

Short scientific note

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Some Neuroptera of the Horn of Africa from the Museum of Zoology of the University of Rome “La Sapienza” (Neuroptera: Chrysopidae, Mantispidae, Ascalaphidae, Myrmeleontidae)

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Abstract

The study of Neuroptera from the Horn of Africa preserved in collections of the Museum of Zoology of the University of Rome “La Sapienza” and those collected several years ago by the late entomologist Prof. A. Vigna Taglianti (Rome), contributes to increasing our knowledge of the neuropterological fauna for this part of East Africa. We give a description of the female of *Apertochrysa eurydera* (Navás, 1910) and a comparison between the male of *Stenares completus* Banks, 1915 (of which only the female was known) and that of *S. irroratus* Navás, 1912 (based on a specimen preserved in the Museum of Zoology of the University of Florence).

Key words: Ascalaphidae, Myrmeleontidae, Chrysopidae, Mantispidae, Horn of Africa.

Introduction

The neuropterological material from the Horn of Africa, belonging to the Zoological Museum of the University of Rome (MZUR), has allowed us to examine 219 specimens (stored both dry and in ethanol). This material was collected in two distinct periods. The first part consists of a smaller number of specimens collected randomly in the Horn of Africa during “the Italian colonial period” (ca. 1937-1940). The second part, collected during the research carried out by the staff of the then Zoological Institute of the University of Rome “La Sapienza” in 1973 in some regions of Central and South Ethiopia and in 1988 in Somalia (Lower Shabelle and North regions).

This paper contributes to expanding the knowledge of neuropterological fauna for this area, thus far rather poorly known, with the exception of data present in a few rather ancient works dealing mainly on Ethiopian and Somali fauna (Banks 1911, 1913, 1915; Esben-Petersen 1928; Navás 1927, 1930, 1932, 1935, 1936), and in a series of more recent contributions (Hölzel & Ohm 1991; Hölzel et al. 1999; Insom & Carfi 1988a, 1988b; Insom & Terzani 2014, 2017). Otherwise, these are always quotations in more general papers on the distribution of species that are also known from other areas of Africa.

We have identified 42 species (including 4 only up to genus level) belonging to the following families: Ascalaphidae, Myrmeleontidae, Chrysopidae and Mantispidae. The description of the female *Apertochrysa euridera* (Navás, 1910) and the comparison between *Stenares completus* Banks, 1911 and *S. irroratus* Navás 1912 for this geographical area are given.

Material and Methods

All the material examined comes from Eritrea, Ethiopia, and Somalia, and belonging to the entomological collections of the Museum of Zoology of the University of Rome “La Sapienza” (MZUR). This material was stored as dry specimens (pinned or in glassine envelopes) or in 65% ethanol.

Synonymy refers only to original descriptions (Od), redescriptions (Rd), citations (Ct), distribution (Dst) and taxonomy (Tax) [for full synonymy, see: Lacewing Digital Library (Oswald 2024)].

Specimens that lacked the abdomen or its apex, the sex was indicated with “spec. (sex unknown)”.

The general distribution (updated to the present paper) is taken from Oswald (2024).

The pictures of wings and body were made with a Nikon D5100 digital camera coupled with a 40 mm Micro Nikkor lens. The details were photographed with Optikam B5 connected to a stereomicroscope MBS-10 or connected to a Koristka microscope with a Leitz Wetzlar Photar 1:4/50 photographic lens. Pictures were stacked with Combine ZP and elaborated with GIMP v.2.10.30 programs.

The tip of abdomen was removed from the specimens, rehydrated by NH₄OH 10% and cleared by KOH 10% for a few minutes at 50°C. The terminalia were rinsed in acetic acid 10% and distilled water (three changes) and stored into microvials with glycerine.

Systematics

CHRYSOPIDAE Schneider, 1851

Chrysopinae Schneider, 1851

Ankylopterygini Navás, 1913

Ankylopteryx Brauer, 1864

Ankylopteryx modesta Hölzel & Ohm, 1991

Ankylopteryx modesta Hölzel & Ohm, 1991: 59 (Od).

Specimens examined. Somalia: 1 spec. (sex unknown), Mogadiscio, VI.1937, S. A. Nicotra leg.

Distribution. So far only known from Somalia.

Remarks. The specimen, although lacking the abdominal apex, agrees with both the description and the wing pattern shown in Hölzel & Ohm (1991, Fig. 20) for this species. Furthermore, the collection locality is within the area of distribution known for Somalia.

Belenopterygini Navás, 1913

Italochrysa Principi, 1946

Italochrysa peringueyi (Esben-Petersen, 1920)

Nothochrysa peringueyi Esben-Petersen, 1920: 511 (Od).

Italochrysa peringueyi: Tjeder, 1966: 277 (Rd).

Specimens examined. Ethiopia: 1♂, Galla & Sidamo, Neghelli (1441 m), V.1938, S. A. Nicotra leg. – **Somalia:** 1♀, Mogadiscio, 26.IV.1938, S. A. Nicotra leg.

Distribution. South Africa, Zimbabwe and now for Ethiopia and Somalia.

Italochrysa fulvicornis Kimmins, 1955

Italochrysa fulvicornis Kimmins, 1955: 4 (Od); Tjeder, 1966: 288 (Rd).

Specimens examined. Somalia: 1♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, M. Bologna leg.

Distribution. Tanzania, South Africa, Zimbabwe and now Somalia.

Chrysopini Schneider, 1851

Ceratochrysa Tjeder, 1966

Ceratochrysa antica (Walker, 1853)

Chrysopa antica Walker, 1853: 270 (Od).

Chrysopa nesaea Navás, 1911: 268 (Od).

Chrysopa inaequalis Navás, 1912: 103 (Od).

Chrysopa regina Navás, 1914: 85 (Od).

Chrysopa ducissa Navás, 1914: 375 (Od).

Chrysopa vuilleti Navás, 1914: 98 (Od).

Chrysopa pooana Navás, 1922: 109 (Od).

Cintameva dimidiata Navás, 1928: 121 (Od).

Chrysopa iniqua Navás, 1929: 19 (Od).

Musola impar Navás, 1929: 368 (Od).

Chrysopa undulata Fraser, 1952: 58 (Od).

Chrysopa (*Ceratochrysa*) *ducissa* Navás: Tjeder, 1966: 356 (Rd).

Chrysopa (*Ceratochrysa*) *atrostrata* Tjeder, 1966: 358 (Od).

Ceratochrysa antica (Walker, 1853): Barnard & Brooks, 1984: 366 (Rd).

Specimens examined. Somalia: 1♀, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988, A. Vigna Taglianti leg.

Distribution. Widespread sub-Saharan Africa species including Madagascar and islands of the western Indian Ocean.

Apertochrysa Tjeder, 1966

Apertochrysa eurydera (Navás, 1910)

Chrysopa eurydera Navás, 1910: 43 (Od); Esben-Petersen, 1927: 447.

Chrysopa madegassa Navás, 1921: 69 (Od); Esben-Petersen, 1927: 447.

Chrysopa crassinervis Esben-Petersen, 1927: 452 (Od).

Chrysopa icterica Esben-Petersen, 1927: 450 (Od).

Apertochrysa eurydera: Hölzel & Ohm, 1992: 173; Ohm & Hölzel, 2002: 235; Hölzel, 2002: 131 (Ct).

Apertochrysa (*alcestes*) *eurydera*: Breitkreuz et al., 2021: 220 (Tax).

Specimens examined. Somalia: 1♀, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988, A. Vigna Taglianti leg.

The specimen ♀ examined is preserved in alcohol and appears to be a juvenile form because the cuticle is transparent. We give a description because, at present, we have not found any description or representation of the main morphological structures of the female of *A. eurydera*.

