DomSeTCO

Dominica Sea Turtle Conservation Organization

Nesting Ecology & Conservation of Marine Turtles in the Commonwealth of Dominica, West Indies

2008 Annual Project Report

Submitted to the Ministry of Agriculture Fisheries and Forestry

Forestry, Wildlife and Parks Division

Prepared by

Errol Harris, Chairman, DomSeTCO

Simon George, Science Officer, DomSeTCO

Data collected and contributed by Community groups:

LAND (La Plaine); NET (Rosalie); NEWCEPT (Londonderry)

Science Advisor: WIDECAST

Karen Eckert, Ph.D., Executive Director

Seth Stapleton, M.Sc., Staff Biologist

WIDECAST

Wider Caribbean Sea Turtle Conservation Network

22 December 2008

For bibliographic purposes, this report should be cited as follows:

Harris, Errol H. and Simon George. 2008. *Nesting Ecology and Conservation of Marine Turtles in the Commonwealth of Dominica, West Indies: 2008 Annual Project Report* (Karen L. Eckert, Editor). Prepared by the Dominica Sea Turtle Conservation Organization (Dom-SeTCO), in partnership with WIDECAST, for the Ministry of Agriculture, Fisheries and Forestry (Forestry, Wildlife and Parks Division). Roseau, Dominica, West Indies. 59 pp.

ACKNOWLEDGEMENTS

We are profoundly grateful for the support and encouragement of the people of Dominica. The Dominica Sea Turtle Conservation Organization Inc. (DomSeTCO) relies upon partnerships with various Community-based organizations – primarily LAND, NET, LEAP, and NEWCEPT – as well as support from members of the Commonwealth of Dominica Police Force in La Plaine, Castlebruce, Marigot, Wesley and St. Joseph Police Stations and the staff of the Forestry Division and the Fisheries Division … and all other sectors necessary to make the project successful. We sincerely appreciate all of your contributions, and we apologize for any inadvertent exclusion.

First, we sincerely thank the data providers. Working long hours under stressful conditions and occasionally in inclement weather is incredibly challenging. Patrolling nesting beaches at night requires dedication and a passion for the job. We appreciate the efforts of all project staff and volunteers: LAND Group – Anthony Attidore, Davis Thomas, Oscar Graham, Janel Thomas, Ninian Colaire, Cathy Graham, Nestor Blaize, Vanya Joseph, Mandy Joseph, Ryan Joseph, John Cadette, Rickie Brumant, Verna Cuffy, Leontius Corbette, Sean Stedman (LEAP Group), and Officer Julian Francis patrolling Bout Sable Beach (La Plaine); NET Group – Dexter George, Frances Lawrence, et al. patrolling Rosalie Beach; and the NEWCEPT Group – Wenslaus Lawrence, Zuane Prescott, Charles Richards, Dennis Roman, Martin Sorhaindo, Charles Watty, Edward Watty, Jolly Williams, Hannah Williams, Richardson Dick, Winston Nixon, Nolton Telemaque, Nicky Mingo, and Maffius Greenaway in the Northeast. We also acknowledge John Alexander, Alexander Beaupierre, Jerome Bruno, Jackson Cadette, John and Osmond Cadette, Stephen Durand, Nelly Felix, MacDonald Greenaway, and Clarisant Joseph who assisted with spot checks, morning patrols, and other important activities.

We extend our gratitude to Hon. Ian Douglas, Minister of Tourism and Legal Affairs, and Hon. Mathew Walters, Minister of Agriculture, Fisheries and Forestry, for their continued support of sea turtle conservation and their foresight regarding sustainable development in general. DomSeTCO enjoyed the support of various government agencies in Dominica during 2008. We are particularly grateful for our long-term partnership with the Forestry, Wildlife and Parks Division and especially thank the Director of Forestry, Wildlife & Parks Mr. Minchinton Burton and his staff, Stephen Durand, David Williams, Ronald Charles, Arlington James, and Charles Watty for their contributions to the project over the years. We also appreciate the ongoing assistance, encouragement and expertise of Mr. Andrew Magloire and his Fisheries Division staff, especially Harold Guiste.

DomSeTCO thanks Discover Dominica Invest Dominica and their staff for their enthusiastic support of the Community-based "turtle watching" component of the turtle conservation programme, and the district Government officers from the Northeast and Southeast of Dominica, as well as numerous village councils (notably Woodford Hill, Riviere Cyrique/ Morne Jaune, Grand Fond, and La Plaine), for the working relationships maintained during 2008. We also enjoyed the support of Parliamentary Representatives Hon. Ronald Green (La Plaine constituency) and Hon. Abraham Brown (Grand Fond constituency), as well as Government Senator-Hon. Peter St. Jean. We thank the individual communities of the Southeast for their support throughout the season, and in particular the project benefited from collaborations with community-based conservation groups LAND, LEAP, NET, WCCA, and NEWCEPT. We also acknowledge our friendship and collaboration with the schools of the Southeast and across the island.

We greatly appreciate the guidance and financial support provided by Albert 'Panman' Bellot of COMPACT/UNDP GEF-SGP. We thank the Dominica State College Environmental Club for their interest in the beach monitoring efforts and their willingness to lend a hand! We also acknowledge the support of the Dominica Hotel and Tourism Association (DHTA). Special mention is due the staff of the USAID/COTS office in Dominica for their kindness, guidance and important financial support toward implementation of the turtle conservation programme; and Mr. Kelvin Alie of IFAW for the funding of spot checks of our patrolling programme and aspects of our education/ outreach programme.

We are profoundly grateful to Mrs. Beverly Deikel of the Rosalie Bay Nature Resort who, through her abiding passion for the local communities of the Southeast coast and her commitment to a sustainable tourism product in Dominica, was responsible for the early formation of the Rosalie Sea Turtle Initiative (RoSTI); in 2008, DomSeTCO continued to enjoy the full support of Mrs. Deikel. In addition, we are indebted to Mr. Patrice Oscar and the staff and associates of the Rosalie Bay Nature Resort for their innumerable contributions.

We appreciate the support of the private sector, including Sam and Glenda Raphael, Laura Ell, Christine Tinker, and other Jungle Bay Resort and Spa staff; John Robin and Benjo's Seamoss and Agro Processing Ltd.; Norman P. Rolle of Valley Engineering Sales & Services LTD.; Harris Paints; Anthony John and Digicel; O. D. Brisbane and Sons; Sunset Bay Club; Tamarind Tree Hotel and Restaurant; East Carib Dive; Al Dive and Andrew Armour of Anchorage Hotel & Dive Center.

These are just some of the representatives of the private sector who provided support in many creative ways for the benefit of sea turtle conservation in Dominica!

We extend our thanks to the national media for helping to share the importance of sea turtle and marine conservation with the people of Dominica. Our acknowledgements include the Management and staff of DBS, Management and staff of Kairi FM, Management and staff of GIS, the Management and staff of Marpin Telecoms and Broadcasting, and SAT Telecommunications Ltd. And Special mention of Mr. Tim Durand and other staff of Marpin, the Manager and staff of the Sun, the Chronicle, and the Times newspapers.

We are grateful for the support and encouragement provided by local NGOs including Ms. Nancy Osler and the staff of the Springfield Guesthouse and Archbold Tropical Research and Education Center, the Waitikubuli Ecological Foundation, and Dr. Sasha Steiner of the Institute for Tropical Marine Ecology.

Finally, we appreciate the technical guidance, resources, and training provided by Dr. Karen Eckert (Executive Director) and other members of the WIDECAST network, including Mr. Dennis Sammy, Ms. Suzan Lakhan Baptiste, and the entire Nature Seekers organization in Trinidad; Dr. Julia Horrocks of the Barbados Sea Turtle Project at the University of the West Indies; and Dr. Scott Eckert of WIDECAST at Duke University. Finally, we are grateful for the support provided by the Earthwatch Institute which, in partnership with WIDECAST and the Government of Trinidad & Tobago, facilitated a sea turtle conservation training course in Matura, Trinidad.

TABLE OF CONTENTS

LIST OF FIGURES

Nesting Ecology and Conservation of Marine Turtles
in the Commonwealth of Dominica, West Indies
March – October, 2008

EXECUTIVE SUMMARY

The Dominica Sea Turtle Conservation Organization Inc. (DomSeTCO) was registered on 8 August 2007. DomSeTCO members had worked closely with the Rosalie Sea Turtle Initiative (RoSTI) in several capacities from the inception of that initiative. There was the realization among members of DomSeTCO that RoSTI, which started as a three-year funded project and had stretched into a five-year project, was facing increased challenges conducting research while trying to protect Dominica's remaining sea turtles. For example, poachers were adopting aggressive positions towards RoSTI researchers and pressure groups were seeking to get exclusive rights through Government to operate on one of the research beaches.

What was needed was a national NGO which could coordinate the Community effort, and organize a unified approach to the conservation and research effort on Dominica. The data collected and work done by RoSTI showed clearly that the sea turtle population visiting Dominica during the laying season was an interrelated population that also visited other Caribbean islands, and that there were conservation minded Communities all around Dominica who were willing to listen and learn and who would be prepared to participate fully in the conservation of these ancient creatures. Moreover, it was also clear that communities were willing to participate in gainful sustainable use of the sea turtles as part of an eco-tourism product designed for both local and overseas visitors.

With help, guidance and encouragement from WIDECAST, an ambitious project was developed to address Dominica's perceived needs. A Needs Assessment was carried out and a training program to bring targeted communities up to speed on relevant aspects of sea turtle conservation, data collection, and tour guiding at the community level was started in 2007 to prepare DomSeTCO to coordinate the Community Management approach to sea turtle conservation, with Turtle Tour Guiding as one component.

The project partnered with Government, NGOs, the private sector, and coastal communities to collect scientifically sound data addressing sea turtle nesting ecology, as well as to educate the public on the importance of marine conservation. In 2008, DomSeTCO continued the research and conservation work started by RoSTI in 2003, utilizing regular foot patrols and identification tagging to study the Leatherback (*Dermochelys coriacea*), Hawksbill (*Eretmochelys imbricata*), and Green (*Chelonia mydas*) sea turtles nesting on the beaches of Dominica. The geographic focus remained Rosalie (i.e. Rosalie and La Plaine beaches); the project also regularly monitored Londonderry Beach in the Northeast and conducted irregular patrols on other beaches around the island.

Data on Sea Turtle Activities on Nesting Beaches, as well as Turtles Tagged and Nests Relocated on Nesting Beaches, are summarized in Appendices 1-3. Leatherback turtles are the dominant nesting species in Dominica, showing a well-defined nesting season spanning March-July with a peak in May. We documented 29 confirmed Leatherback nestings in 2008, with Rosalie Bay accounting for 90% of these nests. For comparison, RoSTI documented a total of 278 confirmed Leatherback nests (and 24 suspected nests) in 2007, also heavily concentrated at Rosalie and La Plaine beaches (Stapleton and Eckert 2007). In speaking with Caribbean colleagues we find that this decline in nesting activities is in keeping with the pattern on neighbouring islands during 2008, and that strong inter-annual fluctuations are not unusual for sea turtles.

Nesting sea turtles are protected by law in the Commonwealth of Dominica. In the Southeast in 2008, there was one confirmed poaching of a Leatherback at Bout Sable (La Plaine) and three Hawksbills were poached at Secret Beach (which is not patrolled at night, so that carcasses were discovered during morning patrols). The total number of turtles lost to poachers at the national level cannot be known.

In the Northeast there were very few Leatherback nests at Londonderry Beach, which was patrolled nightly. Airport construction created excessive nearshore sedimentation and this appeared to result in an unsuitable environment for nesting. There were only 12 Leatherback sightings at Londonderry Beach in 2008, including 3 confirmed nests.

