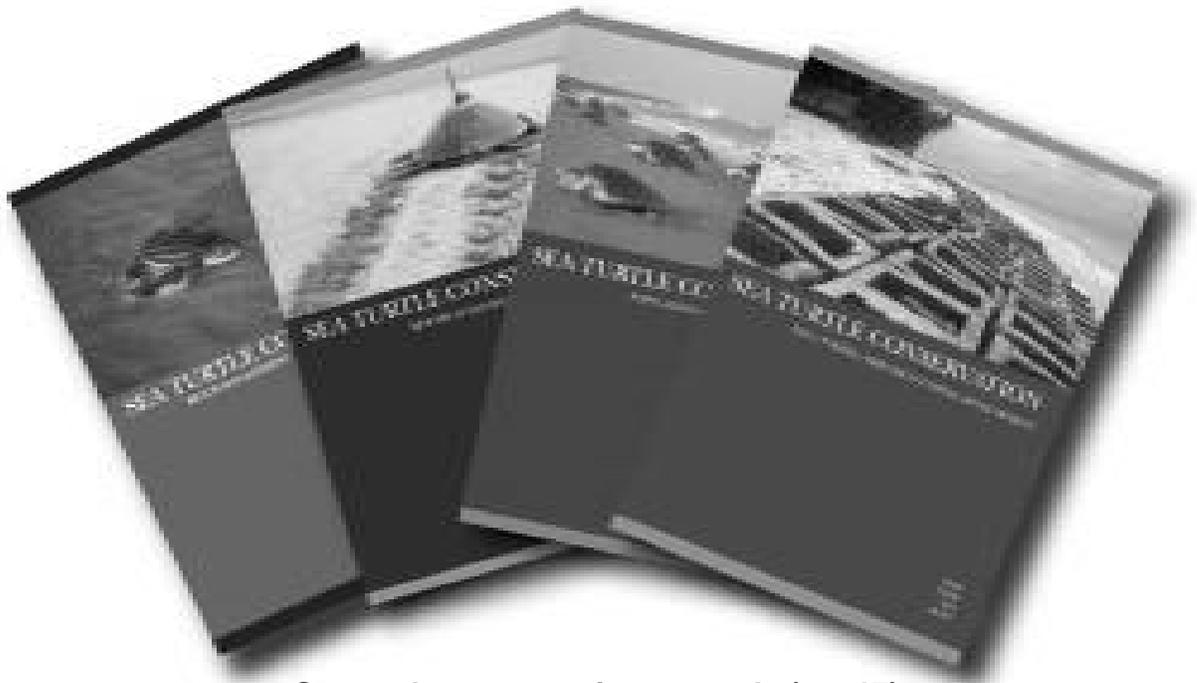




Kachhapa

A newsletter for the Indian ocean on sea turtle conservation and management



Sea turtle conservation manuals (pp. 17)

EDITORIAL

Showing the way:
Mass hatching at Rushikulya, Orissa

NOTES

Sea turtle conservation at Phra Thong Island, South Thailand
Leatherback turtle in Kerala, India
Turtle conservation in Maharashtra, India
TCP sea turtle program in Sri Lanka

AND

Sea turtle Symposium 2004 Announcements

Issue No. 9
October, 2003

HELP US WITH OUR MAILING LIST

Since this newsletter hopes to serve as a link for coastal and marine conservation, the more people we can reach, the more effective it will be. You can help by passing the newsletter around to people and organizations who are interested, and by helping us build up our mailing list. Please send us names and addresses of individuals, NGOs, research institutions, schools and colleges and anyone else who would be interested in receiving Kachhapa.

CALL FOR ARTICLES

Kachhapa, the newsletter, was initiated to provide a forum for exchange of information on sea turtle biology and conservation, management and education and awareness activities in the in the Indian subcontinent, Indian Ocean region, and south/Southeast Asia. The newsletter also intends to cover related aspects such as fisheries and marine biology. Kachhapa articles are peer reviewed. Kachhapa will come out two to three times a year. We request all our contributors and readers to send us information from their part of the subcontinent or Indian ocean region, including notes, letters and announcements. We also welcome casual notes, anecdotal accounts and snippets of information.

OPINION

In addition to information and articles, we now invite your opinion on subjects related to turtles, their habitats and conservation.

BIBLIOGRAPHY

We plan to publish a complete bibliography of literature on sea turtles in the Indian subcontinent in the near future. Meanwhile, the bibliography will be available at our website. We would welcome any additional references that we have missed and copies of articles, papers or reports that are absent from the bibliography.

ALL MATERIAL SHOULD BE SENT TO:

Kartik Shanker

Ashoka Trust for Research in Ecology and the Environment (ATREE)

659, 5th A Main Road, Hebbal, Bangalore 560024. India.

Phone: +91 80 3533942 / 3530069 / 3638771

Fax:+91 80 3530070

Or by email to:

editors@kachhapa.org

Email attachments should be sent as text files or Word 2000 documents (or any older version of Word). Please refer to earlier issues for formatting articles and references.

KACHHAPA ONLINE IS AVAILABLE AT [http:// kachhapa.org](http://kachhapa.org)

Editorial
Showing The Way:
Mass hatching of olive ridleys in Rushikulya, Orissa

Belinda Wright¹ & Biswajit Mohanty²

¹*Wildlife Protection Society of India, M52, Greater Kailash, Part -1, New Delhi 110048. India.*

²*Wildlife Society of Orissa, Shantikunj, Link Road, Cuttack 753012. India.*

Email: biswajit_m@vsnl.com

Orissa has three mass nesting sites for olive ridley turtles. One of them is located at Kantiagada beach at the mouth of the Rushikulya River in south Orissa. The site is close to a national highway and is now quite well known and receives hundreds of visitors during turtle mass nesting and hatching. Previously unknown to the outside world, the Rushikulya nesting site was discovered in 1994 by Bivash Pandav, Wildlife Institute of India, Dehradun, while conducting a survey of olive ridleys on the Orissa coast. Rushikulya is located in Ganjam district, perilously close to local settlements and National Highway No. 5, which connects Kolkata to Chennai. Artificial lights of villages and nearby settlements are visible on the beach. The glow from Ganjam town and from the highway and the headlamps of night-time traffic are also visible on the beach.

Since sea turtles are highly sensitive to light, this has had tragic consequences for the hatchlings. When hatchlings emerge, they find the sea by locating the brighter horizon, which is usually moonlight or starlight reflecting off the sea surface. In Rushikulya, hundreds of thousands of tiny hatchlings are attracted towards artificial lights and perish. Just behind the nesting beach are grass fields where the hatchlings get stuck in the wiry grass. They struggle all night and finally die by sunrise due to exhaustion. Predators such as crows, sea gulls, eagles and dogs devour the ones that survive.

Attempts have been made on several occasions in the past to curb the disturbing lights. Many local people, who are generally supportive of turtle conservation, have responded by switching off the village lights but some lights remain. A nearby chemical factory also responded by switching off its powerful floodlights whenever requested by Operation Kachhapa volunteers and the Forest Department.

