



## **PROGRESS REPORT 2007**

STCB is a member of



**WIDECAST**

*Wider Caribbean Sea Turtle Conservation Network*

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## **Welcome...**

Greetings to the sponsors and friends of Sea Turtle Conservation Bonaire (STCB). We proudly present to you our annual Progress Report. In this report you will learn of the many activities and accomplishments carried out in 2007 to accomplish our mission: *to ensure the protection and recovery of Bonaire's sea turtle populations throughout their range.*

We focused our 2007 work on six objectives designed to help us achieve our mission:

### **Science**

Improved understanding of sea turtle biology through research in order to guide conservation efforts in benefit of these endangered species.

### **Conservation**

Effective management and conservation of Bonaire's sea turtles and their habitats, resulting in improvements in environmental policy; law and enforcement that ensure conservation and recovery; clean nesting sites; and abundant, high quality foraging habitats.

### **Education and Public Awareness**

Increased public awareness of, and concern for, sea turtle conservation, resulting in increased volunteerism and participation in conservation policy, action and advocacy.

### **Training and Collaboration**

Provision of training and collaboration opportunities for conservation volunteers and workers that results in increased capacity, locally and throughout the region, for sea turtle conservation efforts.

### **Fund Development**

Increased financial investment, both public and private, in support of the protection and recovery of Bonaire's sea turtle populations.

### **Organizational Development**

Development, maintenance, and use of systems and resources that facilitate effective operation of the organization

Of special note, we initiated two significant changes in 2007 that you will see continuing in future years. One is in the area of funding. For the past several years we were fortunate to receive the majority of our operational funding from Netherlands government sources. This is no longer the case and we are now developing a more diversified funding stream; one that includes a variety of grants, partnerships, community support, and merchandise sales. This requires consistent attention and programming in these areas annually. In 2007, we made significant progress in all of these areas.

Another area of change is in our understanding of what we need to address to carry out our mission. Seventeen years ago, when STCB was founded, turtles were threatened by direct harvest, accidental capture, and destruction of nests, and accordingly, our conservation efforts focused on direct protection for turtles. Over time those early

threats have been brought under significant control and are now overshadowed by other issues, primarily the threats posed by Bonaire's burgeoning human population. If STCB is to protect turtles effectively into the future, we must continue direct protection, but we must also play an effective role in addressing threats posed by inadequately managed development such as sand mining that destroys nesting habitat; beachfront construction causing polluting runoff and sedimentation of reefs and foraging areas; and untreated, uncontained sewage that leaches into the marine environment and causes deadly nutrification of reefs. Our activities must increasingly include partnerships and initiatives that focus on a bigger picture and use sea turtle conservation as a focal point to drive and stimulate conservation awareness and efforts. In 2007, we started more deliberately on that path.

Our work could not be done without community support, both financially and through volunteerism. We especially want to thank all of those who helped this past year. We hope you find this report informative and that it encourages your continued support of Sea Turtle Conservation Bonaire. If you have not yet been a supporter, we hope that this report encourages you to join our community of friends.

Sincerely,

Bruce Brabec  
Board President

Mabel Nava  
STCB Manager

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Fredericka Hughes	Network (WIDECAST)
Pauline Kayes	Anonymous contributions

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Bruce Bowker's Carib Inn	Serena Black
CARGILL Salt Bonaire NV	SGB students
Chile Ridley	STINAPA
Doi Boekhoudt	Support Bonaire Inc.
Freewinds	The Beach Shop at Harbor Village
Gaia Productions	Tina Lindeken
Harbor Village Marina	Wanna Dive
Indusbank tugboat crew	Wider Caribbean Sea Turtle Network (WIDE-CAST)
Jong Bonaire	Anne Zaat
Kantika di Amor	
NetTech N.V. (Jake Richter & Susan Davis)	

## Science

### Nesting Beach Monitoring

The beaches of Bonaire and Klein Bonaire were surveyed periodically for sea turtle nesting activity, with emphasis on the most actively used nesting area around "No Name" on Klein Bonaire. No Name beach was visited with greatest frequency and is Bonaire's index beach for measuring annual fluctuations in nesting activity.

Turtle nesting activity was first registered during 2007 on May 7<sup>th</sup>, when a loggerhead track and nest was discovered on Fisherman Hut beach along the south coast of Bonaire. At nearby Atlantis, the first green turtle of the season was encountered on July 24<sup>th</sup>, laying a nest there. The first hawksbill nesting of the 2007 season occurred at No Name beach, Klein Bonaire, on June 15<sup>th</sup>.

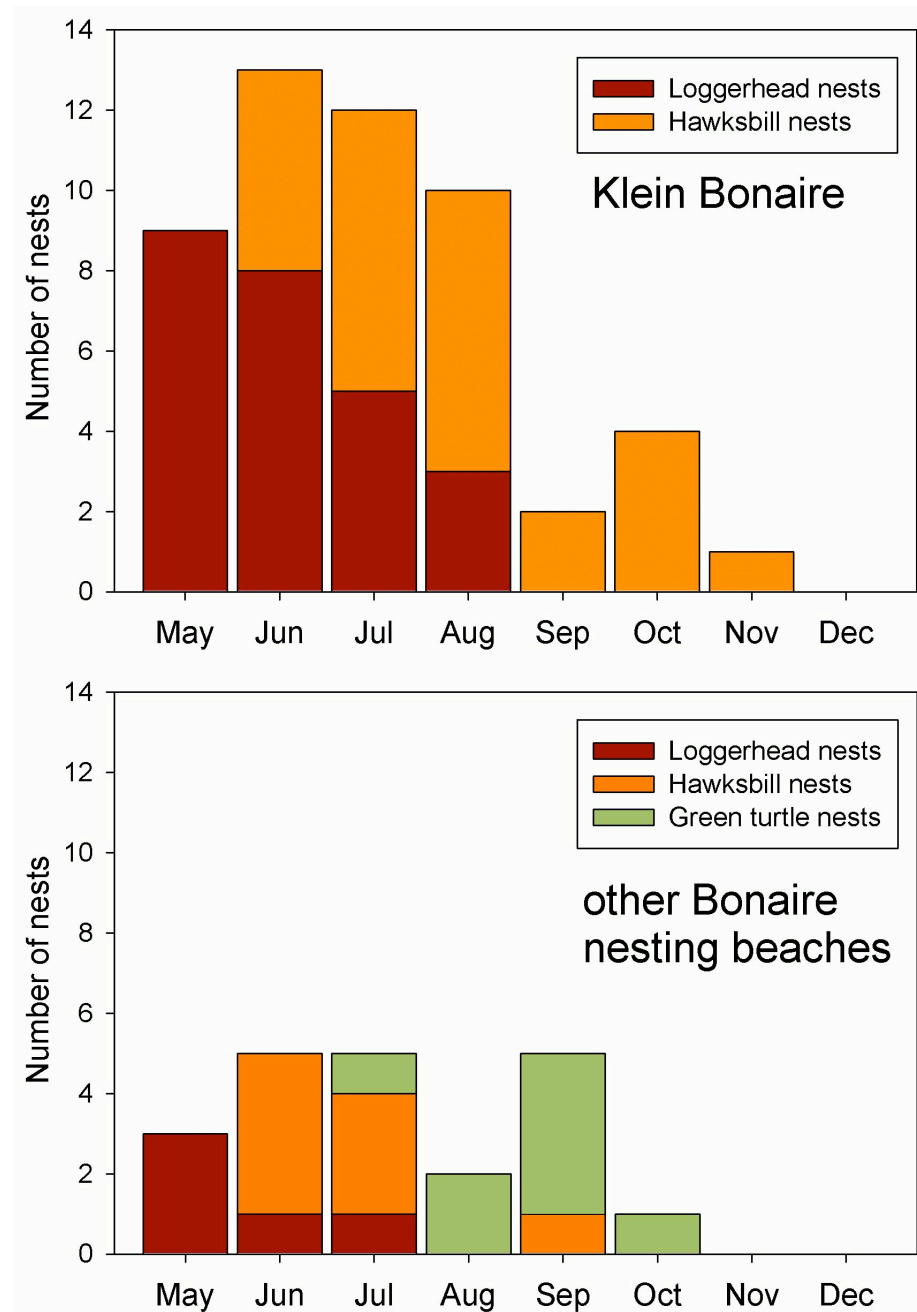
During 2007, a total of 23 loggerhead and 26 hawksbill nests were recorded on No Name beach, with the months of May and June showing the greatest nesting activity for loggerheads, whereas hawksbills were most active in July and August (Figure 1). Both loggerhead and hawksbill nests were fairly uniformly spread out along No Name beach (Figure 2). Two additional loggerhead nests were documented laid in June on the west coast of Klein Bonaire near the Munk's Haven dive site, but were subsequently lost by swells. These two nests fall outside the designated nesting index area at No Name beach and are therefore not included in the index. Compared to the 50 nests counted there in 2006, the total number of turtle nests deposited on No Name beach remained essentially the same. Loggerhead activity increased from only 8 nests laid in 2006 to 23 in 2007, whereas hawksbill activity declined from 42 to 26 nests. Such stochastic annual fluctuations are typical for a population consisting of only a limited number of individuals.

