UPDATE ON THE STATUS OF MARINE TURTLES IN THE GUADELOUPEAN ARCHIPELAGO (FRENCH WEST INDIES)

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INTRODUCTION

In the 1980s, marine turtles were "*exploited to a greater extent at Guadeloupe than anywhere in the Lesser Antilles, with the possible exception of Martinique*"[1]. At that time, nesting levels were described as "*low*" and the marine turtle population levels showed a "*definite decline*" in the Guadeloupean Archipelago[1]. The complete protection of all marine turtles species in Guadeloupe was accorded in 1991. However, no recent reviews of the status of marine turtles in the area have been conducted. Therefore the singular and most-oft cited reference for the status of sea turtles in the region[2] has been and remains Meylan (1983)[1], which was based on a month-long survey conducted outside the nesting season (December) in 1978.

In 1998, a new marine turtle conservation program, lead by AEVA (a non profit NGO), was founded in the Guadeloupean Archipelago [3]. The data gathered since 1998 provide an update on the status of the marine turtles found there.

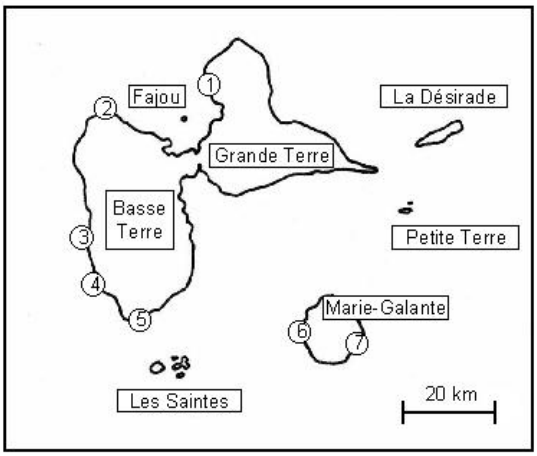
Picture 1 : Hawksbill turtle swimming in Val de l'Orge (photo J. Chevalier)

STATUS OF NESTING POPULATIONS

Three marine turtle species nest in the Guadeloupean Archipelago:

- Hawksbill turtles (*Eretmochelys imbricata*) are by far the most common. Nesting appears to be sparse but is present on most of the beaches of the Archipelago, and valuable nesting sites have also been identified. In Trois Ilets beach in Marie-Galante 17 different nesting females and 121 nesting activities have been recorded from the middle of June to the end of August 2000. Given that on this beach almost all the nesting attempts result in a clutch and that this survey covered only a part of the entire nesting season, the total number of nests on this beach certainly reached 150 in the year 2000. Therefore, this nesting beach appears to host a population of the same level of magnitude as the well-known populations of the Lesser Antilles (Jumby Bay in Antigua or Buck Island in USVI). Other valuable nesting beaches have been identified such as Four à Chaux beach (see picture 2) in Fajou island (8 different females observed and 81 nesting activities recorded during the 2000 survey), Petite Terre (14 nests and 5 false crawls recorded between 19/07/99 and 10/08/99 [4]), Anse à Sable and Anse Galets Rouges in Bouillante (17 nests recorded in 1999 [5]) or in Grande Anse and Pompierre beach in Les Saintes.

Map 1 : The Guadeloupean Archipelago with location of the main nesting and feeding sites



Legend :
1 – Souffleur beach in Port-Louis
2 – Cluny beach in St Rose
3 – Anse à Sable and Anse Galets Rouges in Bouillante
4 – Val de l'Orge in Vieux-Habitant
5 – Grande Anse in Trois-Rivières
6 – Trois Ilets beach
7 – Gallet beach.

- Green turtle (*Chelonia mydas*) nesting is less common and is more localized on certain beaches such as Gallet beach in Marie-Galante (4 nesting activities recorded in September and October 2000; note that no prior nest survey had been conducted on this beach), Grande Anse in Terre de Haut des Saintes (more than 10 nests in 1998[6] and 5 different nesting females observed in 2000), or Petite Terre (8 nests recorded in 12 surveys in 1998[4] and 20 nesting activities observed during 16 surveys in 2000).

- Leatherback turtles (*Dermochelys coriacea*) also nest in small numbers on the larger beaches of the Archipelago such as Cluny beach in St Rose (10 nesting activities recorded in 2000), Souffleur beach in Port Louis[6] or Grande Anse in Trois Rivières[6].