During the mass nesting that took place at Rushikulya in 2001, volunteers and Forest Department staff watched helplessly as hundreds of thousands of hatchlings were disoriented by the lights and died in

the grass fields. Each morning after the mass hatching, thousands of hatchlings were collected in buckets and released into the sea. But these hatchlings had already spent many hours struggling in the grass, and their chance of survival was substantially diminished. A way had to be devised to save the hatchlings from certain death due to their disorientation by artificial illumination.

Consultations with Dr. Bivash Pandav, Wildlife Institute of India led to the idea of putting up a protective barrier along the beach which would stop the hatchlings from moving away from the sea. Since the idea had never been tried on the Orissa coast before, the material and design was critical. The crucial issue was that if the design was not appropriate and needed modification, nothing much could be done since hatching is completed within a short period of 4-5 days. Various alternatives were considered during the planning stage, ranging from plywood boards to polythene sheets. Eventually, fine mesh or mosquito netting was decided upon as most suitable. Its small mesh size meant that hatchlings would not get entangled in it. At the same time, it would not obstruct the beach winds and lead to piling up of sand making it useless. Its height was kept low – around one foot. Since the hatchlings would be crawling on the sand, greater height would be superfluous. Also, a higher net would offer more resistance to strong beach winds, which would lead to its collapsing. The net's raw upper and lower edges were sewn over with white cloth tape to give it strength and seal the loose threads.

During April 2003, the net was erected, using stakes of two sizes. A small split bamboo stake of approximately 18 inches was put up every 5 feet. A larger and stronger round bamboo stake of approximately 3 feet was used every 25 feet. Small strings were stitched to the tapes edging the top and bottom of the nets to tie them to the bamboo stakes.

This support mechanism kept the net in an upright position despite the soft foundation of beach sand. Approximately 1500 metres of protective net barrier was put up at the hatching beach by Operation



Hatchlings stopped by net barrier at Rushikulya in April 2003

Kachhapa. The Forest Department put up a net of similar length and slightly greater height.

Hatching started while darkness was yet to cover the beach. One of the authors, who was present on the beach, watched as the first group of hatchlings promptly started crawling towards the landward side and were stopped by the net. After floundering for approximately five to ten minutes, they made an about turn and marched towards the sea without any help. However, this was during daylight.

Throughout the night, hatching went on at a frenetic pace and the beach was soon covered with tiny hatchlings. While surveying the length of the net, we found that there were thousands of hatchlings stuck at the base when they tried to move towards the landward side. This was after midnight when hatching was at its peak.

We also discovered that the maximum concentrations of disoriented hatchlings were found at those stretches

of the net behind which there were strong artificial lights. We had not anticipated that the hatchlings would climb on top of each other in their frenzy. Due to the massive accumulation of the hatchlings at the net barrier, it collapsed at some places and some hatchlings wandered out. They were promptly picked up in buckets by volunteers and released on the beach a few metres from the shore. This was to ensure they acquired beach imprinting, which is vital for their return, as adults, to their natal beaches for nesting.

As the morning dawned, it was time for us to evaluate the success of this new method of protection. It was clear that casualties had been greatly minimized. According to a very rough estimate, the casualties this time were less than 5 % of the total hatchling population, whereas during the mass hatching season of 2001, it was as high as nearly 70-80 % of the hatchlings. The nets were put to use for the remaining five days of hatching, with our volunteers and the Forest Department guards keeping a close watch on them to ensure that they did not collapse.



OpK helpers collecting hatchlings at net barrier for release

Conservation Project: Sea turtles at Phra Thong Island, South Thailand

Monica Aureggi¹ and Supot Chantrapornsyl²

¹*Naucrates, Onlus, Via Corbetta, 11 - 22063 Cantu' (CO). Italy.*

Email: naucrates12@tiscalinet.it

² *Phuket Marine Biological Center, P.O.Box 60, Phuket, 83000. Thailand*

Phra Thong (PT) is one of three relatively large islands located just off the coast of Phang Nga province on the south west coast of Thailand (Fig 1). Fine sandy beaches (total length 15 km) are situated on the west coast, whereas the east coast is covered with mangrove forest. Three fishing villages are located on the island along with a few tourist resorts. Phra Thong was chosen as a focal point for conservation activities because of its central location along the coast of the Andaman Sea and for its importance as a sea turtle nesting site.

The Sea Turtle Project (STP) at PT Island began in 1996 and has focused on three main aspects: scientific research and conservation, an educational programme for the local community and conservation awareness. Research shows that stocks of olive ridley and leatherback turtles in the Andaman Sea have been decimated to only tens of females nesting annually because of long-term excessive egg harvests (Limpus, 1995). Data collected on site before the beginning of the STP indicates a drastic decline (90%) in sea turtle nesting along the Andaman coast from 1985 (n = 360) to 1995 (n = 36) (Chantrapornsyl, 1997).

On PT Island, the STP have recorded 4 to 13 sea turtle nests per season since 1996 (Aureggi *et al.*, in press a). Most nests belong to the olive ridley turtle (*Lepidochelys olivacea*), with the leatherback (*Dermochelys coriacea*) and green turtle (*Chelonia mydas*) nesting only occasionally. Although most of the information in the literature refers to sea turtle nests without specifying the species, some details were found for the olive ridley turtle. According to Chantrapornsyl (1992) an overall decline of 82% in olive ridley nests was recorded at Phra Thong between 1979 (n = 238) and 1990 (n = 42), with a similar decrease reflected in data collected by the STP between 1996 and 2003 (Fig.2). Historical data reflects a massive sea turtle egg harvest in Thailand estimated to be about 400,000 eggs per year, of which 60,000 come from the Phang Nga province in which Phra Thong is located (Polunin, 1975). The low number of olive ridley nests found since 1996 at Phra Thong is likely to have been caused by excessive egg

harvests documented over the preceding 20 years in the vicinity of the island.

With the help of the Phuket Marine Biological Center staff, Thai and foreign teachers have been conducting regular programmes in local schools. Topics include conservation and biology of sea turtles, different animals on the island, hornbills, and coral reefs and their inhabitants. The children's response to the programme has always been positive, both during the lessons and on Children's Day, when schools are invited to the STP base to participate in games and activities, take guided visits around the project facilities and to assist with the turtle releasing ceremony. During the 2002 and 2003 seasons, villagers have also been collaborating with the STP by donating turtles incidentally caught in fishing nets. A total of seven green turtle and five hawksbill turtle juveniles have been thus rescued and released by the project.

The protection activities of the STP has also contributed to the decrease of egg poaching (Aureggi *et al.*, in press b). STP has protected all nests and safely released more than 2000 hatchlings into the sea. In parallel, conservation awareness activities have been conducted among tourists on the island. A display area at the STP is open to visitors and guided site visits are scheduled. Slide shows and talks are also part of the programme. One of the main threats, egg poaching, has been virtually eliminated through conservation education, but intense fishing activities near the nesting beaches during the breeding season and plans for tourism development threaten the survival of the small nesting population. To prevent further decline of this population, a long-term education programme among fishermen and lobbying activities at both provincial and national government levels to limit tourism development are needed.