Nesting size and productivity were measured through nest revisions after hatching. At No Name beach, revision of 20 loggerhead nests yielded an average nest size of 130.1 eggs (range 86 – 162) and average hatching success for these nests was 76.2%. Revision of 23 hawksbill nests yielded an average nest size of 152.1 eggs (range 112 – 219) and hatching success of 71.1%. Both hawksbill and loggerhead hatching success rates were much higher than in 2006, returning to the typical levels observed in these species.

The estimated number of hatchlings produced at the index beach of Klein Bonaire during 2007 can be calculated from the total number of nests, average nest size and average hatching rate. The 23 loggerhead and 26 hawksbill nests laid along No Name resulted in approximately 2280 live loggerhead and some 2810 live hawksbill hatchlings emerging from their nests. The total of 5090 turtle hatchlings estimated emerging from No Name beach during 2007 is substantially higher than 4300 hatchlings reported for 2006 and the 4500 for 2005, and reflects the higher hatching success rates, which in turn appears to be due to improved incubation conditions on the nesting beach. Three loggerhead nests due to hatch were opened on No Name beach in the presence of the public for educational purposes.

Nesting activity on the rest of Bonaire was more dispersed throughout the 2007 nesting season (Figure 1). Playa Chikitu within the Washington Park registered 3 green turtle nests with no activity observed on the other beaches in the Park. Four loggerhead and five green turtle nests were deposited along the southwest beaches at Fishermen's Hut and near the Atlantis dive site. One additional loggerhead nest was recorded on the small beach at Boca Onima. A total of 9 hawksbill nests were

laid along the south coast from Donkey Beach to Sorobon Beach resort (see Appendix II). The hawksbill nest at Sorobon produced no hatchlings, probably due to the unfavorable incubation conditions in the low-lying beach there.



**Figure 1.** Temporal distribution of nests laid by loggerheads, hawksbills and green turtles on the beaches of Bonaire (bottom) and No Name beach, Klein Bonaire (top).





	Total survey hours			
	2003	2005	2006	2007
Klein Bonaire	25.88	24.54	17.45	13.22
Bonaire Northwest			38.68	25.18
Bonaire Southwest			23.85	20.17
Bonaire Southeast			14.25	9.85

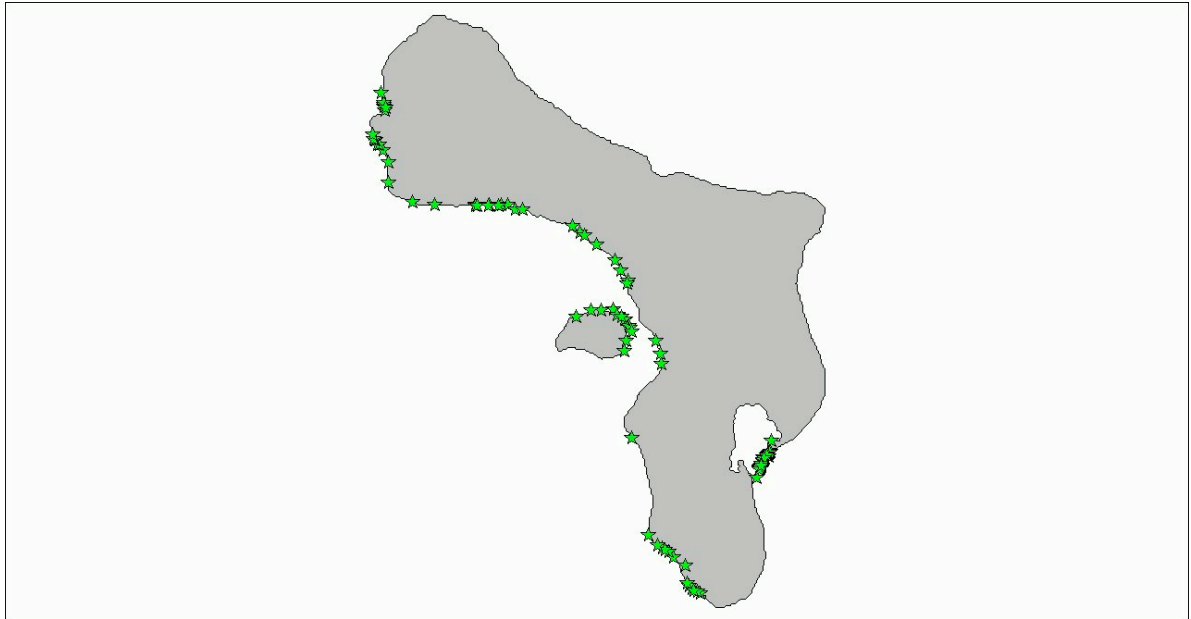
**Table 1.** In-water snorkeling survey effort in hours by sector from 2003 to 2007.

The snorkeling survey effort at Klein Bonaire was reduced after 2005 to allow greater focus on surveying other areas of Bonaire, in particular the Northwestern and Southwestern coasts of the island. From 2006 to 2007, all surveyed areas of Bonaire saw a modest increase in green turtle abundance (Table 2). With the exception of the Lac Bay turtles, the green turtles encountered during snorkeling surveys are mostly immatures smaller than 40 cm straight carapace length (SCL). Locations with particularly high green turtle abundance include Ebo's Reef at Klein Bonaire, Andrea, and the Marine Reserve south of Bopec. The reef in front of Lac Bay harbors a very high density of animals (Table 2 and Figures 4a & 5), which are associated with the Lac Bay sea grass pasture foraging grounds.

Hawksbill turtles occur in lower numbers than green turtles throughout Bonaire and Klein Bonaire (Figure 4b) and since 2006 their abundance appears to have declined slightly throughout the surveyed areas (Table 2). Similarly to green turtles, a high density aggregation of hawksbill turtles is found on the reefs adjacent to Lac Bay (Figures 4b & 5), and these animals may also be using the bay for foraging.

	Green turtles				Hawksbill turtles			
	2003	2005	2006	2007	2003	2005	2006	2007
	average $\pm$ standard deviation							
Klein Bonaire	4.85 $\pm$ 3.95	2.64 $\pm$ 2.19		5.18 $\pm$ 3.50	1.29 $\pm$ 1.17	1.16 $\pm$ 1.34	1.76 $\pm$ 1.83	1.48 $\pm$ 1.50
Bonaire Northwest			2.12 $\pm$ 2.44	3.41 $\pm$ 3.35			1.45 $\pm$ 1.53	1.01 $\pm$ 0.93
Bonaire Southwest			1.01 $\pm$ 1.52	1.43 $\pm$ 2.12			1.04 $\pm$ 2.06	0.89 $\pm$ 1.13
Bonaire Southeast			33.10 $\pm$ 25.06	44.1 $\pm$ 17.57			4.17 $\pm$ 3.94	3.01 $\pm$ 2.42

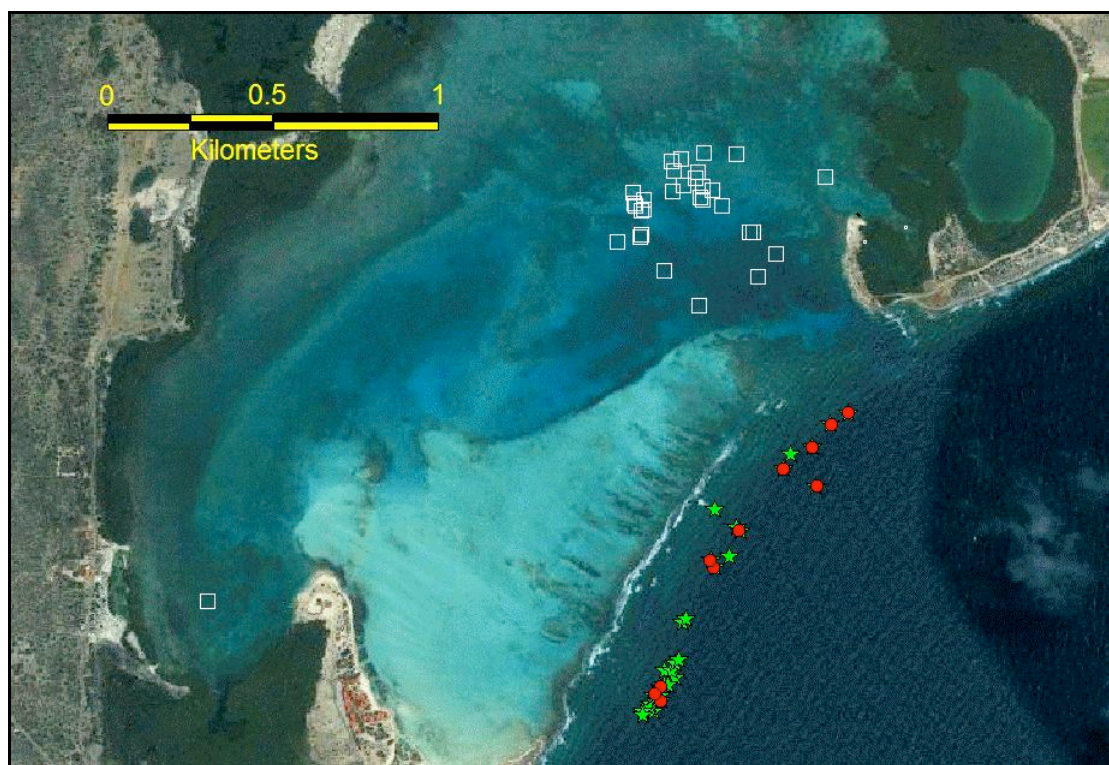
**Table 2.** Comparison of 2003-2007 "catch-per-unit-effort" survey results by sector around Klein Bonaire and Bonaire.



