32 International Sea Turtle Symposium
Simposio Internacional sobre Tortugas Marinas

INTERNATIONAL SEA TURTLE SOCIETY

February 22, 2012

Ricardo Ferdinand Tapilatu
Fulbright Scholar

I am pleased to invite you to the 32nd Annual Symposium on Sea Turtle Biology and Conservation to be held from 13 March to 16 March, 2012, with important Regional meetings and Workshops convened for 11 and 12 March, 2012. The venue will be the Las BrisasHuatulco Resort in Huatulco, Oaxaca, Mexico.

The ISTS is an international non-profit organization devoted to the conservation of the marine turtles through sharing of knowledge and international collaboration. Each year the Society organizes and hosts the Annual Sea Turtle Symposium, an international gathering of 800-1000 of the world's foremost sea turtle scientists, conservationists, policy-makers and enthusiasts from more than 70 countries, and the only major conference of its type.

In keeping with the theme of the symposium "Time for Innovation", the program will host a number of events that highlight innovative research and conservation of sea turtles from around the world. The 32nd Symposium will also draw attention to current major themes in sea turtle conservation through hosting special sessions such as the Mini-Symposium "The Sea Turtles of Mexico". More information about the symposium is available at http://iconferences.seaturtle.org

This year, the National Commission for Natural Protected Areas (CONANP) from Mexico is supporting the event and is an official partner.

I look forward to your participation in Huatulco.

Yours Sincerely,

Ana Rebeca Barragan

President, International Sea Turtle Society
and Liason to the National Sea Turtle Program of Mexico

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Date: October 31, 2011

DECLINE IN LEATHERBACK TURTLES, *Dermochelys coriacea*, NESTING ON THE NORTHWEST COAST OF PAPUA, INDONESIA

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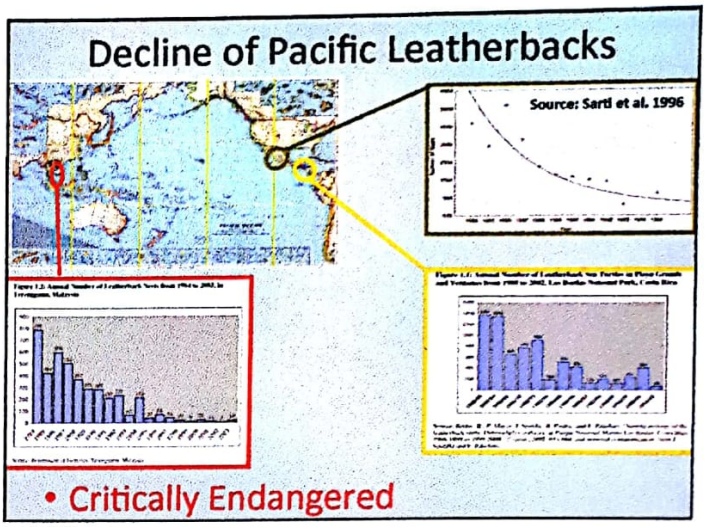
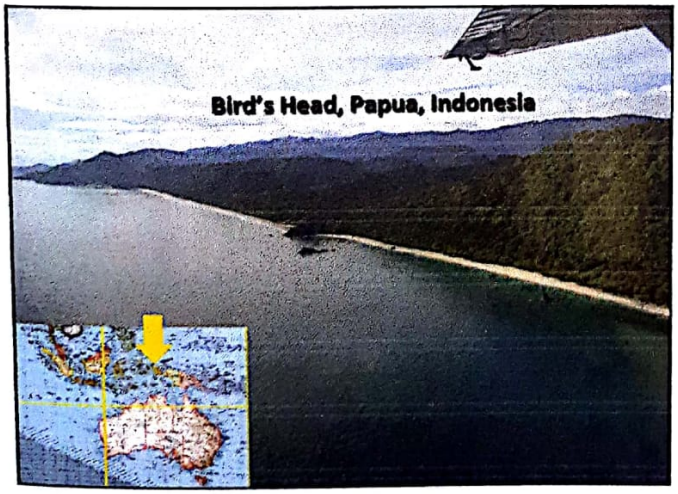
The leatherbacks nesting at Bird's Head peninsula, Papua, Indonesia, comprise the only large nesting aggregation remaining in the western Pacific and have been the focus of recent conservation concern. A declining trend was apparent from nest counts from sporadic monitoring at the principal beaches, Jamursba-Medi (JM), since the 1980's through 2004, although a significant new nesting area was recently discovered at Wermon. The current study adds the most recent 6 years of nesting data from expanded annual nesting surveys and adjusts the nest counts to account for variable survey effort over the past three decades in order to integrate estimates of annual nest counts and evaluate trends at the two primary beaches in the Bird's Head peninsula (i.e. JM and Wermon). The estimated annual number of nests at JM showed a significant declining trend over the past 26 years ranging from 14,491 in 1984 to 1,741 in 2010. Nesting at Wermon has only been monitored since 2004, but appears to show a similar rate of decline as Jamursba-Medi from 2,708 nests in 2004 to 1,065 in 2010. Jamursba Medi has relatively higher number of nests than Wermon with a unimodal nesting distribution that peaks during June to July, whereas Wermon has a bimodal nesting distribution with peaks during December to February and also June to July. Based on PIT tag data, the predicted number of nests per female per season ranged from 3 – 10 with a mean of 5.5 ± 1.6, suggesting that there may be fewer than 1,000 females nesting each year in the Bird's Head region. Considering that Bird's Head represents the last stronghold for leatherback nesting in the western Pacific, the significant decrease in nesting highlights the need for continued and enhanced conservation in an effort to prevent the collapse of the leatherback in the western Pacific.