There was only one confirmed case of Leatherback poaching in the Northeast, but this did not occur at Londonderry Beach. The difficulty in the North is that there are a large

number of beaches spread over a wide area and the beaches have several easy access points, making it a challenge for our small number of patrol groups. Emphasis has been placed on education and, to the best of our knowledge, the poached animals have not been consumed in the Northeast villages but have been sold outside of the area. On one beach, outside of the Northeast nightly patrol area, there was substantial poaching of eggs from 15 nests during the season, none of which turned up in the Northeast villages.

Nesting by Green and Hawksbill turtles was also recorded during the 2008 season; there were 64 sightings but only 14 confirmed nests (seven Hawksbill nests and seven Green turtle nests, all at Rosalie Beach) (Appendix 1, 2). Small sample sizes confound the presentation of summary statistics, but the data indicate that Hawksbill nesting peaked in June (nine sightings), while Green turtle nesting peaked in August and September (14 sightings each month). It is noted that discerning Hawksbill nests is more difficult than for the other species, and the count may be under-representative.

The continued development of the DomSeTCO Community based management of turtle conservation and the training of Tour guides, the development of 'Turtle Watching' as an ecotourism product and an alternative livelihood revenue generator, and a creative, community-centric education and outreach programme will greatly assist future sea turtle conservation efforts in Dominica.

I. INTRODUCTION

The Dominica Sea Turtle Conservation Organization Inc. (hereafter DomSeTCO), in collaboration with the Wider Caribbean Sea Turtle Conservation Network (hereafter WIDECAST), was launched in the Commonwealth of Dominica in 2007 as a community-based research and conservation project. The project, executed in partnership with the Forestry, Wildlife and Parks Division, the Fisheries Division, and communities in the eastern and northern regions of Dominica, represents the continuation of the work of the Rosalie Sea Turtle Initiative (RoSTI) to comprehensively attempt to research and conserve internationally endangered sea turtles (cf. IUCN 2007) on the island.

DomSeTCO was conceptualized as a practical example of how the sustainable management of depleted sea turtle stocks can be accomplished at both community and national levels in Dominica. DomSeTCO seeks to achieve this objective by collecting data on Dominica's nesting sea turtle populations through the use of sound scientific methods, by employing a strong public awareness component, and by enlisting the assistance and support of local communities and by working with the Community Groups with responsibility for data collection, patrolling and the conducting of Turtle Watching tours on the project beaches in their communities (Stapleton and Eckert 2007).

The development of these Turtle Watching Tours is envisioned to provide for sustainable, non-consumptive use and generating economic benefits for participating communities. Ultimately, 'Turtle Watch' programmes will be essential to the long-term sustainability of Dominica's nesting sea turtle populations (see Baptiste and Sammy 2007, Sammy et al. 2008, Sammy and Baptiste 2008).

As a member of the WIDECAST network, DomSeTCO has benefited from the expertise of sea turtle programs throughout the region. For more than a quarter century, WIDECAST, which embraces the largest network of sea turtle research and conservation projects in the world, has pioneered science-based and community-led sea turtle research, conservation, management, and education in the Caribbean region.

DomSeTCO has received technical guidance and support from WIDECAST-affiliated scientists, managers, educators, and conservationists in the form of program development and evaluation, models for data collection forms and outreach materials, and training opportunities for community staff and government officials. Such assistance has enabled DomSeTCO and the divisions of Fisheries and Forestry, Wildlife and Parks to raise Dominica's national consciousness regarding sea turtle conservation.

DomSeTCO and its Community partners will continue to work towards developing our own research priorities, crafting our own conservation successes, and creating a future that includes healthy sea turtle stocks.

The information collected and the results obtained have set the stage for additional work in the coming years and the development of an integrated and science-based agenda for sustainable turtle management in the country. Here we outline objectives

and methodologies, present results obtained during the 2008 research season, and provide conservation, management, and project recommendations regarding marine turtle conservation in the Commonwealth of Dominica.

II. STUDY SITES

Background

The Rosalie Bay is on the southeastern coast of Dominica, 'the Nature Isle' of the Caribbean. Dominica (754 km^2 in area) is situated in the Windward Islands, flanked by the French Departments of Martinique to the south and Guadeloupe to the north.

The island's rugged, mountainous terrain reflects its volcanic origins. Dominica's landscape is largely forested and carved by numerous rivers and streams. The climate is tropical, with temperatures averaging about 27°C. Rainfall along the coasts averages about 180 cm, but in the mountainous interior rainfall may exceed 1,000 cm annually. Rock falls and landslides, particularly in the more mountainous regions, are common during the rainy season. Location in the hurricane belt makes the island vulnerable to tropical storms and hurricanes during the June to November hurricane season.

Dominica boasts a wide range of flora and fauna. More than 1,000 species of flowering plants have been recorded on the island, including several endemic plant species (Govt. of Dominica 2002). Two island-endemic parrots, the Imperial parrot or 'Sisserou' (*Amazona imperialis*) and the red-necked parrot or 'Jacquot' (*Amazona arausiaca*), as well as nine regional endemics are amongst the 175 avifauna species recorded on the island (Govt. of Dominica 2002). Other fauna found in Dominica include 18 mammalian species, 19 reptilian species, 4 amphibians, 11 freshwater shrimps, and 20 crabs, and a rich marine fauna (Government of Dominica 2002).

Politically, Dominica is a member of the Organization of Eastern Caribbean States (OECS). The agriculture-based economy historically focused on bananas, but stricter standards and costs associated with the banana industry, coupled with a shift in government focus away from agriculture into areas such as tourism, have diminished the importance of the banana crop. Unfortunately, the development of the tourism

industry remains slow, attributed to the Dominica's lack of sandy beaches, rugged coastline, and absence of an international airport. Still dependent on agriculture, the island remains highly vulnerable to climatic conditions and international market and economic developments. These factors have contributed to sluggish overall economic development in recent years.

Rosalie Bay

Rosalie Bay, an area that encompasses four distinct sandy beaches: Rosalie (Coffee), La Plaine (Bout Sable), and two much smaller pocket beaches, W'avine Cyrique and Secret Beach (Bord la mer). These black sand beaches are typical windward, high energy beaches located on Dominica's southeastern Atlantic coast (Figure 1). Four villages (Grand Fond, Riviere Cyrique, Morne Jaune, and La Plaine) surround Rosalie Bay. Each village is at least a 15 minute walk to the closest beach.

Rosalie Beach adjoins the Rosalie Estate, a former copra (coconut) plantation, and is the northernmost and one of the larger, more popular beaches in Rosalie Bay (Figure 2). The Rosalie River forms the northern border of the beach, and a high cliff face creates the southern boundary; two small streams cross the beach. The beach may be accessed by a footpath or vehicle.

Rosalie Beach, like other beaches along the east coast of the island, is dynamic and its profile changes rapidly. Cycles of sand deposition and erosion are primarily fueled by the rough Atlantics waves. The beach ranges from rocky or pebbly substrate to a sandy substrate of varying length, width, and depth. The south-central portion of the beach is typically the least susceptible to erosion of sand, whereas the northern and extreme southern stretches of the beach are frequently marked by exposed rocks. A coral reef located in Rosalie Bay protects the beaches from the powerful ocean swells and may provide important foraging habitat for resident sea turtle populations.

Both W'avine Cyrique and Secret Beach are small pocket beaches located near the village of Riviere Cyrique. W'avine Cyrique, which is directly south of Rosalie Beach, lies at the bottom of a cliff with a high waterfall. Secret Beach lies south of W'avine Cyrique; a small stream flows along the southern edge of the small beach. Tracks from

Riviere Cyrique and Morne Jaune provide access to Secret Beach; W'avine Cyrique may be accessed via a single track and cliff.

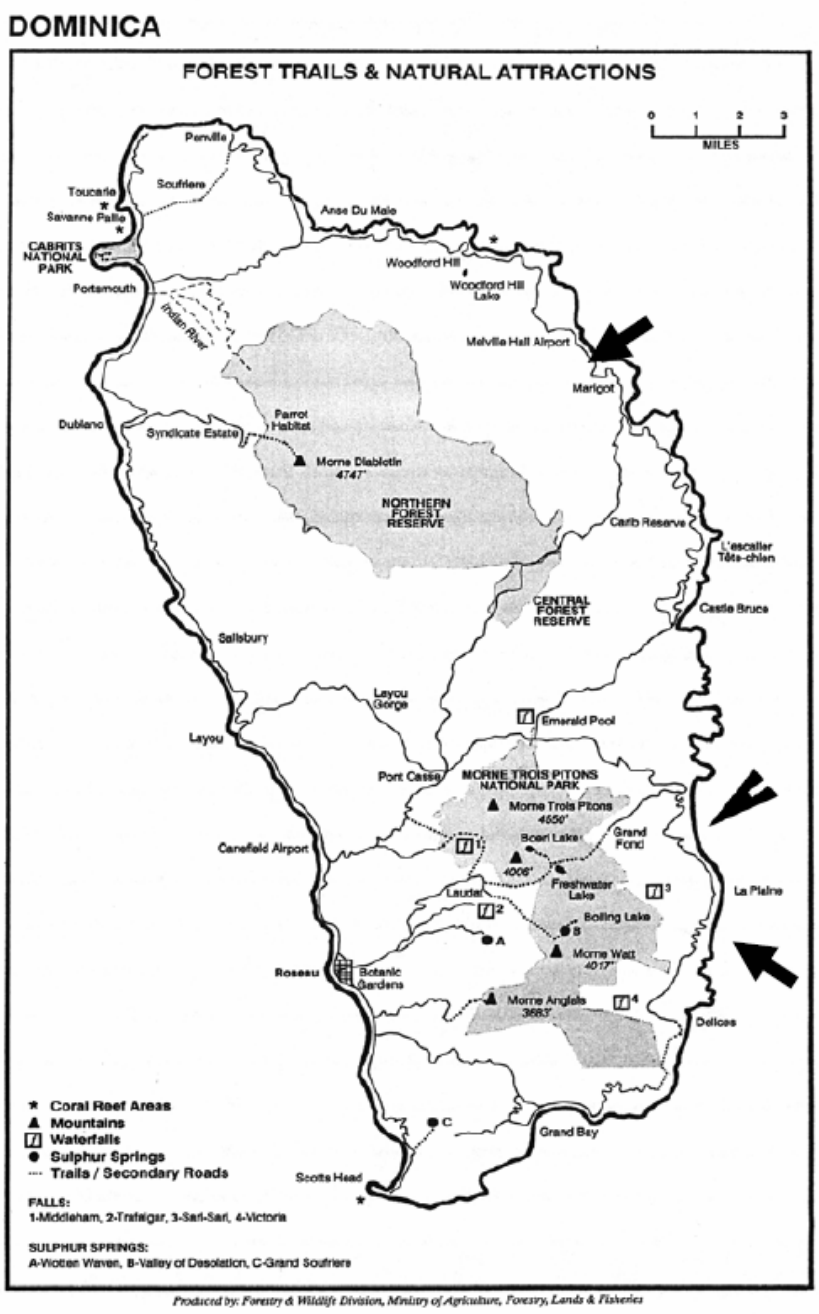


Figure 1. Location of the three nesting beaches where the 2008 sea turtle census took place. From north to south: Londonderry Beach, Rosalie Beach, and Bout Sable (La Plaine) Beach.

