essential to evaluate the population dynamic. The islanders take a large number of turtles.

Boavista beaches vary remarkably in length, energy and slope; nesting females don't appear to show any preference for specific types. The rate of non-nesting emergences is quite similar to that recorded in other Atlantic populations (e. g., Le Buff 1990). Morphological data and nesting behavior of Boavista turtles are not much different from those documented in populations already known (see e. g., Carr 1995).

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Distribution of Marine Turtles in the Archipelago of Cape Verde, Western Africa

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Cape Verde archipelago (14°48'-17°18'N, 22°42'-25°18'W) is located 500 km off the West Coast of Africa. It includes ten islands and several small islets of volcanic origin. The insular character of Cape Verde, its distance from the continental shore compared to other East Atlantic islands, the water temperature, and the sea currents by which it is affected, make it an important biological area, especially from a bio-geographical point of view. The presence of sea turtles in these islands is evident. However, as in many eastern Atlantic populations, references have always been scarce and not very reliable. It is still unknown whether different species nest in this zone. Here we present preliminary data on the distribution of sea turtles in this archipelago, and their nesting sites.

Methods

First of all, numerous bibliographical references concerning the presence of sea turtles in the archipelago were reviewed, bear in mind that many of them were never confirmed (**Table 1**). The bibliography was contrasted with direct observation of marine turtles in the sea and on the beaches from 1996 to 1998. At the same time, different beaches were surveyed to verify the female reproductive activity through recognition of turtle tracks on the sand. Moreover, human predatory activity was assessed by quantifying the remains of slaughtered turtles on the shores.

Results

Dermochelys coriacea. Isolated sightings by fishermen and some non-confirmed references about nesting on Boavista.

Eretmochelys imbricata. It is the second most common species. Only juvenile stages, up to 45 cm in Straight Carapace Length, were observed. The occurrence of the species has been confirmed on the following islands: São Vicente, Santiago, Sal, Boavista and Maio. References not confirmed about nesting.

Lepidochelys olivacea. References related to the islands of Sal and São Nicolau mention stranded animals. References not confirmed about nesting in Maio.

Chelonia mydas. Only small-sized shells from unknown origin have been reported as decorative ornaments. A doubtful record of nesting activity on Santa Luzia island.

Caretta caretta. Its the most widespread species in the archipelago. Its presence is practically confirmed on every island, and their nesting populations remain established in Sal, Boavista, Maio, and São Vicente. References not confirmed in Santa Luzia and Santiago.

Conclusions

Five species of marine turtles are regularly sighted in Cape Verde. *C. caretta* is likely the most abundant species in these islands. Its nesting areas are located on the islands of Sal, Maio, São Vicente and Boavista. *E. imbricata* (only juvenile

stages were observed), *C. mydas* (despite the many previous references citing its occurrence in this archipelago), *L. olivacea* (only a few stranded animals have been recorded), and *D. coriacea* (although some Caboverdeans argue that it may reproduce in the islands), are not noted to breed here (or appear not to breed in this area). *C. Caretta* is particularly abundant along the eastern coast of the island. Although deeper studies on this matter are lacking, Boavista could host the largest nesting population of loggerheads in the whole archipelago, accounting for one of the most significant populations in the Atlantic Ocean.

Table 1. Bibliographical review of the existing data about marine turtles in Cape Verde.

	Caretta caretta	
Rochebrune (1884)	-	-
Bocage (1896)	São Vicente	Juvenile (nesting?)
Angel (1937)	Sal, São Vicente	-
Bertin (1946)	-	-
Loveridge & Williams (1957)	Sal, São Vicente	-
Bannerman & Bannerman (1968)	-	-
Schleich (1979)	Boavista	Human predation
Groombridge (1982)	Boavista	Human predation
Dodd (1988, 1990)	-	Nesting area?
Hazevoet & Hafkens (1990)	Boavista (Curral Velho)	Nesting area
Márquez (1990)	-	Nesting area?
Gawler & Agardy (1994)	-	Nesting area?
Jouvenet (in Fretey 1998)	-	Nesting area?
	Lepidochelys olivacea	
Márquez (1990)	-	Nesting area?
Agardy (1992)	-	-
Chelonia mydas		
Robert (1721)	-	-
Rochebrune (1884)	São Vicente	-
Loveridge & Williams (1957)	São Vicente	-
Parsons (1962)	Santiago, Fogo	-
Parsons (1962)	Sal, Boavista, Maio	Nesting area
Bannerman & Bannerman (1968)	-	-
Brongersma (1981)	-	Improbable
Sternberg (1981)	-	Nesting area
Groombridge (1982)	-	Nesting area
Márquez (1990)	-	Nesting area
Gawler & Agardy (1994)	-	Nesting area
Bonin (1996)	-	-
Jouvenet (in Fretey 1998)	Sal, Boavista (Morro Negro)	Nesting area
	Eretmochelys imbricata	
Loveridge & Williams (1957)	Fogo	-
Maigret (1977)	-	Human predation
Schleich (1979)	-	Human predation
Brongersma (1981)	-	-
Marques (1990)	-	Nesting area
Groombridge (1993)	-	-
Gawler & Agardy (1994)	-	Nesting area
Jouvenet (in Fretey 1998)	Sal, Boavista (Morro Negro)	Nesting area
	Dermochelys coriacea	
Agardy (1992)	Boavista (Santa Monica)	Nesting area
Jouvenet (in Fretey 1998)	Boavista	-