**Figure 4a.** Locations where green turtles were captured during snorkeling surveys around Bonaire and Klein Bonaire.



**Figure 4b.** Locations where hawksbills were captured during snorkeling surveys around Bonaire and Klein Bonaire.



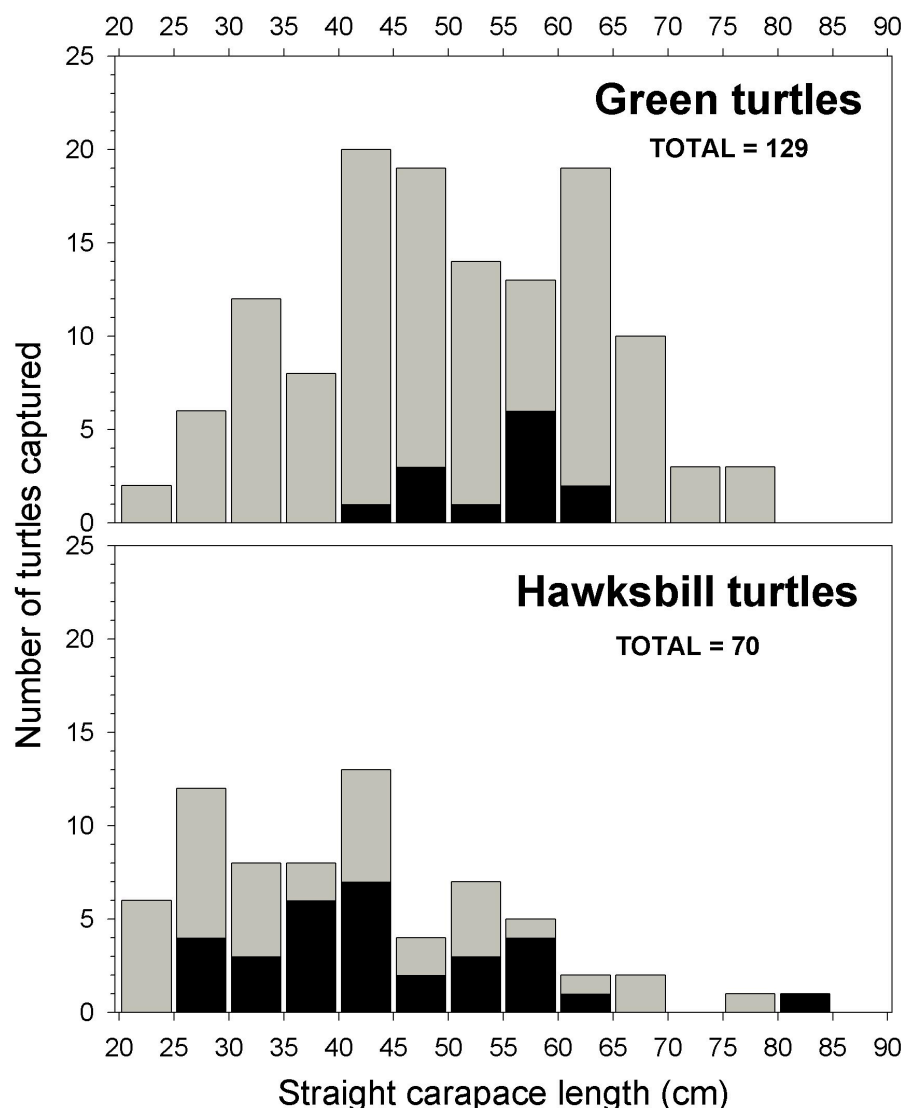
**Figure 5.** Netting locations inside Lac Bay (white boxes), and locations of hand-captured green turtles (green stars) and hawksbills (red circles) on the reefs outside Lac Bay.

	2003	2005	2006	2007
<b>Number of netting sessions</b>	16	13	40	33
<b>Total netting hours ("net soak time")</b>	17.9	8.9	32.9	30.0
<b>Green turtle catches/hour</b>	0.88 ± 0.76	4.38 ± 3.97	2.90 ± 2.25	2.42 ± 1.67
<b>Hawksbill catches/hour</b>	0.10 ± 0.28	no data	0.16 ± 0.39	0.26 ± 0.69

**Table 3.** Catch-per-unit-effort results for netting surveys conducted at Lac Bay (catch rates expressed as mean ± standard deviation).

Net-assisted turtle capture surveys were conducted during two periods in 2007: March 21<sup>st</sup>-30<sup>th</sup> and November 19<sup>th</sup>-November 27<sup>th</sup>. The netting locations are shown in Figure 5 and were mostly near the channel leading out of Lac Bay. This area is both a transit zone for turtles as well as a foraging area. Some additional net sets were done in front of the fishermen's pier at Sorobon. A total of 74 green turtles and 7 hawksbills were caught in the net, then tagged, measured, inspected, photographed, and released. The measure used to determine turtle abundance using nets is the catch rate per hour of net "soak time". From 2006 to 2007, the netting effort and deployment locations were similar, making some comparisons possible, although high variation in catch rates between net sets gives some uncertainty in the results (Table 3). Green turtle abundance remained fairly constant at 2.41 animals caught per net set hour, whereas only 0.26 hawksbills were captured per hour, which is a

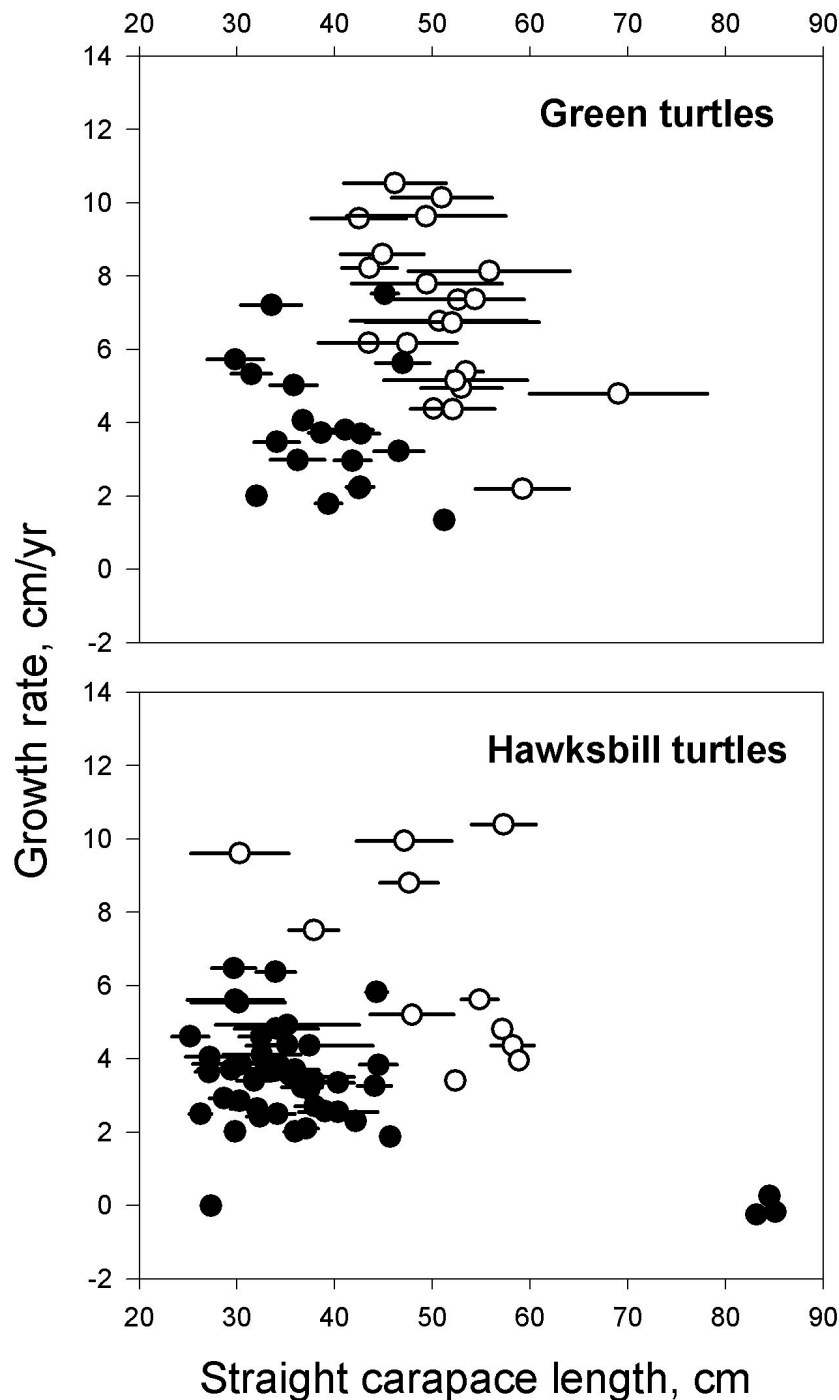
slight increase over previous years. Only with data collected over the longer term can we adequately establish the abundance trends of turtles in Lac Bay.