Description. Female (Figs. 1A-G). Small specimen. Triangular head; antennae light coloured; length of forewing 10.5 mm, length of hindwing 9.5 mm; width of forewing 3.5 mm, width of hindwing 3.5 mm.

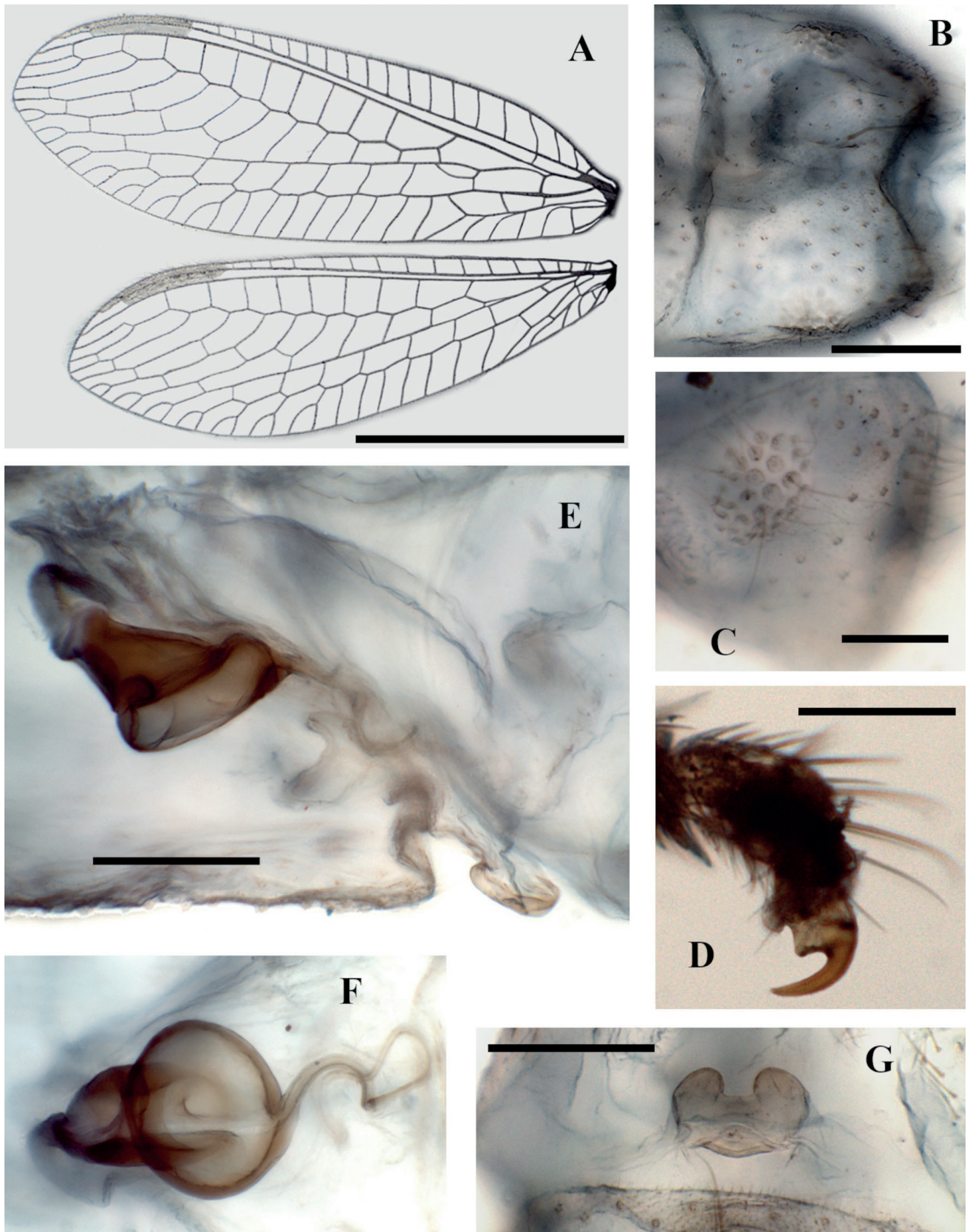


Fig. 1 – *Apertochrysa eurydera* (Navás, 1910) [♀]: **A**, Left fore- and hindwings; **B**, IX tergite and ectoprocts (dorsal view); **C**, *Callus cerci*; **D**, Claw hind leg; **E**, Spermatheca (lateral view; **F**, *Id.* (ventral view); **G**, Subgenital (ventral view). – [Scale bars: 5 mm (Fig. A); 0.2 mm (Figs B, E-G); 0.1 mm (Figs C-D)].

Wings (Fig. 1A). Membrane hyaline; without spots or shadings, pterostigma poorly defined with three incomplete crossveins. Forewing: intramedian cell elongate; its tip just exceeds the first radio-medial crossvein. Radial crossveins straight. Radial sector as in Fig. 1A; radius and subcosta are almost equal in length. Number of gradates are 3 inner series and 4 outer ones. The first gradata of the internal series does not meet the pseudomedial. Cubital cells: the 1st is a little shorter of 2nd. Hindwing: radial crossveins straight; Radial sector as in Fig. 1A; radius and subcosta are almost equal in length. Number of gradates are 3 inner series and 5 outer ones. **Legs**. Femur and tibia without any trace of dark points or lines, tarsal segments slightly brownish. The hind tarsal claw as shown in Fig. 1D. **Abdomen**. Ectoprocts dorsally fused with a dorsal depression (Fig. 1B). Callus cerci with 31 trichobothria (Fig. 1C). Sternite 7 at apex right, its edge is membranous and it is covered by microthorns. Subgenital plate short, membranous part with a wide base, sclerotized part wider than long, bilobed apically with a rectangular notch (Fig. 1G). **Spermatheca**. Short; the vela is triangular in lateral view (Fig. 1E), ventral impression deep (Fig. 1F); short, loosely coiled duct.

Distribution – Afrotropical element (widespread, including Madagascar and western Indian Ocean islands) and South Africa.

MANTISPIDAE Leach, 1815
Mantispinae Leach, 1815

Afromantispa Snyman & Ohl, 2012

***Afromantispa tenella* (Erichson, 1839)**

Mantispa tenella Erichson, 1839:169 (Od).
Mantispilla tenera Navás, 1914: 40 (Od).
Mantispa variolosa Navás, 1914: 648 (Od).
Mantispa axillata Navás, 1936: 354 (Od).
Afromantispa tenella: Snyman and Ohl, 2012: 74 (Tax).
Afromantispa variolosa: Snyman et al., 2015: 95 (Tax).

Specimens examined – **Eritrea**: 1 spec. (sex unknown), Gura, XII.1936-III.1937, S. A. Nicotra leg. – **Ethiopia**: 1♀, Galla & Sidamo Neghelli (1441 m), VI.1938, S. A. Nicotra leg. – **Somalia**: 1♀, Basso Shebeli (= Lower Shabelle) (70 m), 24.III.1940, Romei leg.; 1 spec. (sex unknown), Afgoi, VIII.1937, S. A. Nicotra leg.

Distribution – Cameroon, Côte d’Ivoire, Democratic Republic of the Congo, Ethiopia, Kenya, Nigeria, Somalia, South Africa, Tanzania.

***Afromantispa nana* (Erichson, 1839)**

Mantispa nana Erichson, 1839:169 (Od).
Necyla arabica Navás, 1914:214 (Od).
Necyla bonhourei Navás, 1922:397 (Od).

Afromantispa nana: Snyman et al., 2015: 95 (Tax).

Specimens examined – **Somalia**: 1♂, (SO.07) Lower Shabelle Reg., Shabelle swamps, Abarey, Joware Lake, 13-14.V.1988, at light, M. Bologna leg.; 1♂, 1♀ *idem*, 14-15.V.1988, at light, A. Vigna Taglianti leg.

