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Monitoring and Conservation of the Sea Turtle Nesting Population at Yembekaki Beach on the Waigeo Island of West Papua

Presentation · December 2014

CITATION

1

1 author:



Ricardo Tapilatu

University of Papua, Manokwari - Indonesia

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Some of the authors of this publication are also working on these related projects:



Pacific leatherback and Global climate change [View project](#)

Rufford Small Grants for Nature Conference, Indonesia, Bali 2014

Date: 2-7 December 2014
Venue: Bhuwana Hotel, Ubud
Conference organizers: Matthew Linkie (FFI), Hariyo Wibisono (FFI) and Josh Cole (Rufford)

Schedule:

Day 1: Arrive

- Participants will be met at Denpasar airport by Bhuwana Hotel (and Ms Geumala Yatim; +62) and taken to the hotel. Look for the Rufford sign at the domestic arrival terminal
- Meet for dinner at 630pm at main restaurant.

Day 2: Mini-conference

no.	Presentation order	Time (minutes)	Time	Title
-		-	0700-0900	Breakfast
0.1	Matthew Linkie	10	0900-0910	Participant introductions and introduction to the 2014 Rufford conference for Indonesia
1	Ady Kristanto	10 (ppt) + 5 (Q&A)	0910-0925	Conservation of urban wetlands and threatened birds in Metropolitan Jakarta
2	Agung Nugroho	10+5	0925-0940	Bird Conservation & Education in Kerinci Seblat NP, Sumatra: Building Local Foundation to Address Increasingly Chronic Pressure on Bird Habitat & Population
3	Cahyo Rahmadi	10+5	0940-0955	A cave fauna of Java - the diversity and its contribution to karst conservation
4	Dede Aulia Rahman	10+5	0955-1010	Estimation of density using capture-recapture analysis of camera trapping & behavior study of a threatened and poorly known deer: the Bawean deer (<i>Axis kuhlii</i>)
5	Ekaningrum Damastuti	10+5	1010-1025	Participatory resource mapping to enhance community based mangrove management in Indonesia
-		20	1025-1045	Coffee & fruit break
6	Iding Achmad Haidir	10+5	1045-1100	Assessing Sumatran Wild Cats Population And Conservation Status Using A Science-driven Approach to Conserve Sumatra's Small Cats
7	Nanang Sujana/Een Putra	10+5	1100-1115	Sumatran Elephant Struggle to Survive
8	Wiwin Iskandar	10+5	1115-1130	Sustainably Managing Local Marine Area Through Social Marketing
9	Ricardo F. Tapilatu	10+5	1130-1145	Monitoring and Conservation of the Sea Turtle Nesting Population at Yembekaki Beach on the Waigeo Island of West Papua
10	Sena Adi Subrata	10+5	1145-1200	Civet coffee saves biodiversity: obtaining Civet's population data toward sustainable coffee production in Petungkriyono forest, Indonesia
11	Umilaela	10+5	1200-1215	Frogs diversity for ecological monitoring in Karimata Island
12	Hani Nusantari	10+5	1215-1230	Celebrate the international year of biodiversity by increasing awareness of marine biodiversity among primary school children in East Lombok
-		90	1230-1400	Lunch
13	Muhammad Iqbal	10+5	1400-1415	Survey and conservation of Milky stork in the east coastal of Sumatra Island

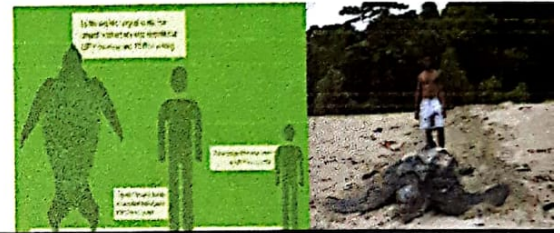
Monitoring and Conservation of the Sea Turtle Nesting Population at Yembekaki beach on Waigeo Island, Papua Barat - INDONESIA



Ricardo F. Tapilatu
December 3, 2014

Leatherback Turtle, *Dermochelys coriacea*

- Largest turtle in the world (up to 2 m and between 800-2,000 lbs)
- Highly vascularized cartilage, relatively high growth rate



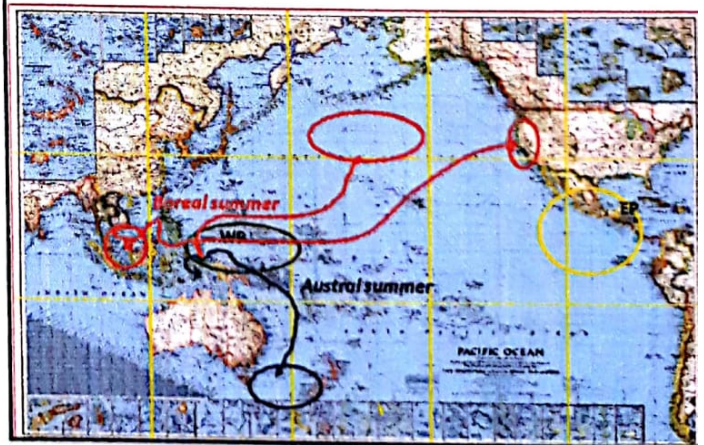
Leatherback turtle, *Dermochelys coriacea*