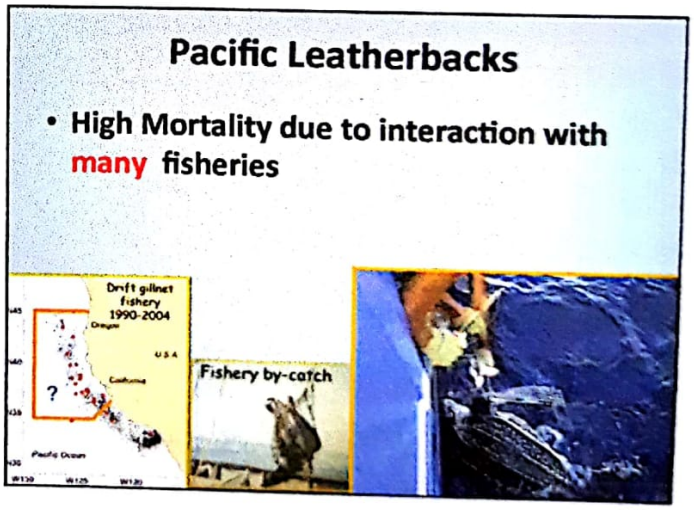
We sincerely thank Harold C. Martin Endowed Fund and Graduate Student Association (GSA) of UAB for providing Travel grant in Biology Dept of UAB. We also thank the International Sea Turtle Symposium, International Sea Turtle Society, U.S. Fish and Wildlife Service, U.S. National Marine Fisheries Service, and Western Pacific Regional Fishery Management Council for supporting our participation in the Symposium. Funding and logistical support for this study were provided by US Fish and Wildlife

Service, U.S. National Oceanic and Atmospheric Administration – National Marine Fisheries Service, the Bird's Head Leatherback (BHL) program of the State University of Papua (UNIPA), WWF Indonesia Program and Conservation Bureau of Ministry of Forestry in Papua Barat Province.