Distribution. Burkina Faso, Djibouti, Eritrea, Republic of the Congo, Saudi Arabia, South Africa, Sudan, United Arab Emirates, Yemen. These new records also extend the species to Somalia.

Mantispilla Enderlein, 1910

= *Sagittalata* Handschin, 1959
= *Perlamantispa* Handschin, 1960

***Mantispilla bequaerti* Navás, 1922**

Mantispilla bequaerti Navás, 1932: 279 (Od).
Mantispilla bequaerti var. *decolor* Navás, 1932: 280 (Od).
Mantispilla kibumbana Navás, 1936: 355 (Od).

Specimens examined. **Somalia**: 1♂, (SO.07) Lower Shabelle, Shabelle swamps, Abarey, Joware Lake, 14-15.V.1988, at light, A. Vigna Taglianti leg.

Distribution. This new record extends the species to Somalia as well. It was formerly known for South Africa, Democratic Republic of the Congo, Tanzania.

ASCALAPHIDAE Rambur, 1842
Ascalaphinae (Lefèbre, 1842)
Ascalaphini van der Weele, 1909

Ascalaphus Fabricius, 1775

***Ascalaphus festivus* (Rambur, 1842)**

Bubo festivus Rambur, 1842: 356 (Od).
Encyoposis amicus McLachlan, 1871: 263 (Od).
Suhpalacsa rutilus Gerstaecker, 1894: 105 (Od).
Helicomitus festivus: van der Weele, 1909: 175 (Rd) (par-
tim); Navás, 1927: 85 (Ct).
Ascalaphus festivus: Tjeder, 1980: 404-405 (Rd); Hölzel,
1983: 238 (Ct).

Specimens examined – **Ethiopia**: 1♀, Gemu Gofa, (loc. 54 ter) Arba Mintch (ca. 1570 m), 15.XI.1973, at light, C. Consiglio leg. – **Somalia**: 2♂♂, 3♀♀ Mogadiscio, IV.1938, S. A. Nicotra leg.; 1♀, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7-12.V.1988, at light, A. Vigna Taglianti leg.; 4♂♂, (SO.07) Lower Shabelle, Shabelle swamps, Abarey, Joware Lake, 14-15.V.1991, at light, A. Vigna Taglianti leg.

Distribution – Southern Europe (Italy: Sardinia); Africa (widespread, including Madagascar), Cape Verde Islands; Middle East (Israel, Saudi Arabia, Oman, United Arab Emirates). Wide distribution element.

Disparomitus van der Weele, 1909

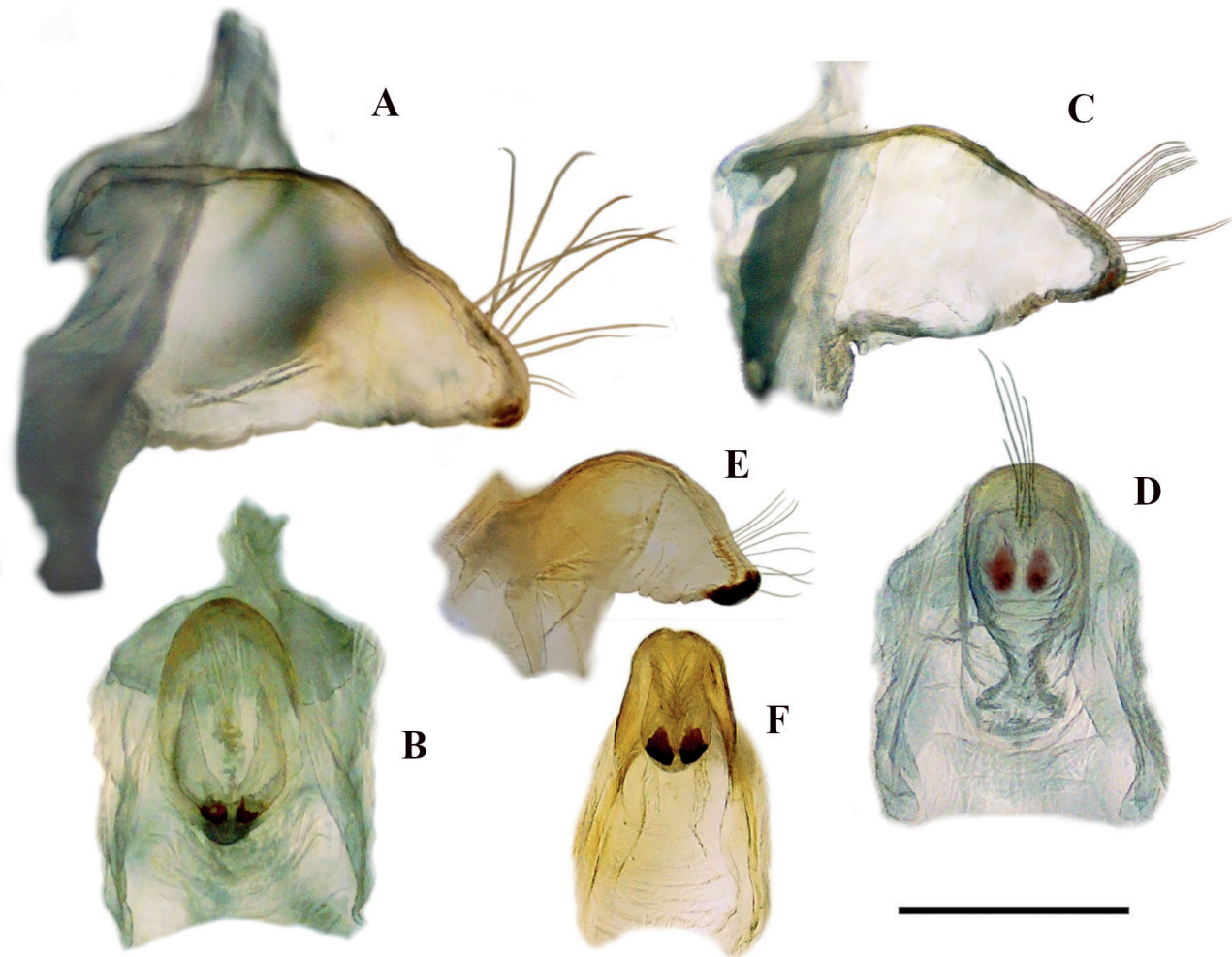


Fig. 2 – Gonarcus-parameres complex: **A**, *Goniocercus reticulatus* (lateral view), **B**, id. (caudal view); **C**, *G. similis* (lateral view), **D**, id. (caudal view); **E**, *G. klugi* (lateral view), **F**, id. (caudal view). – [Scale bar: 0.5 mm].

***Disparomitus transvaliensis* (van der Weele, 1909)**

Suphalomithus transvaliensis van der Weele, 1909: 188 (Od).

Disparomitus longus Navás, 1911: 13 (Od).

Disparomitus transvaliensis: Michel, 2019: 27 (Rd).

Specimens examined – **Somalia**: 1♀, (SO.01) Benadir, ca. 7 km W Mogadishu (University), 7-12.V.1988, M. Bologna leg.

Distribution – The species is distributed throughout East Africa from the Republic of South Africa to Sudan. This specimen extends the distribution to Somalia.

MYRMELEONTIDAE Latreille, 1802

Palparini Banks, 1911

Goniocercus Insom & Carfi, 1988b.

***Goniocercus reticulatus* (Stitz, 1912)**

Palpares walkeri var. *reticulata* Stitz, 1912: 108, fig 4 (Od).

Palpares extensus Navás, 1912: 214, fig. 8 (Od).

Palpares reticulatus: Navás, 1914: 12 (Ct); 1932: 4 (Ct).