Figure 2. Rosalie Beach is representative of Dominica's "high energy" Atlantic-facing beaches which are susceptible to dramatic changes in profile. The photograph here was snapped facing northward from the central portions of the beach in mid-March, and shows a wide sandy beach.

Bout Sable Beach is the southernmost and largest beach in Rosalie Bay. The profile is highly variable and can change dramatically within a few days, with powerful waves eroding massive amounts of sand to expose a rocky substrate. The southern and northern reaches of the beach typically contain the greatest amounts of sand, while the central portion of the beach is usually narrow and highly susceptible to erosion, at times making the section impassable. Small streams cross both the southern and northern portions of the beach. Steep, vegetated hills and cliffs create an impressive backdrop for the beach, which is accessible by vehicle at the south end and via a footpath at the north end.

Traditionally, the rivers and forests of the national landscape have been among the most important natural resources in Dominican culture. Historically, the coastal area of

Rosalie has been very important to the people of the surrounding villages. Years before the present settlements of Grand Fond, Riviere Cyrique, Morne Jaune, and La Plaine, a single village existed in Rosalie. Most of the villagers still maintain a cultural link to Rosalie, as it remains a very popular area for picnics and activities on weekends and public holidays. During the summer months, the absence of school brings children and villagers to the beaches. Line fishermen also frequent the Southeast's beaches.

Northeastern Dominica

Like the beaches of southeastern Dominica, Londonderry and the other beaches of the Northeast are high-energy, Atlantic-facing beaches. Londonderry (Cabana) Beach, the focal point for the area's monitoring efforts, lies adjacent to the Melville Hall airport. A river bisects the northern extent of this long, narrow beach, and the adjacent terrain is relatively flat. A primary road connecting the villages of Marigot and Wesley borders the southern stretch of beach and directs vehicle headlights along the beach. The beach is easily accessed by vehicle, and an access road runs along the length of the beach lying south of the river.

Numerous other beaches are located in the Northeast and are irregularly monitored by the project, including Hampstead, Woodford Hill, Walker's Rest, Big Bottom, and Hatten Garden. These beaches vary in length and adjacent topography varies from small pocket beaches bordering cliffs to large, flat stretches of sand several hundred meters in length. Proximity to development similarly ranges from difficult to access, isolated beaches to beaches directly bordering roads and communities.

Villages in the northeastern study area include Calibishie, Woodford Hill, Wesley, and Marigot. As in the Rosalie Bay region, the Northeast's beaches are popular sites for weekend and public holiday activities.

As a people very reliant upon and maintaining close ties to the land, Dominicans see harvesting their natural resources as their birthright. The fertile soil produces abundant crops, the rivers and streams crayfish, the forests manicout or opossum (*Didelphys marsupialis insularis*), agouti (*Dasyprocta leporinus*), and crapaud (*Leptodactyllus fallax*), and the sea fish and marine turtles. Turtle research and conservation is framed within this geographic, historical, and cultural context.

III. PROJECT OBJECTIVES

DomSeTCO has followed the research procedures developed by RoSTI over the 2003 to 2007 research period (Franklin et al. 2004, Byrne and Eckert 2006, Byrne 2006, Stapleton and Eckert 2007). DomSeTCO's Phase I project was conducted in 2007; whereby extensive training of community Tour Guides was conducted as part of the Community based Management and Ecotourism (see Baptiste and Sammy 2007). Phase II of the project was conducted in 2008. To guide project development, several general goals were established to address Research, Education, Conservation, and Community considerations. These objectives were outlined in previous reports (e.g. Franklin et al. 2004) and the 2008 research permit:

Research: To establish baseline information and lay the foundation for obtaining the necessary scientific information for national management and conservation efforts. These data will focus on the distribution, abundance, seasonality, and species of sea turtles nesting in the southeast region and major threats to their survival. This information will support development of a 'Sea Turtle Recovery Action Plan for Dominica' and the appropriate safeguarding of important sea turtle habitat (e.g. designation of the Rosalie Bay Nature Reserve).

Education: To inform adults and children of the complex biology of sea turtles, their role in local ecosystems, and the importance of managing threats to their survival with an aim to ensure stable populations and sustainable use options for the future.

Conservation: To identify current threats and make recommendations to local community organizations and to Government regarding mitigating options and alternatives. In addition, the project will emphasize the involvement of local hoteliers in designing and implementing "turtle friendly" beach management protocols, such as finding alternatives to artificial lights that shine directly on nesting beaches.

Community: To raise awareness of the biology and status of depleted sea turtle populations, as well as to facilitate the involvement of Dominicans in the design and implementation of locally run "Turtle Watching" ventures. The project will

work with community leaders to recruit residents, including current poachers, to contribute information to the project, to patrol nesting beaches, to safeguard nests, and to conduct outreach (e.g. media, schools, public events).

To meet these objectives, DomSeTCO and the community groups were charged with the following tasks during 2008:

Research

- Monitor the sea turtle population nesting at Rosalie Bay, La Plaine Bay (Bout Sable) and Londonderry Beach and adjacent Beaches.
- Evaluate the relative importance of monitored beaches to sea turtle species.
- Design and implement a regular schedule of beach patrols for the purpose of estimating the abundance, distribution, and seasonality of nesting activity.
- Design and implement a nest monitoring program sufficient to estimate annual reproductive success.
- Maintain a national *Sea Turtle Hotline* for residents to report sea turtle sightings.

Education

- Visit at least one school each month of the school term, at their request and convenience.
- Participate in at least two media-covered events to promote the project and involvement by the community.
- Give at least six print and / or radio interviews on the project, the sea turtles of Dominica, and current conservation issues, typically executed with Government partners.
- Print and distribute, locally and nationally, at least two public education items, such as a teacher's activity guide, slide show, brochure, poster, and / or leaflet.
- Establish objectives and materials needed for a school-based education program.
- Regularly distribute an informative "DomSeTCO Communication" to interested national and international stakeholders.

Conservation

- Identify major causes of nest mortality.
- Document and report incidents of adult mortality (e.g. poaching, stranding resulting from incidental capture and drowning offshore).
- Collaborate with law enforcement agencies to develop strategies to effectively address illegal activities.

Community

- Provide technical training (in Trinidad) to fifteen (15) local persons (nominated by DomSeTCO), on the biology and conservation of Leatherback sea turtles. Training will also address integration of sea turtle field research with ecotourism, focusing on the nation's primary nesting beaches (initially Rosalie Bay, Bout Sable, and Londonderry) for the purpose of providing livelihood and income to rural communities.
- Encourage community support for conservation efforts by sharing information about the biology and status of sea turtles in Dominica, involving communities in research and profit-making ventures, and giving hiring preferences to members of the local communities.
- Sponsor local community groups and functions and participate in public events to promote conservation objectives.
- Develop recommendations to stakeholders, including Government and communities, based on field research, literature, and other resources, concerning management and conservation of sea turtles and the organization, implementation, and sustainability of community-based ecotourism on Dominica's sea turtle nesting beaches.

IV. METHODS

Beach Patrols

Regular foot patrolling, a well-established research technique, is useful to assess nesting activity of individual beaches (see Schroeder and Murphy 1999) and formed the founda-

tion of DomSeTCO research in 2008. Nightly foot patrols permit the tagging of nesting females for long-term identification and the collection of basic biological data (e.g. eggs per clutch, size metrics). Foot patrols may also deter poaching.

Because the nesting process typically lasts about 1.5 hours, beaches were patrolled at least every hour in an effort to ensure that each nesting female was observed at some stage of the nesting process. Patrols generally lasted from 8:00 pm to 5:00 am; although turtles occasionally nest during daylight hours, nesting activities are concentrated during the night.

From 15 March to 1 April 2008, staff patrolled the principal study beaches – Rosalie, Bout Sable, Londonderry (Cabana) – four nights per week. During the primary Leatherback nesting season (1 April to 1 July 2008), these beaches were patrolled nightly. Due to resource constraints and the concentration of nesting activities in the Southeast, nightly foot patrols continued only at Rosalie and La Plaine beaches after 1 July; Londonderry Beach was patrolled irregularly after 1 July.

Patrolling intensity at the Southeast's beaches diminished according to declines in nesting activity. La Plaine was patrolled nightly until the first week of August, about 4 nights per week voluntarily until 31 August. Rosalie was patrolled nightly until 1 August, for 5 nights per week until mid-August and for 7 nights during the fortnight, 16 August to 29 August. Morning patrols were conducted on Secret Beach and W'avine Cyrique Beach; these beaches that were not patrolled at night.

In the North East, morning patrols were conducted at Londonderry, Hampsted and Woodfordhill Beaches and there were spot checks done voluntarily through the end of August. Spot checks were conducted by Forestry Officers on all three principal study beaches during the month of August. Additionally, less frequent evening patrols and morning crawl counts were conducted at Secret Beach and W'avine Cyrique in Riviere Cyrique, Castle Bruce, Hatten Garden, Walker's Rest, Big Bottom, the Woodford Hill beaches, and Hampstead.

Note: Following the passage of Hurricane Omar on 15-16 October 2008, there was the loss of most of the sand on the West coast beaches, and the corresponding loss of turtle nests on the west coast. The East coast beaches were not affected.

Nesting Activity Categorization

The three species of internationally endangered sea turtles – Leatherback (*Dermochelys coriacea*), Hawksbill (*Eretmochelys imbricata*), and Green (*Chelonia mydas*) – are known to currently nest in Dominica. When the turtle was not directly observed, species identity was determined by crawl width, crawl symmetry (or asymmetry), and other distinguishing features such as the characteristically deep body pit of the Green turtle (Pritchard and Mortimer 1999, Stapleton and Eckert 2008).

Activities were also classified according to the result of the nesting attempt. A "false crawl" was defined as an unsuccessful nesting attempt (i.e. a nesting attempt in which eggs were not deposited). A "suspected nest" was defined as an attempt that likely resulted in a nest, but eggs were not visually confirmed. An activity was defined as a "nest" only when eggs were visually confirmed.

Tagging and Morphology of Nesting Females

Individual turtles were thoroughly examined for identification tags. Tagging methods adhered to protocols outlined in Eckert and Beggs (2006). Flipper tags (Monel size 49 or Inconel size 681 from the WIDECAST Marine Turtle Tagging Centre in Barbados) were typically applied to females during the egg-laying stage to ensure proper tag application. Tags were applied to Leatherbacks in the loose skin located between the tail and rear flippers; tags were applied to hard-shelled turtles in the most proximal flipper pad.

Staff obtained size measurements including curved carapace length notch to tip (CCLn-t), defined as the distance from the nuchal notch along the midline to the most posterior tip of the carapace, and the curved carapace width (CCW), defined as the maximum carapace width (Bolten 1999) (Figure 3). Any injuries, deformities, or other distinguishing characteristics (e.g. barnacles) were noted as well.

To simplify and increase the accuracy of data recording, all information was recorded on standardized data forms (Appendix 4), amended from those used in 2003 - 2006.

Nest Relocation

Egg poaching and beach erosion compel the DomSeTCO project to relocate nests. Relocation methods followed international best practices (Boulon 1999, Stapleton and

Eckert 2008). Eggs were collected, counted, and carefully transferred in plastic bags to the hatchery at Rosalie Beach or to a less susceptible location on the beach in which they were deposited. Nest dimensions of the relocation chamber were to reflect original chamber dimensions.

Figure 3. Seth Stapleton (WIDECAST) and Dexter George (NET) measure the curved carapace width of a nesting Leatherback while beach patroller Frances Lawrence collects eggs and visitors observe.

