ON THE ODONATE FAUNA OF ILHA GRANDE AND SOME OTHER COASTAL ISLANDS OF THE STATE OF RIO DE JANEIRO, BRAZIL*

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Abstract A checklist is given of 55 spp. recorded from 8 coastal islands, incl. 36 spp. from Ilha Grande. The composition of the odon. fauna of the islands is discussed and it is compared with that of the State mainland.

* Dedicated to the memory of Dr E.P. COELHO, the leader of the "Insular-Rio" Expedition.

Introduction

A reference collection of dragonflies of the coastal islands of Rio de Janeiro arose from the zoological material collected by the "Insular-Rio" expedition (Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro) between July, 1983 and April, 1984. This main source of records, plus the additional material from new collections, enabled us to prepare this commented list, previously revealed in part

by PUJOL-LUZ & CARVALHO (1987).

The unique material collected in some coastal islands of this State before the "Insular-Rio" expedition has been gathered in Ilha Grande during a single excursion by Dr N.D. Santos who also in part reported on it earlier (e.g. SANTOS, 1965a).

All in all, over 400 specimens were examined and identified. They are deposited in the Departamento de Zoologia, Instituto de Biologia and Departamento de Entomologia, Museu Nacional – Universidade Federal do Rio de Janeiro (UFRJ).

The islands

The eight islands included in this study (Fig. 1) are situated 0.2-7.0 km off the coast and were formed through sea transgression (MARTIN & SUGUIO, 1978). They are listed below (the resp. main settlements in parentheses) with the coordinates of the collection sites and their approximate surface.

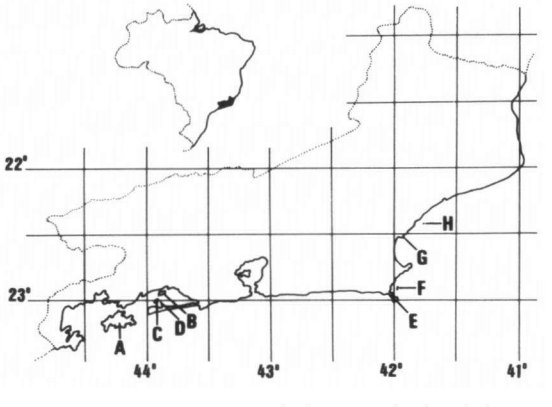

Fig. 1. The coast of the State of Rio de Janeiro in relation to the coast of Brazil: (A) Ilha Grande; – (B) Ilha de Itacurucá; – (C) Ilha de Jaguanum; – (D) Ilha da Pombeba; – (E) Ilha de Cabo Frio; – (F) Ilha Comprida; – (G) Ilha das Pombas; – (H) Ilha do Santana.

(A) Ilha Grande (Angra dos Reis) – 23°08'S/44°12'W; – 190 km^2;
(B) Ilha de Itacuruçá (Mangaratiba) – 22°57'S/43°54'W; – 7.5 km^2;
(C) Ilha de Jaguanum (Mangaratiba) – 23°00'S/43°56'W; – 2.2 km^2;
(D) Ilha da Pombeba (Mangaratiba) – 23°02'S/43°55'W; – 0.1 km^2;
(E) Ilha de Cabo Frio (Cabo Frio) – 23°01'S/42°00'W; – 5.5 km^2;
(F) Ilha Comprida (Cabo Frio) – 22°52'S/41°57'W; – 1.2 km^2;
(G) Ilha das Pombas (Macaé) – 22°32'S/41°57'W; – 0.2 km^2;
(H) Ilha do Santana (Macaé) – 22°25'S/41°42'W; – 1.1 km^2.

Species list and discussion

Table 1 lists the 55 species collected, 36 of these being recorded in Ilha Grande.

Due to the nature of these islands and their short distance to the coast, they represent only coastal expansions for the majority of the species recorded. Generally, the odonate fauna occurring on an island is conditioned by the local availability and quality of breeding habitats. These largely depend on the size of the surface and on the stability of the habitats. Consequently, due to the geographic discontinuity, the number of species found on each island is related to its size, and it will be always smaller than in a similar area on the continent. In addition, because of the instability of aquatic habitats and due to continuous migration, the odonate fauna of the smaller islands is subject to a rapid change in time.