Trichocercus reticulatus: Insom & Carfi, 1988b: 76 (Tax).

Specimens examined – **Ethiopia**: 1♀, Harar, 1939, E. Zavattari leg. – **Somalia**: 1♀, Mogadishu, IV.1938, S. A. Nicotra leg.

Distribution – Kenya, Somalia, Sudan.

Remarks – *Goniocercus reticulatus* (Stitz, 1912) was considered synonymous with *G. klugi* (Kolbe, 1898) by Aspöck et al. (2001: 209), Stange (2004: 39) and Prost (2010: 258), but we disagree with this opinion and consider the species to be valid. We re-examined the preparations used for the drawings reported in Insom & Carfi (1988) of *Goniocercus reticulatus*, *G. klugi* and *G. similis* (Stitz, 1912), and we have included photographs of the gonarcus-parameres complex (Fig. 2). As shown in this figure, the gonarcus-parameres complex of *G. klugi* differs significantly from that of *G. reticulatus* and *G. similis*; if anything, the latter two are more similar to each other. Moreover, the shape of the ectoprocti also differs in the three species, as can be seen in Insom & Carfi (1988) [see Fig.

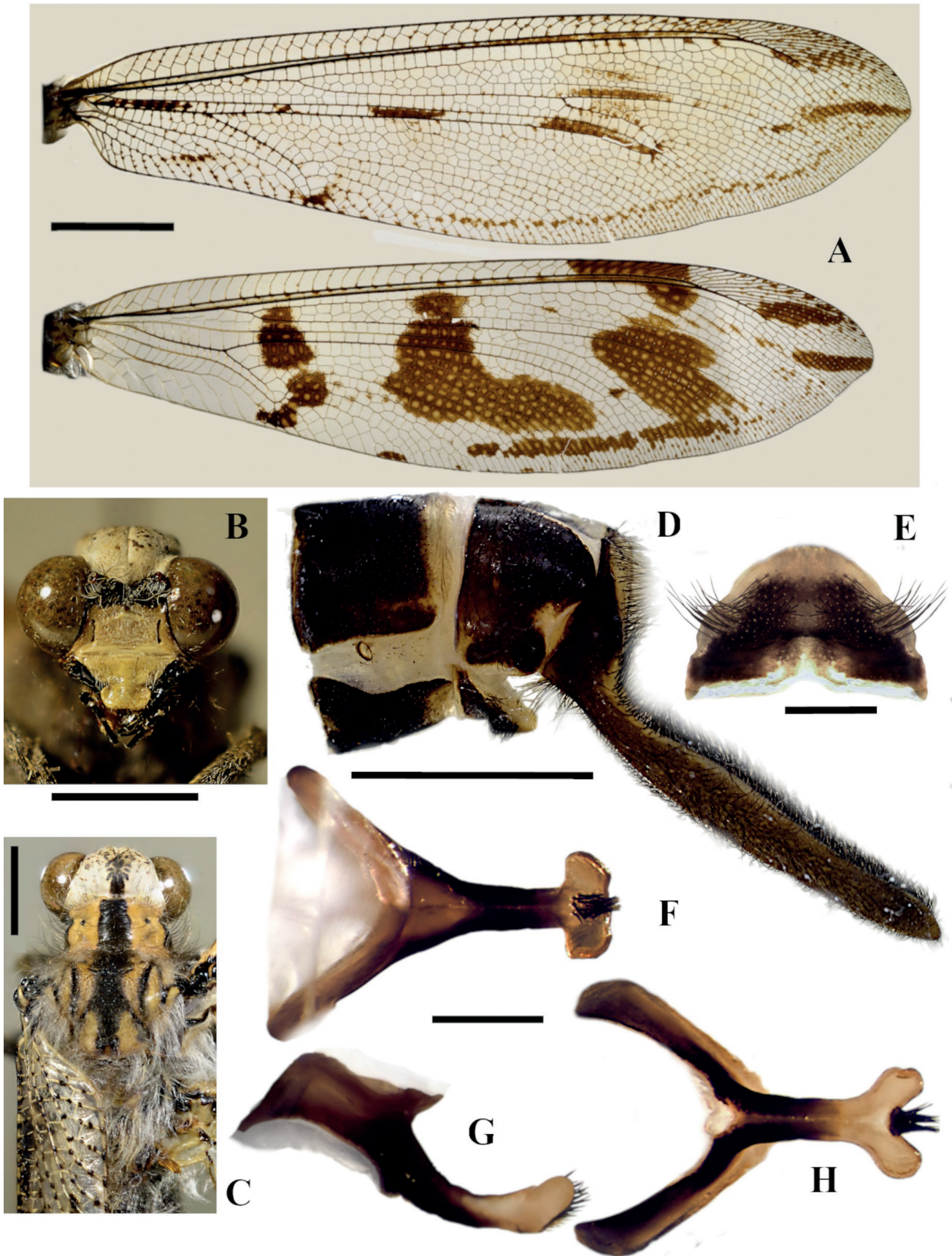


Fig. 3 – *Stenares completus* Banks, 1915 [♂]: **A**, Right fore- and hindwing; **B**, Front; **C**, Vertex, thorax (dorsal view); **D**, Ectoproct (lateral view); **E**, Subgenital plate (ventral view); **F**, Gonarcus-parameres complex (dorsal view); **G**, *Id.* (lateral view); **H**, *Id.* (ventral view). – [Scale bars: 10 mm (Fig. A); 5 mm (Figs B-D); 1 mm (Figs E-H)].

10 for *G. reticulatus*; Fig. 9 for *G. klugi*; and Fig. 11 for *G. similis*]. In addition, the wing pattern of *G. reticulatus* is very different from the illustration of *G. klugi* in Ábrahám (2012: 88, Fig. 21), which shows Klug's drawing in Ehrenberg (1834: Tab. XXXV, Fig. 3 as "var. Papilionoides"). Klug's drawing correspond to the specimen ♂ from Somalia [labelled as: A.O.I. (= Italian East Africa; Migiurtinia), Bender Cassim (actually Bosaso), 30.IV.1938, Mordini leg.] in the MZUF collection, whose terminalia and gonarcus-parameres complex, drawn in Insom & Carfi (1988), are given here in picture (fig. 2). We also consider *Palpares extensus* Navás, 1912 to be a synonym of *G. reticulatus*, the latter being considered a synonym by both Banks (1913) and Navás (1914). We disagree with Stange (2004: 40) who, without any explanation, placed *P. extensus* as a synonym of *G. walkeri* (McLachlan, 1894), even though the original descriptions are different for both species.

***Goniocercus similis* (Stitz, 1912)**

Palpares similis Stitz, 1912: 112 (Od).

Palpares similis: Banks, 1913: 180 (Rd, Tax).

Trichocercus similis: Insom & Carfi, 1988b: 69, fig. 55 (Tax).

Goniocercus similis: Stange, 2004, 39 (Tax, Dst).

Specimens examined – Somalia: 1♂, 2♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Tanzania and now Somalia.

***Pseudopalpares* Insom & Carfi, 1988b**

***Pseudopalpares torridus* (Navás, 1912)**

Palpares torridus Navás, 1912: 225 (Od).

Palpares torridus: Esben-Petersen, 1931: 93 (Ct).

Specimens examined – Somalia: 1♀, Mogadiscio, IV.1938, S. A. Nicotra leg..

Distribution – Ethiopia, Somalia, Kenya, Zambia. It seems to be an element of East Africa.

***Pseudopalpares digitatus* (Gerstaecker, 1894)**

Palpares digitatus Gerstaecker, 1894: 117 (Od).

Palpares pobeguini Navás, 1912: 35 (Od).

Palpares bayoni Navás, 1915: 20 (Od).