Outreach and Education

DomSeTCO operated two national *Sea Turtle Hotlines* (767 225-7742 held by Simon George and 767 616-8684 held by Stephen Durand) in 2008. Concerned citizens used the *Hotlines* to notify project staff of nesting activities on the island. Although maintaining multiple phone numbers was a logistical nuisance, these *Hotlines* allowed citizens using either of the two primary service providers (Digicel and Cable & Wireless) to call within network at lower rates – and most likely increased the probability of *Hotline* calls.

In addition to sponsoring the *Hotlines*, DomSeTCO staff and Board Members employed a variety of educational strategies to meet the education and outreach objectives, including traditional classroom talks, print and radio media outlets, and distribution of educational materials and at DomSeTCO outreach and educational meetings.

V. RESULTS

Nesting

Leatherback turtles exhibited a well-defined nesting season spanning March to July, with a peak in May. Twenty-nine (29) confirmed Leatherback nestings were recorded in 2008; 90% occurred at Rosalie Bay. For comparison, RoSTI documented 278 confirmed Leatherback nests (and 24 suspected nests) in 2007, also heavily concentrated at Rosalie and Bout Sable (Figure 4: Stapleton and Eckert 2007). At Londonderry Beach, the only beach in the Northeast that was patrolled on a nightly basis, there were only 12 Leatherbacks sightings in 2008 (including 3 confirmed nests).

There were 64 sightings of Green and Hawksbill turtles in 2008, but only 14 confirmed nests. Small sample sizes confound the presentation of summary statistics, but the data indicate that Hawksbill nesting peaked in June (nine sightings), while Green turtle nesting peaked in August and September (14 sightings each month).

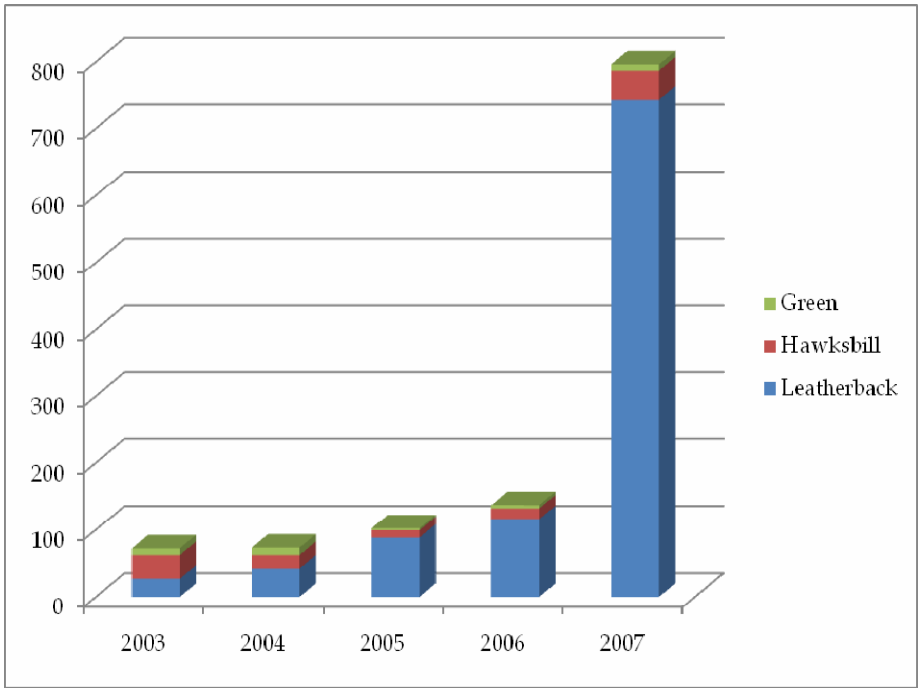


Figure 4. Total sea turtle nesting activities recorded during 2003–2007 in the Commonwealth of Dominica. Data exclude poaching and suspected poaching events. Source: Stapleton and Eckert (2007). In 2008, the total number of nesting activities documented at three monitored nesting beaches was 184, slightly above that documented in 2006, with 60% of 2008 activities occurring at Rosalie Beach.

Tagging and Morphology of Nesting Females

Twenty-one Leatherbacks were tagged; six Green turtles were tagged; and two Hawksbills were tagged (Appendix 3). All were tagged during the nesting process by trained members of participating Community Groups.

The size of our nesting Leatherbacks did not differ appreciably from average sizes reported in previous years. Stapleton and Eckert (2007) calculated mean Leatherback size (sample size: 98 individuals for which multiple measurements were obtained) to be 150.2 cm CCLn-t (SD: 6.7) and 117.7 cm CCW (SD: 6.1). See figure 5.

Nest Relocation

There were 43 confirmed nests laid in 2008 on the three monitored nesting beaches; of these, 35 were relocated (see Appendix 3) to areas deemed to be lower in risk for erosion and/or poaching.

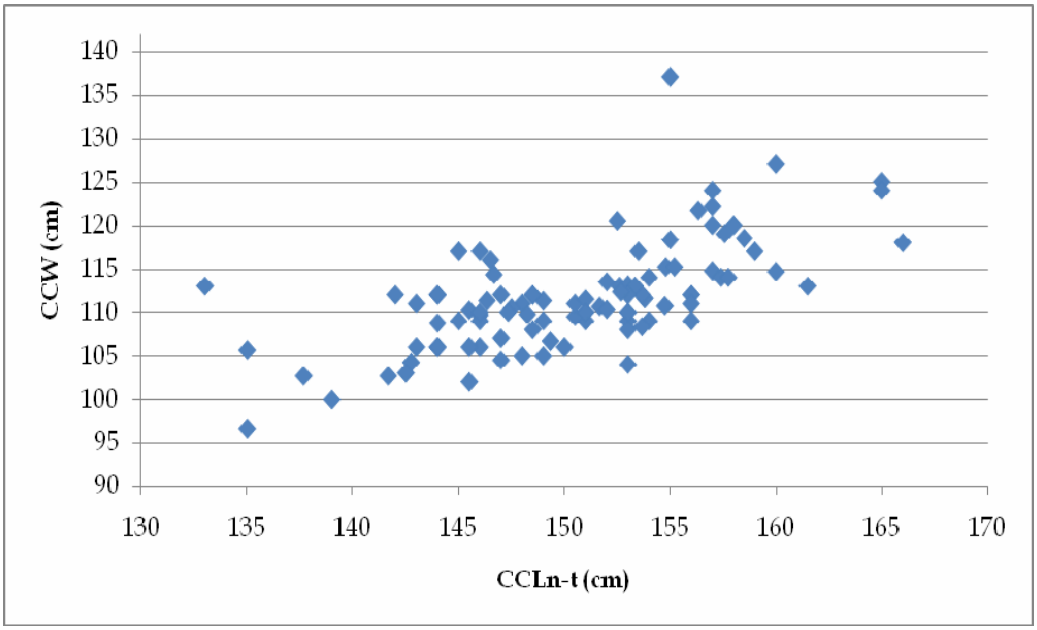


Figure 5. Curved carapace length versus curved carapace width of individual Leatherbacks recorded during March – September, 2007 in the Commonwealth of Dominica. Source: Stapleton and Eckert (2007)

Hatch Success

The 2007 field season marked the first attempt to quantify hatch success and identify sources of nest failure. With a relatively small sample size (n=35), Stapleton and Eckert (2007) were able to document a hatch success rate of about 26%, a low value attributed largely to inadequate reburial techniques. Stapleton and Eckert (2007, 2008) review the importance of replicating the original nest dimensions, typically about 70 cm in depth for Leatherbacks, and suggest ongoing training for field staff and volunteers.

In 2008, hatch success continued to be lower than would normally be expected. Of the 25 nests relocated at Rosalie, all fared poorly. The relocation area was enclosed but not secure and feral dogs accessed the nests. Fewer than 10 nests were spared, all were excavated post-hatch. In one typical case, 14 of 95 (14.7%) eggs hatched, there were 11 dead embryos. A priority for the 2009 season will be to address the hatchability issue.

Poaching

In 2008, there was one confirmed poaching of a Leatherback at Bout Sable Beach in La Plaine (see Appendix 5) and one confirmed and several unconfirmed Leatherback poachings in the Northeast. It is noteworthy that none of these were taken at Londonderry Beach, the only beach patrolled on a nightly basis. Three Hawksbills were poached at Secret Beach (Rosalie Bay) but that number is certainly higher on a national scale. On one beach, outside of the Northeast nightly patrol area, there was substantial poaching of eggs from 15 nests during the season, none of which turned up in the northeast villages.

Outreach and Education

Project staff and partners utilized a variety of strategies during the 2008 season to educate local communities and the general public about sea turtle ecology and marine conservation. DomSeTCO conducted numerous presentations across the island for school, community, and volunteer groups including Scott's Head Soufriere Marine Reserve Day, Eat Fish Day at Dublanc/Colihaut/Bioche; met regularly with conservation organizations, village councils, and Government officers throughout the island; participated in community meetings and programmes; and educated the public during informal 'Turtle Watches.'

The project continued to make use of Dominica's radio, print, and television media outlets to disseminate pertinent information. DomSeTCO worked to forge relationships with organizations such as the Clifton Dupigny State College, the Roseau Library, the Ministry of Education, schools and maintained private sector partnerships. The project established an educational collection (i.e. preserved eggs, embryos, and hatchlings).

Community groups organized and took responsibility for the patrolling of and collection of data on the study and other beaches in their communities. The patrollers were paid but there was also voluntary work as well. Extensive training in Turtle Tour Guiding – some five weeks – was conducted in preparation for the 2009 season; although tours were conducted in the 2008 season and payment was made directly to the community groups/tour guides.

Two Dutch volunteers with sea turtle experience in Central America, worked with the North East Wildlife Conservation Environmental Protection and Tours (NEWCEPT) group and assisted with preparation of brochures for their 2009 Turtle Tour programme. DomSeTCO sponsored the Riviere Cyrique rounders team which participated in the National competition (Figure 6).

Figure 6. Teams participate in the Southeast Rounders "Bowl-A-Rama" in August in Delices. Riviere Cyrique's *DomSeTCO Turtle Doves* had another strong showing in the 2008 Rounders season!

WIDECAST donated a large selection of sea turtle books and educational materials, including Teacher Packages that were distributed to all primary and secondary schools in the country, as well as to the Central Library and The State College (Figure 7).

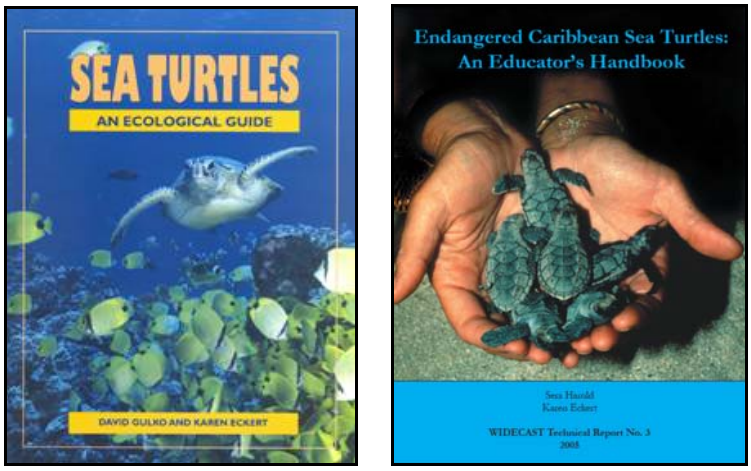


Figure 7. Among the materials included in the Teacher Packages and shared with educators throughout the country were a sea turtle textbook and an educator's handbook.

