

Sea Turtle Nesting Monitoring Report

(March 1, 2014 – July 14, 2015)

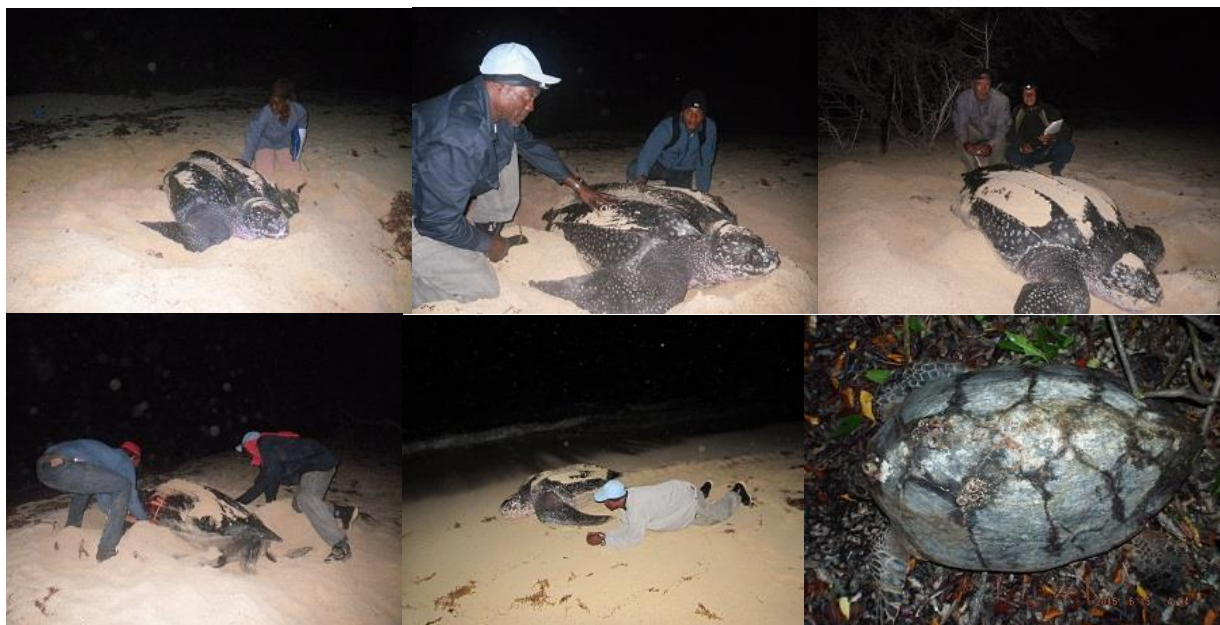
High North National Park, Carriacou, Grenada, West Indies

INTRODUCTION

The Critically Endangered Hawksbill (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*) turtles nest on Carriacou beaches. Chronic anthropogenic impacts affecting sea turtles include: loss of suitable nesting beaches due to coastal development, beach sand mining (a very destructive and increasing, though illegal, activity in Carriacou), accidental and targeted capture of turtles, poaching of nesting turtles and eggs.

In the proposed High North National Park and Protected Seascape (Carriacou north - N 12°30.45, W 61°26.45) three distinct sea turtle nesting beaches within and on the fringe of the Park area were monitored from March 1 to December 31, 2014 and from March 1 to July 14, 2015: Petit Carenage, Anse La Roche and Sparrow Bay. Big Field (North West), located between Anse La Roche and Petit Carenage, was monitored occasionally by kayak, as there is no footpath access.

Petit Carenage (North East) is a nesting beach buffered by a mangrove forest and the nearby village of Windward. PC, a white coarse sand and coral rubble beach, extends 0.80 km and is one of the longest continuous stretches of beach on the island.



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Anse La Roche (North West) is a 0.35 km of fine white sand along a dense littoral forest

Sparrow Bay (West) includes: Bogles beach (a narrow stretch of 0.30 Km of fine black sand abutting a three foot high earth step to cattle pastures & deciduous forest) & Craigston beach (a stretch of 0.30 Km of fine white and black sand): increasingly preferred by nesting hawksbills and highly threatened by poaching of turtles, eggs and sand mining (this beach runs along a residential estate).

METHODS

A minimum of two-person team composed by project staff and volunteer/s monitor Petit Carenage beach nightly from 8:00pm to 5:00am. This schedule is flexible due to the fact that sea turtles may crawl to nest occasionally on an early morning, thus extending the monitoring time for the Turtle Team on the beach. Anse La Roche and Sparrow bay are monitored by Kido staff on early mornings. Trained guides and research assistants Solomon Stafford, Emmanuel & Camilla Bethel, Antonio & Antonia Peters and Katlynd Treiber-Vajda formed the night & early morning patrolling teams with overseas volunteers, monitoring and protecting critically endangered species of turtles nesting in the High North proposed National Park beaches of Carriacou. Dario Sandrini and Dr. Marina Fastigi, founders & directors of KIDO, monitor the beaches when needed.