Session: Nesting biology and monitoring
Type of presentation: Prefer poster but upgraded to oral format
Equipment: Poster

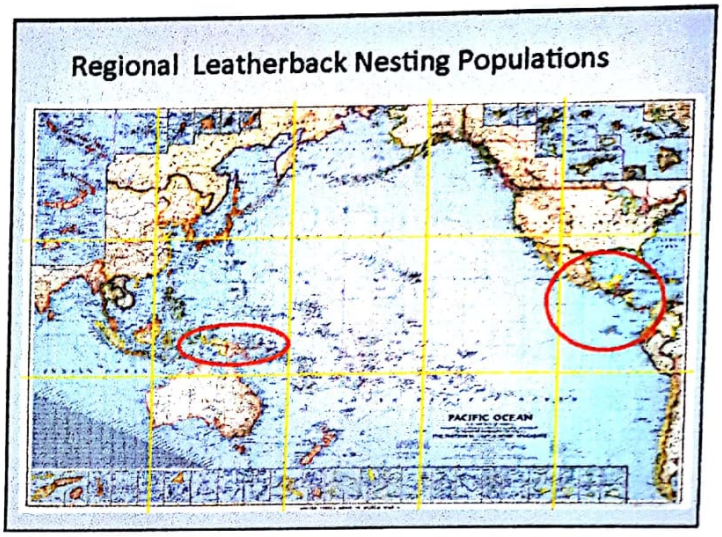






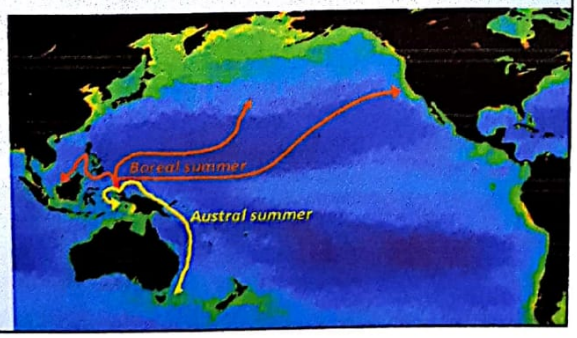
Local threats to Papua leatherback turtles

Regional Leatherback Nesting Populations



Western Pacific Leatherback at Bird's Head

- Migrate to multiple foraging destinations: north and south regions (Benson et al 2011)
- Increased risk to fishing

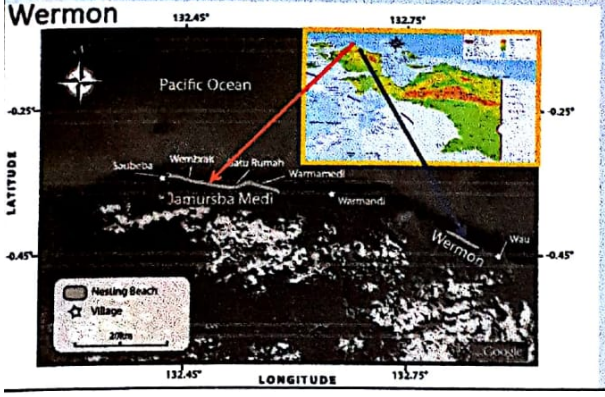


Objectives

- a comprehensive survey of nesting activity over a total of 24km at Jamursba Medi (~18km) and Wermon (~6km) starting 2005 to present.
- integration of survey data with historic data between 1984 – 2004.
- determination of long-term nesting trends and number of reproductive females.

Methods

- Study Site: two principal nesting sites for leatherback at Bird's Head – Jamursba Medi and Wermon