VI. DISCUSSION AND RECOMMENDATIONS

Nesting

The 2007 research season documented a surge in nesting activity in comparison to the previous four years of RoSTI research, and in 2008 nesting levels returned to levels more aligned with tallies recorded in recent years (Figure 4). The unusual 2007 surge, a product of heightened Leatherback nesting, was not unique to Dominica: the Caribbean region witnessed elevated nesting in 2007 (Stapleton and Eckert 2007), perhaps based on natural fluctuations in the availability of prey on Atlantic feeding grounds. The 2008 decline in egg-laying (compared with 2007) is presumably attributable to the normal cycle of Nature.

Data on Sea Turtle Activities on Nesting Beaches, as well as Turtles Tagged and Nests Relocated on Nesting Beaches, are summarized in Appendices 1-3. Leatherback turtles are the dominant nesting species in Dominica, showing a well-defined nesting season spanning March-July with a peak in May.

We documented 29 confirmed Leatherback nests in 2008, with Rosalie and Bout Sable (La Plaine) beaches accounting for 90% of these. In contrast, there were 278 confirmed Leatherback nests (and 24 suspected nests) in 2007, also heavily concentrated at Rosalie and La Plaine beaches (Stapleton and Eckert 2007). In speaking with Caribbean colleagues we find that this decline in nesting activities is in keeping with the pattern on neighbouring islands during 2008, and that strong inter-annual fluctuations are not unusual for sea turtles.

There were 12 Leatherbacks sightings at Londonderry Beach in 2008 (including three confirmed nests). The relative absence of nesting at this site in 2007 and 2008 is likely a result of sedimentation in adjoining waters caused by airport runway expansion (Figure 8). Sedimentation, coupled with intense lights occasionally used by nighttime construction crews, appears to have created an environment less suitable for nesting. Possible nearshore navigation methods such as auditory, olfactory, and/or visual cues may be impaired by the sedimentation, and artificial lights act as a strong deterrent to nesting (Witherington and Martin 2000). Completing the expansion will remove sedimentation and artificial lights, and may encourage the return of nesting on Londonderry.

Figure 8. Sedimentation of the waters around Londonderry Bay was created by construction at the Melville Hall airport near Marigot.

The May peak of Leatherback nesting activities documented during 2008 reinforces the seasonal nesting trends documented in previous years of the project (e.g. Franklin et al. 2004). Additional reports of Leatherback nesting activities included areas suspected to be active nesting beaches in the East (e.g. Castle Bruce) and Northeast (e.g. Woodford Hill and Hampstead).

There were 64 sightings of Green and Hawksbill turtles in 2008, but only 14 confirmed nests (seven Hawksbill nests and seven Green turtle nests, all at Rosalie Beach) (Appendix 2). Small sample sizes confound the presentation of summary statistics, but the data indicate that Hawksbill nesting peaked in June (nine sightings), while Green turtle nesting peaked in August and September (14 sightings each month). It is noted that discerning Hawksbill nests is more difficult than for the other species, and the count may be under-representative.

DomSeTCO received numerous reports of Hawksbill nesting activities from the West coast during 2008, particularly along the beaches of Macoucherie, Salisbury, and Batalie. Unfortunately, poaching of both adults and eggs continues to present a significant problem to Dominica's Hawksbill nesting population.

Concerned proprietors and community members have expressed an interest in starting a sea turtle conservation project in an effort to better monitor West Coast nesting activities and reduce the threat of poaching. DomSeTCO and its partners, including the Forestry, Wildlife and Parks Division and the Fisheries Division, provided limited support and technical guidance to support the developing West Coast turtle monitoring communities in 2008. Collaborations with the Dominica State College Environmental Club and the Dominica Youth Environmental Organization to assist with West Coast monitoring efforts were further explored in 2008 and should be revisited in 2009.

Tagging

Flipper identification tags applied by research and conservation projects throughout the Caribbean provide valuable data regarding the life histories and regional movements of marine turtles. Twenty-nine sea turtles were tagged in 2008, including 21 Leatherbacks, six Green turtles, and two Hawksbills (Appendix 3).

Sea turtles, particularly Leatherbacks, are seen to nest among the nation's beaches over the course of the season, as evidenced by the identification of these individuals by their tags. Leatherbacks often do not exhibit the same strong degree of nest site fidelity as do other sea turtle species (Eckert 1987, Bräutigam and Eckert 2006). Rather, the island of Dominica appears to function as a single 'nesting beach', emphasizing the need for communities to collaborate and coordinate in their protection and data collection efforts. Such movement among nesting beaches also corrects popular misconceptions that create opposition to common conservation practices, such as egg relocation among adjacent beaches (Stapleton and Eckert 2007, 2008).

Poaching

Sea turtles engaged in nesting activities and their eggs are protected against harvest and disturbance in the Commonwealth of Dominica under the Forestry and Wildlife Act (Chapter 60:02, Act 12) (Appendix 6). However, anecdotal evidence suggests that poaching was widespread prior to the establishment of the RoSTI project in 2003. Public awareness campaigns initiated by RoSTI and project partners targeted the general public and specific communities; poaching subsequently declined.

Although illegal slaughter of adults and harvest of eggs likely remained lower in 2007 than the pre-RoSTI era, poaching continues to present a significant conservation problem. The 14 Leatherbacks poached in 2007 represented more than 12% of the nesting cohort documented that year. Additional, unconfirmed poaching was reported in irregularly monitored portions of the island such as the West Coast and Castle Bruce regions. Poachers generally targeted beaches without regular beach patrols; only three slaughters occurred on routinely monitored beaches in 2007.

In 2008, there was one confirmed poaching of a Leatherback at Bout Sable Beach in La Plaine (see Appendix 5), in addition to one confirmed and several unconfirmed incidents of poaching in the Northeast. It is noteworthy that none of these were taken at Londonderry Beach, the only beach in the Northeast patrolled on a nightly basis.

Given that there were only 21 Leatherbacks tagged in 2008, confirmed poaching activity represented some 10% of that number. We do not have information to suggest that the poached animals were among our tagged cohort, but the level of poaching clearly

presents a uniquely serious threat both to conservation and to the development of a sustainable and profitable 'Turtle Watch' product.

The difficulty in the north is that there are a large number of beaches spread over a wide area and the beaches have several easy access points, making it a challenge for our small number of patrol groups. Emphasis has been placed on education and, to the best of our knowledge, the poached animals have not been consumed in the Northeast villages but have been sold outside of the area.

On one beach, outside of the Northeast nightly patrol area, there was substantial poaching of eggs from 15 nests during the season, none of which turned up in the northeast villages.

Three Hawksbills were poached at Secret Beach, in the South East. The number is certainly higher – but unknown – on a national scale.

Given that only an estimated 1 in 1,000 eggs survives the two to three decades required for sea turtles to reach sexual maturity, each adult female is vital to Dominica's small nesting colonies, as well as to regionally depleted sea turtle populations. Continued public awareness, expansion of monitoring efforts, increased law enforcement efforts, and establishing economic incentives via community-based 'Turtle Watching' ventures will be critical to combating poaching.

Improving the Science

DomSeTCO and previous to this, RoSTI, in partnership with Government partners and local communities, has collected valuable data on the nesting ecology of Dominica's sea turtles for the past six years. As a successful and growing research and conservation programme, the project should continually strive to improve data collection practices and answer new scientific questions.

As suggested in previous annual reports (e.g. Byrne and Eckert 2006), quantification of the beach profile would be useful to sea turtle conservation efforts. Regular (ideally weekly) photographs, measurements of beach width at set locations, and substrate categorization are all important to understanding beach dynamics. DomSeTCO's Science Officer commenced beach profile data collection at Rosalie Beach in 2008, with the

intention to continue the effort on an ongoing basis in order to describe patterns of sand deposition and erosion on one of Dominica's most active beaches.

Also needed on an ongoing basis is more rigorous collection of nest site data (including nest fate and hatch success) via division of the beach into permanent sectors, measurement of distances to high tide line, vegetation, and permanent landmarks, and collection of GPS coordinates. Greater comprehension of beach dynamics and nest site selection will enable better management decisions regarding nest relocation.

Finally, nest monitoring research should require that a 'nest tag' including the nest deposition date and the turtle's identification tag numbers be placed (typically encased in a plastic bag) in all nests.

DomSeTCO amended the 2007 data sheets (to simplify and improve the accuracy of data collection: see Appendix 4), and additional changes should be made as necessary. Recommended modifications include the addition of slots for nest relocation information (i.e. date of relocation, original and relocated nest depth, relocation beach and landmarks) on the nesting form and reducing 'egg outcome' and date categories on the hatchery form.

Community Considerations

Multiple strategies are required to ensure the sustainability of sea turtle conservation programmes in Dominica. We agree with Stapleton and Eckert (2007) that these should focus on the development of sustainable 'Turtle Watching' ecotourism ventures and should utilize more effective community outreach programming, and that community participation – beyond simply hiring local beach patrollers – must be emphasized as a core project objective.

Technical Training— In keeping with project objectives to provide technical training to stakeholders, about 25 members of participating Community Groups attended a WIDECAST-sponsored field training course at the Rosalie Diocesan Centre House in Dominica on March 14-16, 2008; 15 members nominated by DomSeTCO participated in an Advanced Turtle Science and Tour Guide Training Course, hosted by Nature Seekers in Trinidad on March 23-29, 2008; a peer-exchange was implemented to the Jumby Bay Hawksbill Project in Antigua on October 19-24, 2008 (Eckert and Harris 2008); two local

Star Gazing workshops were well attended in November (see *Star-Gazing*, below); and Mr. Errol and Ms. Marcella Harris of DomSeTCO attended the WIDECAST Annual Meeting in Saint Kitts on December 18-20, 2008 (Appendix 7).

The field training course, which included both classroom and field sessions, was designed to prepare community-based partners to conduct the 2008 census of sea turtle nesting at three primary sites: Rosalie Beach, Bout Sable Beach, and Londonderry Beach. The Diocese facility in Rosalie was a superb venue, featuring an auditorium and comfortable seating. Topics covered included inter alia the basic biology of sea turtles, pros and cons of captive rearing, methods of tagging, evaluation and protocol for moving nests, data collection and reporting, need for a thorough census (staying out all night, etc.), interpreting nesting trends, deterring poaching, scheduling beach patrols (and the necessity for morning patrols and spot checks), interpreting crawl evidence if the turtle has left, and the singular importance of protection for nesting females in order to promote population recovery, as well as discussions of fundraising and how to balance the collection of data with managing visitors to the beach. At Londonderry Beach a scale model Leatherback (crafted from beach sand) facilitated a demonstration of tagging – aided by some stiff sheets of cardboard.

Figure 9. Completion Certificate awarded to participants in the field training course held in Dominica on March 14-16, 2008, and a classroom session on the nesting beach.

Development of 'Turtle Watching'-- The development of community-based 'Turtle Watching' programs has remained a fundamental objective in the turtle conservation programme. Communities with a vested economic interest in the well-being of nesting turtles should be encouraged to self-police and to control local poaching threats to protect the resource and revenue generator.

Crowds continue to flock to the nation's primary nesting beaches, illustrating that the market exists. Accordingly, communities from La Plaine in the Southeast to Woodford Hill in the Northeast have received professional training in community-based management and tour guiding (Baptiste and Sammy 2007, Sammy and Baptiste 2008) through USAID-COTS projects implemented by DomSeTCO and WIDECAST. The programme focused on capacity building through training and hands-on experience in conservation techniques, data collection, and best management practices, including tour guiding.

In 2008, follow-up exchange opportunities with Trinidad and later with Antigua were implemented (see *Technical Training*, above). Communities are thus better equipped to devise successful ecotourism programmes, with hopes that independent ecotourism groups will soon be fully functional in each participating community.