Specimens examined – Somalia: 1♂ (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 18.V.1988, A. Vigna Taglianti leg.

Distribution – Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Guinea, Kenya, Nigeria, Republic of Congo, Somalia, Uganda and Zambia.

***Parapalpares* Insom & Carfi, 1988a**

***Parapalpares inclemens* (Walker, 1853)**

Myrmeleon inclemens Walker, 1853: 303 (Od).

Palpares inclemens (Walker, 1853): Hagen, 1887: 89; Kolbe, 1897: 7 (Rd); Ábrahám, 2011: 101 (Ct).

Parapalpares latipennis: Insom & Carfi, 1988b: 76 (Tax).

Specimens examined – Somalia: 7♂♂, 2♀♀, Mogadiscio, IV.1938, S. A. Nicotra leg.; 2♀♀, *idem.*, IV-V.1938, S. A. Nicotra leg.; 1♂, Basso Giuba, Gelila, 1-20.IV.1940, Calcagno leg.; 1♀, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7.V.1988, S. Bruschi leg.

Distribution – Kenya, Mozambique, South Africa (Kwa-Zulu-Natal), Tanzania, Yemen (islands: Socotra).

Remarks – Concerning *Parapalpares latipennis* some clarifications are necessary. The drawings of this species in Insom & Carfi, (1988b) must be considered as referring to *P. inclemens*, after having seen the observations and the re-description made by Prost (1995; 2018) for *P. latipennis*. Indeed, the genital structures, terminalia and palpi in Insom & Carfi (1988b) are different from those drawn in Prost (2018), as is the wing pattern which is different from that observed in Prost (1995; 2018). However, it should be noted that the gonarcus-parameres complex and labial palp drawn by Prost (2018) correspond to those drawn in Insom & Carfi (1988b) for *P. interioris*, [considered by Esben-Petersen (1928: 443) to be synonymous with *P. papilionoides*]. Furthermore, it is also noteworthy that the distribution of the spots and the shape of the wings depicted in Prost (1995; 2018) correspond to both the figure of Ábrahám (2012, fig. 20) and the drawing of Klug in Ehrenberg (1834) "Tab. XXXV. Fig. 2" also reported by Ábrahám *l.c.* for *P. papilionoides*.

***Parapalpares papilionoides* (Klug, 1834)**

Myrmeleon papilionoides Klug, 1832: t. 35, fig. 2 (Od).

Palpares interioris Kolbe, 1897: 9 (Od).

Palpares tristis var. *ugandanus* Stitz, 1912: 106 (Od), fide Esben-Petersen, 1928: 443.

Palpares interioris: Banks, 1913: 181, pl. 21, fig. 49 (Ct); Van der Weele, 1922: 321, Pl. In², figs. 2-4 (Mont Karoli, Afrique Orientale Anglaise) (Ct); Esben-Petersen, 1928: 443 (Syn).

Palpares papilionoides: Banks, 1913: 188 (Tax); Esben-Petersen, 1928: 443 (Rd); Hölzel et al., 1999: 363 (Dst); Aspöck et al., 2001: 228 (Tax, Dst, Syn); Ábrahám 2012: 87 (Tax, Dst).

Parapalpares interioris: Insom & Carfi, 1988b (Tax).

Specimens examined – Ethiopia: 7♀♀, Gemu Gofa, (loc. 54) Arba Mintch (ca. 1570 m), 13.XI.1973, C. Consiglio leg.; 7♀♀, *idem.*, (loc. 54 bis), 14.XI.1973, at light, C. Consiglio leg.; 2♂♂, *idem.*, A. Vigna Taglianti leg.; 4♂♂, 11♀♀, *idem.*, (loc. 54 ter), 15.XI.1973, at light, C. Consiglio leg. – **Somalia:** 4♂♂, [SO.02] Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7-12.V.1988, A. Vigna Taglianti leg.; 2♂♂, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

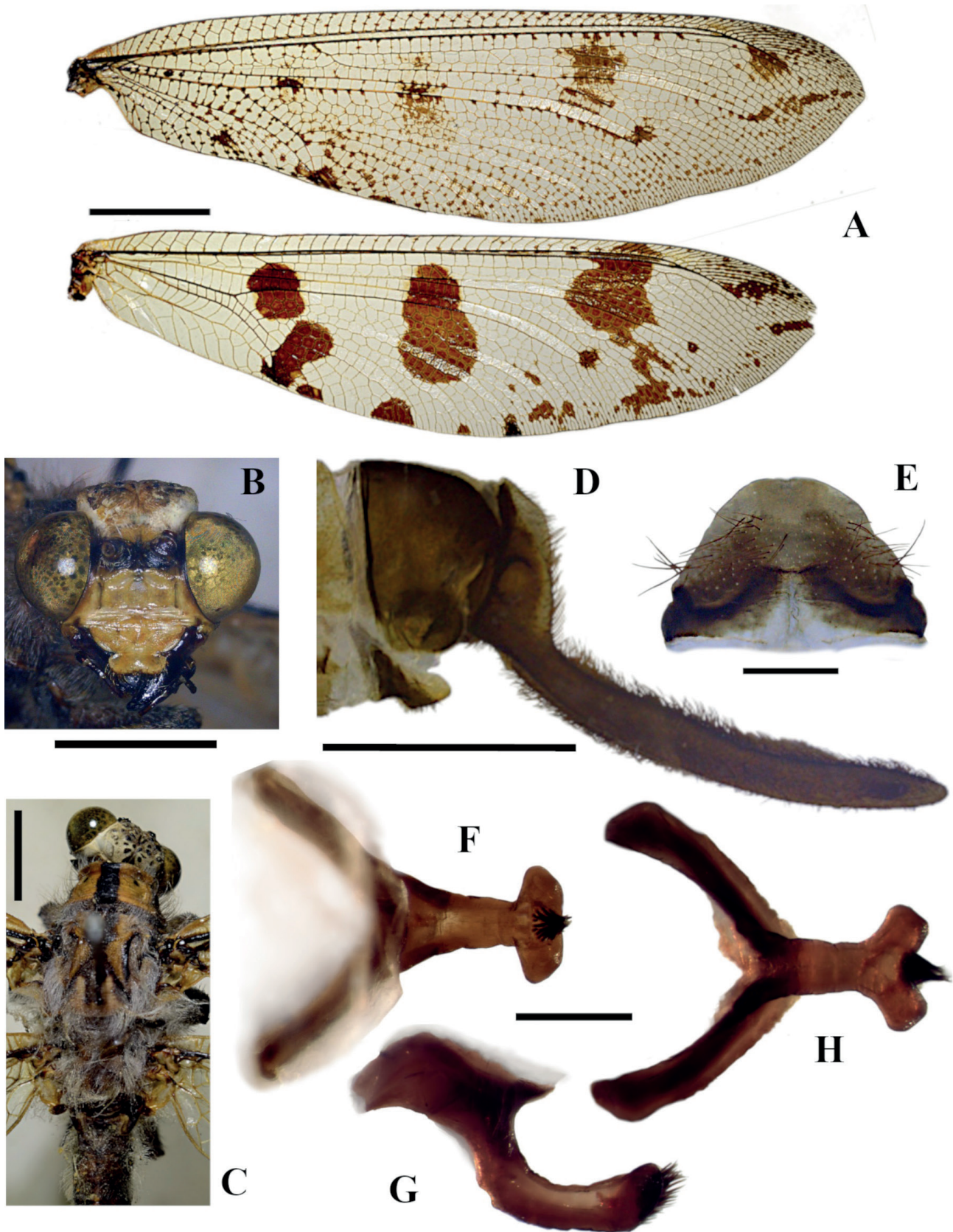


Fig. 4 – *Stenares irroratus* Navás, 1912 [♂]: **A**, Right fore- and hindwing; **B**, Front; **C**, Vertex, thorax (dorsal view); **D**, Ectoproct (lateral view); **E**, Subgenital plate (ventral view); **F**, Gonarcus-parameres complex (dorsal view); **G**, *Id.* (lateral view); **H**, *Id.* (ventral view). – [Scale bars: 10 mm (Fig. A); 5 mm (Figs B-D); 1 mm (Figs E-H)].