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Sea Turtles in the South of Bioko Island (Equatorial Guinea), Africa

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Bioko (Equatorial Guinea) is a volcanic island in the Gulf of Guinea on the west coast of Africa (**Fig. 1A**). South Bioko, under the influence of high mountains, is one of the rainiest areas in Africa and the World (Pérez del Val, 1996). The island has 150 km of mainly rocky coast (Butynski & Koster, 1989). Only at the south of the island are there large black sandy beaches surrounded by non-altered rain forest and very difficult access area.

There is scarce information about the nesting activity and population size of sea turtles in Bioko, despite their well known presence (Butynski & Koster, 1989; Castroviejo *et al*., 1994; Butynski, 1996). Four species nest at South Bioko: the green turtle (*Chelonia mydas*), the leatherback (*Dermochelys coriacea*), the olive ridley (*Lepidochelys olivacea*) and the hawksbill (*Eretmochelys imbricata*).

Traditionally, sea turtles have been exploited in Bioko for food (meat and eggs), especially by South Bioko people, or to obtain ornamental objects. In 1995, the Spanish NGO Asociación Amigos de Doñana, within the project Conservación y Ecodesarrollo del sur de la isla de Bioko, began to protect the area and the marine turtle nesting beaches. In this study, we tried to evaluate the population size for the sea turtle species nesting at South Bioko during two surveyed seasons (1996/97 and 1997/98).

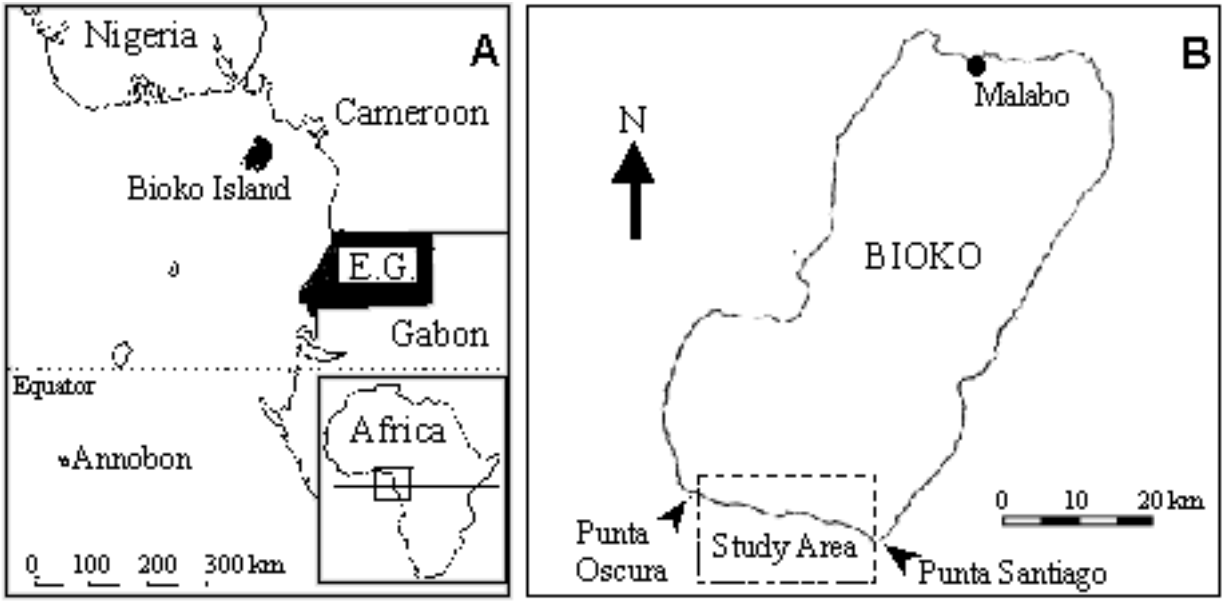

Figure 1. A: Equatorial Guinea (shadowed areas: Bioko, Annobón and Continental Equatorial Guinea: E.G.), indicating the location of Bioko Island in the West coast of Africa . **B:** Bioko Island with the study area, that includes all the monitored beaches, and their geographic limits (Punta Oscura and Punta Santiago).