Sea turtle conservation partners also aspire to establish a cohesive, community-based national monitoring programme. With oversight and technical guidance provided by DomSeTCO, this national programme will meet conservation needs and ultimately, with the full implementation of turtle watching tours, generate revenue for the respective communities.

'Turtle Watching' Considerations-- Sustained public interest in 'Turtle Watching' can create management challenges for research and beach patrol staff. Sea turtles are highly vulnerable on land. Lights, excessive noise, and movements may result in a failed nesting attempt and force the turtle to attempt to nest at another time and/or location. Sharing information on proper 'Turtle Watching' etiquette became virtually impossible when scores of people had already assembled around a nesting turtle, and, in any event, it was exceedingly difficult to get large, excited groups to adhere to written guidelines or spoken instructions. The situation can be exacerbated during peak season when the presence of multiple turtles on the beach simultaneously required that a

single staff member attend to a turtle, collect necessary data, manage numerous guests, and sometimes confront poachers (Stapleton and Eckert 2007).

Fortunately, solutions to help overcome these conservation obstacles are readily identifiable. Community-based groups, appropriate government agencies, and conservation partners must identify and enforce a particular beach's carrying capacity for 'Turtle Watchers.' A system must be able to monitor and regulate the number of persons visiting the beaches. Similarly, regulations stating that visitors need to obtain a permit and hire a certified tour guide will provide the communities some control of access to their local beaches and ensure that they derive financial benefit from 'Turtle Watching.' Additionally, the establishment and enforcement of 'Turtle Watching' guidelines will be required to ensure a safe experience for both the turtle and guests.

The development of interpretive centers at 'Turtle Watching' beaches would be hugely beneficial to community-based 'Turtle Watching' programmes. Centers would help to organize and guide people to the beach and guarantee that all visitors paid appropriate fees, received information regarding proper behavior, and had shelter from the weather. These centers could function as a venue from which to view natural history displays and movies and sell crafts and gifts. Additionally, the structure could serve as a base for other tourist operations in the Southeast such as surfing or hiking and/or as an eco-crafting center.

In the Northeast, the NEWCEPT community group has sought and received permission to construct a center on government land adjacent to Londonderry. At these sites and elsewhere, education centers should to be a focus as 'Turtle Watching' develops.

Star-Gazing-- Marine turtles generally do not nest every year, and nesting sea turtle numbers fluctuate on an annual basis, reflecting both local conservation efforts and larger patterns of oceanic productivity. At sites (e.g. Trinidad) with historically large populations, ecotourism programmes have the luxury of being able to virtually guarantee that guests will see a turtle. In Dominica, where nest density is far lower, creativity will be the key to entrepreneurial success, including focusing on other interesting ecological and cultural elements indigenous to the island.

With this in mind, communities should be encouraged to structure an ecotourism product such that it provides an enjoyable and stimulating experience in the event that sea turtles are *not* seen on a given night. Food, music, local history, story-telling, viewing other organisms (such as crabs, night herons, and plants), star-gazing, camping, and educational videos could all be implemented with 'Turtle Watching' to provide a 'Night at the Beach' tourist package.

In 2008, star gazing training was offered to community partners in the Southeast and the Northeast. DomSeTCO (with funding provided by USAID-COTS Dominica), engaged the services of Mr. David Stubbs of Antigua to conduct star gazing workshops with Sea Turtle Community Organizations in Dominica. Mr. Stubbs conducted workshops in Londonderry (21-22 November 2008) and La Plaine (23 November 2008). The workshops were well-attended, and it is intended that star gazing will enhance the sea turtle tourism product, especially in situations when turtles are not seen.

The star gazing workshops established the foundation for sea turtle community organizations to enhance their tour programs by adding a star gazing component. The workshops equipped tour guides with the skills needed to enable them to conduct successful star gazing tours. In addition, community organizations were supplied with literature and equipment, including binoculars, to help them develop the star gazing skills of their tour guides.

The La Plaine workshop was conducted at the Agricultural Training Center and brought together participants from two community organizations: seven participants from NET and three participants from LAND, in addition to Mr. Errol and Ms. Marcella Harris (DomSeTCO) and Ms. Suzie Le Blanc (USAID-COTS, Dominica).

Mr. Stubbs divided the workshop into two sessions – a classroom session (6:00 PM to 8:00 PM) and an outdoor session (8:00 PM to 9:00 PM). He conducted both sessions in an interactive and fun filled atmosphere and utilized the classroom session to introduce participants to the fundamentals of star gazing. In doing so, he explained the science of astronomy, traced the history of star gazing, and shared his experience as a star gazing tour guide.

Topics covered during the classroom session included the following: the universe, the moon, the planets, the stars and star constellations, the international space station, and resources. Mr. Stubbs utilized the outdoor session (grounds of the La Plaine Agricultural Training Center) to give participants hands on experience of star exploration. Star constellations observed during the out door session included Orion, Taurus, Plaides, Cassiopeia, Pegasus and Andromeda galaxy.

In summary, because turtle nesting is seasonal by nature it is beneficial to consider other means to generate revenue during the off-season. Pairing 'Turtle Watching' / 'Night at the Beach' tours with other low impact, revenue generating eco-activities such as surfing and hiking would provide income and employment to coastal communities. WIDECAST additionally is working to build eco-crafting expertise and in the future anticipates providing eco-craft training to community groups. Current craft training available from the WIDECAST network includes utilizing scrap glass to make jewelry, weaving recycled plastic bags to create purses and baskets, and wood and bone carving.

Outreach and Education-- In Dominica, as in other Caribbean islands, target groups for conservation education span the demographic spectrum: adults and school children, East Coast country folk and Roseau city dwellers, business professionals and farmers. A diverse population requires diverse education methods. Accordingly, DomSeTCO utilizes a variety of outlets in outreach and educational programming.

The project must continue to develop novel education approaches while maintaining aspects of current efforts to reach the various segments of society. A community focus in outreach efforts must underscore all programming. Regular meetings with community groups will maintain an open dialogue and project transparency, helping to ensure that community interests are recognized and community needs are met. Investment in the communities of La Plaine, the Northeast, and the Salisbury region on the West Coast would prove particularly beneficial.

In addition, collaboration with NGOs and government agencies such as the Youth Development Division, Dominica Youth Environmental Organization, the Dominica State College Environmental Club, and the Waitikubuli Ecological Foundation would strengthen conservation education efforts by increasing resources and the audience reached. Such collaborations will be further pursued in 2009.

Project Staff

Periodic spot checks revealed periodic breaches of best practices training; these ranged from leaving the beach prior to the end of patrol-duty to arriving late and sleeping through patrols. For the privilege of participating in salaried beach patrols, community groups should be encouraged to address these breaches though staff-led processes. Another option, not mutually exclusive, is the designation of a responsible, perhaps independent (i.e. not affiliated with any active community partner, perhaps a Forestry officer) person to conduct 'spot checks' during the night.

Morning patrols are an essential component of thorough data collection, as they confirm and complete the nesting record. Morning patrols should not be seen as intrusive or as implying poor nighttime vigilance. There are many reasons – not associated with poor nighttime patrol – why crawls are missed. The objective is to ensure a complete database. An efficient approach is to hire one person to undertake daily morning patrols throughout the season, including a few weeks before and after nighttime patrols commence and conclude.

Regular staff evaluations should be a routine part of project governance (cf. Sammy and Baptiste 2008) and should be reflected in hiring and firing practices.

Training of field staff is critically important. Annual "refresher sessions" addressing research techniques (e.g. tagging, egg relocation, data collection and reporting, equipment care) and general marine ecology should become a regular practice prior to the commencement of the each field season.

Project Administration

DomSeTCO management made a concerted effort during 2008 to establish organizational components necessary for a successful conservation progamme. Administrative progress included the creation of a comprehensive inventory, a project contact list, a detailed budget and accounting protocol, a catalogue of relevant correspondence and materials developed, an outreach programme, an indexed library, a collection of specimens (e.g. preserved eggs, embryos, hatchlings) for educational use, and appropriate organizational files. This administrative approach eases transition between project management and maintains necessary project transparency and fiscal accountability.

As part of the USAID-COTS programme, project staff were trained in sea turtle population data management, including use of software designed for this purpose. Still to be accomplished is the designation of a central data repository (cf. Stapleton and Eckert 2007, 2008).

VII. LITERATURE CITED

Baptiste, S. L. and D. Sammy. 2007. *Basic Course Report: Sea Turtle Community Based Ecotourism, Tour Guiding and Management, 11-15 September and 1-12 October 2007.* La Plaine Agricultural Training Centre, Commonwealth of Dominica. Prepared by the Wider Caribbean Sea Turtle Conservation Network (WIDECAST), in partnership with Nature Seekers and DomSeTCO, with funding from the U. S. Agency for International Development. Roseau, Commonwealth of Dominica. 39 pp.

Bolten, A. B. 1999. Techniques for Measuring Sea Turtles. Pp. 110-114 *In* K. L. Eckert, K. A. Bjorndal, F. A. Abreu-Grobois, and M. Donnelly (Editors), *Research and Management Techniques for the Conservation of Marine Turtles.* IUCN/SSC Marine Turtle Specialist Group Publication No. 4.

Boulon, R. H. 1999. Reducing Threats to Eggs and Hatchlings: In Situ Protection. Pp. 169-174 *In* K. L. Eckert, K. A. Bjorndal, F. A. Abreu-Grobois, and M. Donnelly (Editors), *Research and Management Techniques for the Conservation of Marine Turtles.* IUCN/SSC Marine Turtle Specialist Group Publication No. 4.

Bräutigam, A. and K. L. Eckert. 2006. *Turning the Tide: Exploitation, Trade and Management of Marine Turtles in the Lesser Antilles, Central America, Colombia and Venezuela.* TRAFFIC International, Cambridge, UK. 550 pp.

Byrne, R. 2006. 2006 *Annual Project Report: Rosalie Sea Turtle Initiative (RoSTI).* Prepared by WIDECAST for the Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division). Roseau, Dominica, West Indies. 25 pp.

Byrne, R. and K. Eckert. 2006. *2004-2005 Biennium Project Report: Rosalie Sea Turtle Initiative (RoSTI)*. Prepared by WIDECAST for the Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division). Roseau, Dominica. 51 pp.

Eckert, K. L. 1987. Environmental unpredictability and leatherback sea turtle (*Dermochelys coriacea*) nest loss. Herpetologica 43(3):315–323.

Eckert, K. L. and J. Beggs. 2006. *Marine Turtle Tagging: A Manual of Recommended Practices.* WIDECAST Technical Report No. 2. Revised Edition. Beaufort, North Carolina. 40 pp.

Eckert, K. L. and E. H. Harris. 2008. *Peer-Training Evaluation.* Sea Turtle Conservation and Tourism Initiative: A Community-Based Program in the Commonwealth of Dominica, West Indies. A Deliverable prepared for the U. S. Agency for International Development. Roseau, Commonwealth of Dominica. 13 pp.

Franklin, A., R. Byrne, and K. Eckert. 2004. *2003 Annual Report: Rosalie Sea Turtle Initiative (RoSTI).* Prepared by WIDECAST for the Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division). Roseau, Dominica. 57 pp.

Government of Dominica, Ministry of Agriculture and the Environment. 2002. First National Report to the Conference of Parties - Convention on Biological Diversity. Roseau, Commonwealth of Dominica. 44 pp.
URL: www.cbd.int/doc/world/dm/dm-nr-01-en.doc. Accessed 2008.

IUCN 2007. *IUCN Red List of Threatened Species*. URL: www.redlist.org. Accessed 2008.

