

REGRESSION/PROGRESSION OF FIBRO-PAPILLOMA SEVERITY IN GREEN TURTLES IN THE INDIAN RIVER LAGOON, FLORIDA, BASED ON RECAPTURE RECORDS

Shigetomo Hirama and Llewellyn M. Ehrhart

University of Central Florida, UCF Dept of Biology, PO Box 162368, Orlando, FL USA

Between January 1998 and December 2000, we captured 41 previously tagged green turtles. Changes in GTFP status were examined by comparing photographs and/or tumor drawings of initial captures with those from subsequent captures. There was no change of GTFP status if the recapture period was less than 10 months.

Of 17 individuals without GTFP at initial capture, 11 (64.7%) remained unaffected at subsequent recapture over more than a 10 month period. Six of 17 (35.3%) non-GTFP turtles at first capture were afflicted with the disease by the second capture. Of 24 green turtles with FP at the first capture, 21 (87.5%) showed clear

regression or complete absence of GTFP by the second capture. None of the turtles that showed regression of GTFP tumors was severely afflicted at the first capture (76%—mildly afflicted, 24%—moderately afflicted). Three out of 24 (12.5%) green turtles with FP tumors present at the first capture showed progression in the severity of GTFP. The longest recapture record (4 years) was observed in an individual which showed mild affliction at the first capture and absence of GTFP at the second capture. No turtle classified as severely afflicted has been recaptured more than 7 months after the initial capture. This may indicate reduced survivorship in the most severely afflicted animals.

EVIDENCE FOR BEHAVIOURAL EFFECTS ON DAILY PROFILES OF MELATONIN AND CORTICOSTERONE IN MARINE TURTLES

Tim S. Jessop¹, Colin J. Limpus², and Joan M. Whittier³

¹ Department of Zoology, University of Queensland, Brisbane, Qld 4072, Australia

² Department of Environment, PO Box 155, Brisbane Qld 4002, Australia

³ Department of Anatomy, University of Queensland, Brisbane, Qld 4072, Australia

In addition to biophysical cues such as light and temperature, the circadian system of vertebrates may be regulated by non-photic cues such as behaviour. This influence of behaviour on the circadian system can be assessed by measuring the response curve of particular circadian rhythms including hormone cycles. In this study we examined the effect of induced and spontaneous nocturnal behaviours on the daily profiles of the melatonin (M) and corticosterone (B) cycle in captive and wild green turtles, *Chelonia mydas*. First, we examined if captive juvenile turtles exhibited the predicted nocturnal and diurnal profiles in plasma M and B. Second, low- and high- intensity nocturnal behaviours were induced in captive turtles to ascertain any effect of behaviour on hormone

profiles of M and B. Third, the effect of three spontaneous nocturnal behaviours— nesting, mate searching by males and feeding/swimming in wild turtles were investigated to determine the effects of natural behaviours on the expression of circadian hormone cycles. In captive turtles, a distinct nocturnal and diurnal profile in M and B was expressed. Induced and spontaneous field based nocturnal behaviour caused a marked decrease in nocturnal levels of plasma melatonin compared to inactive turtles. Nocturnal behaviour prevented the nocturnal decrease in corticosterone. Our findings provide evidence for an association between daily profile variation in melatonin and corticosterone and various nocturnal behavior in green turtles.

LOGGERHEAD NEST SITE FIXITY IN THE ROOKERY OF LAGANAS BAY, ZAKYNTHOS, GREECE

Kostas Katselidis, Gail Schofield, and Dimitris Margaritoulis

ARCHELON - the Sea Turtle Protection Society of Greece, Solomou 57, GR-104 32, Athens, Greece. Tel/Fax +30 1 5231342. E-mail: stps@archelon.gr

INTRODUCTION

Researchers have found that (loggerhead and green) sea turtles are 80% faithful to particular rookeries (Kikokawa, 1999), 70% faithful to 3 km clusters of beaches (Mortimer & Portier, 1989) and 71% faithful to their 1st nesting beach of the season (Wang & Cheng, 1999). This means that about 30% of turtles move between different

beaches. Nest site fixity is assessed by calculating how close turtles nest to their previous nesting site. This study primarily assesses nest site fixity of loggerhead turtles to a particular beach in the rookery of Laganas Bay in one season, and degree of exchange between the six nesting beaches. Secondly, nest site fixity is assessed with respect to one beach, the high-density nesting beach of Sekania.



NOAA Technical Memorandum NMFS-SEFSC-528

**PROCEEDINGS
OF THE TWENTY-FIRST ANNUAL
SYMPOSIUM ON SEA TURTLE
BIOLOGY AND CONSERVATION**



*Coming
of Age*



24 to 28 February 2001
Philadelphia, Pennsylvania, USA

Compiled by:
Michael S. Coyne & Randall D. Clark

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, FL 33149 USA

April 2005