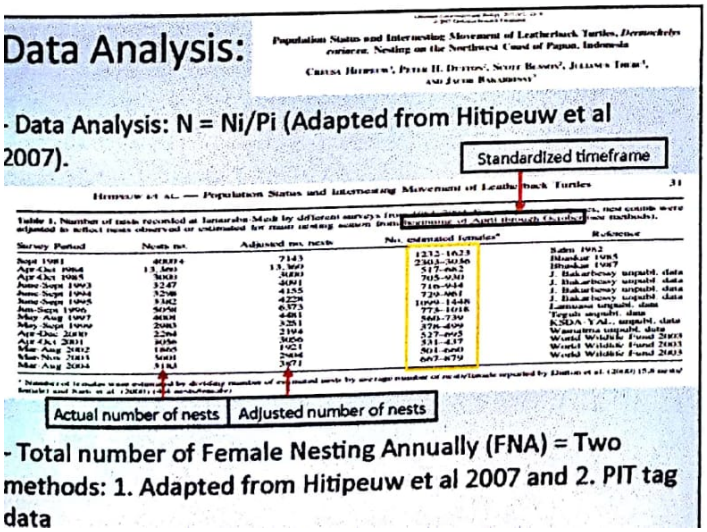


Methods:

- Daily Nest Counts by foot on year round basis since 2005.
- Night Patrol to mark individuals females using PIT tag (started in 2003) to determine reproductive parameters

Data Analysis:

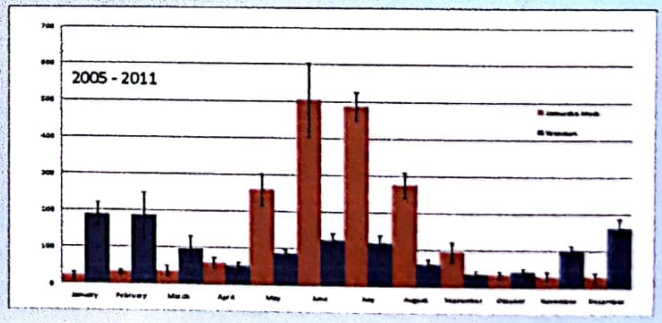
- Data Analysis: N = Ni/Pi (Adapted from Hitipeuw et al 2007).



- Total number of Female Nesting Annually (FNA) = Two methods: 1. Adapted from Hitipeuw et al 2007 and 2. PIT tag data

Evaluation of long-term nesting trends:

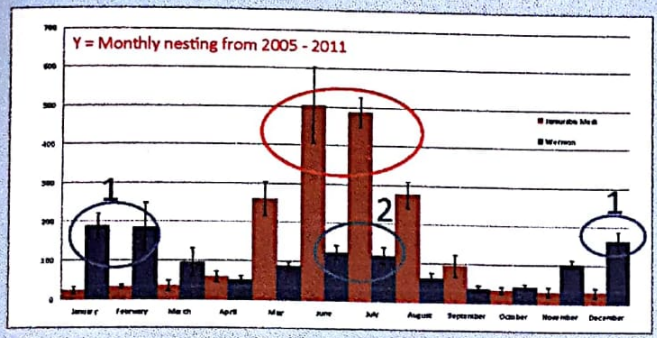
Adjustment for historical data — Hitipeuw, et al, 2007



- Scatter plot and 3 parameters single exponential decay model

Results:

- Nesting: Year-round
- Nesting Distributions: JM – Unimodal
  Wermon – Bimodal
- Monthly and annual variation