Distribution – East Africa (Mozambique, Kenya, Tanzania, Zaire, Ethiopia, Somalia). Asia (Arabia Saudita, Yemen). Element of tropical Africa and the Arabian Peninsula.

Remarks – In Insom & Carfi (1988b) the Fig. 5 was incorrectly referred to as *P. somalicus* Insom & Carfi, 1988a, but refers to *P. interioris* (Kolbe, 1897) now considered synonymous with *P. papilionoides* (Klug, 1834), while the Fig. 6 refers to *P. somalicus*.

Stenares Hagen, 1866

***Stenares completus* Banks, 1915**

Stenares completus Banks, 1915: 144 (Od).

Specimens examined – **Somalia**: 5♂♂, 4♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Ethiopia and Somalia.

Remarks – The comparison of the *Stenares* specimens (5♂♂ and 4♀♀) collected at Sheikh (northern Somalia) was made with the only male of *Stenares irroratus* Navás, 1912 from the Museum of Zoology of the University of Florence collected in Mogadishu (southern Somalia) [see Insom & Carfi (1988b; figs. 14, 28, 64-66) where *Stenares irroratus* is indicated as *Stenares* sp.]. Although the two species are

very similar in general appearance, the comparison revealed some differences especially in the genital area of the male, which allows their distinction. From a comparison of the various descriptions and distributions of known *Stenares* species, the description that best fits the Sheikh specimens is that of *Stenares completus* Banks, 1915 [holotype ♀ from Abyssinia, Dire Dawa [Dire Daona] (Ethiopia), described without figures]. No other reports and description of the male are known to us so far. We have also compare the females with the pictures of holotype [MCZ:Ent:10554 *Stenares completus* Banks, 1915] published by Museum of Comparative Zoology, Harvard University [http://mczbase.mcz.harvard.edu/guid/MCZ:Ent:10554] and see by GBIF.

A comparison of the taxonomic characters with the corresponding figures between the males of *Stenares completus* and *S. irroratus* is shown in the Table 1 below.

Acanthaclisini Navás, 1912

***Centroclisis* Navás, 1909**

***Centroclisis mordax* (Navás, 1912)**

Sogra mordax Navás, 1912: 151 (Od).

Sogra brachygaster var. *6-punctata* Lacroix, 1921: 57; Prost, 1998: 169.

Table 1 – Comparison of characters between *Stenares completus* Banks, 1915 and *S. irroratus* Navás, 1912. Abbreviations: C= costa; R= radius; Rs= radial sector; Sc= subcosta; M= median; Cua= anterior cubitus.

	characters	<i>S. completus</i>	<i>S. irroratus</i>
head	vertex (frontal view)	arched	subretangular
	clipeus	twice wide the height (Fig. 4B)	high ca. one third of the width (Fig. 4B)
fore wing	origin of <i>Rs</i>	between the <i>Cua</i> fork and the <i>M</i> fork (Fig. 3A)	after to the <i>M</i> fork (Fig. 4A)
	wing dotting	scarce brown dots (Fig. 3A)	dense brown dots at the ends of the cross veins (Fig. 4A)
	<i>Mp</i> field	four brown stripes of varying intensity alternated with wide hyaline spaces (Fig. 3A)	three brown spots (Fig. 4A)
	<i>Sc</i> field	almost all brown (Fig. 3A)	hyalin (Fig. 4A)
	cross bands	only trace of stigmal band (Fig. 3A)	median band is very poorly defined, the stigmal band is pale but well defined (Fig. 4A)
	hind edge	submarginal row of dots (Fig. 3A)	not so defined (Fig. 4A)
hind wing	basal band	divided into two spots (Fig. 3A)	two spots
	median and stigmal bands	as in Fig. 3A, which fits with the description given by Banks (1915: 114)	the spot between the median and stigmal band is missing (Fig. 4A)
	cross veins <i>C</i> field	furked at the base and then from the distal half to <i>Sc</i> + <i>R</i> (Fig. 3A)	furked at the base of the wing and then in the third distal up to <i>Sc</i> + <i>R</i> (Fig. 4A)
	hind edge	submarginal line well defined from below the median band to the stigmal one (Fig. 3A)	not so (Fig. 4A)
abdomen	I-X abdominal segments	matt black with very short white and dense bristles in both males and females, in the latter on the rear edge of the tergites there are yellow spots of varying sizes	brownish with a yellow spot on the sides of the tergites towards their rear edge
	ectoprocts	matt black with straight ventral process (Fig. 3D)	brownish with ventral process slightly curved upwards (Fig. 4D)
	gonarcus-parameres complex	long, slender and gently curved upwards (Figs. 3F-H)	short, hardy and curved upwards (Figs. 4F-H)

Centroclisis mordax: Banks, 1920: 22 (Ct); Prost, 1998: 169; Stange, 2004: 348 (Tax, Dst).

Specimens examined – Somalia: 1♂, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7.V.1988, M. Bologna leg.; 1♂, 1♀, *idem*, 7-12.V.1988, A. Vigna Taglianti leg.; 2♂♂, 1♀, *idem*, 8.V.1988, A. Vigna Taglianti leg.; 1♀, *idem*, 12.V.1988, A. Vigna Taglianti leg.; 1♀, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988, A. Vigna Taglianti leg.

Distribution – Democratic Republic of the Congo, Mozambique, Republic of the Congo, Tanzania.

***Centroclisis brachygaster* (Rambur, 1842)**

Acanthaclisis brachygaster Rambur, 1842: 381 (Od).

Sogra iracunda Navás, 1912: 159 (Od).

Sogra brachygaster var. *nebulosa* Navás, 1932: 272 (Od).

Centroclisis brachygaster (Rambur): Stange, 2004: 344 (Tax, Dst).

Specimens examined – Somalia: 1♂, 2♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.; 1♀, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17.V.1988, at light, M. Bologna leg.; 1♀, *idem*, 17-18.V.1988, at light, A. Vigna Taglianti leg.

Distribution – Benin, Democratic Republic of the Congo, Kenya, Mozambique, Namibia, Somalia, Zimbabwe.

Jaya Navás, 1912

***Jaya stephaniae* Insom & Terzani, 2014**

Jaya stephaniae Insom & Terzani, 2014: 165 (Od).

Specimens examined – Somalia: Mogadiscio, IV.1938, S. A. Nicotra leg., (3 ♀♀).

Distribution – Somalia.

Syngenes Kolbe, 1897

***Syngenes dolichocercus* Navás, 1914**

Syngenes dolichocercus Navás, 1914: 91 (Od).

Specimens examined – Somalia: 4♀♀, Mogadiscio, IV.1938, S. A. Nicotra leg.

Distribution – Madagascar, Mozambique and now Somalia.

***Syngenes longicornis* (Rambur, 1842)**

Acanthaclisis longicornis Rambur, 1842: 382 (Od).

Myrmeleon longicornis (Rambur, 1842): Walker, 1853: 320 (Rd).

Syngenes longicornis (Rambur, 1842): Navás, 1934: 46 (Ct); Ohm & Hölzel, 1995: 8 (Tax, Dst); Stange 2004: 360 (Tax, Dst); Mansell, 2018: 354 (Rd, Tax, Dst).

Syngenes carfi Insom & Terzani, 2017: 55 (Od).

