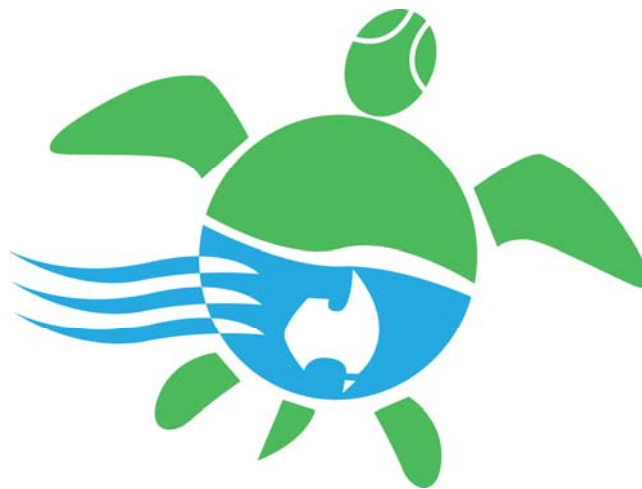




NOAA Technical Memorandum NMFS-SEFSC-630

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



17 to 19 February 2009
Brisbane, Queensland, Australia

Compiled by:

Lisa Belskis, Mike Frick, Aliko Panagopoulou, Alan Rees, & Kris Williams

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Fisheries Service
Southeast Fisheries Science Center
75 Virginia Beach Drive
Miami, Florida 33149

May 2012



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STUDENT AWARDS

There were 103 student presentations – 39 papers and 64 posters with \$3,000 US awarded to eight recipients. The awards committee was composed of Lisa Campbell, Matthew Godfrey, Jeanette Wyneken. Judges were Karen Arthur, Ken Lohmann, Melissa Snover, Dave Owens, Annette Broderick, Sheryan Epperly, Kirstin Fritsches, Thane Wibbels, Zoe Meletis, Bryan Wallace, Nick Pilcher, Kiki Dethmers, Marydelle Donnelly, Anna Barragan and Andrea Phillott. The awards were financed by the Chelonian Research Foundation and the International Sea Turtle Society.

ORAL PRESENTATIONS

Best Biology Oral Presentation

First Prize: **Wendy Dow**, Duke University, USA

In-water and in-air hearing sensitivity of the juvenile green sea turtle (*Chelonia mydas*).

Runner up: **Hoyt Peckham**, UC Santa Cruz, USA

Demographic and conservation implications of alternative foraging strategies in juvenile loggerhead turtles.

Best Conservation Oral Presentation

First Prize: **David Pike**, University of Sydney, Australia

Climatic change and changes in sea turtle nesting distributions.

Runner up: **Mariana MPB Fuentes**, James Cook University, Australia

Assessing the vulnerability of key sea turtle rookeries to predicted geographic shifts in cyclone activity.

POSTER PRESENTATIONS

Best Biology Poster Presentation

First Prize: **Suzanne E Roden**, NOAA Fisheries - Southwest Fisheries Science Center / University of San Diego, USA. Detecting green turtle population structure in the Pacific using single nucleotide polymorphisms (snps).

Runner up: **Kimberly Reich**, University of Florida, USA

Effects of repeated tissue sampling on the growth of immature loggerhead turtles; a controlled study.

Best Conservation Poster Presentation

First Prize: **Juan Patiño-Martínez**, Estación Biológica de Doñana. Spain

The accumulation of driftwood on the beach disturb leatherback nesting and newborn behaviour affecting reproductive success.

Runner up: **Antonio Nogueira**, Wildlife Conservation Society

The use of geographic information system (GIS) for the support of the marine turtle research and conservation in Soyo, northern Angola.