**Figure 6.** Size distribution of hawksbill and green turtles captured, tagged and measured at Bonaire. Black bars indicate recapture of turtles tagged in previous years.

Combined, the snorkeling and netting surveys yielded a total of 70 hawksbills and 129 green turtles, of which 30 hawksbills and 14 green turtles were recaptures (Figure 6). Gathering information on movement and somatic growth rates is possible by recaptures of previously tagged turtles. Two hawksbill turtles made significant movements from their original capture location: juvenile hawksbill turtle 06-025 was first tagged near the Fishermen's Huts (South-west coast of Bonaire) on March 1<sup>st</sup> 2006, then recaptured on March 20<sup>th</sup>, 2007 inside Lac Bay (and subsequently there again on November 23<sup>rd</sup>, 2007). Another hawksbill, turtle 06-124, moved from Klein Bonaire where it was tagged on June 21<sup>st</sup>, 2006, across to the Andrea I dive site along the central west coast of Bonaire by March 2, 2007, when it was recaptured there. No significant movements of tagged green turtles on the foraging grounds of Bonaire or Klein Bonaire were detected.

Recaptured turtles yielded substantial information on somatic growth rates for green turtles and hawksbills over a wide size range (Figure 7). For both species, animals caught in or near Lac Bay exhibited exceptionally high growth rates, suggesting that Lac Bay has very high quality foraging habitat. Growth rates of turtles living on the reefs along the rest of Bonaire and Klein Bonaire are more in line with those growth rates measured in other Caribbean turtle populations. Recaptured adult hawksbill turtles did not increase significantly in body size, which is normal in such animals.



**Figure 7.** Somatic growth of hawksbill and green turtles recaptured at Bonaire, with turtles captured at Lac Bay indicated with open circles. Horizontal lines indicate the size range over which an individual's growth was recorded.

### Presence of Disease

Fibropapillomatosis occurs in green turtles at Lac Bay and all animals captured there are examined for the presence of external tumors. Of 50 green turtles examined in March 2007, 8 turtles (16.0%) exhibited some evidence of tumors (Table 4). However, none of the 49 green turtles caught subsequently in November 2007 in Lac had evident tumors. It is unclear why there would be such variation in tumor occurrence, since there is likely no seasonal effect and numbers of examined turtles are high enough to eliminate biased data due to stochastic effects. To date, no hawksbill turtles have been found at Lac Bay with any evident fibropapillomas.

Year	Month	Green turtles	w/FP	Occurrence %
2003	March	14	0	0
2004	March	20	0	0
2005	March	46	8	17.4
2006	March	56	13	23.2
2006	November	37	7	18.9
2007	March	50	8	16.0
2007	November	49	0	0

**Table 4.** Number of green turtles captured in Lac by survey period and occurrence of evident tumors.



**Figure 8.** Green turtle 07-087 caught in Lac Bay exhibiting fibropapilloma tumors in the eye.



## Turtle Tracking Study

Sea turtles are highly migratory animals, and as such understanding their migratory patterns and behavior at sea are critical elements if we are to protect them. To expand our understanding of Bonaire's sea turtles, Sea Turtle Conservation Bonaire placed satellite telemetry devices on two turtles in 2007.

The first turtle to be fitted with a satellite tracking device was 'Eloise.' STCB staff and volunteers intercepted 'Eloise', a large female hawksbill turtle as she came ashore at 10:30 pm on July 12<sup>th</sup>, 2007 at No Name Beach on Klein Bonaire. Working into the early morning hours, 'Eloise' was released back into the sea at 2:30 am with a satellite transmitter attached to her carapace. 'Eloise' was named after the granddaughter of Queen Beatrix of the Netherlands, the sponsor of this research effort.

After laying five nests, 'Eloise' left Bonaire on the morning of August 26<sup>th</sup> and started her journey back to her home foraging grounds. During the course of her migration, 'Eloise' swam right through the heart of Hurricane Felix in early September as she made her way to the northwest.

Our female hawksbill 'Eloise' made it to her home grounds, the Albatross Bank, some 50 km southeast of Jamaica, on approximately September 16<sup>th</sup>. To get home, 'Eloise' swam 25 days and traveled over 1350 km. The Albatross Bank is over 1000 km from 'Eloise's starting point on Klein Bonaire.



**Figure 9.** 'Eloise's tracking map from Bonaire to the Albatross Bank

On July 24<sup>th</sup>, a green turtle nesting on the Atlantis dive site on the southern coast of Bonaire was fitted with a satellite transmitter by STCB staff and volunteers. This was the second green turtle ever fitted with a transmitter on Bonaire. This turtle was named 'Darwina' by her sponsors, Karen and Ken Miller.

'Darwina' was unlike any turtle STCB has tracked in the past. Most of the turtles tracked to-date have been hawksbills, and as mentioned above, 'Darwina' was only

the second green turtle to be tracked from Bonaire. Our past experience has shown that sea turtles, after laying a nest and returning to the sea, move to a location not too far from the nesting beach to rest after the stress and effort of nesting and stay in that general area until it is time to nest again.

Not 'Darwina'! She immediately started swimming south and then east before traveling all the way back to Curacao and then returning Bonaire to nest again. After each nesting, she would journey far from Bonaire only to return in time to lay her next nest.

Finally after laying her sixth nest, 'Darwina' departed on or about September 29<sup>th</sup> to start her journey back home. Unfortunately her signal was lost on November 14<sup>th</sup> while she was off the coast of the Yucatan Peninsula of Mexico. Her migration back to the point where her signal was lost took her over 2200 km from Bonaire, a record distance for all the turtles STCB has tracked so far. The actual path she covered exceeded 2750 km. All told, since having the transmitter affixed, 'Darwina' traveled just short of 7000 km!



**Figure 10.** 'Darwina' makes it to the Yucatan

The turtle tracking study continued to attract lots of public attention to our turtles, with press coverage both on Bonaire and elsewhere. Given the involvement of the Dutch Royal Family, interest and excitement over 'Eloise' in the Netherlands was especially high. 'Darwina's energetic and marathon travels made her a favorite with the people of Bonaire. Whenever turtles were moving, tracking updates were produced and sent via our E-Newsletter to the press and whoever else expressed interest.

Sea Turtle Conservation Bonaire would like to thank the 2007 sponsors and to acknowledge the support given to the Turtle Tracking Study by the Dutch Caribbean Nature Alliance. Without their assistance the 2007 project would not have happened.



## Conservation

During 2007 we continued to emphasize action and advocacy. As part of our work we kept on enhancing partnerships with the local community. We monitored and protected nests from predators and human events, conducted annual beach clean-ups, placed barriers at nesting sites to prevent vehicles from driving over them, and rescued turtles from threats such as entanglements.

Bonaire residents notified STCB or STINAPA when they recognized signs of turtle activity or saw evidence of threats to turtles, and participated in beach clean-ups and snorkel surveys. STINAPA, the managing organization of the Bonaire National Marine Park and Washington Slagbaai National Park, played a complementary role by patrolling additional habitats and enforcing conservation law.

Earth Day Clean-up was conducted the 22<sup>nd</sup> of April. Organized with STINAPA, the clean-up was conducted in two different locations: Baby Beach (southeast coast) and Playa Chikitu at Washington Park (northeast coast). Staff from both organizations with the help of volunteers worked together to make this happen. As part of this effort SELIBON cleaned Lagoen (east coast) with their loader under the guidance of STCB staff Gielmon "Funchi" Egbreghts.

A beach clean-up was conducted at No Name beach on Klein Bonaire the 16 of September. The clean-up was organized by STCB and STINAPA as part of the annual International Coastal Clean-up effort sponsored by the Ocean Conservancy. No Name beach is Bonaire's primary hawksbill and loggerhead nesting beach and maintaining unobstructed access to beaches for egg laying females is extremely important to the survival of these endangered animals.

As in other years, the cruise ship Freewinds supported the effort, providing food and drinks as well as volunteers. The water taxi Kantika di Amor helped with the transportation of volunteers and SELIBON participated by placing a truck on the pier for dumping trash. Trash was sorted and the types of trash collected were recorded on data forms that were then sent to the Ocean Conservancy. Ocean Conservancy releases an annual report with the results of the clean-up sites all over the world and the data is used to help formulate strategies for reducing marine debris.

A total of 175 bags of trash were collected and sorted. As part of our effort to reduce, re-use and recycle, the bags will be saved and re-used in the next clean-up.

The International Coastal Clean-up is the world's oldest and largest volunteer effort to clean up our marine environment. Each year, volunteers removed trash and debris from their local beaches, rivers, lakes and streams – along shorelines and under the water. Since 1986, over five million volunteers in 123 countries have cleaned 130,000 miles of shoreline – over five times the circumference of the earth.



