



# Underwater surveys of ichthyofauna of the Northwest Bank of Santo Antão (Cape Verde archipelago)



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## INTRODUCTION

The Northwest Bank rises from 2000 m to 30 m and is located 15 nm offshore Santo Antão Island (Fig. 1). A unique research event took place in 1981 using echosounder techniques and pelagic trawl (Stromme *et al.*, 1981). Prior to this the only information available was from fishermen. In order to obtain accurate data and more precise information about spatial organisation of fish communities, surveys using underwater sampling techniques were carried out in 2002.

## STUDY AREA:

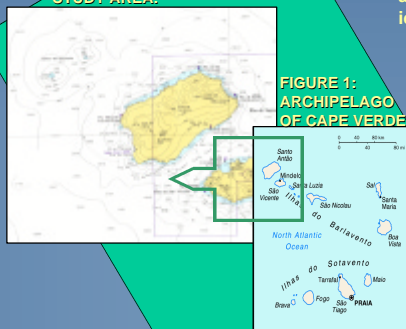


FIGURE 1: ARCHIPELAGO OF CAPE VERDE

## METHODS

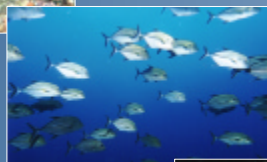
Seven Underwater surveys were carried out in 2002 at depths from 35 to 38m. Underwater census by divers and the use of photography and video for species identification and abundance evaluation were used.

## RESULTS

Of the 33 fish species observed, 9.1% were endemics, 6.1% were Macaronesian endemics, 21.2% had an African distribution, 9.1% were of Atlantic-Mediterranean influence, 24.2% were Cosmopolitan and 21.2% were Amphiatlantic. The most abundant species were *Caranx lugubris*, *Canthidermis sufflamen*, *Similiparma hermani*, *Myripristis jacobus* and *Holacanthus africanus*. Carangidae and Pomacentridae were the best represented families. Only 7 species were present in all the surveys: *Acanthocybium solandri*, *Acanthurus monroviae*, *Bodianus speciosus*, *C. sufflamen*, *C. lugubris*, *Cephalopholis taeniops* and *S. hermani* (Table 1). One vulnerable, *Chaetodon robustus*, and two endemic species, *Chromis lubbocki* and *S. hermani*, were observed. Of the species found, 6.1% were benthopelagic, 15.2% demersal, 54.5% reef-associated and 15.2% were pelagic.



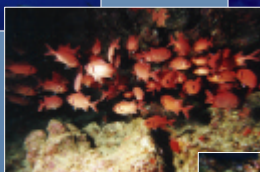
*Similiparma hermani*



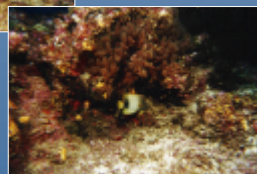
*Caranx lugubris*



*Canthidermis sufflamen*



*Myripristis jacobus*



*Holacanthus africanus*

## THE MOST ABUNDANT SPECIES OF THE NORTHWEST BANK

## DISCUSSION

The high degree of species directly depending on the seabed habitat found showed that this seamount may have a permanent fish community, supported by upwelling and other oceanographic phenomena that take place in seamounts namely "Taylor-column" circulation (Clemmesen & Röhrscheidt, 2002, Gad & Schmitnke, 2002). Otherwise geographical proximity from the coastal suggests that the upper part of seamounts like this one may act both as attraction point for oceanic species and as "stepping-stone" for the dispersal of coastal species (Matthiessen, 2002, Rowden *et al.*, 2002).

TABLE 1: List of species and percent of occurrence in all 7 surveys.

Scientific name	English Name	% Occurrence (n=7)
<i>Acanthocybium solandri</i>	Wahoo	100
<i>Acanthurus monroviae</i>	Surgeonfishes	100
<i>Bodianus speciosus</i>	Wrasses	100
<i>Canthidermis sufflamen</i>	Triggerfishes	100
<i>Caranx lugubris</i>	Black jack	100
<i>Cephalopholis taeniops</i>	Groupers	100
<i>Similiparma hermani</i>	Damselfishes	100
<i>Holacanthus africanus</i>	Angelfishes	86
<i>Myripristis jacobus</i>	Soldierfishes	86
<i>Sparisoma cretense</i>	Parrotfishes	96
<i>Gangeticaster rostrata</i>	Puffers	71
<i>Chaetodon marcellae</i>	Butterflyfishes	71
<i>Ginglymostoma cirratum</i>	Nurse sharks	71
<i>Apogon imberbis</i>	Cardinalfishes	57
<i>Chromis lubbocki</i>	Damselfishes	57
<i>Trachurus sp.</i>	Mackerel	57
<i>Abudefduf luridus</i>	Bluefin damselfish	43
<i>Caranx latus</i>	Horse-eye jack	43
<i>Pseudocaranx dentex</i>	White trevally	43
<i>Sargocentron hastatus</i>	Squirrelfishes	43
<i>Muraena augusti</i>	Moray eels	29
<i>Raja sp.</i>	Skate	29
<i>Rypticus saponaceus</i>	Lizard goby	29
<i>Seriola dumerilii</i>	Greater amberjack	29
<i>Seriola rivoliana</i>	Almaco jack	29
<i>Stegastes leucostictus</i>	Damselfishes	29
<i>Thunnus albacares</i>	Yellowfin tuna	29
<i>Aluterus scriptus</i>	Scrawled filefish	14
<i>Chaetodon robustus</i>	Butterflyfishes	14
Gobiidae	Goby	14
<i>Kyphosus sectatrix</i>	Sea chub	14
<i>Seriola lalandi</i>	South-atlantic amberjack	14

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