Results: Downward trend in the number of nesting activity

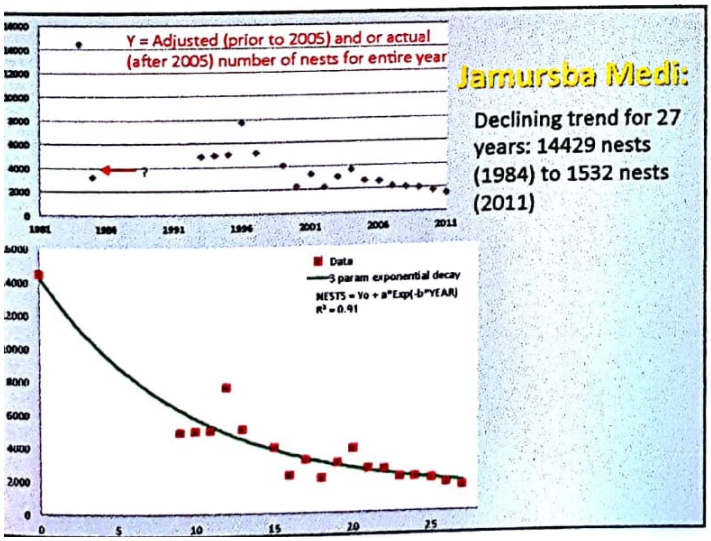
JM

Wermon

No.	Survey Period	Jamursba Medi: Number of nests recorded	Jamursba Medi: Adjusted number of nests in peak season *)	Jamursba Medi: Adjusted and/or actual number of nests for entire year	Wermon: Adjusted and/or actual/nest number for entire year	References
1	Sep-81	4000+	7143			Salm, 1982
2	April - October 1984	13580	13580	14429		Bhaskar, 1985
3	April - October 1985	3000	3000	3240		Bhaskar, 1987
4	June -September 1993	3247	4061	4935		Bakarbessy, unpubl. data
5	June -September 1994	3298	4155	5012		Bakarbessy, unpubl. data
6	June -September 1995	3382	4228	5107		Bakarbessy, unpubl. data
7	June -September 1996	5058	6373	7688		Bakarbessy, unpubl. data
8	May - August 1997	4001	4481	5123		Lawrusey, unpubl. data
9	May - September 1999	2987	3251	4023		Tegun, unpubl. data
10	April - December 2000	2264	2194	2207		KSDA-YAL, unpubl. data
11	April - October 2001	3056	3056	3306		Wamafma, unpubl. data
12	March - August 2002	1865	1921	2163		WWF, 2003
13	March - November 2003	3601	2904	3048	2504	WWF, 2003
14	March - August 2004	3183	3597	3871		WWF, unpubl. data
	January - December 2004				2934	[illegible]
15	January - December 2005	2566	2547	2666	2208	WWF-UNIPA, unpubl. data
16	January - December 2006	2624	2430	2624	1236	WWF-UNIPA, unpubl. data
17	January - December 2007	2165	1967	2165	1485	WWF-UNIPA, unpubl. data
18	January - December 2008	2120	1932	2120	1412	UNIPA-WWF, unpubl. data
19	January - December 2009	2001	1920	2001	1065	UNIPA-WWF, unpubl. data
20	January - December 2010	1741	1537	1741	1434	UNIPA-WWF, unpubl. data
21	January - December 2011	1532	1414	1532	1292	UNIPA-WWF, unpubl. data

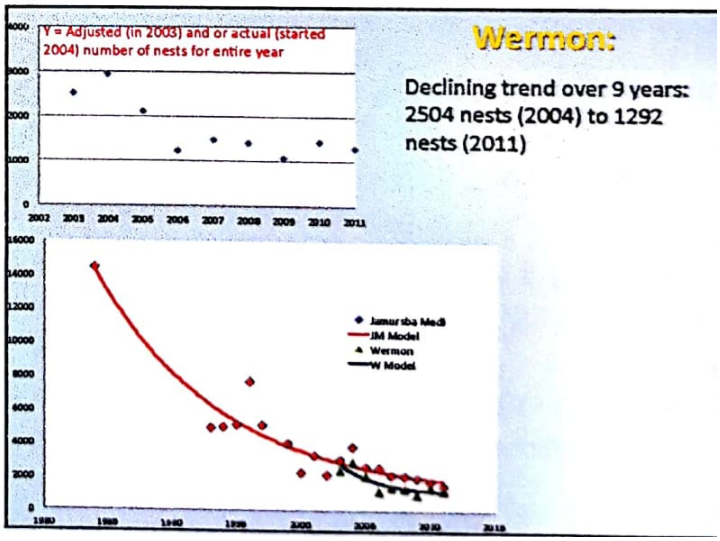
Year round join monitoring effort. WWF started year-round monitoring in Wermon in 2004

