

ATOLL RESEARCH BULLETIN

NO. 177

**FULGOROIDEA FROM ALDABRA, ASTOVE, AND COSMOLEDO ATOLLS,
COLLECTED BY THE ROYAL SOCIETY EXPEDITION 1967-68
(HEMIPTERA-HOMOPTERA)**

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Issued by
THE SMITHSONIAN INSTITUTION
Washington, D.C., U.S.A.

January 15, 1975

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TERA-HOMOPTERA)**

by M. D. Webb^{1/}

INTRODUCTION

The present study is concerned with the Fulgoroidea collected by B. H. Cogan and A. M. Hutson of the British Museum (Natural History) on the 1967-68 Royal Society Expedition to Aldabra, Astove and Cosmoledo Atolls. These islands together with Assumption are known collectively as the Aldabra group.

Eight Fulgoroid species were recorded from the Aldabra group by Distant (1906) who placed them in seven genera and four families. The present work adds five families, eighteen genera and ten species to the fauna. A list of species from the Aldabra group with their distribution is included at the end of the paper. Three of Distant's species were not found by the expedition but are listed for completeness.

Identifications were carried out with reference to the type specimens, except in those species where published descriptions and illustrations proved sufficient. The classification used follows Metcalf's General Catalogue of the Hemiptera (1936-58) except where indicated.

The collecting areas on the present expedition were as follows:

Aldabra Atoll: South Island, Middle Island, West Island,
Ile Michel.

Cosmoledo Atoll: Wizard Island, Menai Island.
Astove Atoll.

Recent detailed maps, descriptions and discussions on the flora and fauna of the areas listed above can be found in Westoll and Stoddart (1971) for Aldabra, Bayne et al. (1970) for Cosmoledo and Bayne et al. (1970) for Astove.

^{1/}British Museum (Natural History).

(Manuscript received Dec. 1973--Eds.)

I would like to thank Dr. Göllner-Scheiding, Humboldt University Museum, Berlin and Dr. A. Kaltenbach, Naturhistorisches Museum, Vienna for the loan of type material.

SYSTEMATIC LIST

Ricaniidae

Deferundata aldabrana Distant

ALDABRA, SOUTH ISLAND: 7♂ 11♀, Takamaka, 1-27/ii/1968; 3♂ 2♀, Dune Jean-Louis, 13-20/iii/1968; 3♂ 1♀, Flamingo Pool, 21-22/i/1968; 1♂ 1♀, Cinq Cases, 3-16/i/1968; MIDDLE ISLAND: 1♂, near Passe Gionnet, 2/iii/1968; 1♂ 1♀, near East Channel, 18-23/ii/1968; WEST ISLAND: 1♂, near Settlement, 21-31/iii/1968; ILE MICHEL: 1♂, 15/ii/1968.

Identified from the type series deposited in the British Museum (Natural History).

Neoprivesa fuscovaria Distant

ALDABRA, SOUTH ISLAND: 6♂ 3♀, Takamaka, 1-27/ii/1968; 7♂ 21♀, Dune Jean-Louis, 13-20/iii/1968; 1♀, Cinq Cases, 3-16/i/1968; 3♂ 4♀, Dune D'Messe, 21/iii/1968; 1♀, Frigate Pool, 20/i/1968; MIDDLE ISLAND: 1♂, near East Channel, 18-23/ii/1968; WEST ISLAND: 3♂ 3♀, near Settlement, 7-12/iii/1968; ILE MICHEL: 3♂, 15/ii/1968; COSMOLEDO, WIZARD ISLAND: 1♀, 6/iii/1968.

Identified from the type series deposited in the British Museum (Natural History).

Privesa punctifrons Signoret

ALDABRA, SOUTH ISLAND: 5♂ 2♀, Takamaka, 1-27/ii/1968; 2♂ 3♀, Takamaka Grove, 1-27/ii/1968; 3♂ 3♀, Dune Jean-Louis, 13-20/iii/1968; 1♀, Dune D'Messe, 21/iii/1968; 1♂, Anse Cedre, 17-19/i/1968; 2♂, Point Hodoul, 27/i/1968; MIDDLE ISLAND: 1♂ 1♀, near Passe Gionnet, 2/iii/1968; 3♂, near East Channel, 18-23/ii/1968; WEST ISLAND: 1♀, near Settlement, 7-12/iii/1968; ILE MICHEL: 6♂ 3♀, 15/ii/1968; COSMOLEDO, WIZARD ISLAND: 2♂ 1♀, 6/iii/1968; MENAI ISLAND: 1♂ 1♀, 6/iii/1968; ASTOVE: 2♂ 5♀, around coconut plantation, 5/iii/1968.

