lake Kivu.

Hydropsychidæ**HYDROPSYCHODES** Ulmer

Hydropsychodes diminuta (Walker).—Lower Congo (Kinshasa)

Hydropsychodes albomaculata Ulmer.—Lower Congo (Kinshasa).

Hydropsychodes sexfasciata Ulmer. See above.

ÆTHALOPTERA Brauer

Æthaloptera dispar Brauer (= *Primerenca maesi* Navás). See above.

POLYMORPHANISCUS Walker

Polymorphanicus bipunctatus (Brauer.) See above.

PHANOSTOMA Brauer

Phanostoma senegalense Brauer.—Lower Congo (Kinshasa), Bangala (Lisala).

PROTOMACRONEMA Ulmer

Protomacronema hyalinum Ulmer. See above.

Protomacronema pubescens Ulmer.—Lower Congo (Kinshasa), island of the Congo River at the confluence of the Ubangi.

MACRONEMA Pictet

Macronema capense Walker var. *signatum* Walker.—Ubangi.

Leptoceridæ**LEPTOCERUS** Leach

Leptocerus trivittatus Ulmer.—Lower Congo (Kinshasa).

PSEUDOLEPTOCERUS Ulmer

Pseudoleptocerus squamosus (Ulmer).—Lower Congo (Kinshasa).

ÆCETIS MacLachlan

Æcetis fasciata Lestage.—Belgian Congo.

SETODELLINA Lestage

Setodellina albopunctata Lestage.—Belgian Congo.