THE USE OF DEVELOPMENT INCENTIVES TO PROMOTE BUY-IN AMONGST LOCAL COMMUNITIES FOR TURTLE CONSERVATION IN PAPUA NEW GUINEA Nicolas J. Pilcher and Irene Kinan Kelly	164
THE MANAGEMENT OF MARINE TURTLES WITHIN THE GREAT BARRIER REEF MARINE PARK Mark Read and Malcolm Turner	164
LONG-TERM TRENDS IN BASKING HAWAIIAN GREEN SEA TURTLES IN THE NORTHWESTERN HAWAIIAN ISLANDS Melissa L. Snover and Mark S. Sullivan	165
THE INTRODUCTION OF TURTLE EXCLUDER DEVICES IN SHRIMP TRAWL NETS AND SEA TURTLE CONSERVATION STRATEGIES IN SMALL SCALE FISHERIES IN THE SOUTHERN GULF OF GUINEA Bolu Solarin, T. Moth-Poulsen, V. Amire, J. C. Ogbonna, E. E. Ambrose, O. Bolaji, O. Orimogunje, M. Abass, O. Adegbile, A. Ajulo, F. Aniebona, and S. C. Oporum	165
PATOKU: MONITORING AN IMPORTANT SEA TURTLE FORAGING GROUND IN ALBANIA Michael White, Idriz Haxhiu, Enerit Saçdanaku, Lazion Petritaj, Merita Rumano, Prue Robinson, Stephanos Kouris, and Lily Venizelos	166
SEA TURTLE CONSERVATION IN BALI – INDONESIA, SOCIAL – CULTURAL, EDUCATION, PRESS AND LAW ENFORCEMENT APPROACH I Wayan Wiradnyana	167
SAVING THE MARINE TURTLES - THE MEKAR EXPERIENCE Rahayu Zulkifli and Rejani Kunjappan	167

SPEED SESSION 3

FORAGING DESTINATIONS AND HIGH-USE AREAS OF WESTERN PACIFIC LEATHERBACK TURTLES Scott Benson, Peter H. Dutton, Creusa Hitipeuw, Betuel Samber, Ricardo Tapilatu, Vagi Rei, Levi Ambio, John Pita, Peter Ramohia, Joe Horoku, Tomo Eguchi, and Barbara Block	168
OXYGEN CONSUMPTION AND SWIMMING EFFORT OF HATCHLING GREEN TURTLES David T. Booth	169
RECONSTRUCTION OF HISTORIC SEA TURTLE POPULATIONS AROUND MAURITIUS AND IDENTIFICATION OF APPROPRIATE CONSERVATION GOALS FOR A GHOST POPULATION Patricia Z. R. Davis and Noa Sainz	169
‘SHARED SEAS’: MARINE TURTLES IN THE ARAFURA-TIMOR SEAS Kiki Dethmers, Ray Chatto, Narciso A. de Carvalho, and Karren Edyvane	170
CAN <i>CASUARINA</i> AS SHELTERBELTS SPELL DOOM FOR THE <i>LEPIDOCHELYS OLIVACEA</i> NESTING ALONG SOUTHERN CHENNAI COAST IN INDIA? Supraja Dharini	170
USE OF MICROSATELLITE MARKERS FOR EVALUATING THE RELATEDNESS AMONG GREEN TURTLE NESTS FOUND ON THE MAIN HAWAIIAN ISLANDS Amy Frey, Peter H. Dutton, and George H. Balazs	171
SEARCHING FOR THE BEST HISTORICAL RECORD IN THE CARAPACE OF GREEN TURTLES Melania C. López-Castro, Karen A. Bjørndal, and Alan B. Bolten	171
SOCIAL AND ECONOMIC FACTORS DRIVING ILLEGAL SEA TURTLE FISHERY AND TRADE IN BCS, MEXICO Agnese Mancini, Ricardo Borquez Reyes, Volker Koch, and Jeff Seminoff	172
DISPERSAL PATTERNS AND SWIMMING BEHAVIOUR OF HATCHLING FLATBACK TURTLES (<i>NATATOR DEPRESSUS</i>) Andrea D. Phillott	172
EYES IN THE SKY: DEFINING A LOGGERHEAD FORAGING HOTSPOT IN THE EASTERN PACIFIC THROUGH AERIAL SURVEYS Jeffrey A. Seminoff, Tomoharu Eguchi, S. Hoyt Peckham, Rodrigo Rangel, and Karin Forney	173
THE INFLUENCE OF THE WORLD BANK ALONG INDIA'S COASTAL HABITATS Seema Shenoy, Tanvi Vaidyanathan, Manju Menon, and Aarthi Sridhar	173

and hopes to impress the importance of community involvement in ensuring the success of turtle conservation initiatives. Acknowledgement: International Sea Turtle Symposium, Australian Government DEWHA, Queensland Environmental Protection Agency, Disney Animal Kingdom, Western Pacific Regional Fisheries Management Council, US. National Marine Fisheries Service, and the U.S. Fish and Wildlife Service (Marine Turtle Conservation Fund).