Identified from the description and figure given by Melichar (1898). According to Melichar, the type of this species is in the Vienna Museum, but I have been unable to trace it there or elsewhere. I have, however, studied a headless specimen mentioned by Melichar and determined by him as the same species.

Osaka hyalina Distant

The genus Osaka is here included in the family Ricaniidae as proposed by Schmidt (1912) and other authors rather than in the Nogodinidae as given by Metcalf.

ALDABRA, SOUTH ISLAND: 7♂ 4♀, Takamaka, 1-27/ii/1968; 6♂ 2♀, Dune Jean-Louis, 13-20/iii/1968; 2♀, Flamingo Pool, 21-22/i/1968; 3♂ 3♀, Cinq Cases, 3-16/i/1968; 3♂ 4♀, Dune D'Messe,

21/iii/1968; 1♀, Anse Cedre, 17-19/i/1968; MIDDLE ISLAND: 1♂, near Passe Gionnet, 2/iii/1968; WEST ISLAND: 1♂ 2♀, near Settlement, 21-31/iii/1968; ILE MICHEL: 4♂, 15/ii/1968; COSMOLEDO, MENAI ISLAND: 1♀, 6/ii/1968; ASTOVE: 10♂ 5♀, around coconut plantation, 5/iii/1968.

Identified from the type series deposited in the British Museum (Natural History).

Flatidae

Chaetormenis madagascariensis (Signoret)

ALDABRA, SOUTH ISLAND: 13♂ 6♀, Takamaka, 1-27/ii/1968; 1♂ 5♀, Takamaka Grove, 1-27/ii/1968; 9♂ 4♀, Dune Jean-Louis, 13-20/iii/1968; 11♂ 1♀, Takamaka Pool, 1-17/ii/1968; 5♂ 6♀, Cinq Cases, 3-29/i/1968; 4♂, Dune D'Messe, 21/iii/1968; 6♂ 3♀, Anse Cedre, 17-19/i/1968; 16♂ 11♀, Bras Cinq Cases, 9/i/1968; 3♂ 3♀, Flamingo Pool, 21-22/i/1968; 1♀, Frigate Pool, 20/i/1968; MIDDLE ISLAND: 1♀, near East Channel, 18-23/ii/1968; WEST ISLAND: 4♂ 1♀, near Settlement, 7-31/iii/1968; ILE MICHEL: 4♂ 1♀, 3-15/ii/1968; ISLETS IN WEST CHANNEL: 2♂ 1♀, 28-29/ii/1968; COSMOLEDO, WIZARD ISLAND: 1♂ 2♀, 6/iii/1968; MENAI ISLAND: 1♀, 6/iii/1968.

Identified from the type specimen deposited in the Naturhistorisches Museum, Wien.

Meenoplidae

Nisia atrovinosa (Lethierry)

ALDABRA, SOUTH ISLAND: 1♂ 2♀, Takamaka Grove, 23-27/ii/1968; 1♀, Takamaka Pool, 1-17/ii/1968; 2♀, Cinq Cases, 3-29/i/1968; 1♀, Flamingo Pool, 21-22/i/1968; 1♀, Anse Cedre, 17-19/i/1968.

Identified from the description and figures given by Synave (1957).

Issidae

Trienopa (Ivinga) typica Distant

ALDABRA, SOUTH ISLAND: 1♀, Takamaka, 1-17/ii/1968; 1♂, Takamaka Grove, 23-27/ii/1968; 3♂ 1♀, Cinq Cases, 3-16/i/1968; 1♂ 1♀, Anse Cedre, 17-19/i/1968; 1♀, Frigate Pool, 20/i/1968; COSMOLEDO, WIZARD ISLAND: 1♂, 6/iii/1968; ASTOVE: 2♂ 2♀, around coconut plantation, 5/iii/1968.

Identified from the type series deposited in the British Museum (Natural History).

Cixiidae

Brixia stellata Distant

ALDABRA, SOUTH ISLAND: 1♂ 2♀, Takamaka, 23-27/ii/1968; 4♂ 3♀, Takamaka Grove, 1-27/ii/1968; 3♂ 3♀, Takamaka Pool,

1-17/ii/1968; 2♀, Cinq Cases, 3-29/i/1968; 1♀, Anse Cedre, 17-19/i/1968; 4♀, Flamingo Pool, 21-22/i/1968; WEST ISLAND: 1♀, near Settlement, 7-12/iii/1968.

These specimens are only tentatively recorded as stellata since males from the type series in the British Museum (Natural History) have only one mid-ventral spine on the aedeagus compared to three on the Aldabra specimens.