Sea turtle nesting activity data are recorded as either:

- confirmed nests (eggs deposition observed, eggs found, emergence of hatchlings recorded, turtle packing or disguising activities recorded)
- unconfirmed nests (when egg deposition or turtle activities of packing and disguising is not observed, but mound with emergence and dispersal crawls to and from the mound is recorded)
- attempted nests (evidence of body pits)
- dry runs (no evidence of nesting activity other than tracks on the beach).

Sea turtles encountered during monitoring are tagged *after* nesting is completed using Monel (for *Dc*) and Inconel (for *Ei*) flipper tags and standard morphometric data are recorded.

The tagging and data collection operations follow WIDECAST (Wider Caribbean Sea Turtle Conservation Network) protocol procedures.

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From March 1, 2014 to July 14, 2015 we recorded **525 nesting activities**: 182 confirmed nests (74 Leatherback, 108 Hawksbill) / 159 unconfirmed nests (44 Leatherback, 115 Hawksbill) / 144 attempted nests (31 Leatherback, 113 Hawksbill) / 40 dry runs (12 Leatherback, 28 Hawksbill) / 19 new Leatherbacks and 24 new Hawksbills were tagged. 15 Leatherbacks and 19 Hawksbills were pre-tagged.

March 1, 2014 July 14, 2015	Nests	Petit Carenage	Anse La Roche	Sparrow bay/ Prospect	Big Field	Hillsborough / Lauriston	Harvey Vale / White Island	Jean Pierre	Totals
LKB	Confirmed	58	10		1	5			74
	Unconfirmed	9	23	5	7				44
	Attempted	28	1	1			1		31
	Dry run	10		1		1			12
HWK	Confirmed	59	11	32	1	2	3		108
	Unconfirmed	31	24	46	1	1	12		115
	Attempt	81	4	27				1	113
	Dry run	19	1	7		1			28
Totals		295	74	119	10	10	16	1	525

53 nests were relocated for one or more of the following reasons: too close to the high water mark / there were too many roots & rocks in the nest / there was risk of poaching / the nests were laid in an area with grasses too thick for the hatchlings to crawl through / the nest were laid in a sand mining area

95 hatching activities were recorded: 58 leatherback and 37 hawksbill.

Nest Disturbance and Poaching

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Prior to the beginning of Kido Foundation's monitoring activities, we recorded as many as thirty-five (35) destroyed sea turtle nests during one nesting season (2001) resulting from human poaching. Sea turtle eggs remain a traditional delicacy for men on the island who believe turtle eggs are an aphrodisiac. Eggs are sold at 6 EC\$ each on the local black market. In contrast, following the start of the nest monitoring activities (2002), we noted a great reduction of poaching incidents. Our physical presence in the field during the nesting season deterred poachers from coming to the beach during the night and the anti-poaching strategies applied (turtle nest and tracks disguising after every nesting event and relocation of the entire nest) discouraged the poachers searching for eggs during their early morning prowls.

During the 2014 nesting season we recorded one poaching incident in Petit Carenage: a hawksbill came to lay on a late morning, after KIDO patrol team had left the beach and opportunistic poachers took advantage of the situation. In May 2015 KIDO team with Kids with Cameras Carriacou rescued, tagged and released a leatherback illegally caught by fishermen. Contrary to the fishermen statement that the turtle was a net by-catch, it was evident that the leatherback had no net scars on her skin; we suspected that the turtle was poached while day-nesting in a beach accessible by boat only. Our suspicions were reinforced when, the next day, patrolling by kayak the secluded Big Field beach we found a leatherback nest poached and signs of a boat ashore (see photos attached # 33 to # 36). In 2015 Sargassum seaweeds massively invaded Carriacou main turtle nesting beach, Petit Carenage (North-East), interfering with hatching activities. Kids with Cameras assisted our team to clear the critical nesting sites, helping the hatchlings to overcome these obstacles in their first most crucial journey to the Ocean (see attached photo # 37)

CONCLUSION

As the nesting habitats of sea turtles become increasingly threatened and reduced by land development, sand mining, erosion and other anthropogenic impacts, small secluded beaches on islands such as Carriacou offer important patches of alternative nesting habitat for sea turtles in the region.

Our ongoing nesting monitoring program has demonstrated that effective protection of nesting beaches enables a general increase in nesting activities and a relevant reduction of nest poaching; additionally, the ongoing project offers training, subsistence salaries for local nature guides and volunteer positions to local and foreign students and research assistants. All of these activities help to establish a culture of nature and wildlife conservation on and around the islands.