SPEED SESSION 3

FORAGING DESTINATIONS AND HIGH-USE AREAS OF WESTERN PACIFIC LEATHERBACK TURTLES

Scott Benson¹, Peter H. Dutton², Creusa Hitipeuw³, Betuel Samber⁴, Ricardo Tapilatu⁵, Vagi Rei⁶, Levi Ambio⁷, John Pita⁸, Peter Ramohia⁸, Joe Horoku⁹, Tomo Eguchi², and Barbara Block¹⁰

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⁷ Kamiali Wildlife Management Area, Lababia, Morobe Province, Papua New Guinea

⁸ The Nature Conservancy, Honiara, Solomon Islands

⁹ Department of Environment and Conservation, Honiara, Solomon Islands

¹⁰ Tagging of Pacific Predators (TOPP), Stanford University, California, USA

Endangered Western Pacific leatherback sea turtles, *Dermochelys coriacea*, form an ecologically diverse metapopulation, which forages in several tropical and temperate regions of the Pacific and Indo-Pacific region. Multi-year satellite telemetry studies at Bird's Head Peninsula, Papua Barat, Indonesia; Huon Gulf, Papua New Guinea; and Santa Isabel Island, Solomon Islands have revealed variations in migratory routes and foraging destinations, and links to oceanographic processes. The most apparent pattern in this dataset (n=91) is a clear separation of migratory destinations for boreal summer (July) vs. boreal winter (December-February) nesters. Individuals nesting in Papua Barat, Indonesia during July (2003, 2005, 2006, 2007) migrated to foraging areas within multiple temperate regions of the North Pacific Ocean and tropical waters of the South China Sea, remaining north of the equator at all times. In contrast, individuals tagged at the same Papua Barat beaches during January-February (2005, 2007) moved southward, similar to nesting leatherbacks tagged during these months in Papua New Guinea and the Solomon Islands (2001, 2003, 2006). Destinations for these boreal winter nesters included the temperate South Pacific between southeastern Australia and New Zealand's North Island, and tropical regions south of the equator, particularly the Banda Sea. The arrival of leatherbacks at northern temperate destinations coincided with periods of peak marine productivity. Off the U.S. West Coast, leatherbacks arrived during July-August to exploit the seasonal dense aggregations of sea nettles, *Chrysaora fuscescens*, an important prey species. We hypothesize that the timing of arrival at southern temperate destinations also coincides with peak prey availability in these locations.

Mott, Cody118	O'Hara, Amanda103	Patterson-Kane, Janet C.90, 98
Mounier, Sophie24	Okazaki, Makoto119	Pazeto, Fernando D. 24
Mug, Moises46	O'Keefe, Kelly144	Peavey, Lindsey 28
Murray, Peter J.90	Olynik, Jeremy67	Peckham, S. Hoyt73, 173
Murray, Tonya9	Onton, Kim11	Pena-V., Jaime 23
Muurmans, Maggie144	Opurum, S. C.165	Pendoley, Kellie5, 13, 159
Nahill, Brad138	Ordoñez, Cristina126	Pennober, Gwenaëlle 58
Nairn, Campbell J.84	Orimogunje, O.165	Pereira, Manuel 21
Namboothri, Naveen31	Orr, Mark67	Perez, Elena Abella127
Nand, Neema157	Orrego, Carlos Mario34	Perez, Sara 46
Nash, Rachael125	Ortega, David46	Perkins, Susan103
Nel, Ronel158	Ouellette, Stefanie A.144	Perrault, Justin 99
Nelson, David115	Owens, David W.38	Petit, Matthieu139
Ngatunga, Ben48	Pacheco, Lucas46	Petritaj, Lazion152, 166
Nichols, Wallace J. ...73, 130, 138	Pajuelo, Mariela72	Petro, George145
Nielsen, Janne T.83	Palacios, Daniel P.130	Pham, Tuan Hung140
Nodarse, Gonzalo125	Paladino, Frank130	Phillott, Andrea D.172
Nogueira, Antonio ...27, 137	Palaniappan, Pushpa M. .98	Piedra, Rotney130
Nolasco, Dagnia177	Panagopoulou, Aliko163	Pikacha, Patrick 19
Norton, Terry M.144	Pantis, John D.128	Pike, David A. 62
Oades, Daniel9	Papetti, Luana50	Pilcher, Nicolas J.164
Oates, Jessica 13, 159	Parga, MariLuz46	Pinto, Ana103
Ochoa, Ruth73	Parker, Denise120	Pita, John19, 168
O'Connell, Steven G.97	Parrales, Manuel46	Plantalech Manel-la, Núria127
Ogbonna, J. C.165	Patiño-Martínez, Juan ...28, 61, 127	Poche', Billie101