



Sea Turtle Monitoring Program



Volunteer Training - Introduction

Map of Statia



Sand mining on Zeelandia Beach

2001 – Sand mining stopped on Zeelandia Beach; the main turtle nesting beach was given protected status

2002 – Sea Turtle Protection and Monitoring program established with sporadic monitoring of beaches during nesting season

From 2003 – Regular monitoring of nesting beaches is possible due to the participation of Work Abroad volunteers

Leatherback Turtle



Leatherback turtle (*Dermochelys coriacea*)

- **No hard shell – leathery, flexible carapace with longitudinal ridges**
- **Oldest and largest sea turtle**
- **Up to 2.0m long and >1000kg**
- **Feed mainly on jellyfish**
- **Dark grey/black with white spots**
- **Lay 80-90 eggs plus yolkless**

Green Turtle



Green turtle (*Chelonia mydas*)

- **Hard carapace with 4 pairs of lateral scutes**
- **1 pair of prefrontal scales**
- **Up to 120cm and 230kg**
- **Eat sea grass and algae**
- **Varying colour from brown to olive green**
- **Name comes from the green fat in their body**
- **Lay 110 – 130 eggs**

Hawksbill Turtle



Hawksbill turtle (*Eretmochelys imbricata*)

- **Hard carapace – 4 pairs of overlapping lateral scutes**
- **2 pairs of prefrontal scales**
- **Hawk-like beak**
- **Up to 90cm and 80kg**
- **Feed on sponges**
- **Normally dark brown, orange or yellow**
- **Carapace used to make tortoiseshell artifacts**
- **Lay over 150 eggs**

Loggerhead Turtle



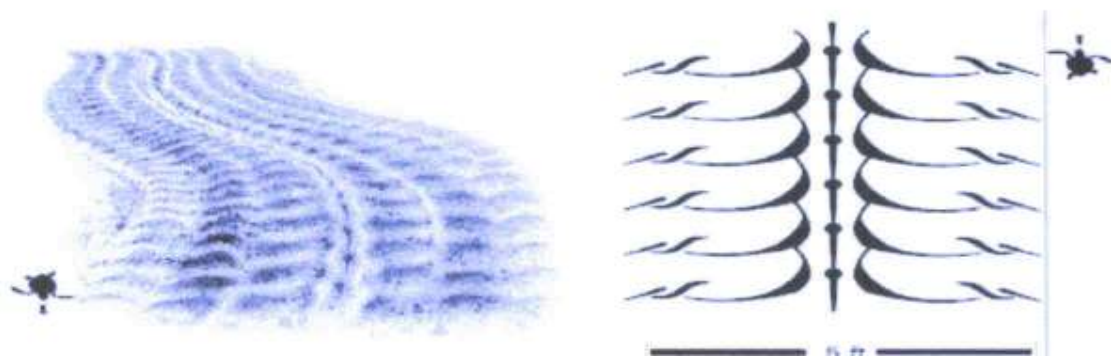
- **Hard carapace with 5 pairs of lateral scutes**
- **2 pairs of prefrontal scales**
- **Up to 105cm and 180kg**
- **Very big head**
- **Feed on crustaceans**
- **Normally reddish-brown colour**
- **Lay 100 – 130 eggs**

Track Identification

- 2 types of tracks

1) Symmetrical – Leatherback and Green

Figure 2-7. Leatherback track



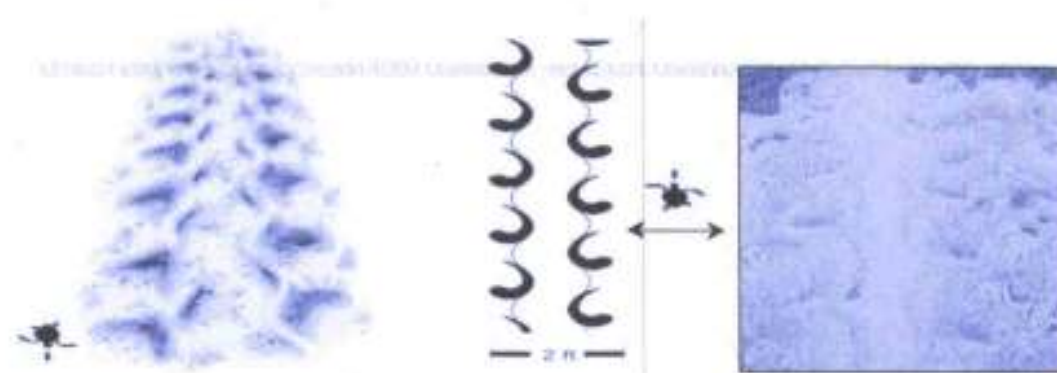
Track width

Leatherback: 1.5 – 2.3m

Green: 1 – 1.3m

2) Asymmetrical – Hawksbill and Loggerhead

Figure 2-4. Loggerhead track



Track width

Hawksbill: 0.75 – 0.8m

Loggerhead: 0.7 – 0.9m

Nesting Behaviour

- Individual females do not normally nest every year
- Typically nest every 2-3 years
- Nest more than once during a nesting season
- Lay on average 5 nests a season
- Inter-nesting intervals vary between species from 9 – 15 days
- Often different species lay at different times of the year



Nesting Process

- Same process for all species - some subtle differences
- Can take between 1 – 2 hours depending on the species
- Nine stages
 - 1) Emerging from the sea
 - 2) Crawling to the nest site
 - 3) Selecting nest site
 - 4) Creating body pit
 - 5) Digging egg chamber
 - 6) Depositing eggs
 - 7) Tamping/Covering egg chamber
 - 8) Disguising nest site
 - 9) Returning to the sea



Hatchlings



- Incubation period is between 45 - 90 days depending on species
- Average incubation is about 60 days
- 40 – 60mm long
- Weigh approximately 60g

- Hatchlings have temperature-dependent sex determination
- Hatch around the same time
- Remain in the nest 1 – 7 days before emerging and entering sea



Schedule for the rest of today

- **Trip to Zeelandia beach**
- **Practice nest marking**
- **Discussion of the data collection protocol**
- **Practical session on data sheets and measuring a turtle**
- **Training review**