Specimens examined – Somalia: 1♂, Mogadiscio, IV.1938, S. A. Nicotra leg.; 2♂♂, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7-12.V.1988, at light, A. Vigna Taglianti leg.; 1♀, *idem*, 9.V.1988, at light, *idem*; 2♂♂, *idem*, 12.V.1988, at light, *idem*.

Distribution – Madagascar, Mozambique, Seychelles, Somalia, South Africa, Tanzania.

Dendroleontini Banks, 1899

***Cymothales* Gerstaecker, 1893**

***Cymothales bouvieri* van der Weele, 1907**

Cymothales bouvieri van der Weele, 1907: 267 (Od).

Specimens examined – Somalia: 1♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Widespread sub-Saharan African species to South Africa including Madagascar and Comoros. This specimen extend the distribution also to the NE Africa.

Myrmeleontini Banks, 1911

***Hagenomyia* Banks, 1911**

***Hagenomyia tristis* (Walker, 1853)**

Myrmeleon tristis Walker, 1853: 373 (Od).

Hagenomyia tristis: Banks, 1911: 9 (Ct).

Specimens examined – Ethiopia: 1♂, Galla & Sidamo, Neghelli (1441 m), VI.1938, S. A. Nicotra leg.

Distribution – Widespread sub-Saharan African species (Senegal east to Ethiopia and south to South Africa) including Madagascar.

Myrmeleon Linnaeus, 1767

***Myrmeleon (Myrmeleon) obscurus* Rambur, 1842**

Myrmeleon obscurus Rambur, 1842: 403 (Od).

Myrmeleon capensis Rambur, 1842: 404 (Od).

Myrmeleon secretus Walker, 1853: 375 (Od).

Myrmeleon fictus Walker, 1853: 380 (Od).

Myrmeleon malignus Walker, 1853: 380 (Od).

Myrmeleon fusiformis Esben-Petersen, 1912: 268 (Od).

Congoleon sociatus Navás, 1936: 337 (Od).

Specimens examined – Ethiopia: 1♀, Sagan Omo, (Fortino di) El Banno, Tertale, 30.IV.1939, 04°39'N–37°40'E, Miss. E. Zavattari (A.O.I.); 1♀, Gemu Gofa (loc. 54), Arba Mintch (ca. 1570 m), 14.XI.1973, A. Vigna Taglianti leg. – **Somalia:** 1♂, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988, A. Vigna Taglianti leg.; 1♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Widespread species in Africa (Senegal east to Ethiopia and south to South Africa) including

Madagascar and the western Indian Ocean islands. The species was not known from Somalia.

Myrmeleon (Myrmeleon) quinquemaculatus Hagen, 1853

Myrmeleon quinquemaculatus Hagen, 1853: 482 (Od).

Myrmeleon polyzonus Gerstaecker, 1885: 21 (Od).

Myrmeleon rapax Kolbe, 1897: 20 (Od).

Myrmeleon (Macroleon) quinquemaculatus: Banks, 1911: 9 (Ct).

Macroleon quinquemaculatus: Navás 1914: 16 (Ct); Navás 1923: 144 (Ct); Navás 1934: 47 (Ct).

Distoleon quinquemaculatus: Whittington, 2002: 382 (Ct).

Specimens examined – Somalia: 1♂, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Widespread sub-Saharan African species (Togo east to Kenya and south to Namibia and Mozambique) including Madagascar. The species was not known from Somalia.

Myrmeleon (Myrmeleon) pellucidus Hölzel, 1988

Myrmeleon (Myrmeleon) pellucidus Hölzel, 1988: 63 (Od).

Myrmeleon hyalinus isolatus Abraham, 2010: 186 (Od).

Specimens examined – Somalia: 1♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, M. Bologna leg.

Distribution – Kenya, Oman, Saudi Arabia, United Arab Emirates, Yemen. It seems to be a species from the eastern Afrotropical region.

Nemoleontini Banks, 1911

***Creoleon* Tillyard, 1919**

***Creoleon cinerascens* Navás, 1912**

Myrmeleon irroratus Klug in Ehrenberg, 1834: pl. XXXV (Od).

Creagris parallela Klapálek, 1911: 176 (Od).

Creagris cinerascens Navás, 1912: 59 (Od).

Creagris surcouffi Navás, 1912: 218 (Od).

Creoleon klugi Navás, 1926: 50 (Od).

Specimens examined – Somalia: 1♀, Mogadiscio, IV.1938, S. A. Nicotra leg.

Distribution – Species already known from Somalia and widespread in North and East Africa and the Middle East.

***Creoleon chappuisi* Navás, 1936**

Creoleon chappuisi Navás, 1936: 112 (Od).

Specimens examined – Somalia: 1 spec. (sex unknown), Mogadiscio, IV.1938, S. A. Nicotra leg.

Distribution – Kenya and now Somalia.

***Creoleon decussatus* (Navás, 1914)**

Creagris decussata Navás, 1914: 21 (Od).

Gama decussata (Navás, 1914): Banks, 1938: 7 (Ct).

Specimens examined – Ethiopia: 2♀♀, 1 spec. (sex unknown), Galla & Sidamo, Neghelli (1441 m), VI.1938, S. A. Nicotra leg. – **Somalia:** 1 spec. (sex unknown), VI.1938, S. A. Nicotra leg.

Distribution – Kenya and now Ethiopia and Somalia.

***Creoleon nubifer* (Kolbe, 1897)**

Creagris nubifera Kolbe, 1897: 25 (Od); Banks, 1911: 15 (Ct).

Creagris proximus Péringuey, 1910: 446 (Od).

Creagris junodi Esben-Petersen, 1916: 16 (Ct).

Gama nubifera: Banks, 1938: 7 (Tax).

Creoleon nubifer: Esben-Petersen, 1928: 444 (Tax, Dst); Handschin & Markl, 1955: 81 (Tax, Dst).

Specimens examined – Ethiopia: 1♀, Gemu Gofa, Arba Mintch, (ca. 1570 m), 13.XI.1973, C. Consiglio leg.; 3♀♀, *idem*, (ca. 1570 m), 14-15.XI.1973, A. Vigna Taglianti leg.

Distribution – Widespread sub-Saharan Africa species including Madagascar.

***Creoleon mortifer* (Walker, 1853)**

Myrmeleon mortifer Walker, 1853: 353 (Od).

Myrmeleon pervigil Walker, 1853: 354 (Od).

Creagris nigrostrigatus McLachlan, 1867: 245 (Od).

Creagris infirmus Navás, 1912: 58 (Od).

Creagris plagatus Navás, 1912: 39 (Od).

Creagris loanguana Navás, 1913: 489 (Od).

Creagris venosa Navás, 1914: 645 (Od).

Creagris interrupta Navás, 1914: 646 (Od).

Creoleon loanguanus: Tauber et al., 2014: 91 (Tax); Abraham & Giacomino, 2020: 42 (Tax).

Creoleon mortifer: Navás, 1925: 132 (Dst); Esben-Petersen, 1928: 444 (Dst); Abraham & Dobosz, 2011: 121 (Tax, Dst); Abraham & Giacomino, 2020: 42 (Tax); Krivokhatsky, 2021: 126 (Tax, Dst).

Specimens examined – Ethiopia: 1♀, (loc. 54 ter) Gemu Gofa, Arba Mintch (ca. 1570 m), 13.XI.1973, C. Consiglio leg.; 2♀♀, (loc. 54 bis) *idem*, 14.XI.1973, A. Vigna Taglianti leg.; 1♀, (loc. 54 ter) *idem*, 15.XI.1973, A. Vigna Taglianti leg. – **Somalia:** 1♀, (SO.02) Lower Shabelle, Afgooye, Lafoole (Faculty of Agriculture, Somali National University), 7-12.V.1988, A. Vigna Taglianti leg.; 3♀♀, (SO.11) Togdheer, Gahan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988, M. Bologna leg.; 5♀♀, *idem*, A. Vigna Taglianti leg.; 4♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti leg.