Having established a research and conservation project based on the island, which is approved by the National Research Council of Thailand, and having evaluated the status of the nesting population, the STP now intends to focus on studying the mortality rate at sea due to fishing activities. The STP plans to limit any

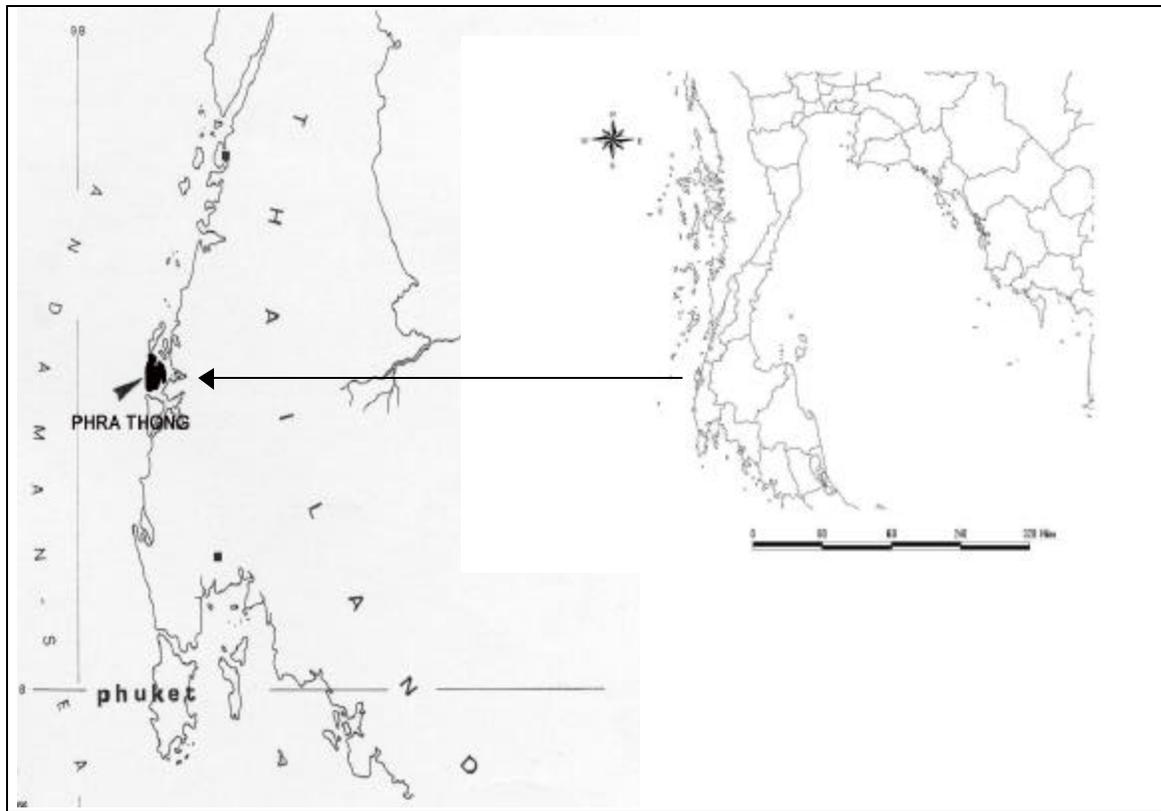


Fig 1: Phra Thong island, Andaman sea, southwest coast of Thailand

further decrease of the nesting population and to establish a rescue center which would decrease the mortality rate due to fishing activities in the area.

Acknowledgements: The authors would like to thank Carole Beauclerk for her voluntary work in

coordinating the educational program and all the volunteers that took part in the project. A special thank you to Loredana Follador for her logistic support, and to the local community for their participation and help.

Thanks to Katie Jones for revising the language.

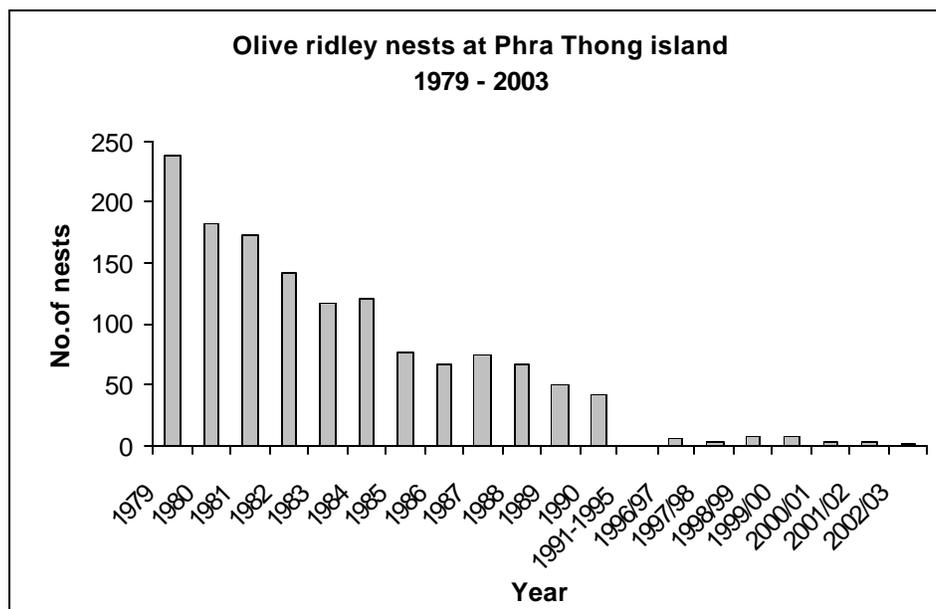


Fig 2: Olive ridley nesting at Phra Thong Island, 1979-2003 (graph adapted from Aureggi and Chantrapornsyl, submitted)

References

- AUREGGI, M., G. GEROSA & S. CHANTRAPORNSYL (in press a). An update of sea turtle nesting along the Andaman coast of Thailand: 1996-2000. *Proceedings of the 21st International Symposium on Sea Turtle Biology and Conservation, Philadelphia, USA, Feb. 2001*.
- AUREGGI, M., G. GEROSA & S. CHANTRAPORNSYL (in press b). Elimination of egg poaching activity at Phra Thong island, Thailand. *First Italian Meeting on Sea Turtle Biology and Conservation, Policoro, Italy*.
- AUREGGI, M. & S. CHANTRAPORNSYL (submitted) Reproductive biology and conservation of the olive ridley turtle at Phra Thong Island, Andaman Sea, south Thailand. *Phuket Mar. Biol. Cent. Res. Bull.* (submitted August 2003)
- CHANTRAPORNSYL, S. (1992) Biology and Conservation Olive Ridley turtle (*Lepidochelys olivacea*) in the Andaman Sea, Southern Thailand. *Phuket Mar. Biol. Cent. Res. Bull.* 57:51-66.
- CHANTRAPORNSYL, S. (1997) *Status of marine turtles in Thailand*. Phuket Marine Biological Centre. Unpubl. Manuscript. 9 pp.
- LIMPUS, C.J. (1995) Global overview of the status of marine turtles: a 1995 review. In: *Biology and conservation of sea turtles*. (Ed: Bjorndal, K.A), revised edition, 1995. Smithsonian Institution press, Washington D.C. pp 605-609.
- POLUNIN, N.V.C. (1975) *Sea Turtles: reports on Thailand, West Malaysia and Indonesia with synopsis of data on the conservation status in the Indo west pacific region*. Unpubl. report.