Oliarus nosibeanus Jacobi

ALDABRA, MIDDLE ISLAND: 2♂, near Passe Gionnet, 2/iii/1968.

Identified from the type series deposited in the Humboldt University Museum, Berlin.

Oliarus sp.

ASTOVE: 4♂ 1♀, around coconut plantation, 5/iii/1968.

Achaemenes major Jacobi

ALDABRA, SOUTH ISLAND: 1♂, Dune D'Messe, 21/iii/1968; 3♀, Dune Jean-Louis, 13-20/iii/1968.

Identified from the type series deposited in the Humboldt University Museum, Berlin.

Delphacidae

Ugyops sp.

ALDABRA, SOUTH ISLAND: 1♂ 1♀, Takamaka, 1-17/ii/1968; 1♂, Takamaka Pool, 1-17/ii/1968.

Matutinus sp.

ALDABRA, SOUTH ISLAND: 1♀, Dune Jean-Louis, 13-20/iii/1968; 6♂ 2♀, Cinq Cases, 3-16/i/1968.

These specimens resemble Matutinus typhae (Lindberg) but differ slightly in the male genitalia.

Sogatella nigeriensis troilus Fennah

ALDABRA, SOUTH ISLAND: 1♂ 1♀, Takamaka Grove, 23-27/ii/1968; 1♂, Dune D'Messe, 21/iii/1968.

Identified from the description and figures given by Fennah (1963).

Sogatella kolophon subsp.

ALDABRA, SOUTH ISLAND: 1♀, Dune D'Messe, 21/iii/1968; WEST ISLAND: 2♂, near Settlement, 21-31/iii/1968; ASTOVE: 5♂ 1♀, around coconut plantation, 5/iii/1968.

Identified from the description and figures given by Fennah (1963).

Sogatella sp.

ALDABRA, SOUTH ISLAND: 3♂, Dune Jean-Louis, 13-20/iii/1968.

Sogatella sp.

ALDABRA, SOUTH ISLAND: 1♀, Cinq Cases, 3-16/i/1968.

Sogatella sp.

COSMOLEDO, WIZARD ISLAND: 1♀, 3-16/i/1968.

Sogatodes cubana (Crawford)

ALDABRA, SOUTH ISLAND: 1♂ 1♀, Dune D'Messe, 21/iii/1968;

WEST ISLAND: 1♀, near Settlement, 21-31/iii/1968;

COSMOLEDO, WIZARD ISLAND: 1♀, 6/iii/1968.

Identified from the original description, Crawford (1914), combination as in Fennah (1963).

Thriambus sp.

ALDABRA, WEST ISLAND: 2♀, near Settlement, 21-31/iii/1968.

Eripeson sp.

ALDABRA, WEST ISLAND: near Settlement, 21-31/iii/1968.

This specimen is similar to Eripeson illex Fennah, but differs slightly in the male genitalia and in the proportions of the vertex.

Nilaparvata maeander Fennah

ALDABRA, SOUTH ISLAND: 2♂ 3♀, Dune Jean-Louis, 13-20/iii/1968; WEST ISLAND: 2♂ 1♀, near Settlement, 7-31/iii/1968.

Identified from the original description and figures (Fennah, 1958).

Toya propinqua (Fieber)

ALDABRA, SOUTH ISLAND: 4♀, Dune Jean-Louis, 13-20/iii/1968; 1♂, Dune D'Messe, 21/iii/1968; WEST ISLAND: 2♂ 1♀, near Settlement, 21-31/iii/1968; COSMOLEDO, MENAI ISLAND: 1♂, 6/iii/1968.

Identified from the description and figure given by Muir and Giffard (1924), combination as in Fennah (1964).

Toya thomasseti (Muir)

ALDABRA, SOUTH ISLAND: 2♀, Dune Jean-Louis, 13-20/iii/1968.

Identified from the type specimen deposited in the British Museum (Natural History), combination as in Fennah (1964).

Toya sp.

ALDABRA, SOUTH ISLAND: 1♀, Dune Jean-Louis, 13-20/iii/1968.

Toya sp.

ALDABRA, SOUTH ISLAND: 1♂, Anse Cedre, 17-19/i/1968;

COSMOLEDO, MENAI ISLAND: 1♂, 6/iii/1968.

Toya sp.

ALDABRA, SOUTH ISLAND: 1♀, Cinq Cases, 3-16/i/1968.

Toya sp.

ALDABRA, MIDDLE ISLAND: 2♂, near Passe Gionnet, 2/iii/1968.

Toya sp.

ALDABRA, MIDDLE ISLAND: 2♂ 8♀, near East Channel, 18-23/iii/1968.

Falcotoya sp.

COSMOLEDO, WIZARD ISLAND: 1♂, 6/iii/1968.