Distribution – Widespread southern and eastern Africa species including Madagascar and islands of western

Indian Ocean. It seems to be a species of the arid zones of the Afrotropical and Oriental regions.

Ganguilus Navás, 1912

Ganguilus pulchellus (Banks, 1911)

Macronemurus pulchellus Banks, 1911: 26 (Od).

Nelees princeps Navás, 1936: 106 (Od).

Ganguilus pulchellus: Michel & Mansell, 2010: 10 (Rd, Tax, Dst).

Specimens examined – Somalia: 3♂♂, (SO.14) Togdheer, Sheikh Pass (1450 m), 19.V.1988, G. Carpaneto leg.

Distribution – The species is known from the Horn of Africa (Eritrea, Ethiopia, Somalia, Kenya), Saudi Arabia and Pakistan.

Geyria Esben-Petersen, 1920

Geyria sp.1

Specimens examined – Somalia: 1 spec. (unknown sex), Mogadiscio, IV.1938, S. A. Nicotra leg.

Remarks – The specimen was determined to be *Geyria* sp, according to morphological features that seemed to fit the description of the genus made by Esben-Petersen (1920: 146). However, it was impossible to identify the species because the specimen was missing the median legs, part of the anterior and posterior ones and the abdomen.

Macronemurus Costa, 1855

Macronemurus perlatus (Gerstaecker, 1885)

Formicaleo perlatus Gerstaecker, 1885: 14 (Od).

Macronemurus ianthe Banks, 1911: 25 (Od).

Formicaleo neavinus Navás, 1913: 491 (Od); Tauber et al., 2019: 92 (Tax).

Formicaleo fictus Navás, 1913: 270 (Od).

Macronemurus nuncius Navás, 1913: 270 (Od).

Macronemurus wittei Navás, 1932: 272 (Od).

Macronemurus perlatus: Ábrahám & Giacomino, 2020: 56 (Tax, Dst).

Specimens examined – Somalia: 2♂♂, 1♀, (SO.14) Togdheer, Sheikh Pass (1450 m), 19.V.1988, G. Carpaneto leg.; 4♂♂, 2♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A.Vigna Taglianti leg.; 3♂♂, *idem*, M. Bologna leg.

Distribution – Angola, Democratic Republic of the Congo, Ethiopia, Kenya, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe. These records extend the range to Somalia.

Nemoleon Navás, 1909

Nemoleon notatus (Rambur, 1842)

Myrmeleon notatus Rambur, 1842: 402 (Od).

Creagris angustipennis Péringuey, 1910: 448 (Od).

Creagris latens Navás, 1911: 242 (Od).

Nemoleon alcidice Banks, 1911: 20 (Od).

Neuroleon angustus Navás, 1912: 41 (Od).

Nemoleon notatus: Stange, 2004: 118 (Od).

Specimens examined – Ethiopia: 1♀, Shoa (loc. 5), Abalti, ponte sul F. Omo (= bridge on Omo River) (ca. 1190 m), 22.X.1973, C. Consiglio leg.

Distribution – Southern Europe (Italy, Spain), northern and middle Africa, Madagascar.

Neuroleon Navás, 1909

Neuroleon (Neuroleon) virgineus Hoelzel, 1983

Neuroleon virgineus Hoelzel, 1983: 224 (Od).

Specimens examined – Eritrea: 1 spec. (sex unknown), Cam Ceua, III.1940, Calcagno leg.

Distribution – This species was known for Saudi Arabia and now this record extend the range to Eritrea.

Neuroleon sp. 1

Specimens examined – Somalia: 1♀, Mogadiscio, IV.1938, S. A. Nicotra leg.

Remarks – This specimen seems to belong to the genus *Neuroleon* because of the characteristics of the wing veins, but as we only have one ♀ specimen and have not found any suitable descriptions, we postpone any description until we have more material available.

Myrmecaelurini Esben-Petersen, 1918

Myrmecaelurus Costa, 1855

Myrmecaelurus dioristus (Navás, 1914)

Myrmecaelurus dioristus Navás, 1914: 103 (Od).

Specimens examined – Eritrea: 1 spec. (sex unknown), Cam Ceua, III.1940, Calcagno leg.

Remarks – Incomplete specimen, without part of the head and the whole abdomen.

Distribution – Djibouti, Eritrea, Ethiopia, Somalia, Yemen.

Nesoleontini Markl, 1954

Cueta Navás, 1911

Cueta misteriosa (Gerstaecker, 1894)

Myrmeleon misteriosus Gerstaecker, 1894:141 (Od); Kolbe, 1897: 19 (Rd).

Nesoleon mysteriosus: Banks, 1911: 8 (Dst).

Cueta mysteriosa: Navás, 1914: 17 (Ct.); Navás, 1935: 52 (Ct).

Specimens examined – Ethiopia: 1♂, Gemu Gofa (loc. 54), Arba Mintch (ca. 1570 m), 13.XI.1973, C. Consiglio leg.; 4♀♀, *idem*, 14-15.XI.1973, A. Vigna Taglianti leg.; 1♀, Sidamo (loc. 60), 40 km W of Iavello (ca. 1500 m), 17.XI.1973, A. Vigna Taglianti leg. – **Somalia:** 1 spec. (sex unknown), Mogadiscio, IV.1938, S. A. Nicotra leg.; 1♀, (SO.14) Togdheer, Sheikh Pass (1450 m), 19.V.1988, G. Carpaneto leg.; 1♂, 3♀♀, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 7-12.V.1988, A. Vigna Taglianti leg.; 2♂♂, 2♀♀, (SO.14) Togdheer, Sheikh (1440 m), 19-20.V.1988, A. Vigna Taglianti. leg.

Distribution – The species is recorded for the Democratic Republic of Congo, Kenya, Mozambique, Somalia, Tanzania, Uganda, and South Africa. Ethiopia has now been added to these records.

Cueta tumida (Banks, 1913)

Nesoleon tumidus Banks, 1913: 156 (Od).

Nesoleon tumidus: Esben-Petersen, 1928: 444 (Dst).

Cueta tumida: Hölzel et al. 1999: 362 (Dst); Stange 2004: 294 (Tax, Dst).

Specimens examined – Ethiopia: 1♂, Gemu Gofa, (loc. 54 bis) Arba Mintch (ca. 1570 m), 14.XI.1973, A. Vigna Taglianti leg. – **Somalia:** 1♀, (SO.02) Lower Shabelle, Afgooye, Lafoole (Facoltà di Agraria), 8.V.1988, at light, A. Vigna Taglianti leg.; 2♀♀, (SO.07) Lower Shabelle, Shabelle swamps, Abarey, Joware Lake, 14.V.1988, at light, G. Carpaneto leg.; 6♀♀, *idem*, 14-15.V.1988, at light, A. Vigna Taglianti leg.

Distribution – The species was only known from Ethiopia, now these new records extend its distribution to Somalia.

Cueta sp. 1.

Specimens examined – Somalia: 1 spec. (sex unknown), Mogadiscio, IV.1938, S. A. Nicotra leg.

Remarks – The specimen lacks the abdomen from the half of the third segment.

Cueta sp. 2

Specimens examined – Somalia: 1♂, (SO.11) Togdheer, Gacan Libah (1700 m), 9°52'N–44°50'E, 17-18.V.1988 A. Vigna Taglianti, leg.

Remarks – The specimen preserved in a test tube is heavily damaged, so identification is doubtful. [From examination of the wings, head and thorax, although completely separated and damaged, it could be *Cueta divisa* (Navás, 1912)].

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