Leatherback turtle released into the sea at Vizhinjam in Kerala, India

S. Krishna Pillai¹, K.K. Suresh¹ & P. Kannan²

¹ Vizhinjam Research Centre of CMFRI, Vizhinjam - 695 521. India

² Madras Research Centre of CMFRI, Chennai - 600 006. India.

Of the five species of the sea turtle occurring in the Indian waters, the leatherback turtle (*Dermochelys coriacea*) popularly known as *eluvai amai*, or *thoni amai* in Tamil, is rare along the Indian mainland. Four species, the olive ridley, green turtle, the hawksbill and leatherback, are known from Kerala waters. However, all except the olive ridley are rare or uncommon. The nesting of leatherback turtle along the Kerala coast has been reported near Quilon by Cameron (1923) and near Calicut by Jones (1959). Strandings of leatherback turtles have been reported along the coast by several authors. Incidental landings of leatherback turtle recorded during the period 1923 - 2003 are given chronologically (Table 1). There are thirteen published reports of the leatherback turtle on the Indian mainland; this the smallest of the specimens reported.

The present note is an account of an accidentally caught male leatherback turtle in shore - seine at Kovalam, near Vizhinjam in Kerala. On receiving a telephone call from Kovalam on 03.04.2001 regarding the capture of a large turtle in shore - seine, one of the authors paid a visit to the site. In the landing center the turtle was identified as a male leatherback turtle measuring 116 cm in total length

with a total weight of 110 kg. The carapace measured 93 cm in length and 68 cm in width. The turtle looked inactive due to the prolonged struggle in the sea to extricate itself from the shore seine.

Many tourists, including foreigners assembled at the spot to see the turtle struggling for life. On seeing that the fisherman were trying to butcher it for its meat, a foreign tourist (a woman) started negotiating with the fisherman for its safe release in to the sea. Finally, their negotiations concluded at Rs.2000 for the release of the turtle into the sea. Again on 8.4.2001 the turtle was recaptured in the same area by the same crew, but seeing that it was the turtle they had released on 3.4.2001 at the request of the foreign tourist, the fisherman released the turtle into the sea.

Shoals of oil sardine are frequently noted along the Vizhinjam coast during March - April period, and there is a some possibility that leatherback turtles follow the shoals and come close to the shore where shore-seine operation is quite regular during this season.

References

CAMERON, T.H. (1923) Notes on turtles. *J. Bombay. Nat. Hist. Soc.* 29(2): 299 - 300.

DUTT, S. (1976) The Leatherback turtle. *Sea. Food. Expo. J.* 8 (1): 35-36.

EBENEZER, I.P. & J.J. JOEL (1992) On the landing of a leatherback turtle. *Mar. Fish. Infor. Serv., T & E Ser.*, 118: 20.

JONES, S. (1959) A leathery turtle *Dermochelys coriacea* (Linnaeus) coming shore for laying eggs during the day. *J. Bombay. Nat Hist. Soc.* 56 (1): 137 - 139.

KARBHARI J.P. (1985) Leatherback turtle caught off Devbag. near Malvan. *Mar. Fish. Infor. Serv., T & E Ser.* 64: 23.

PILLAI, S.K. & C. KASINATHAN (1989) On two species of marine turtles caught off Dhanuskodi, Gulf of Mannar. *Mar. Fish. Infor. Serv., T & E Ser.* 102:17-18

PILLAI, S.K., S. BADRUDEEN AND BOSE (1995) On a leatherback turtle landed at Rameswaram. *Mar. Fish. Inform. Serv. T & E. Ser.* 140: 11.

PILLAI, S.K. (2003) Instance of meat of Leatherback Turtle *Dermochelys coriacea* used as food. *Fishing Chimes* 23 (3): 46-47.

PILLAI, S.K. *et al.* (2003) Community participation in the release of a leatherback turtle) in south Kerala. *Kachhapa* 9: 23

PILLAI, S.K. & R. THIAGARAJAN (2000) An updated record of incidental catches of Leatherback turtle in India. 4th Int.Symp. on Recent Trends in Life Science. University of Kerala.

RAJAGOPALAN. M. 1983. Leatherback turtle *Dermochelys coriacea* washed ashore at Kovalam, Madras. *Mar. Fish. Infor. Serv., T & E. Ser.* 50: 35-36.

RAO, P.V. *et al.*, 1989. On a leatherback turtle caught from Palk Bay, Off Mandapam. *Mar. Fish. Infor. Serv. T & E Ser.* 95:9.

Table 1: Records of leatherback turtles on the Indian Mainland from 1923 -2003

Sl. No	Year	Place	CCL (cm)	CCW (cm)	PL (cm)	PW (cm)	FFL (cm)	HFL (cm)	HL	Sex	WT (kg)	Gear	References
1	1923	Off Quilon, Kerala	212.3	-	-	-	-	-	-	F	272.4	-	Cameron, 1923
2	1959	Calicut, Kerala	190.5	-	116.8	-	-	-	-	F	-	-	Jones, 1959
3	1976	Visakhapatnam Andhra Pradesh											
4	1982	Kovalam, Tamil Nadu	195	119	162	102	110	85	-	F	-	Washed	Rajagopalan, 1983
5	1985	Malavan, Maharastra	149.8	109	142.5	72.5	-	-	-	F	-	Washed	Karbhari, 1985
6	1988	Mandapam, Tamil Nadu	152	81	144.5	83	96	58	-	M	260	Gillnet	Rao <i>et al.</i> , 1989
7	1989	Pamban, Tamil Nadu	162	86	150	87	102	78	37	F	300	Trawl net	Pillai & Kasinathan, 1989
8	1991	Rameswaram, Tamil Nadu	174	120	-	-	180	-	34	F	350	Trawl net	Pillai <i>et al.</i> , 1995
9	1991	Kanyakumari, Tamil Nadu	173.2	132.4	154.7	86	107	68.8	39.1	F	250	Boat seine	Ebenezer & Joel, 1992
10	1998	Vizhinijam, Kerala	150	-	108	78	100	78	39	M	250	Gillnet	Pillai & Thiagarajan, 2000
11	2001	Kovalam, Kerala	93	68	-	-	-	-	-	M	110	Shore seine	present observation
12	2002	Vizhinijam, Kerala	141	106	-	-	-	-	24	F	-	Gillnet	Pillai, 2003
13	2003	Pallithura, Kerala	-	-	-	-	-	-	-	F	-	Shore seine	Pillai, 2003

CCL - Curved Carapace Length; CCW - Curved Carapace Width; PL - Plastron Length; PW - Plastron Width; FFL - Foreflipper Length; HFL - Hind Flipper Length; HL - Head Length