The odonate fauna of the smaller islands is composed of few generalist species in common to the lowlands and sand dune zones of the State (SANTOS, 1965b; CARVALHO, 1991), like the libellulids *Erythemis* spp., *Miathyria marcella*, *Tramea* spp., and the coenagrionids *Ischnura capreola* and *Leptagrion andromache*. These short-larval-cycle species breed in small open-country collections of temporary stagnant waters and even in the bases of Bromeliaceae leaves.

The two major islands, Ilha Grande and Ilha de Itacuruçá, shelter species that breed in stable lotic environments like the gomphids registered, the calopterygid *Hetaerina hebe* and the megapo-

Table I – Odonate species recorded on some coastal islands of the State of Rio de Janeiro, Brazil – [Collection data: (1) Insular-Rio Expedition (A.L. Carvalho, C.R. Sampaio, A.M. Kosawa and others): Ilha Grande, 20/28-II-1984; Ilha de Itacuruçá, 12/13-III-1984; Ilha de Jaguanum, 14/17-III-1984; Ilha da Pombeba, 18-III-1984; Ilha de Cabo Frio, 24/27-I-1984; Ilha Comprida, 28/31-I-1984; Ilha das Pombas, 9-X-1983; Ilha do Santana, 30/31-III-1984; – (2) Ilha Grande, 31-III-1956, N.D. Santos leg.; – (3) Ilha Grande, 14/15-XII-1985, 14/16-I-1986, A.L. Carvalho & J.R. Pujol-Luz leg.; – (4) Ilha Grande, 1-III-1986 and Ilha do Santana, 18/21-X-1986, A.L. Carvalho leg.; – (5) Ilha de Itacuruçá, 1/3-II-1987, J.R. Pujol-Luz leg.].

Species	Grande	Itacuruçá	Jaguanum	Pombeba	Cabo Frio	Comprida	Pombas	Santana	Collection data
CALOPTERYGIDAE									
Hetaerina hebe	X	X							1.3.5
LESTIDAE									
Lestes bipupillatus					X				1
PERILESTIDAE									
Perilestes fragilis	X								1.2.3
MEGAPODAGRIONIDAE									
Heteragrion consors	X	X							1.3.5
COENAGRIONIDAE									
Acanthagrion gracile	X	X							1.3.5
Argia modesta	X								1.3
A. sordida	X								1.3
Argia sp.	X								1
Ischnura capreola					X		X	X	1.4
I. fluviatilis	X				X			X	2.4
Leptagrion andromache								X	1.4
L. elongatum	X	X			X	X			1.3
L. perlongum	X								1.2.3
Metaleptobasis macilenta	X								2
Telagrion longum					X				1
PSEUDOSTIGMATIDAE									
Mecistogaster asticta	X								1
M. amalia [?]	X								1
AESHNIDAE									
Aeshna cornigera	X								3
Anax amazili	X				X				1
Castoraeschna castor	X								1.2.4
Coryphaeschna adnexa							X		1
Limnetron debile	X								2
GOMPHIDAE									
Epigomphus paludosus	X								1.3
Progomphus complicatus	X								2.3
Progomphus sp.	X								3
Zonophora campanulata	X								1.3.4
LIBELLULIDAE									
Anatya januaria			X						1
Brechmorhoga nubecula	X								1.3

Table I - continued

Species	Grande	Itacuruçá	Jaguanum	Pombeba	Cabo Frio	Comprida	Pombas	Santana	Collection data
Dasythemis venosa	X								1.2.3
Dythemis multipunctata	X	X							1.2.3.5
Erythemis peruviana								X	1
E. plebeja								X	1
E. vesiculosa					X			X	1
Erythrodiplax anomala					X				1
E. basalis	X								2.4
E. castanea	X								1
E. connata	X								1.2.3
E. juliana	X								1
E. ochracea					X				1
E. umbrata	X	X	X	X		X		X	1.3.4
Erythrodiplax sp.			X						1
Libellula herculea	X								3
Macrothemis hemichlora	X								1.3
M. musiva	X								1.3
M. tesselata		X							1
Miathyria marcella						X	X	X	1.4
Micrathyria hypodidyma	X								2.4
M. ocellata					X				1
Orthemis ferruginea	X	X			X			X	1.3.4.5
Pantala flavescens	X	X	X	X	X	X		X	1.3.4.5
Perithemis mooma		X			X				1.5
P. waltheri	X	X							2.3.5
Tramea abdominalis					X				1
T. binotata				X					1
T. cophisa					X	X		X	1

dagrionid *Heteragrion consors*; many of them occur likewise in the mountain areas of the State (SANTOS, 1970). Forest species, like the rare *Mecistogaster asticta*, are also noticed.

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