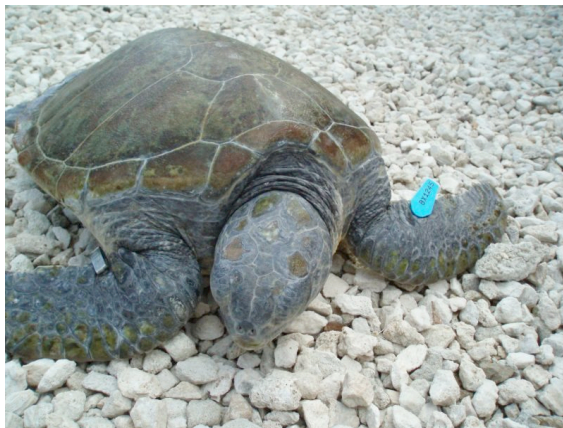
**Figure 11.** – STCB staff with students from the Stichting Project

Small beach clean-ups were regularly conducted during the year with the help of the high school students that participate in our program. These clean-ups are part of an ongoing activity we perform once a week, 3 to 4 months per year. Monitoring the nesting beaches with STCB staff and helping keep them clean is an important part of the students' hands-on experience.

### Rescued turtles

I. One hawksbill hatchling was found in the bay of Lac during the windsurfing Pro-kids event by one of the young competitors (August). This hatchling was not a newborn; it was already two times the size of a just-hatched turtle. It was released on the west side of Bonaire by STCB staff. Three other hatchlings were found and released during the year. Doi Boekhoudt, a fisherman on the island, now converted into a turtle conservationist, found these hatchlings on different occasions during the year in the area of Lac where he lives. Every time he finds a hatchling or a turtle in distress he informs us.

II. One green turtle was captured during one of our regular in-water surveys on February 14<sup>th</sup>. This turtle presented signs of disease. Not having a turtle veterinarian available on the island we decided to use the Marine Turtle Trauma Response manual, prepared by WIDECAST, to diagnose and treat the animal. The turtle was released after 24 hours into the sea.



**Figure 12.** Green turtle captured and released after treatment

III. On August 8th 2007, at approximately 5:00 pm, STCB received an emergency call of a sea turtle entangled, in a home-made longline with floats and hooks, near the BOPEC oil terminal.

The crew of the tugboat Indusbank were on duty off the oil terminal when they spotted the leatherback turtle. Recognizing that it was in distress and needed immediate assistance, Captain Willy Meye and his crew were able to get a rope around the turtle. Working from a platform from the side of the tugboat, the crew cut off much of the line and a number of floats that encircled the turtle. Oil terminal supervisor Jan Emereciana then called Din Domacasse, Chief Ranger of the BNMP, who immediately contacted Mabel Nava, Manager of STCB

With time being an issue and sunset near, Mabel and BNMP Ranger Duvan Rios quickly responded to the call. With support from Ramon de Leon, the marine park's manager and Carlos Rodriguez, the operations manager at Harbor Village Marina, a marine park boat was rapidly fueled and equipped. Accompanied by Andy Uhr, acting STCB President, Mabel and Duvan were on the water and headed north at 5:45 pm.

When the team reached the Indusbank, the rope securing the turtle was quickly passed to the marine park boat. In spite of the Indusbank's work, the turtle still had significant amounts of twisted nylon line wrapped around her, with the line having cut deeply into and around each of her front flippers and the back of her neck.

Efforts to remove the remaining line while working from the marine park boat proved to be less than successful. Mabel, donning a mask and fins, went over the side to work in the water. With two sets of hands from the boat steadying the leatherback, Mabel removed the remainder of the line and floats. Sea turtles are tough and resilient animals and attempting to bring them in for veterinary treatment presents a potential for harming the animal so the leatherback was released. Though seriously injured, she swam away into the deep blue using a steady and strong stroke, giving the team encouragement that she would survive her ordeal.

This rescue was made possible by the quick and positive actions of Captain Willy Meye and the crew of the Indusbank: Francis Verginie, Leopoldo Clarendia and Florenso Thode. STCB extends its thanks to them and everyone else involved in the effort.

The leatherback sea turtle (*Dermochelys coriacea*) is the biggest of all living turtles, reaching a length of over 2.7 m (8.8 ft) and weight of 900 kg (2,000 lb) and is listed by international authorities as critically endangered. The leatherback is found worldwide in all oceans. Our leatherback was quite small, measuring an estimated 1 m (3 ft) across the carapace and weighing over 100 kg (220 lb). Leatherbacks are occasional visitors to Bonaire and are usually seen passing through on their way to destinations unknown.

Longline fishing is illegal on Bonaire and to our knowledge not practiced here. But the practice is common along the coast of South America and it is thought that is where the leatherback became entangled. This was the second such incident in 2007. In April, the remains of a hawksbill turtle ensnared by a similar fishing rig were recovered from a dive site at the southern end of the island (see "Conservation Set-backs," below).



**Figure. 13.** BNMP Ranger and Indusbank Crew Members

IV. On December 11<sup>th</sup> a hawksbill turtle was rescued due to the vigilance and effort of the community.

Early in the day STINAPA received a phone call from Clinton Sint Jago, a resident of Rincon, reporting a turtle in trouble. While walking along the shore at Morotin, in the north-east part of the island, he came upon an entangled and stranded turtle. STINAPA called STCB and both teams traveled to Morotin and found the turtle alive. In all likelihood, this adult male hawksbill got entangled with ropes and thick nylon lines somewhere in the open seas and had drifted for quite a while. Now weakened and hurt, it had washed ashore and probably would have died if Clinton had not happened upon it.

STCB staff checked the turtle after cutting the lines. The turtle was measured and tagged. He was then taken to Boca Onima for release. Everyone present was impressed to see how fast the turtle entered the water.

In order for STCB and STINAPA to accomplish our conservation goals it is essential we get reports of problems in a timely fashion. This is a happy example of how an endangered sea turtle was saved and it would not have happened if it wasn't for the concern and effort of Mr. Sint Jago. We encourage everyone to become part of this very important network and always report problems promptly.





**Figure.15** STCB staff and volunteer untangling the turtle

### Conservation setbacks

On April 4<sup>th</sup> a dead adult hawksbill was found at Vista Blue dive site. A bunch of nylon rope with two coca-cola bottle buoys was found entangled in a gorgonian. The bones and the rest of the turtle lay on the sandy bottom under the gorgonian and lines. The turtle most likely drifted entangled in the artisanal longline and buoys. It is likely that the turtle drowned while attempting to eat and the lines got entangled in the gorgonian. The gorgonian was at a depth of 40 ft. We estimated that the turtle was 78cm SCL (straight carapace length) and weighed probably 58 kg. Lines and bones were removed by STCB staff with the help of volunteers. The skeleton has been given to the CIEE Research Station for educational purposes.



**Figure 16.** Carapace bones and lines entangled in the gorgonian at Vista Blue dive site

On September 18<sup>th</sup>, a dead hawksbill was reported by a sailboat crew. The sailboat was moored at Klein Bonaire when the dead turtle was seen drifting. The turtle was estimated to be 35 cm carapace and the head was missing.

## **Education and Public Awareness**

Our 2007 program with SGB, Bonaire's public high school, proved to be popular with the youngsters. The program consisted of a group of 7 students from the social science class. More students applied but sadly we did not have the capacity to receive them all. This program started in 2006 as an opportunity for students to learn through community service. As part of their curriculum in school, students must do 30 volunteer hours for a company or organization. Our program is focused on having students learn about sea turtle conservation work at the same time that they help us with fieldwork such as nesting monitoring and beach clean-ups. At the end of their 30 hours, they have learned theory and some practice about sea turtle biology and conservation work. This is the second year that we have done this activity. Last year the STCB program was ranked number one in the list of choices for this class.

In 2007 we again supported STINAPA's NME program, providing turtle presentations for the elementary schools of the island. Two elementary schools requested extra presentations as part of special activities they organized with the theme of life beneath the sea. Presentations were given in Papiamentu by STCB Field Specialist Gielmon 'Funchi' Egbreghts, who is very charismatic with the kids.

As part of our working relationship with STINAPA during 2007 we again contributed to their snorkel program "Turtuganan di Boneiru," giving the class about sea turtles.

We released satellite tracking maps and conservation news on our web site at [www.bonaireturtles.org](http://www.bonaireturtles.org), and through email newsletters

In 2007 the popular "Sea Turtles of Bonaire" presentation was shown weekly, alternating between Buddy Dive Resort and the Carib Inn. During the month of September staff provided a special program at Buddy Dive Resort. The program consisted in one nesting beach monitoring excursion to Klein Bonaire for 6 tourists and one evening presentation per week.

Informative articles and releases were published in the local press and in STINAPA's quarterly publication "Makubeken.". We used radio to publicize conservation issues and advertise volunteer opportunities.

We participated in the Stichting Project's Junior Ranger program, teaching youngsters about turtle conservation and biology. Stichting Project provides education for students with learning disabilities. Two groups participated in this program. At the end of the program the students were certified as honorary turtle rangers.

## **Training and Collaboration**

Volunteers have played an important role in STCB's successes since its inception. Volunteerism allows STCB to accomplish the work that needs to be done. Being a small but professional nonprofit organization we understand the value of having people donate their time to the turtle conservation effort. We consider our volunteers part of the turtle family. In return they gain knowledge and experience in turtle conservation work. We continue to focus on maintaining a core crew of volunteers for the in-water surveys while also providing opportunity for short-term walk-ins to participate in conservation work.