Pritchard, P. C. H. and J. A. Mortimer. 1999. Taxonomy, External Morphology, and Species Identification. Pp. 21-38 *In* K.L. Eckert, K. A. Bjorndal, F. A. Abreu-Grobois, and M. Donnelly (Editors), *Research and Management Techniques for the Conservation of Marine Turtles.* IUCN/SSC Marine Turtle Specialist Group Publication No. 4.

Sammy, Dennis and Suzan Lakhan Baptiste. 2008. *Community Tourism Handbook: A Resource Guide for Community Groups Participating in Sea Turtle Ecotourism in the Commonwealth of Dominica* (Karen L. Eckert, Editor). Prepared by Nature Seekers and WIDECAST, in partnership with the Dominica Sea Turtle Conservation Organization (DomSeTCO), with funding from the U. S. Agency for International Development. Roseau, Commonwealth of Dominica. 41 pp.

Sammy, Dennis, Karen Eckert and Errol Harris. 2008. *Action Plan for a Sea Turtle Conservation and Tourism Initiative in the Commonwealth of Dominica.* Prepared by the Wider Caribbean Sea Turtle Conservation Network (WIDECAST), in partnership with Nature Seekers and DomSeTCO, with funding from the U. S. Agency for International Development. Roseau, Commonwealth of Dominica. 58 pp.

Schroeder, B. and S. Murphy. 1999. Population Surveys (Ground and Aerial) on Nesting Beaches. Pp. 45-55 *In* K. L. Eckert, K. A. Bjorndal, F. A. Abreu-Grobois, and M. Donnelly (Editors), *Research and Management Techniques for the Conservation of Marine Turtles.* IUCN/SSC Marine Turtle Specialist Group Publication 4.

Stapleton, S. P. and K. L. Eckert. 2007. *Nesting ecology and conservation biology of marine turtles in the Commonwealth of Dominica, West Indies: RoSTI 2007 Annual Project Report.* Prepared by WIDECAST for the Ministry of Agriculture and the Environment (Forestry, Wildlife and Parks Division). Roseau, Dominica. 45 pp.

Stapleton, S. P. and K. L. Eckert. 2008. *Community-Based Sea Turtle Research and Conservation in Dominica: A Manual of Recommended Practices*. Prepared by the Wider Caribbean Sea Turtle Conservation Network (WIDECAST) and DomSeTCO, with funding from the U. S. Agency for International Development. WIDECAST Technical Report No. 8. Beaufort, North Carolina. 47 pp.

Witherington, B. E. and R. E. Martin. 2000. *Understanding, Assessing, and Resolving Light Pollution Problems on Sea Turtle Nesting Beaches*. Second edition, revised. Florida Marine Research Institute Technical Report TR-2. 73 pp.

Appendix 1

Summary, by month, of sea turtle activities at three monitored nesting beaches in the Commonwealth of Dominica, March to October 2008.

Sea Turtle Activities in March 2008				
Site / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Leatherback	3	-	2	1
Bout Sable Beach				
	-	-	-	-
Londonderry Beach				
Leatherback	1	1	-	-
Hawksbill	1	-	1	-
Total	**5**	**1**	**3**	**1**

Sea Turtle Activities in April 2008				
Site / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Leatherback	8	2	2	4
Green	5	4	-	1
Bout Sable Beach				
Leatherback	3	3	-	-
Londonderry Beach				
	-	-	-	-
Total	**16**	**9**	**4**	**10**

Sea Turtle Activities in May 2008				
Site / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Leatherback	24	11	1	12
Green	3	2	1	-
Bout Sable Beach				
Leatherback	36	31	1	4
Unknown	1	-	1	-
Londonderry Beach				
Leatherback	8	6	1	1
Hawksbill	2	2	-	-
Total	**74**	**52**	**5**	**17**

Sea Turtle Activities in June 2008				
Site / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Leatherback	17	11	4	2
Hawksbill	9	3	1	5
Bout Sable Beach				
Leatherback	16	12	1	3
Londonderry Beach				
Leatherback	3	1	-	2
Total	**45**	**27**	**6**	**12**

Sea Turtle Activities in July 2008				
Site / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Green	3	1	2	-
Hawksbill	4	1	1	2
Bout Sable Beach				
	-	-	-	-
Londonderry Beach				
Hawksbill	2	1	1	-
Total	**9**	**3**	**4**	**2**

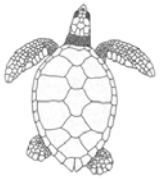
Sea Turtle Activities in August 2008 (Rosalie Beach only)				
Site / Species	Sightings	Crawls	Suspected Nests	Confirmed Nests
Green	14	6	4	4
Hawksbill	1	1	-	-
Total	**15**	**7**	**4**	**4**

Sea Turtle Activities in September 2008 (Rosalie Beach only)				
Site / Species	Sightings	Crawls	Suspected Nests	Confirmed Nests
Green	14	8	5	1
Total	**14**	**8**	**5**	**1**

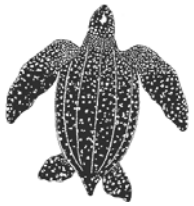
Sea Turtle Activities in October 2008 (Rosalie Beach only)				
Site / Species	Sightings	Crawls	Suspected Nests	Confirmed Nests
Green	6	3	2	1
Total	**6**	**3**	**2**	**1**

Appendix 2

Overall summary of sea turtle activities at three monitored nesting beaches in the Commonwealth of Dominica, March to October 2008.



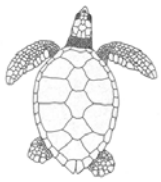
DomSeTCO



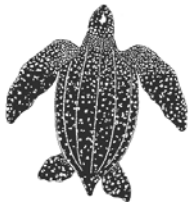
Location / Species	Total Sightings	False Crawls	Suspected Nests	Confirmed Nests
Rosalie Beach				
Leatherback	52	24	9	19
Green	45	24	14	7
Hawksbill	14	5	2	7
	111	**53**	**25**	**33**
Bout Sable Beach				
Leatherback	55	46	2	7
Green	-	-	-	-
Hawksbill	-	-	-	-
Unknown	1	-	1	-
	56	**46**	**3**	**7**
Londonderry Beach				
Leatherback	12	8	1	3
Green	-	-	-	-
Hawksbill	5	3	2	-
	17	**11**	**3**	**3**
Total	**184**	**110**	**31**	**43**

Appendix 3

Overall summary of sea turtles tagged and nests relocated (March to October 2008) at three monitored nesting beaches in the Commonwealth of Dominica.



DomSeTCO



Location / Species	Turtles Tagged	Nests Relocated
Rosalie Beach		
Leatherback	11	14
Green	6	7
Hawksbill	2	4
	19	**25**
Bout Sable Beach		
Leatherback	7	7
	7	**7**
Londonderry Beach		
Leatherback	3	3
	3	**3**
Total	**29**	**35**

Appendix 4

Page _____

DOMINICA SEA TURTLE SIGHTING FORM

Date: _____ **Time Turtle is Encountered**: _____ AM / PM

Observers:_____ **No. Guests**:_____

Beach Name:_____ **Beach Section**: _____

Location (GPS): Latitude_____ Longitude_____

Turtle Species: _____ **Gender**: Female / Male / unknown

Identified by: ☐ Adult ☐ Juvenile ☐ Hatchling **Condition**: ☐ Alive ☐ Dead

or, ☐ Crawl/Nest **Crawl Width**: _____cm **Crawl Pattern**: Symmetrical / Alternating

Activity (*circle*): On shore: Crawling Digging Laying Covering Returning Stranded

At sea: Swimming Feeding/Resting Entangled

Tag #1: _____ ☐OLD or ☐ NEW / ☐RIGHT or ☐LEFT / ☐ FRONT or ☐ REAR

Tag #2: _____ ☐OLD or ☐NEW / ☐RIGHT or ☐LEFT / ☐FRONT or ☐REAR

Tag 'scars'? ☐Yes ☐No **Destroyed or Lost tags?**_____

Result: ☐Nest (eggs confirmed) ☐ Suspected Nest ☐False Crawl (no eggs)

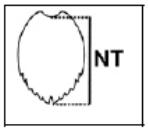
Egg Counts: Yolked (large) eggs _____ Unyolked (small) eggs _____

Were the eggs collected and reburied? ☐Yes ☐No

If yes, **Time**: Collected _____ AM / PM Reburied _____ AM / PM

Reburial Beach: _____ **Reburial Site (GPS)**: Lat_____ Long_____

Turtle Size: CCL-NT _____ cm CCW _____ cm **Carapace Damaged?** ☐Yes ☐ No



Descriptions (parasites, injuries) and **Notes** (location landmarks, evidence of poaching or other threats, etc.). Please continue on reverse. (Write legibly!)

_____

_____

_____

Prepared by the Wider Caribbean Sea Turtle Conservation Network (WIDECAST) and the Dominica Sea Turtle Conservation Organization (DomSeTCO), with funding from the United States Agency for International Development. © 2008

Appendix 5

MEMORANDUM

To : Mr. Errol Harris

Chairman (DomSeTCO)

From: Simon George

Science & Coordinating Officer Date: May 19, 2008

SEA TURTLE POACHING INCIDENTS

On May 16, 2008 (my 56 birthday), I investigated two (2) reports of turtle poaching incidents. In the morning, I acted on instructions from Mr. Harris (received by telephone, 8:00 am May 15, 2008). I traveled to the Castle Bruce beach where I investigated a reported Sea Turtle egg poaching incident. In the after noon, I responded to a telephone call from Mr. A. Attidore of LaND (received approx. 12:00 noon). I traveled to the Boute Sabre beach in La Plaine where I investigated a reported discovery of the carapace of a harvested Leatherback Sea Turtle. This report provides information regarding my findings and my recommendations for DomSeTCO response.

Castle Bruce

I arrived on the Castle Bruce beach at 8:45 am, walked the entire length of the beach, recorded my observations and left the beach at 9:30 am.

The exercise revealed the following:

1. A beach with conditions ideal for Sea Turtle nesting. Except for the Northern and Southern ends of the beach where there are stones, the entire beach has a sandy surface;

2. No visible signs of Sea Turtle slaughter;
3. Recent Leatherback Sea Turtle tracks and nesting site (Northern beach section), see *Figures 1a & 1b*; and
4. Sea Turtle nesting activities, but no visible Sea Turtle tracks (two areas of Southern beach section).

Figure 1a Leatherback Sea Turtle tracks, Castle Bruce (photo: Simon George)

Figure 1b Leatherback Sea Turtle nesting site, Castle Bruce (photo: Simon George)

Analysis

Field observations produced information insufficient to confirm or deny reports of Sea Turtle egg poaching. However, they supplied evidence of active Sea Turtle activity sufficient to make a case for giving beach monitoring serious consideration.

La Plaine

I stepped on the Boute Sabre beach at 12:45 pm, walked the length of the Southern beach section, Ran past the volcanic lava point (at low tide) and entered the Northern beach Section. There, I met Mr. Attidore. He was alone. Moving constantly, he carried fire wood from various parts of the beach and added them to an already blazing fire. In that inferno was the carapace of a slaughtered Leatherback Sea Turtle.

Mr. Attidore and I were together on the beach for about 1.5 hours. During that period, I accomplished the following tasks:

- Took photographs of the scene *(Figure 2);*
- Interviewed Mr. Attidore about the circumstances surrounding the incident and assisted him in the development of plans aimed at:
  a) Building an inland access route to the Northern beach section;
  b) Drawing a map containing defined boundaries of beach zones;
  c) Conducting morning patrols designed to gather information pertaining to beach profile changes.