*) = as adapted from Hitipeuw et al (2007)



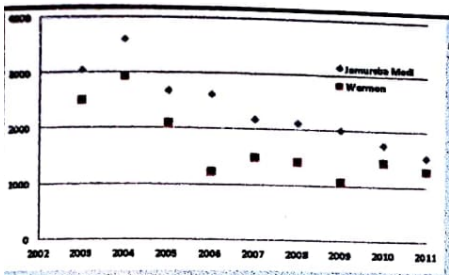
Jamursba Medi:

Declining trend for 27 years: 14429 nests (1984) to 1532 nests (2011)



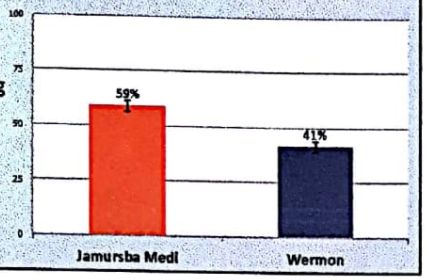
Wermon:

Declining trend over 9 years: 2504 nests (2004) to 1292 nests (2011)



Same rate of decline

Mean % total nesting
JM ~ 59%
Wermon ~ 41%.



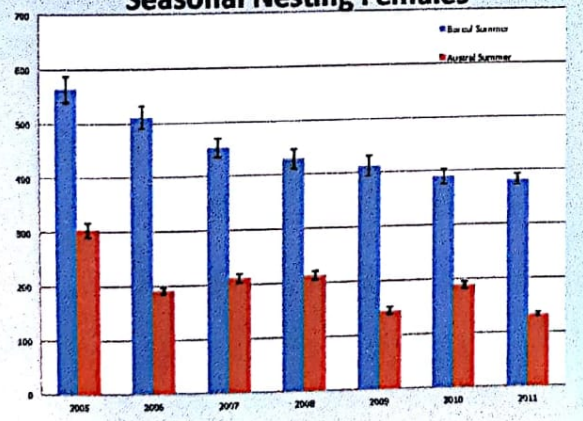
Number of Female Nesting Annually (FNA)

Dutton et al, 2000 (5.8) | Sarti et al, 1996 (4.4) | PIT tag 2003 – 2011 (5.5)

No.	Year	Adjusted and or actual number of nests for entire year		No of estimated females for entire year as adapted from Hitipeuw *et al* (2007)				No of estimated females based on number of nests per season based on PIT tag	
		JM	Wermon	JM		Wermon		JM	Wermon
2	1984	14429		2488	3279			2623	
3	1985	3240		559	736			589	
4	1993	4935		851	1122			897	
5	1994	5012		864	1139			911	
6	1995	5107		881	1161			929	
7	1996	7688		1326	1747			1398	
8	1997	5121		883	1164			931	
9	1999	4027		694	915			732	
10	2000	2307		398	524			419	
11	2001	3300		569	750			600	
12	2002	2163		373	492			393	
13	2003	3048	2504	526	693	432	569	554	455
14	2004	3597	2938	620	817	507	668	654	534
15	2005	2666	2109	460	606	363	478	485	382
16	2006	2624	1236	452	596	213	281	477	225
17	2007	2165	1485	373	492	256	338	394	270
18	2008	2120	1412	366	482	243	321	385	257
19	2009	2001	1065	345	455	184	242	364	194
20	2010	1741	1434	300	396	247	326	317	261
21	2011	1532	1292	264	348	223	294	279	236

Year-round join monitoring effort. 1981 previously presented was not included here.

Seasonal Nesting Females



Conclusions

- Significant long-term population decline (1984 – 2011) in Bird's Head, Papua Indonesia.
- Nesting population currently estimate to include 514 adults females.
- Major threats must be addressed e.g. fishery interactions, predation, erosion, direct take, elevated sand temperatures.
- Alleviating these threats requires conservation at nesting beach as well as cooperation from diverse fishing nations.