Turtle Conservation in Konkan, Maharashtra, India

Vishwas Katdare and Ram Mone

Sahyadri Nisarga Mitra, Chiplun,
District Ratnagiri, Maharashtra 415 605. India.
Email: sahyadricpn@rediffmail.com

The occurrence and sporadic nesting of olive ridleys is reported along the entire coast of Maharashtra. The major threats to the marine turtles of Maharashtra are from poaching of eggs and adults, incidental catch in fishing nets and due to developmental activities along the coast (Giri and Chaturvedi, 2003). The nesting population has been decreasing due to poaching by man & predation of eggs by the jackal (*Canis aureus*). While on survey for the whitebellied sea eagle (*Haliaeetus leucogaster*) in February 2002, we found 35 nests of turtles along 3 km beach of Velas, Mandangad taluka, Ratnagiri district, Maharashtra. All the nests were empty. Poaching of nests is a regular practice in some of the villages. Locals said that all the eggs were eaten by jackals. Nesting appeared to be good, but eggs were threatened by humans and animals. Hence Sahyadri Nisarga Mitra, Chiplun, (SNM) started a marine turtle conservation project from 2002.

SNM is a registered organization working in nature conservation, nature education and nature research since 1992 in Konkan. Recently, SNM investigated and stopped the smuggling of Indian swiftlet (*Collocalia unicolor*) nests in South Konkan. SNM also successfully completed a status survey of the whitebellied sea eagle in Konkan and is now working for the conservation of the species. SNM regularly undertakes programmes in nature education like nature trail, nature camps, workshops and exhibitions.

SNM started its turtle conservation campaign in Ratnagiri district, Maharashtra from 1st October 2002. Awareness programs among locals were carried out in 45 villages of the 162 km coastline of the Ratnagiri district. Information sheets were distributed at meetings in each village, and boards were fixed on important beaches. Additionally, letters were sent to each village panchayat asking them to protect marine turtles, their eggs and hatchlings. The local Forest department also assisted in the project.

At Velas, about 130 km from Chiplun, SNM has undertaken actual field work. This small village is

mainly dependent on agriculture, with no fishing activity. A small river divides the village and *Casuarina* plantation on the seashore. The beach is minimally populated. Using G.I. mesh and wooden poles, a rectangular hatchery (8 m x 3m X 1m) was erected at the southern side of the beach just above high tide line. To avoid injury by the mesh to hatchlings, the hatchery was lined with a cardboard sheet at bottom. To protect hatchling from avian predators, the hatchery was covered by chicken mesh. A person was appointed to look after the hatchery, and SNM team members frequently visited the project. Local persons and our volunteers walked the 3 km beach at dawn to locate turtle nests. Eggs were collected and relocated in the hatchery. Each nest was numbered and associated data noted. On tentative dates of hatching, the nests were carefully observed, and hatchlings released immediately after emergence.

During the 2002- 2003 season, the first two nests were recorded on December 10, 2002, and last one on 26th February 2003. A total of 50 nests were located and relocated in the hatchery. Out of a total of 5372 eggs, 2734 hatchlings were released with a hatching success of 50.89 %. All nests were of the olive ridley *Lepidochelys olivacea* (Table 1). During the breeding season, 5 turtles returned to sea without nesting. Due to wave action, a 0.60 m high and 200m long sandy wall was formed on beach. This obstructed many turtles from the beach. One dead green turtle *Chelonia mydas* was seen on the beach.

Table 1: Month wise nests, eggs and hatchlings.

Month	No of nests	No of eggs	Hatchlings
December 2002	25	2906	0
January 2003	19	1975	179
February 2003	6	491	1210
March 2003	Nil	0	1157
April 2003	Nil	0	188
Total	50	5372	2734

This is the first sea turtle conservation programme in Maharashtra, and was sponsored by WWF-India, Kolhapur Division, Barve Trust, Pune and many other NGOs and individuals. Locals from Velas Village, Sarpanch and Village Panchayat also helped us in the project. SNM now plans to spread this project to the entire coast of Maharashtra. With the help of locals and the government, we are undertaking sea turtle conservation at 10 to 15 sites in 2003- 2004.

References

GIRI, V. & N. CHATURVEDI (2003) Status of marine turtles in Maharashtra, India. *Kachhapa* 8: 11-15.

TCP, Sri Lanka initiates a new in-situ turtle nest protection programme

Thushan Kapurusinghe

*Turtle Conservation Project (TCP), Sri Lanka,
72/4, Galle Road, Walana, Panadura, Sri Lanka.
Email: turtle@sltnet.lk or tcpsl@sltnet.lk.*

The Turtle Conservation Project (TCP) has launched a new programme to ensure the survival of sea turtles in their natural habitat on the Kosgoda Beach, southwest of Sri Lanka. An extent of 4 kms. of the Kosgoda Beach has become very important due to the fact that five of the seven species of sea turtles – including the green Turtle, the leatherback turtle, the loggerhead turtle, the hawksbill turtle and the olive ridley turtle - frequent this beach annually for nesting.

Coastal communities living along this stretch of beach have made a livelihood on marine turtles by collecting turtle eggs for consumption as well as for sale. Between 500 and 600 turtle nests are deposited annually in Kosgoda and all of them are collected by the poachers and sold to hatcheries or for consumption.

TCP selected 1 km of the Kosgoda beach (which has the highest nesting density) for in-situ conservation of marine turtles while 3 km of the beach stretch would be free for the turtle hatcheries to collect the eggs and to continue with the ex-situ conservation projects. 15 local persons who had engaged themselves in collecting turtle-eggs for sale were engaged in the project's "Nest Protectors" scheme. In introducing the concept of sustainable development

of this marine resource, the TCP has drawn up a plan to transform these egg collectors to 'nest-protectors'. They will also be trained as tour guides for the "Turtle night watch" tourism programme with the assistance of the Ministry of Tourism and the Sri Lanka Tourist Board as a means to providing them with an alternative income source.

The TCP's Kosgoda in-situ marine turtle nest protection and the community development programme is funded by the SGP/GEF of the United Nations Development Programme (UNDP), Sri Lanka and assisted by the Sri Lanka Tourist Board. The opening ceremony of this programme was held on August 7, 2003. TCP believes that this latest programme will ensure the further conservation of marine turtles while helping to uplift the living standards of the fisher communities in the area.

For further details of this programme and for volunteer opportunities please contact:

*Thushan Kapurusinghe,
Project Leader & Committee Chairman,
Turtle Conservation Project (TCP), Sri Lanka,
72/4, Galle Road, Walana, Panadura, Sri Lanka.
Tel: 0094 0777 810509, 0777 810508, 038 2231919.*

FIRST ANNOUNCEMENT
24th Annual Symposium on Sea Turtle Biology and Conservation
(San Jose, Costa Rica, February 22-29, 2004)

Roderic B. Mast

*President, International Sea Turtle Society (ISTS),
c/o, Center for Applied Biodiversity Science, Conservation International,
1919 M Street, NW Washington, DC 20036 USA
Email: r.mast@Conservation.org*

Venue and Theme

I am happy to announce that plans for the 24th Annual Symposium on Sea Turtle Biology and Conservation are well underway. The Symposium will take place at the beautiful Herradura Hotel and International Conference Center in San Jose Costa Rica, from February 22-29, 2004. A full array of activities are being planned, including pre and post Symposium travel opportunities; a mini-symposium on Costa Rica's contribution to sea turtle research and conservation; plus banquets, music and cultural shows, a very special auction night and lots of chances to dance, discuss turtles, and enjoy the Latino hospitality for which Costa Rica is famous.