My interview with Mr. Attidore produced the following information:

- On May 15, 2008 at about 9:15 pm, night patrols discovered the carapace / carcass of the harvested Leatherback Sea Turtle;
- The carapace / carcass displayed signs of early decomposition;
- In recent days, rough sea conditions sometimes denied beach patrollers access to the northern section of the beach;
- Prior to May 15, 2008 the last visit by LaND patrollers to the northern section of the beach were performed at approx 11:00 pm May 11, 2008 and at 2:00 pm May 12, 2008 by night patrol personnel and by Day Patrol personnel respectively.

Figure 2 LaND Official cremating the remains of slaughtered Leatherback Sea Turtle, Boute Sabre. (Photo: Simon George)

Analysis

I found the Northern section of the beach to be broad, open and sandy. Compared to the Southern section of the beach, it offers better sites for Sea Turtle nesting. No Sea Turtle tracks were visible on the beach. However, there were signs indicating possible nesting activities by one or more Sea Turtles. Poachers gained access to the Northern section of the beach via an inland track. LaND patrollers need to do likewise.

RECOMMENDATIONS

To reduce the threat of poaching which Sea Turtles face when they visit the two nesting beaches, DomSeTCO needs to:

1. Accelerate efforts to secure and manage the Castle Bruce beach and
2. Strengthen the capacity of LaND to protect the Northern section of Boute Sabre beach.

CONCLUSION

My experience on the two beaches left me with conflicting emotions. The Castle Bruce beach left me memories of young lovers playing in the sand and of tracks indicating the entry, suspected nesting and departure of a Leatherback Sea Turtle. Those memories trigger a felling of hope. The Boute Sabre beach left nightmares that haunt me. The sight of a blazing fire cremating the remains of a slaughtered Leatherback Sea Turtle and the stench of burning rotting flesh permeating the air were not my wishes for a birthday gift.

Appendix 6

Laws of Dominica

Forestry and Wildlife Act

Chapter 60:02, Act 12 of 1976

Amended by Act 35 of 1982

Amended by Act 12 of 1990

Chapter 60:02

Section 21

Ninth Schedule

Regulations for the taking of sea turtles

1. The word 'turtle' shall be deemed not to include the tortoise or land turtle (*Geochelone carbonaria*).

2. No person shall:
   - Catch or take or attempt to catch or take any turtle between the 1st June and the 30th September both dates inclusive,
   - Catch or take or attempt to catch or take any turtle which is under twenty pounds in weight
   - Disturb any turtle nest or eggs or take any turtle eggs, or take or attempt to take any turtle laying eggs or on the shore engaged in nesting activities.

Appendix 7

~ 2009 Annual General Meeting ~

Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

Meeting Room: Auditorium
Ross University School of Veterinary Medicine
Basseterre, Saint Kitts & Nevis, Eastern Caribbean
18-20 December 2008

WIDECAST
Wider Caribbean Sea Turtle Conservation Network

ROSS UNIVERSITY
School of Veterinary Medicine

Georgia Sea Turtle Center

PROVISIONAL AGENDA
Thursday, 18 December 2008

SPECIAL SEMINAR - Sea Turtle Medicine

13:00 Welcome - *Karen Eckert, Ph.D., WIDECAST Executive Director*

13:15 Sea Turtle Health Assessment in St. Kitts - *Kimberly Stewart, D.V.M., Ross University School of Veterinary Medicine*

14:00 Sea Turtle Rehabilitation – *Terry Norton, D.V.M., Georgia Sea Turtle Center*

14:45 ~ Coffee Break ~

15:15 Fibropapillomatosis in Sea Turtles – *Mike Walsh, D.V.M., University of Florida*

16:00 Sea Turtle Necropsy and Mortality Event Management – *Terry Norton, D.V.M., Georgia Sea Turtle Center*

18:00 ~ DINNER ~

Special Dinner Performance: *Saint Christopher Choral Society Christmas Concert*

1

~ 2009 Annual General Meeting ~

Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

Meeting Room: Auditorium
Ross University School of Veterinary Medicine
Basseterre, Saint Kitts & Nevis, Eastern Caribbean
18-20 December 2008

PROVISIONAL AGENDA
Friday, 19 December 2008

Session I: Welcome

08:00 ~ BREAKFAST ~

09:00 Welcome – *Randolph Hamilton, Manager, Product Development & Cruise, St. Kitts Tourism Authority*

09:15 Welcome – *David DeYoung, Dean, School of Veterinary Medicine, Ross University*

09:30 Opening Remarks - *Karen Eckert, WIDECAST Executive Director*

09:40 Introductions

09:50 Announcements
- Meeting Secretary
- List of Participants
- Accommodations, transportation, meals

Session II: Executive Director's Report

10:00 Executive Director's Report – *Karen Eckert, WIDECAST Executive Director*

2

Session III: Country Reports

10:30 Anguilla – *Rhon Connor, Anguilla National Trust and James Gumbs, Director, Department of Fisheries and Marine Resources*
Antigua – *Mykl Clovis, Jepson Prince and Junior Prosper, Environmental Awareness Group*

11:00 ~ Coffee Break ~

11:30 Dominica - *Errol Harris and Marcella Harris, Dominica Sea Turtle Conservation Organisation (DomSeTCO)*
Dominican Republic – *Yolanda León, Universidad INTEC, Dominican Republic*
Guadeloupe - *Sophie Bedel, Association Kap Natirel/ Réseau Tortues Marines Guadeloupe*

12:30 ~ LUNCH ~ [catered to the meeting room]

Special Interactive Presentation: Using OBIS-SEAMAP (Ocean Biogeographic Information System – Spatial Ecological Analysis of Megavertebrate Populations: http://seamap.env.duke.edu/), an Interactive Management Tool – *Andrew DiMatteo, Associate in Research / SWOT Database Manager, Marine Geospatial Ecology Lab, Duke University*

13:30 Open Room – Displays and Sharing

Session IV: Bycatch Assessments and Mitigation Programs

14:00 Bycatch Reduction in the Coastal Gillnet Fishery in Trinidad – *Scott Eckert, Director of Science, WIDECAST*

14:20 Impact of Artisanal Coastal Fisheries on Marine Turtles in the French West Indies – *Laurent Louis-Jean, Observatoire du Milieu Marin Martiniquais*

Session V: Outreach and Capacity Building

14:40 Public Awareness and Outreach Programme in Guyana – *Michelle Kalamandeen, Project Coordinator, Guyana Marine Turtle Conservation Society*

15:00 Public Awareness and Outreach Programme in Guadeloupe – *Sophie Bedel, Association Kap Natirel/ Réseau Tortues Marines Guadeloupe*

3

15:20 ~ Coffee Break ~

16:00 Dutch Caribbean Sea Turtle Training Course – *Mabel Nava, Manager, Sea Turtle Conservation Bonaire*

16:20 Green Stepping Stone; Grant Writing Assistance – *Dominique Vissenberg, Coordinator, Green Stepping Stone*

Session VI: Achieving Conservation Success – Case Study: Brazil

16:40 The Role of Science, Conservation and Community Development in the Recovery of Sea Turtles in Brazil – *Neca Marcovaldi, Presidente, Fundaçao Pró-TAMAR*

17:10 Open Forum, New Business

17:30 Closing Remarks and Adjourn

18:00 ~ Reception with Live Entertainment ~

19:00 ~ DINNER ~

~ 2009 Annual General Meeting ~

Wider Caribbean Sea Turtle Conservation Network (WIDECAST)

Meeting Room: Auditorium
Ross University School of Veterinary Medicine
Basseterre, Saint Kitts & Nevis, Eastern Caribbean
18-20 December 2008

PROVISIONAL AGENDA
Saturday, 20 December 2008

Session VII: Welcome

08:00 ~ BREAKFAST ~
08:45 Welcome and Opening Remarks - *Karen Eckert, WIDECAST Executive Director*
09:00 Introductions and Announcements

Session VIII: Sea Turtle Conservation in St. Kitts and Nevis

09:15 Sea Turtle Conservation in St. Kitts: History and Future – *Ralph Wilkins, Fisheries Officer, Department of Fisheries (St. Kitts)*

09:30 Sea Turtle Program of Ross University – *Kimberly Stewart, Ross University School of Veterinary Medicine*

09:45 Man and the Biosphere Project: Protecting Sea Turtle Habitat in St. Kitts – *Austin Jay Farier, Physical Planner, Department of Physical Planning and the Environment, St. Kitts*

10:00 Youth and Sea Turtles in St. Kitts – *Azilla Clarke, President, St. Kitts National Youth Parliament Association (SKNYPA)*

10:15 Sea Turtle Conservation in Nevis – *Emile Pemberton, Department of Fisheries (Nevis) and Patrice Pemberton, Nevis Turtle Group*

10:30 ~ Coffee Break ~

5

Session IX: "Big Picture" Conservation

11:20 "Caribbean Challenge" – *Elianny Dominguez Tejo, Marine Program Manager, Central Caribbean Program, Mesoamerica & Caribbean Region, The Nature Conservancy*

11:40 Estimating Population Size; Lessons Learned from Leatherbacks in Trinidad – *Scott Eckert, WIDECAST and Dennis Sammy, Nature Seekers*

12:00 WWF Guianas' Regional Marine Turtle Conservation Programme – *Marie-Louise Felix, Marine Turtle Coordinator, WWF Guianas Programme (Suriname)*

12:15 Hawksbill Genetic Studies in the Eastern Caribbean – *Darren Browne, Barbados Sea Turtle Project, University of the West Indies*

12:30 ~ LUNCH ~

13:30 Open Room - Displays and Sharing

Didiher Chacón, Director of WIDECAST's Latin American Program, will be on hand to display and share information about THREAD and WEAVING FOR NATURE, two innovative community handicraft revenue programs in Central America

Session X: Working Groups – 2009-2010 Workplan Priorities

14:00 Introduction and Objectives – *Karen Eckert, WIDECAST Executive Director*

14:15 – 16:45 Working Groups ** see attached list*

15:30 ~ Coffee Break ~

17:00 Working Group Conclusions and Recommendations

17:30 Closing Remarks and Adjourn

18:30 ~ DINNER ~ (your choice in town)

Thank You so Much for Joining Us!
Safe Travels, and Happy Holidays!

6

~ WORKING GROUPS ~

These are the Working Group topics that have been requested so far. Others may be suggested at the Meeting. Working Groups provide a forum for discussing topics of interest with colleagues and experts. Working Groups often develop recommendations for new programmatic directions that we can focus on as a WIDECAST family. The regional tagging centre in Barbados, the comprehensive nesting atlas, our database management software, attention to bycatch issues, models of eco-tourism and community crafting, and building capacity for responding to sick and injured sea turtles, among many other initiatives, all emerged from recommendations made by Working Groups convened at an annual meeting. Working Groups might also convene simply as an informal venue for discussion on a topic of shared interest.

Working Group I
"Certification" for Turtle-Friendly Tourism Businesses
Chair: Kimberly Stewart, WIDECAST Country Coordinator in St. Kitts

Working Group II
GIS Conservation Tools
Chair: Andrew DiMatteo, Duke University Marine Spatial Ecology Lab

Working Group III
Health, Disease, and Veterinary Care
Chair: Terry Norton, Director of the Georgia Sea Turtle Center

Working Group IV
Monitoring Sea Turtle Populations; Data Collection and Analysis
Chair: Scott Eckert, WIDECAST Director of Science

Working Group V
Trash to Treasure; Community-Based Eco-Crafting
Chair: Didiher Chacón, WIDECAST Director of Latin American Programs

7