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DEPARTMENT OF Conservation AND LAND MANAGEMENT
Conserving the nature of WA

MARINE TURTLE RESEARCH PROJECT ROSEMARY ISLAND

VOLUNTEERS NEWSLETTER

Issue 3 May 2001

Well, turtle season is over for another year. It has been a very successful year and a huge thankyou to all who have been involved.

This will be the last issue of the newsletter for this season. The next issue will come out around the beginning of the next season in August (I hope!!).

THIS SEASON'S RESULTS

Rosemary Island

352 turtles were encountered at Rosemary Island during season 2000/2001. Of these:

100 (28%) were remigrants
258 (73.5%) were Hawksbills
93 (26%) were Flatbacks
1 was a Green.

NEWS FROM OTHER LOCATIONS

Cowrie Beach, Munda Station

290 Flatback turtles were encountered at Cowrie Beach this year. 90 of these (31%) were remigrants. Thanks to the guys at Munda station homestead who kindly assisted with accommodation and food for the volunteers.

Barrow Island

The absence (almost) of green turtles this year meant that tagging numbers were down. However, that is an important result in itself as it helps to reveal patterns in the movement of these turtles. Despite this, 9 green turtles were encountered at John Wayne Beach on the western side of the island, and 65 Flatbacks were seen, mostly at Yacht Club Beach on the eastern shore, adjacent the main camp. Of the total 75 turtles encountered at Barrow Island, 11 (14.5%) were remigrants. This low number probably reflects the relatively low effort at tagging Flatback turtles on Barrow in previous years.

FIRST TURTLE RETURNS

The first two turtles tagged at Rosemary Island were tagged in 1986. One of these has since been seen once, in October 1995, and was again recorded in 2000. She was seen on the night of 22 September by Warren and Mike Richards. Her tag numbers are T9236 (an original Qld tag) and WA26406. She has not changed in size during this 14 year period (within statistical variation and observer differences).

SATELLITE TRACKING NEWS

Kellie Pendoley is currently doing her PhD studies on the turtles of the Barrow/ Lowendal/Montebello Islands area. As part of this study, she attached satellite transmitters to a small number of Green turtles at Barrow Island. She has been following their progress over the past few months, and they have all followed virtually the same track, heading in to the Pilbara coast and then northwards.

HAWKSBILL DNA SAMPLING

Anna Vitenbergs collected skin samples from 5 Hawksbill turtles at Rosemary Island, as part of a wider collection in this region. The samples have been sent to Nancy Fitzsimmons, at the University of Canberra. The DNA data gathered will be used to determine whether the Hawksbill population that nests at Rosemary and Varanus Islands is different to that found in Northern Territory, and other, waters.

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TURTLES & LIGHTS

Many of you may know that lights can have a detrimental effect on turtles, particularly hatchlings. When hatchlings emerge from the nest, they must find the ocean. It appears that they use a number of cues to do this, including light, slope of the beach, the earth's magnetic field. Research indicates that the most important cue is light.

Under natural conditions, turtle hatchlings crawl directly from the nest towards the ocean. However, when artificial lighting is present the turtles may become confused and move towards these lights instead. The consequences of such misorientation can be death, from exhaustion, dehydration, or predation.

Adult turtles may also be adversely affected by artificial lights on nesting beaches. Effects on the turtle's natural behaviour include a reluctance to emerge from the ocean to nest, abandonment of nesting attempts, and an inability to return to the ocean after nesting due to confusion about which direction to travel.

Solutions to this problem include using lights that are not visible to turtles, shielding lights so they are not visible from the beach and turning off lights that are not essential.

Turtle hatchlings respond to light at the ultraviolet end of the spectrum (that humans cannot see) and are only weakly sensitive to red light (that humans see well). Therefore, orange or red lights are less attractive to turtle hatchlings than blue or green lights. It is important, however, to choose types of lights which emit only those wavelengths which turtles do not see well. For example, a light which would appear yellow to humans may be made up of both red and green, and be highly attractive to turtles.

A recent example of this problem was seen in Port Hedland. Cemetery Beach is home to a Flatback turtle rookery, but is also subject to influence from many lights, streetlights, carpark and building lighting. CALM received reports from local residents of turtles hatchlings being run over on the road, and ending up in people's front gardens. CALM has conducted a light audit of the area, and is negotiating with those responsible for the trouble lights to try and get a good outcome for the turtles for next season.

WEB SITES TO VISIT

http://www.turtle.ky/

Something a bit different – the Cayman Islands turtle farm. This farm grows turtles for food (a local delicacy), but also releases large numbers each year.

http://www.umigame.org

Home page of the Sea Turtle Association of Japan.

http://www.kachhapa.org/newsletter

Information about sea turtles in India.

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The information contained in this newsletter is accurate at the time of printing. Views expressed are those of the author and not of CALM, so blame me if I get it wrong! My apologies for any errors!