This year's theme will be *Sea Turtle Lifescapes*. It urges us to consider marine turtles as pieces of greater biodiversity landscapes, to discuss the niches that sea turtles fill in marine and terrestrial ecosystems, and to ponder as well their "fit" in Earth's broader Biosphere. More importantly, the 24th Symposium encourages us to analyze our own niche as powerful human components in the selfsame Biosphere, and to express our thoughts and voice our opinions about the most synergistic actions we can take as institutions, governments, a sea turtle conservation "movement", and as individuals, to assure that sea turtles thrive.

I must express my gratitude and recognize my local Organizing Committee consisting of ISTS Board member, Clara Padilla, Mario Boza (Costa Rican Executive Director of The Leatherback Trust) and Marcos Solano (Executive Secretary of the Inter-American Sea turtle Convention); they have already assisted enormously in smoothing the waves and assuring that local logistics are handled ably. Thanks also to the other Costa Rican partners who have demonstrated their unflagging support for the Symposium, including Costa Rican President, Abel Pacheco, the Costa Rican Sea Turtle Network, Conservation International, and officials from

MINAE (the Ministry of Environment and Energy), who are dedicating time and energy above and beyond the call. I am also grateful to ISTS Treasurer, Ed Drane and retiring President, Nicolas Pilcher and his wife Carmen, for having provided useful advice and guidance, not to mention leaving behind some finances from a highly successful fundraising effort that led up to the 23rd Symposium in Malaysia.

Why Costa Rica?

Long before accepting the ISTS Presidency some months ago, I analyzed what would be my goals for a 24th Symposium were I to accept Earl Possardt's persistent pleas. I wanted to: 1) host a fabulous, memorable gathering where ideas could be exchanged and valuable networking take place; 2) provide opportunities for Symposium participants to get out into the field and experience tropical Nature first-hand, and; 3) impact the conservation of sea turtles worldwide by encouraging policy shifts and providing an "attraction" for media and communications attention that would get-the-word-out about sea turtles to communities beyond our own. Furthermore, I wanted to be able to offer all this at a venue that was affordable, safe, fun and logistically uncomplicated for a majority of Symposium participants.

Costa Rica is the epicenter of global ecotourism for a reason. It is a safe, fun, manageable, and relatively inexpensive travel destination. The infrastructure for international visitors is advanced, the airfares are reasonable, and it is very conveniently situated geographically for participants from around the world. There are lots of interesting places to visit post and pre-symposium, including two ocean coasts, and a variety of sea turtle *Meccas* like Tortuguero, Ostional, Nancite, and Playa Grande, just to name a few. Furthermore, Costa Rica is a showcase for biodiversity conservation. It was among the first tropical countries to really take national parks seriously, the first to adopt "ecotourism" as a national strategy,

and first in a handful of other biodiversity and environment achievements from debt-swap, to carbon offset, to bio-prospecting. Costa Rica has not only served as a conservation model for other tropical countries, but perception-wise it is among the first places that comes to the minds of most Northern Hemisphere-dwellers when they think “tropical nature”.

Having visited Costa Rica regularly since 1983 when I coordinated the first WATS (Western Atlantic Turtle Symposium) with the late Dr. Fred Berry, I am keenly aware of the important role the country plays as a global leader with respect to sea turtles. Indeed, many consider Costa Rica to be the birthplace of modern sea turtle research and conservation. Famous as the site of Archie Carr’s historic Tortuguero green turtle project, launched in the late 1950’s and still led today by the Caribbean Conservation Corporation, the accounts of Costa Rican turtles in *So Excellent A Fish* and other volumes have fueled the imaginations of many a young biologist (myself included). More importantly, they brought sea turtles to the attention of the public for the first time as something other than a soup ingredient – rather, through Archie’s stories, sea turtles became mysterious, beautiful and *Excellent* examples of the multiple wonders of Nature. In addition to being Archie Carr’s former stomping ground and the site where hundreds of today’s active researchers first learned the ropes of beach work, Costa Rica is currently at the center of what is unquestionably one of the top sea turtle conservation issues of our day, that being the vertiginous decline of the Pacific Leatherback. The Baulas de Guanacaste National Park plays a central role as one of the last remaining beach-heads in efforts to conserve the species, and it is indeed an ecosystem anchor in a broad biodiversity landscape spanning several nations from Cocos Island to Galapagos, the conservation of which will be critical to the survival of not only Pacific leatherbacks, but countless other marine species as well.

Thus, for the aforementioned reasons alone, one can easily see that Costa Rica is truly a worthy place to host a Symposium focused on the importance of sea turtles. But the clincher came last November, when I was invited by colleagues from The Leatherback Trust to attend a fundraiser in San Jose for FAICO (The Friends of Cocos Island Foundation). I accepted the invitation, and somehow wound-up at the head table (I am convinced that the name cards were accidentally switched), there surrounded by Costa

Rica’s President, Abel Pacheco, former President Rodrigo Carazo, the current Minister of Environment and Energy and his family, a handful of other Ministers, and a plethora of assorted Costa Rican luminaries. Between their speeches that evening, my conversations with these delightful dinner guests naturally centered on sea turtles, and I was overwhelmed by the support I received from them all for the idea of hosting the 24th Annual Symposium in their country. Most of all, I felt not only honored to have had the opportunity to “talk turtles” with the country’s President, but thoroughly surprised and pleased to find that President Pacheco is himself a turtle enthusiast. He and the others whom I met that evening demonstrated a deep concern for the plight of sea turtles and their habitats, and a strong commitment to help in any way to support their study and conservation in Costa Rica and to assist the ISTS with the organization of the 24th Symposium.

What is In Store – A Tentative Schedule of Events

The final schedule for the meeting is still under development. The following represents the current thinking of the organizers (regular updates will be posted on seaturtle.org).