Delphacodes ceresensis Muir

ALDABRA, WEST ISLAND: 1♂, near Settlement, 21-31/iii/1968.

Identified from the type specimen deposited in the British Museum (Natural History).

Dicranotropis ibadanensis Muir

ALDABRA, SOUTH ISLAND: 1♂, Dune Jean-Louis, 13-20/iii/1968;

WEST ISLAND: 6♂ 4♀, near Settlement, 21-31/iii/1968.

Identified from the original description and figures (Muir, 1920).

Liburnia krugeri (Muir)

ALDABRA, SOUTH ISLAND: 22♂ 5♀, Dune D'Messe, 21/iii/1968;

MIDDLE ISLAND: 16♂ 2♀, near Passe Gionnet, 2/iii/1968.

The hitherto unrecorded females of this species are brachypterous and entirely yellow. The material was identified from the type specimen deposited in the British Museum (Natural History).

Achilidae

Akotropis sp.

ALDABRA, SOUTH ISLAND: 1♂ 1♀, Takamaka, 1-27/ii/1968; 1♂ 2♀, Takamaka Grove, 1-17/ii/1968; 1♀, Cinq Cases, 3-16/i/1968; 1♂ 1♀, Dune D'Messe, 21/iii/1968; 3♂, Anse Cedre, 17-19/i/1968; 1♂, Flamingo Pool, 21-22/i/1968; WEST ISLAND: 2♂ 1♀, near Settlement, 7-12/iii/1968; ILE MICHEL: 4♂ 1♀, 3-15/ii/1968; ASTOVE: 2♂ 1♀, around coconut plantation, 5/iii/1968.

These specimens resemble Akotropis quericola Linnavuori, but differ slightly in the male genitalia.

Derbidae

A male of the tribe Cenchreini was taken at Aldabra Takamaka Grove, 1-12/ii/1968. Owing to the absence of the head it has not been possible to identify this specimen further.

Tropiduchidae

Numecia sp.

ALDABRA, WEST ISLAND: 1♀, near Settlement, 21-31/iii/1968.

In Melichar's Monograph of the Tropiduchidae (1914), this specimen runs to Numecia punctula Melichar, but male specimens are required for confirmation.

From table 1 it can be seen that the Aldabra group has received its Fulgoroid fauna from three main areas, Africa, Malagasy and Seychelles. With the exception of the Delphacidae and Ricaniidae, the families are poorly represented and many families, notably the Fulgoridae and Dictyopharidae, are absent. Only one monotypic genus, Deferundata, and one species, Privesa fryeri Distant, are endemic, the former restricted to Aldabra Atoll and the latter to Aldabra Atoll and Assumption. Within the Aldabra group the richest fauna occurs on Aldabra Atoll itself which possesses all species occurring within the island group. Six of these species are shared with Cosmoledo and/or Astove to the east and only one with Assumption to the south.

TABLE 1. FULGOROIDEA FROM ALDABRA ATOLL
AND THEIR DISTRIBUTION ELSEWHERE

	Assumption	Cosmoledo	Astove	Seychelles	Malagasy	Mascarene Is.	East Africa	South Africa	West Africa	Other Localities
Ricaniiidae										
<u>Deferundata aldabrana</u> ^{1/}										
<u>Neoprivesa fuscovaria</u>		X	X	X						
<u>Privesa fryeri</u> ^{2/}	X									
<u>P. punctifrons</u>					X					
<u>Osaka hyalina</u>		X	X	X						
<u>O. relata</u> ^{2/}				X						
Flatidae										
<u>Chaetormensis madagascariensis</u>		X			X	X	X			
Meenoplidae										
<u>Nisia atrovenosa</u>				X	X	X	X	X	X	Old World tropics
Issidae										
<u>Trienopa (Ivinga) typica</u>		X	X	X						
Cixiidae										
<u>Brixia stellata</u>				X	X	X				
<u>Oliarus nosibeanus</u>					X					
<u>Achaemenes major</u>					X					

Delphacidae

<u>Ugyops facialis</u> ^{2/}								X	
<u>Sogatella nigeriensis troilus</u>								X	
<u>Sogatodes cubana</u>	X							X	Cuba, U.S.A., Puerto Rico, Sudan
<u>Nilaparvata maeander</u>								X	
<u>Toya propinqua</u>	X			X	X	X	X	X	Cosmopolitan
<u>T. thomasseti</u>					X			X	
<u>Delphacodes ceresensis</u>							X		
<u>Dicranotropis ibadanensis</u>								X	
<u>Liburnia krugeri</u>								X	

^{1/}Only recorded from Aldabra; ^{2/}Distant species not found by expedition.

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