During 2007, 590.52 hours of direct effort (number of hours in the water) was contributed by our volunteers for the in-water capture surveys including the netting surveys at Lac. The time contributed is significantly greater when travel time and surface time, which includes application of our research protocols (measurement, tagging, etc.), are considered.

Other areas in which we depend on volunteers are grant writing and the satellite tracking program. Satellite tracking depends on volunteers to assist with the deployment of the transmitter and the long-term tracking effort that follows. Last year Andy Uhr wrote the Satellite Tracking Update Reports and the regular releases to the public.



**Figure 17.** STCB staff and volunteers in Lac during the netting sessions in March

One volunteer from Holland, Bas van der Voort, came to Bonaire to help us for a month in the in-water surveys. The sailing community is also an important source of volunteers. Tina Lindeken, a part time resident on Bonaire, has volunteered several weeks each year for three consecutive years. As part of our volunteer and cooperation with other turtle conservation efforts in the Caribbean Region we hosted Maria Fernanda Gonzalez, a biology student from the Universidad Central de Venezuela who is working to become a turtle specialist. Local teenagers like Andrea Simal and Rafael Rodriguez join the project on an ad hoc basis. Sadly our friend and volunteer Chile Ridley is no longer with us. His captain skills were a great help for us during the in-water surveys and he recruited many volunteers for STCB. We mourn his passing and we miss Chile for sure!

## **Strategic Partnerships and Organizational Development**

Strategic partnerships and organizational development are areas we started to focus on increasingly last year (see “Fund Development,” below regarding the STCB-STINAPA strategic alliance process supported by WNF).

STCB Manager Mabel Nava participated in the 23<sup>rd</sup> Annual Symposium on Sea Turtle Biology Conservation and the WIDECAST (Wider Caribbean Sea Turtle Conservation Network) annual meeting held at Myrtle Beach, South Carolina in the United States, in February 2007.

## **Fund Development**

In 2007 we made important progress in our approach to fund development. The change was generated through both internal and external forces. STCB's strategic plan calls for increasingly effective fundraising planning and diversification of funding sources to ensure that we can meet our program goals in the long-term. On a practical level, our three-year operating funds grant from the Netherlands government came to an end last year. Accordingly, our 2007 fund development goals were to work toward diverse, sustainable funding sources and long-term partnerships.

Staff and several board members formed a fundraising team that pursued an ambitious plan targeting individual and business donations, grants and merchandising. We were able to exceed our minimum revenue targets for the year, which meant that STCB had the financial capacity to accomplish our program goals.

A significant partnership-building effort was undertaken between STCB and STINAPA in 2007. Always close working partners, our two organizations underwent a strategic alliance process which resulted in a memorandum of understanding. This understanding outlines a path of cooperation and resource sharing aimed at increasing our combined capacity to protect the island's natural resources. World Wildlife Fund Netherlands encouraged our strategic alliance process and supported its implementation through a three-year grant that provides significant operating support for STCB beginning in 2008.

## **Financial Report**

The total income for 2007 was 156,244 Nafl, and expenses were 154,213 Nafl. Grant revenue accounted for 56% of the total revenue. Donations accounted for 40% and the remaining 4% came from merchandise sales, program fees, and interest income. A copy of our 2007 financial report, prepared by a contracted accountant, is available for review at the office of Sea Turtle Conservation Bonaire.



## Appendix I. List of turtles captured and tagged during 2007.

### Green turtles

Date capture	Tag left	Tag right	Turtle ID	Location	Measured by	SCL	Weight
26-Jan-07	WH1020	BX1361	06-009	Sabadecco	GE	49.7	15.8
29-Jan-07	WH1213	WH1214	07-007	Marget- Bay	GE	28.2	2.8
31-Jan-07	WH1016	WH1015	07-008	White Slave	GE	31.6	4
12-Feb-07	BX1242	WH1225	07-016	Karpata	GE	45.0	12.4
14-Feb-07	BX1244	WH1197	07-020	Reserve1	GE	42.6	8.6
14-Feb-07	WH1195	WH1196	07-021	Reserve1	GE	26.9	9.6
14-Feb-07	BX1245	WH1198	07-019	Reserve 1	GE	41.2	2.5
16-Feb-07	BX1246	WH1199	07-026	Bopec	GE	36.5	6.2
19-Feb-07			07-027	Playa Frans	GE	24.1	1.8
19-Feb-07	WH1204	WH1203	07-028	Playa Frans	GE	32.2	4.5
21-Feb-07			07-029	Slagbaai	GE	27.2	2.4
21-Feb-07	BX1249	WH1205	07-031	Playa Frans	GE	32.9	5
23-Feb-07	BX1251	WH1206	07-032	Slaagbai	GE	32.6	4.8
23-Feb-07	WH1207	BX1350	05-089	Wayaka	GE	40.7	9.3
23-Feb-07	BX1252	WH1208	07-034	Wayaka	GE	34.8	5.7
26-Feb-07	WH1211	WH1212	07-036	Sweet Drams	GE	29.0	3
26-Feb-07	WH1226	WH1227	07-038	Sweet Dreams	GE	25.7	2
5-Mar-07	WH1235	WH1234	07-045	Andrea II	GE	24.3	1.6
7-Mar-07	WH1237	WH1236	07-046	Ladanias	GE	26.4	2.5
9-Mar-07	WH1241	WH1240	07-051	Playa Franz	GE	30.8	3.9
9-Mar-07	WH1242	BX1255	07-052	Playa Franz	GE	35.6	5.4
9-Mar-07	BX1258	WH1245	07-055	Slaagbai	GE	31.5	4
19-Mar-07	WH1250	BX1259	07-056	Lac	GE	42.8	9.3
19-Mar-07	WH1225	BX1264	07-057	Lac	GE	51.4	17
19-Mar-07	WH1252	BX1265	07-058	Lac	GE	52.2	18
19-Mar-07	WH1246	BX1261	07-059	Lac	GE	32.8	4.7
19-Mar-07	WH1247	BX1260	07-060	Lac	GE	43.2	11.3
19-Mar-07	WH1248	BX1263	07-061	Lac	GE	53.8	23
20-Mar-07	WH1258	BX1270	07-063	Lac	GE	65.7	40
20-Mar-07	WH1257	BX1269	07-064	Lac	GE	53.7	20
20-Mar-07	WH1255	BX1267	07-065	Lac	GE	38.0	6.8
20-Mar-07	WH1254	BX1266	07-066	Lac	GE	60.6	31
21-Mar-07	WH1261	BX1273	07-069	Lac	GE	46.8	14
21-Mar-07	WH1260	BX1272	07-070	Lac	GE	40.2	8.5
21-Mar-07	WH1263	BX1274	07-071	Lac	GE	63.7	
21-Mar-07	WH1264	BX1275	07-072	Lac	GE	48.6	18
21-Mar-07	WE4256	Bx1329	05-041	Lac	GE	57.1	23
22-Mar-07	BX1276		07-074	Lac	GE	52.7	21
22-Mar-07	WH1266	BX1278	07-076	Lac	GE	55.5	24
22-Mar-07	WH1267	BX1279	07-077	Lac	GE	63.3	34
22-Mar-07	WH1269	BX1280	07-078	Out of Lac	GE	64.3	36
22-Mar-07	WH1270	BX1281	07-080	Out of Lac	GE	71.9	53
23-Mar-07	WH1273	BX1284	07-081	Lac	GE	51.5	15.6
23-Mar-07	WH1271	BX1282	07-082	Lac	GE	37.3	6.8
23-Mar-07	WH1272	BX1283	07-083	Lac	GE	54.8	22
23-Mar-07	WH1274	BX1285	07-084	Lac`	GE	60.6	26
23-Mar-07	WH1275	BX1286	07-085	Lac	GE	57.6	
24-Mar-07	WH1078	BX1153	06-067	Lac	GE	51.4	18
24-Mar-07	WH1276	BX1287	07-087	Lac	GE	68.7	43
24-Mar-07	WH1277	BX1189	07-088	Lac	GE	73.7	60