Friday, February 20, 2004

- Arrival of participants for the 11th Latin American Sea Turtle Specialists Meeting
- 11th Latin American Sea Turtle Specialists Meeting – check-in and registration
- Other Regional Meetings (to be announced)

Saturday, February 21

- All day - 11th Latin American Sea Turtle Specialists Meeting
- Other Regional Meetings (to be announced)
- Pre-symposium excursions

Sunday, February 22

- Arrival of participants for the 24th Annual Sea Turtle Symposium
- 24th Annual Sea Turtle Symposium - registration
- All day - 11th Latin American Sea Turtle Specialists Meeting

- Other regional Meetings (to be announced)
- Pre-symposium excursions
- 19:30 Reception and awards ceremony sponsored by the Costa Rican Ministry of Environment and Energy

Monday, February 23

- 08:00 - transfer by bus from Herradura Hotel to the National Theater for opening ceremonies of the 24th Annual Sea Turtle Symposium, and cultural events.
- 10:00 – 12:30 mini-symposium on Costa Rican Turtle Conservation and Research
- 12:30 - transfer back to Herradura
- 13:00 – 14:00 lunch
- 14:00 – 18:00 afternoon poster and oral sessions
- 19:30 opening banquet sponsored by the Costa Rican Tourism Institute

Tuesday, February 24

- 08:30 – 12:00 morning poster and oral sessions
- 12:00 – 13:00 lunch session on Fresh Water Turtle Research and Conservation
- 14:00 – 18:00 afternoon poster and oral sessions
- 19:30 Return of the Tippling Turtle Bar

Wednesday, February 25

- 08:30 – 12:00 morning poster and oral sessions
- 12:00 – 13:00 lunch
- 14:00 – 18:00 afternoon poster and oral sessions
- 19:30 Tippling Turtle Bar
- 20:00 Auction

Thursday, February 26

- 08:30 – 12:00 morning poster and oral sessions
- 12:00 – 13:00 lunch
- 14:00 – 18:00 afternoon poster and oral sessions

- 21:00 Tippling Turtle Bar

Friday, February 27

- 08:30 – 11:30 morning poster and oral sessions
- 11:30 – 12:00 Closing Ceremonies of 24th Annual Sea Turtle Symposium
- 12:00 – 13:00 lunch
- begin post-symposium excursions

Saturday, February 28

- Special ceremonies and press conference at Playa Grande, Guanacaste (for invited guests)
- shuttles from Herradura Hotel to San Jose International airport for return flights
- post-symposium excursions

Associated Events

One of the highlights of the meeting will be a mini-symposium on Costa Rica and the important role it has played in sea turtle conservation and research; for more information on the Costa Rica mini-symposium, please contact Committee member, Dr. Mario Boza at ecoamericas@amnet.co.cr. The 24th Symposium will also serve as host for the 11th Reunion of Latin American Sea Turtle Specialists, to take place either at the Herradura Hotel, or at Ostional National Wildlife Refuge. We will communicate the final venue in our web page and in future communications. The coordinator for this meeting is Dr. Carlos Orrego, Ministry of the Environment and Energy, carlosmario01@yahoo.com.mx, should you require additional information. We also welcome meetings of others who may be interested in similar regional or thematic meetings (please contact Roderic Mast to schedule special meetings and events)

Call For Papers and Resolutions

The program committee will review all proposals received prior to **15 November 2003**. Final details are still being worked out regarding the themes and chairpersons for the various sessions in which oral and poster presentations will be organized. Nonetheless, we would like to provide you now with

the information required for abstract submission. We urge all potential presenters to review the Symposium website over the coming months to determine the oral or poster sessions most appropriate for their presentation, and we also request that you consider the theme of the Symposium, as described above – *Sea Turtle Lifescapes* – as you conceive your topics for presentation. Please use the Symposium web site, found at (<http://www.seaturtle.org/symposium/>) to access guidelines and to make your submission. If you cannot access the web site, you may submit your abstract as a text file attachment to an e-mail sent to abstracts@seaturtle.org. If you are unable to submit your abstract via internet or email, then send your proposals by fax to 202-318-4448. A printed copy of the submission guidelines can be mailed to you upon request (contact Roderic Mast). If you wish to submit a Resolution to be considered by the Board of Directors of the International Sea Turtle Society, please follow the guidelines presented at the website (<http://www.seaturtle.org/symposium/resolutions/>) or request guidelines via e-mail: (resolutions@seaturtle.org).

Symposium Registration

You must register to attend the Symposium. The preferred registration method is to visit the Symposium's web site (<http://www.seaturtle.org/symposium/>). There you will find everything you need to know about the Symposium in addition to a user-friendly interface for registration. Should you wish to receive a printed copy of the registration materials, please contact Roderic Mast.

Lodging and Transfers in Costa Rica

The Organizers are currently negotiating discounted airfares, as well as a formal relationship with a travel provider that will allow for the purchase of tickets and the arrangement of pre and post symposium travel on-line. We have reserved a block of rooms at the Hotel Herradura, which can be reserved by calling (+506) 239-0033, by faxing to (+506) 293-2713, or by e-mail to gventas@hotelherradura.com. The web site of the hotel is www.hotelherradura.com. Be sure to make reference to the Sea Turtle Symposium. The Juan Santamaria International Airport in San Jose is

only 15-20 minutes away from the Herradura Hotel and International Conference Center, and shuttles will be made available at pre-determined times for Symposium participants. Please stay tuned for future articles in the Marine Turtle Newsletter, or check the Symposium website for updates on travel arrangements.

Visas

Americans and Canadians do not require a visa for Costa Rica, and indeed only a very small number of foreign countries are required to obtain a visa before entering Costa Rica. A "Public Interest Decree" is presently being negotiated with the government of Costa Rica, that will allow for the provision of special assistance to participants in the 24th Symposium requiring visa services. If you are from Colombia, South Africa or if you envision that you may have difficulty obtaining a visa in your home nation, please seek advice from the Symposium Organizing Committee, c/o Clara Padilla (Clarits@hotmail.com).

ISTS Travel Assistance

As in past years, the ISTS will provide support for a limited number of qualified presenters at the 24th Symposium from around the world. The deadline for submission of applications will be **15 November 2003**. The Chair of the ISTS Travel Committee is Dr. Jeffrey A. Seminoff, and additional information on travel awards will appear in this and future issues of MTN.

Conclusion

The ISTS, the Organizing Committee and I are all very excited about the 24th Symposium, and are working hard to assure that it will be both a wonderful experience for you, the participants, as well as a positive step for the conservation of sea turtles worldwide. Check our website for regular updates, and we will continue to provide additional information through the MTN. We look forward to seeing you in Costa Rica next February.

Travel Assistance for the 24th Annual Symposium on Sea Turtle Biology and Conservation in San Jose, Costa Rica

The Travel Committee for the 2004 Symposium are pleased to announce that limited travel funds are available to assist participants in their efforts to attend the Symposium in San Jose, Costa Rica. As in previous years, awards should not be expected to cover the full cost of symposium travel. Priority will be given to those who will be presenting papers or posters, those who apply before the deadline, 15 November 2003, and to individuals from relatively under represented regions. **The committee looks favourably on those who demonstrate efforts to secure additional sources of travel funds or matching grants.** If you are in need of assistance for travel to the 2004 symposium, apply via the symposium web page (<http://www.seaturtle.org>) before the deadline. No late applications will be considered.