- Adapted for open ocean existence
- Nest every 2-4 years with multiple clutches (3-12)/nesting season
- Gelatinous zooplankton specialist
- Papillae with long digestive tract

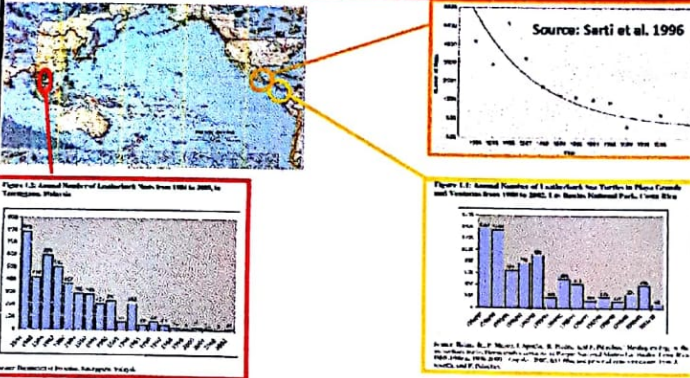


Regional Leatherback Genetic Populations

(Dutton et al, 1999, 2007)

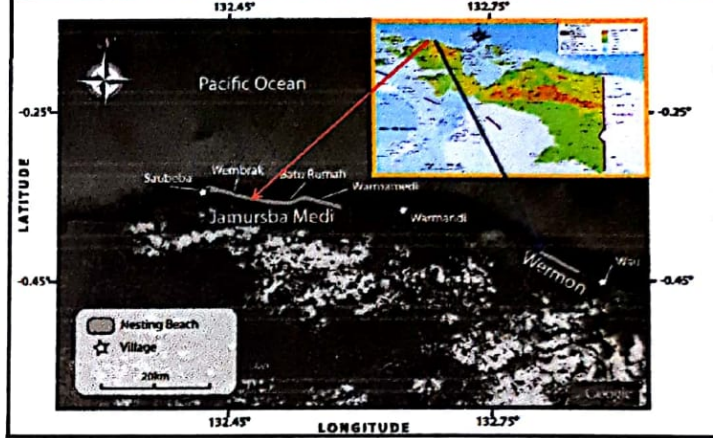


Historic decline of Pacific leatherback in the Pacific

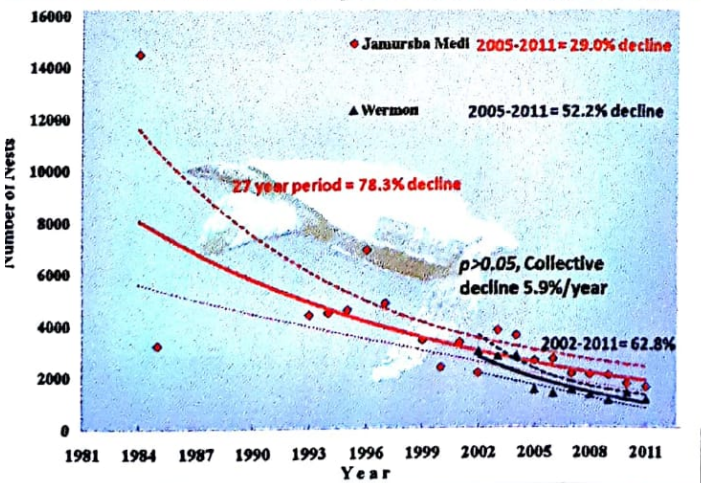


• Critically Endangered

Two principal nesting sites for leatherback at Bird's Head: Jamursba Medi and Wermor



GLM Analysis (Tapilatu et al, 2013)



Results

Estimated number of females nesting seasonally

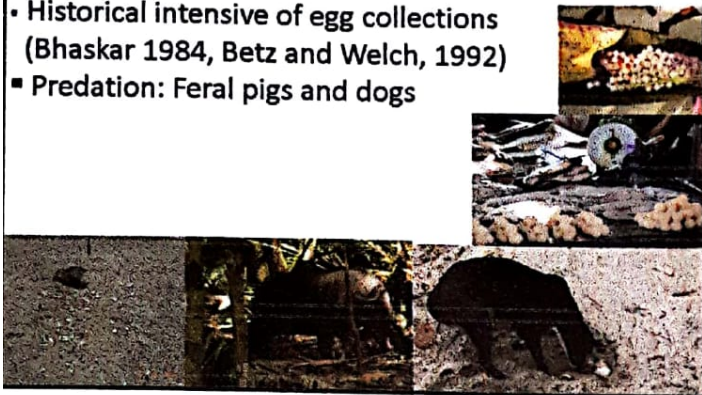
Year	Summer nesting season	
	Boreal	Austral
2005	563 (48)	186 (14)
2006	511 (42)	218 (15)
2007	452 (34)	200 (15)
2008	429 (36)	183 (14)
2009	413 (38)	157 (11)
2010	389 (29)	170 (11)
2011	382 (23)	93 (6)

• ~ 500

Discussion

Why declining?