**Green turtles (continued)**

Date capture	Tag left	Tag right	Turtle ID	Location	Measure d by	SCL	Weight
26-Mar-07	WE4276	BX1339	05-059	Lac	GE	59.4	28
26-Mar-07	WH1279	BX1289	07-092	Out of Lac	GE	66.0	41
27-Mar-07	WH1281	BX1291	07-096	Out of Lac	GE	41.2	9.1
27-Mar-07	WH1280	BX1290	07-097	Out of Lac	GE	52.3	18.8
27-Mar-07	WH1282	BX1292	07-098	Out of Lac	GE	61.7	31
27-Mar-07	WH1284	BX1294	07-099	Out of Lac	GE	46.1	11.7
27-Mar-07	WH1284	BX1298	07-100	Out of Lac	GE	55.8	25
27-Mar-07	WH1287	BX1297	07-101	Out of Lac	GE	76.4	65
27-Mar-07	WH1286	BX1296	07-102	Out of Lac	GE	66.9	39
27-Mar-07	WH1285	BX1295	07-103	Out of Lac	GE	64.8	37
27-Mar-07	WE4245	BX1326	05-039	Out of Lac	GE	56.4	25
28-Mar-07	WH1291	BX1121	07-105	Lac	GE	48.8	16.6
28-Mar-07	WH1032	BX1381	06-043	Lac	GE	56.1	23
28-Mar-07	WH1290	BX1300	07-107	Lac	GE	40.9	9.1
28-Mar-07	WH1292	BX1364	07-108	Lac	GE	63.0	33
28-Mar-07	WH1293	BX1341	07-110	Lac	GE	48.1	14.7
29-Mar-07	WH1299	WH1298	07-111	Lac	GE	36.4	6.6
29-Mar-07	WH1297	WH1296	07-112	Lac	GE	43.6	11
29-Mar-07	WH1301	WH1300	07-113	Lac	GE	40.0	8.5
30-Mar-07	WH1303	WH1304	07-115	Out of Lac	GE	45.6	11.5
30-Mar-07	WH1306	WH1305	07-116	Out of Lac	GE	76.4	75
30-Mar-07	WH1303	WH1302	07-117	Out of Lac	GE	39.6	9.1
30-Mar-07	WH1312	WH1311	07-118	Lac	GE	41.4	8.9
30-Mar-07	WH1310	WH1309	07-119	Lac	GE	51.1	16
30-Mar-07	WH1314	WH1313	07-120	Lac	GE	56.2	25
30-Mar-07	WH1316	WH1315	07-121	Lac	GE	46.8	13.2
30-Mar-07	WH1308	WH1307	07-122	Lac	GE	57.5	24
10-apr-07	WH1325	WH1324	07-123	No Name KB	GE	32.9	4.9
10-apr-07	BX1122	WE4200	04-069	Leonora	GE	49.1	16.8
25-Jul-07	WH1331	WH1332	07-139	Atlantis	GE	0.0	
19-Nov-07	WH1333	BBG201	07-140	LAC	GE	57.0	28
19-Nov-07	WH1161	BX1211	06-148	LAC	GE	58.0	25
19-Nov-07	WH1334	BBG202	07-142	LAC	GE	40.7	8.6
19-Nov-07	WH1335	BBG203	07-143	LAC	GE	75.0	66
19-Nov-07	WH1338	BBG206	07-144	LAC	GE	45.7	11.3
19-Nov-07	WH1337	BBG205	07-145	LAC	GE	47.9	12.8
19-Nov-07	WH1336	BBG204	07-146	LAC	GE	61.3	30
19-Nov-07	WH1339	BX1323	05-036	LAC	GE	60.9	31
20-Nov-07	WH1342	WH1343	07-148	LAC	GE	33.0	4.9
20-Nov-07	WH1345	BBG212	07-149	LAC	GE	44.9	10.9
20-Nov-07	WH1344	BBG211	07-150	LAC	GE	44.7	14.7
20-Nov-07	WH1346	BBG207	07-151	LAC	GE	48.2	15
20-Nov-07	WH1347	BBG208	07-152	LAC	GE	61.9	35
20-Nov-07	WH1348	BBG213	07-153	LAC	GE	45.6	12.6
21-Nov-07	WH1349	BBG6214	07-155	LAC	GE	40.4	8
21-Nov-07	WH1350	BBG209	07-154	LAC	GE	51.6	19
21-Nov-07	WH1351	BBG210	07-156	LAC	GE	41.9	10,2
21-Nov-07	WH1352	BBG215	07-157	LAC	GE	51.7	17,4
22-Nov-07	WH1353	BX1069	03-077	LAC	GE	64.0	38
22-Nov-07	WH1354	BBG217	07-159	LAC	GE	72.5	60
22-Nov-07	WH1355	BBG216	07-160	LAC	GE	49.9	9.4
22-Nov-07	WH1356	BBG218	07-161	LAC	GE	44.7	12

**Green turtles** (continued)

Date capture	Tag left	Tag right	Turtle ID	Location	Measured by	SCL	Weight
23-Nov-07	WH1357	BBG219	07-162	LAC	GE	45.9	12.3
23-Nov-07	WH1358	BBG220	07-163	LAC	GE	64.1	38
23-Nov-07	WH1365	BBG221	07-164	LAC	GE	65.7	40
26-Nov-07	WH1360	BBG223	07-169	LAC	GE	41.4	9.1
26-Nov-07	WH1361	BBG224	07-170	LAC	GE	61.7	34
26-Nov-07	WH1362	BBG225	07-171	LAC	GE	63.6	37
26-Nov-07	WH1363	BBG226	07-172	LAC	GE	45.6	12.5
26-Nov-07	WH1364	BBG227	07-173	LAC	GE	66.9	44
26-Nov-07	WH1264	BX1275	07-072	LAC	GE	51.6	23
27-Nov-07	WH1390	BBG230	07-175	LAC	GE	66.5	40
27-Nov-07	WH1368	BBG232	07-176	LAC	GE	44.9	13.2
27-Nov-07	WH1367	BBG229	07-177	LAC	GE	41.8	10
27-Nov-07	WH1366	BBG228	07-178	LAC	GE	64.4	38
28-Nov-07	WH1370	BBG235	07-180	Out of Lac	GE	57.7	24
28-Nov-07	WH1371	BBG236	07-183	Out of Lac	GE	68.6	45
29-Nov-07	WH1099	BX1173	06-089	Out of Lac	GE	48.6	14.9
29-Nov-07	WH1377	BBG234	07-187	Out of Lac	GE	63.5	38
29-Nov-07	WH1376	BBG231	07-188	Out of Lac	GE	61.7	34
29-Nov-07	WH1378	BBG241	07-189	Out of Lac	GE	65.7	40
29-Nov-07	WH1374	BBG238	07-190	Out of Lac	GE	61.4	32
29-Nov-07	WH1380	BBG242	07-192	Out of Lac	GE	67.6	46
30-Nov-07	WH1381	WH1382	07-193	Sorobon Pier	GE	33.1	5.1
30-Nov-07	WH1385	WH1386	07-194	Sorobon Pier	GE	34.1	5.1
30-Nov-07	WH1383	WH1384	07-195	Sorobon Pier	GE	35.6	5.9
30-Nov-07	WH1388	BBG239	07-196	Sorobon Pier	GE	45.5	12.4
30-Nov-07	WH1389	WH1391	07-197	Sorobon Pier	GE	39.9	7.9
30-Nov-07	WE4250	BX1322	05-034	Out of Lac	GE	59.7	32

## Hawksbill turtles

Date capture	Tag left	Tag right	Turtle ID	Location	Measured by	SCL	Weight
22-Jan-07	WH1201	BX1250	07-001	Sweet dreams	GE	35.6	5.5
22-Jan-07	WH1190	WH1191	07-002	Atlantis	GE	27.6	2.6
22-Jan-07	WH1016	BX1359	06-004	Atalntis	GE	40.3	8
24-Jan-07	WH1192	WH1193	07-004		GE	30.4	3.8
29-Jan-07			07-006	Sweet Dreams	GE	22.9	1.5
31-Jan-07	WH1018	WH1017	06-028	White Slave	GE	27.4	2.4
5-Feb-07	WH1220	WH1219	07-010	Divi Flamingo Beach	GE	29.7	2.8
7-Feb-07	WH1019	BX1360	06-008	Playa Pabou	GE	46.6	11.3
7-Feb-07	WE4058	WE4059	03-043	Playa Pabou	GE	46.4	11.6
9-Feb-07	WH1221	BX1240	07-013	Oil Slick	GE	40.7	8.2
9-Feb-07	BX1241	WH1222	05-058	1.000 steps	GE	34.9	4.9
9-Feb-07	WH1223	WH1224	06-103	1.000 steps	GE	28.6	2.9
12-Feb-07	BX1247	WH1194	07-017	Karpata/reserve	GE	37.0	5.8
12-Feb-07	WH1053	WH1023	06-015	Karpata/reserve	GE	37.3	6.3
14-Feb-07			07-022	Karpata	GE	26.1	2
16-Feb-07	WH1202	BX1248	07-023	BOPEC	GE	34.1	4.8
16-Feb-07	BX1247	WH1200	07-024	Nukove	GE	30.8	3.2
16-Feb-07			07-025	Nukove	GE	26.6	2.1
21-Feb-07			07-030	Playa Frans	GE	21.2	1.1
26-Feb-07	WH1210	WH1209	07-035	Sweet Dreams	GE	29.9	2.9
26-Feb-07	BX1253	WH1228	07-039	Margae Bay	GE	45.9	10
26-Feb-07	WE4209	WE4208	04-081	Sweet Dreams	GE	35.4	4.5
28-Feb-07	BX1254	WH1229	07-040	Punt Vierkant	GE	42.9	8.1
28-Feb-07	WH1230	WH1231	06-104	Punt Vierkant	GE	27.3	2.1
2-Mar-07	WH1232	WH1233	07-042	Petries Piller	GE	29.4	3
2-Mar-07	WH1139	WH1138	06-124	Andrea I	GE	31.9	4.1
5-Mar-07			07-044	Witches Hut	GE	24.9	1.9
7-Mar-07			07-047	Reserve	GE	24.2	1.4
7-Mar-07	WH1238	WH1239	07-048	Reserve	GE	26.8	1.9
7-Mar-07			07-049	Reserve	GE	22.5	1.5
7-Mar-07	WH1053	WH1023	06-015	Reserve	GE	37.5	6.4
9-Mar-07	WH1243	BX1256	07-053	Playa Franz	GE	45.2	9.5
9-Mar-07	WH1244	BX1257	07-054	Playa Franz	GE	50.6	14.3
19-Mar-07	WH1249	BX1262	07-062	Lac	GE	61.2	26
20-Mar-07	WH1259	BX1271	07-067	Lac	GE	55.4	21
20-Mar-07	WH1256	BX1268	06-025	Lac	GE	35.3	5.2
22-Mar-07	WH1265	BX1277	07-075	Lac	GE	44.6	11
22-Mar-07	WH1042	BX1391	06-053	Out of Lac	GE	57.9	23
26-Mar-07	WH1278	BX1288	07-091	Out of Lac	GE	50.8	15.2
26-Mar-07	WH1172	BX1221	06-158	Out of Lac	GE	52.9	18.5
27-Mar-07	WH1289	BX1299	07-093	Out of Lac	GE	41.3	7.9
27-Mar-07	WH1283	BX1293	07-094	Out of Lac	GE	50.0	15.7
27-Mar-07	WH1043	BX1392	06-051	Out of Lac	GE	60.4	25
28-Mar-07	WH1174	BX1223	06-162	Lac	GE	59.5	25
29-Mar-07	WH1295	WH1294	07-114	Out of Lac	GE	53.4	20
11-apr-07	WH1006	BX1354	05-098	Nearest Point	GE	38.1	6.5
12-apr-07	WH1323	WH1322	07-126	Ebo's	GE	27.9	2.2
12-apr-07	WE4192	BX1117	04-065	Ebo's	GE	40.0	7
13-apr-07	WH1320	WH1319	07-130	Ebo's	GE	31.2	3.5
13-apr-07	WE4021	WE4022	03-013	Ebo's	GE	44.4	9
13-apr-07	WH1318	WH1317	05-080	Ebo's	GE	34.7	4.6
16-apr-07	WH1326	WH1321	07-132	Ebo's	GE	31.2	3.6