The review presented above is far from exhaustive: none of the nesting beaches have been followed thoroughly during a full nesting season and many beaches have not been surveyed for nesting activities (especially the north of Grande Terre). We suspect that numerous interesting sites remain to be discovered in the coming years.

STATUS OF FEEDING POPULATIONS

Hawksbill and green turtles, mainly juveniles, are commonly seen in the shallow water habitat (rocky areas, coral reefs and seagrass beds) of the Archipelago. They seem to be common in Côte sous le Vent; for example during 47 surveys of about 1 hour each performed in Val de l'Orge, the mean number of juveniles seen per survey was 0.72 turtles for greens and 0.60 for hawksbills. Greens and hawksbills are also common in les Saintes, particularly around Anse Pajot (12 hawksbills, including adults, were observed during 2 surveys), and also in Marie-Galante and Petite Terre. From interviews with fishermen and divers (snorkel and scuba), the general opinion is that marine turtles are much more common now as compared to 10 years ago.

Loggerhead turtles (*Caretta caretta*) and leatherbacks are sometimes seen by fishermen further away from the coast. In late July 1999, a whale watching crew observed a juvenile leatherback interacting with pantropical spotted dolphins (*Stenella attenuata)* off Bouillante[5].

Three adult olive ridley turtles (*Lepidochelys olivacea*) were observed in 1998 and 1999[7]. Prior to these observations, there are no certified historical records of either *Lepidochelys* species in the Guadeloupean Archipelago[7].

THREATS AND CONSERVATION ACTIONS

Since the protection law of 1991 was enacted, the number of turtles killed in the Guadeloupean Archipelago has greatly decreased. Today, accidental captures due to fishing and poaching on the beaches and at sea appear to be the two major threats. The destruction of nesting and feeding habitat represents a third serious threat for the long-term survival of the marine turtles in the Guadeloupean Archipelago. Others threats are also present in particular locations, such as egg predation by mongoose in Fajou[6] or beach destruction in Côte sous le Vent [6].

Picture 2 : Four à Chaux beach in Fajou Island (photo J. Chevalier)

During the last three years several green, hawksbill, loggerhead and olive ridley turtles were found ill or injured. These turtles were transported for rehabilitation at the Aquarium de la Guadeloupe and released after complete recovery. The program now aims to develop an awareness campaign targeting schoolchildren and the general public via media reports, school trips, information posters/billboards, etc. We will also start to work with the fishermen on the bycatch problem.

CONCLUSION

The marine turtle conservation project of the Guadeloupean Archipelago is still young and is now working to produce a Recovery Action Plan from the French Ministry for Environment. The results gathered to date provide a provisional status review of marine turtle populations currently found in this part of the Lesser Antilles. The primary finding is that the present

situation seems less critical than the one reported in the early 1980s. This encouraging trend may in part be explained by the total protection afforded to marine turtles in Guadeloupe since 1991 and in Martinique since 1993 (where previously hundreds of turtles were killed every year) or perhaps even the decrease in the Cuban hawksbill harvest[8]. As these changes affected most of the Lesser Antilles, the improvement seen in the Guadeloupean Archipelago may reflect a larger regional trend. In this case, the data gathered in the Lesser Antilles during the 1980s are out of date and thus cast serious doubt on the validity of regional status estimates of species based on old information, for example the 1999 review of the status of hawksbills in the Caribbean[2].

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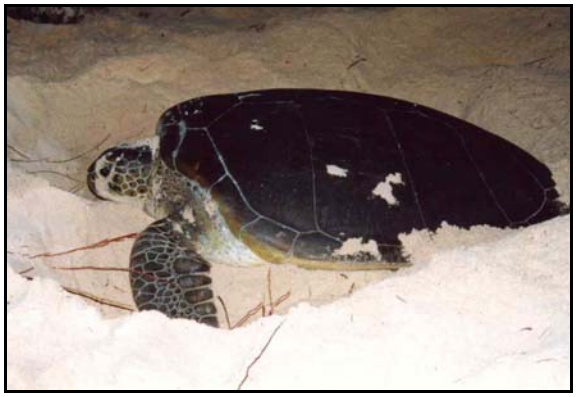
Picture 3 : Green turtle nesting in Marie-Galante (photo M. Roulet)



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