- Historical intensive of egg collections (Bhaskar 1984, Betz and Welch, 1992)
- Predation: Feral pigs and dogs

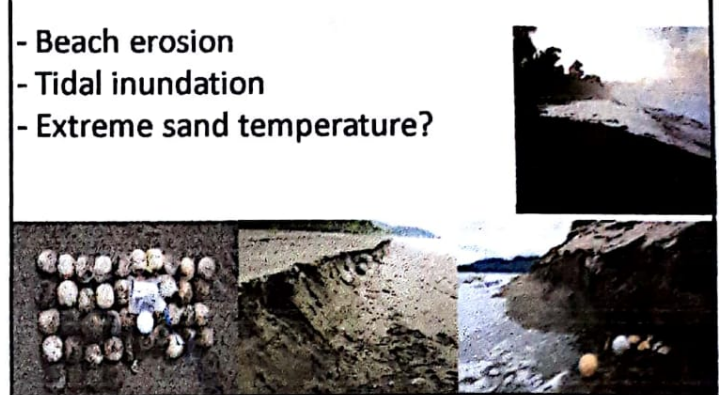


Chapter 1:

Discussion

Threatening factors on nesting beaches:


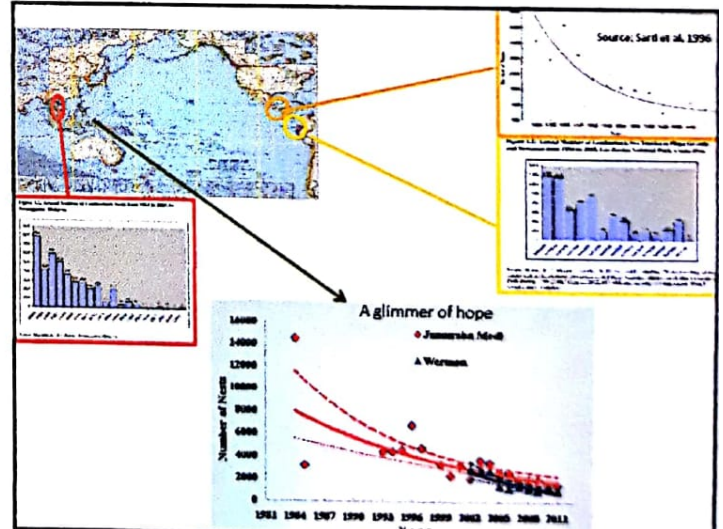
- Beach erosion
- Tidal inundation
- Extreme sand temperature?



Discussion

Threatening factors at sea:

- High mortality due to interaction with **many** fisheries
- Traditional hunting

Source: Sarti et al. 1996

Figure 14: Trends in the number of birds on the island, including the number of birds that were hunted.

A glimmer of hope

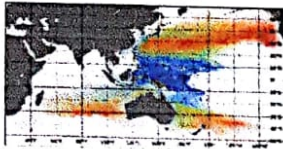
Number of Birds

Year

• Jamsilak Island
• Worman

A glimmer of hope

- Isolated beaches with a few pockets
- Concentrated and represented 75% of western Pacific leatherback (Dutton et al, 2007)
- Sizeable nesters (~500 FNA)
- Important due to hatchling distribution (Gaspar et al, 2012)



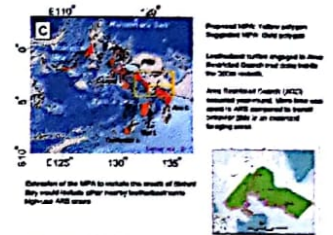
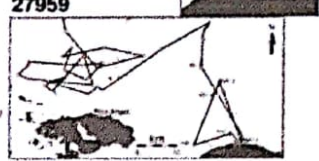
A science-based beach management plan:
Restore nesting beach pockets and pumping out more hatchlings

Internesting Period: Hitipeuw et al, 2007

27957



27959



RSG's Support



Funding and logistical support

- U.S NOAA Southwest Fisheries Science Center
- Biology Department – UAB
- MTCF - US Fish and Wildlife Service
- ISSF, Walton Foundation, Rufford Small Grant (RSG), and Whitley Fund
- Bird's Head Leatherback Conservation Program – The State University of Papua (UNIPA)
- Fulbright
- Indonesian organisations: Raja Ampat, CI Indonesia Program, and YPP

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