# **Hawksbill turtles (continued)**

Date capture	Tag left	Tag right	Turtle ID	Location	Measured by	SCL	Weight
16-apr-07	WE4055	WE4056	03-038	Ebo's	GE	42.0	9
16-apr-07	WH1328	WH1327	06-123	Leonora	GE	27.1	2.1
17-apr-07			07-135	Nearest Point	GE	23.2	1.5
17-apr-07	WE4184	WE4185	04-059	Ebo's	GE	38.3	6.9
17-apr-07	WE4195	WE4196	04-070	Nearest Point	GE	41.0	7.1
30-May-07	WH1329	WH1330	07-137	Fisherman's hut	GE	95.8	
12-Jul-07	BX1124	WE4198	04-072	No Name KB	GE	84.9	
23-Nov-07	WH1256	BX1268	06-025	LAC	GE	40.4	8.2
23-Nov-07	WH1173	BX1222	06-163	LAC	GE	52.1	16.8
26-Nov-07	WH1265	BX1277	07-075	LAC	GE	50.6	16
26-Nov-07	WH1359	BBG222	07-167	LAC	GE	68.8	49
28-Nov-07	WH1369	BBG233	07-181	Out of Lac	GE	44.3	9.4
28-Nov-07	WH1372	BBG237	07-184	Out of Lac	GE	40.9	8.8
28-Nov-07	WH1373	BBG240	07-185	Out of Lac	GE	67.3	47
28-Nov-07	WH1172	BX1221	06-158	Out of Lac	GE	56.7	24
28-Nov-07	WH1107	BX1181	06-096	Out of Lac	GE	52.2	18
12-Dec-07	WH1392	BB6248	07-199	Morotin	GE	75.1	

## Appendix II. List of nests observed on Klein Bonaire during 2007.

Activity number	Location stake	Observation date	Species	Observations
1	894	11-May-07	Loggerhead	missing left hind flipper
2	1120	16-May-07	Loggerhead	
3	335	23-May-07	Loggerhead	missing left hind flipper
4	880	26-May-07	Loggerhead	
5	1230	1-Jun-07	Loggerhead	
6	820	15-Jun-07	Loggerhead	
7	1200	15-Jun-07	Hawksbill	
8	550	18-Jun-07	Loggerhead	
9	Munks Haven	9-Jun-07	Loggerhead	Washed away
10	Munks Haven	22-Jun-07	Loggerhead	Washed away
11	500	25-Jun-07	Hawksbill	
12	1008	25-Jun-07	Loggerhead	Not found
13	1122	29-Jun-07	Hawksbill	Olive
14	335	2-Jul-07	Loggerhead	
15	610	2-Jul-07	Hawksbill	Not found
16	1550	4-Jul-07	Loggerhead	Tabaco
17	1602	9-Jul-07	Loggerhead	mangrove
18	1500	11-Jul-07	Hawksbill	Olive
19	750	12-Jul-07	Hawksbill	Olive
20	1200	16-Jul-07	Hawksbill	Olive
21	1530	18-Jul-07	Loggerhead	Dunes
22	1030	18-Jul-07	Loggerhead	
23	660	23-Jul-07	Loggerhead	Dune/open
24	1603	25-Jul-07	Hawksbill	Open/dune
25	580	27-Jul-07	Loggerhead	Dunes
26	1530	6-Aug-07	Loggerhead	relocated to dune
27	1515	6-Aug-07	Hawksbill	
28	857	8-Aug-07	Hawksbill	Olive
29	1850	8-Aug-07	Hawksbill	Dune
30		8-Aug-07	Loggerhead	
31		20-Jul-07	Loggerhead	
32	580	27-Jul-07	Loggerhead	
33	668	11-Aug-07	Hawksbill	laid around 10:00 am
34	413	13-Aug-07	Hawksbill	Olive
35	1048	20-Aug-07	Loggerhead	Dune/tabaco
36	793	22-Aug-07	Hawksbill	
37	1010	22-Aug-07	Hawksbill	
38	520	22-Aug-07	Loggerhead	found hatched
39	413	13-Aug-07	Hawksbill	found hatched
40	753	26-Aug-07	Hawksbill	last nest from Eloise
41	520	7-Sep-07	Hawksbill	Dune
42	1530	11-Sep-07	Loggerhead	Tabaco
43	1250	11-Sep-07	Hawksbill	Dune
44	400	18-Sep-07	Hawksbill	Olive
45	1640	26-Sep-07	Hawksbill	
46	1065	3-Oct-07	Hawksbill	Behind olives
47	925	9-Oct-07	Hawksbill	Olive
48	536	17-Oct-07	Hawksbill	Olive
49	230	17-Oct-07	Loggerhead	Open
50	735	19-Oct-07	Hawksbill	Small tree
51	955	08-Jan-08	Hawksbill	Small tree

### Appendix III. List of nests on other Bonaire beaches during 2007

Location	Observation date	Species	Observations
Fisherman's Huts	7-May-07	Loggerhead	GPS:04/02.433N/15.913W
Fisherman's Huts	18-May-07	Loggerhead	GPS:05/02.467N/15.925W - rocks
Fisherman's Huts	30-May-07	Loggerhead	12.02.447/68.15.916 / transmitter on 52045
Fisherman's Huts	12-Jun-07	Loggerhead	N 10.665 W 18.164 transmitter off
Light House Beach Resort	11-Jul-07	Green turtle	N09.901/W17.520
Atlantis	24-Jul-07	Green turtle	N 02.682 / W 10.012 - Darwina - transmitter
Atlantis	8-Aug-07	Green turtle	Darwina's third nest
Fisherman's hut	22-Aug-07	Green turtle	Darwina's 4th nest - 02.545 N / 15.955 W
Fisherman's hut	7-Sep-07	Green turtle	100 meters south of the hut
Playa Chikitu	20-Sep-07	Green turtle	21 meters from Rock, 16.768N/20.892W
Atlantis/10 mts from #1 (Darwina)	27-Sep-07	Green turtle	02.686N/16.009W
Playa Chikitu / Washington Park	29-Sep-07	Green turtle	
Playa Chikitu/Washington Park	9-Oct-07	Green turtle	50 meters from Rocks
Sweet Dreams	18-Jun-07	Hawksbill	N 10.098 / W 18.338
Sweet Dreams	21-Jun-07	Hawksbill	N 10.098 / W 18.338
Sweet Dreams	21-Jun-07	Hawksbill	Confirmed late / hatched already
Sorobon Naturist Beach Hotel	26-Jun-07	Hawksbill	N 10.048 W 18.106
Sweet Dreams	5-Jul-07	Hawksbill	N 10.094 / W 15.746
Donkey Beach	24-Jul-07	Hawksbill	N 07.937 / W 16.966
Onima	25-Jul-07	Hawksbill	Center of the beach
Onima	3-Aug-07	Hawksbill	Close to the rock
Donkey beach	3-Sep-07	Hawksbill	07.920/16.991 under mangrove tree