Applicants should follow the following procedure:

1. Register for the symposium
2. Submit your abstract to the symposium for consideration (required for applicants from USA and Canada)
3. Using your symposium registration number, complete the online travel grant application in full, prior to the deadline

Applicants should apply to the region from which they are travelling, NOT where the research was conducted. Awards will be announced by 15 January 2003, and all recipients are expected to apply for visas immediately upon award if they have not already done so. Please contact the appropriate Regional Chair with any questions. It is greatly preferred that all correspondence is carried out by email/internet; however, applicants can also make contact with their Regional Chairs by fax. Grant recipients are expected to attend the entire symposium.

Travel Committee Chair:

Jeffrey A. Seminof (jeffrey.seminoff@noaa.gov)
Fax: (USA) 858 546 7003

Regional Chair – Asia and Pacific

Nicolas J. Pilcher (pilcher@tm.net.my)
Fax: (Palau) 680 488 8730, (Malaysia) 608 824 3000

For a full list of regional chairs, see Marine Turtle Newsletter 101 or www.seaturtle.org

SECOND ANNOUNCEMENT

24th Annual Symposium on Sea Turtle Biology and Conservation (San Jose, Costa Rica, February 22-29, 2004)

Roderic B. Mast¹ and Brian Hutchinson²

1 - President, International Sea Turtle Society,

Email: r.mast@conservation.org

2 - Acting Program Officer, IUCN/SSC Marine Turtle Specialist Group,

Email: b.hutchinson@conservation.org

c/o Center for Applied Biodiversity Science, Conservation International,
1919 M street NW, Washington, DC 20037 USA,

Update on Preparations

Planning for the 24th Symposium is in full swing, gracias to the help of many people, most notably Clara Padilla, our Costa Rica-based Symposium Coordinator. Also, special thanks to James Norman for his volunteer weeks over the summer months (plus to Jim Richardson for sending James to us). In addition to the usual negotiations of blocking hotel rooms, booking a Conference Center, and arranging logistics for feeding

and transporting the expected 600-1000 participants, some noteworthy strides have been made in the past few months. To begin, we have secured a *Decreto de Interes Publico*, or Public Interest Decree, signed by both Costa Rica's Minister of Environment and the country's President, Abel Pacheco, declaring that the 24th Symposium is in the Country's national interest; this decree will do a great deal to open doors within the Costa Rican government to facilitate such things as reductions in sales tax (and hence room

rates), as well as assuring smooth procedures for foreign visitors requiring visas. We have partnered with a local travel firm, Neotropical Expeditions, to provide a number of reasonably priced pre and post-Symposium travel opportunities for participants, and we have arranged for a full time travel advisor to be present at the Symposium to assist with tickets and excursions for those interested in seeing more of Costa Rica. Furthermore, we have selected an international travel partner, Manaca.com, to assist participants with their global travel needs; Manaca will provide the Symposium with the convenience of web-based travel planning via a link from www.seaturtle.org.

Symposium Theme and Sessions

As mentioned in the first announcement, the theme of the 24th Symposium is *Sea Turtle Lifescapes*, and we ask presenters to consider this as they prepare their abstracts for submission over the coming months; for a more detailed description of the theme, please refer to MTN No. 101 – page 42. With the help of Dr. Nat Frazer, and based partially on his article in MTN 100 entitled *Concerning those Things Which We Ought to Have Done: Reflections on the Future of Sea Turtle Research*, seven sessions have been designed for the 24th Symposium, as described below. Chairpersons will be selected for each session, and each session will be comprised of presentations drawn from both submitted abstracts and invited speakers. The agenda proposed herein will be finalized once all abstracts are received and all invited papers and poster sessions are confirmed (remember that the deadline for submissions is **November 15, 2003**).

Sea Turtles in Costa Rica – Mini Symposium

Half-day: First half of Day 1 (Feb. 23), Session Chair: Roldan Valverde

Costa Rica has a rich history in sea turtle conservation and research, and has always served as a leader in the field. Presentations for the mini-symposium on sea turtles in Costa Rica will highlight these accomplishments and demonstrate why Costa Rica remains at the forefront. Presentations in this session may encompass all topic areas related to sea turtle research, conservation and history that pertain to Costa Rica.

Sea Turtles and Socio-Economics

Full day: Second half of Day 1/first half of Day 2 (Feb 23-24), Session Chair: TBA

This session will include all presentations that analyze the cultural interactions that take place between humans and sea turtles, as well as the role or value of sea turtles in human economic activities. This includes investigations regarding the perception, treatment, and utilization of sea turtles by specific cultures or populations for subsistence, ceremonial and other purposes, as well as the role that sea turtles play in local and global economic activities and the associated conservation challenges. In previous years, presentations falling under this category have been placed in sessions with titles such as ‘Human-Sea Turtle Interactions’ (2001), and have included projects related to ecotourism and other economic alternatives, consumptive use of sea turtles, indigenous cultural practices/beliefs, sustainable use of sea turtles, and economic valuation of sea turtles. Sample titles from presentations at previous symposia that would fit into this session include: *Researching the utilization of marine turtle eggs*; *Sea turtles and the indigenous culture of Palau*; *The sea turtle in the magical-religious beliefs of the indigenous Wayúu*; *Conservation and sustainable use: Some principles and problems*; *Turtles and tourists in a global economy: The future of ecotourism as a conservation tool*, and; *Assessing the socio-economic value of marine turtle use in the UK overseas territories in the Caribbean: Methodological challenges*.

Sea Turtle Assessment and Monitoring

Full day: Second half of Day 2/first half of Day 3 (Feb. 24-25), Session Chair: TBA

This session will include results of long-term monitoring reports, (assessments of management and conservation programs), findings of laboratory studies in genetics, toxicology, disease and physiological mechanisms, human impact assessments, behavior/life-cycle studies, population biology, and other studies that *assess or monitor the lives or conservation status of sea turtles*. In previous years, presentations in this category have been placed in a variety of sessions with titles such as, ‘Physiology and Behavior’, ‘Ecology’, ‘Genetics’, and ‘Conservation, Management and Policy’. Sample titles of presentations from previous symposia that would fit into this session include: *Metabolic rates, dive duration and buoyancy regulation: Why sea turtles beat any other diver in breathholding*; *Trace elements (Cd, Hg, Zn, Cu, Se) accumulation and tissue distribution in loggerhead turtles (Caretta caretta) from the western Mediterranean Sea*; *17 years of monitoring and management of*

leatherback sea turtle nesting population in the northeastern coast of Puerto Rico (1986-2002); Mercury in loggerhead sea turtles, Caretta caretta, in the southeast US: Assessing health impacts and developing monitoring strategies, and; Underwater noise and anthropogenic disturbance in critical sea turtle habitats.

Global and Regional Sea Turtle Conservation and Research

Half-day: Second half of Day 3 (Feb. 25), Session Chair: TBA

This session will include presentations that deal with large-scale sea turtle conservation and research efforts, international or intercontinental partnerships, broad regional agreements, multi-national regimes, and regional and global policy initiatives. Presentations could encompass environmental education, broad communications efforts, and regional/global strategies for sea turtle research or conservation, policy initiatives, treaties, and trade regimes and agreements. In the past, presentations that fit under this session would have been placed in sessions like ‘Education and Community-Based Conservation’ or ‘Conservation Management and Policy’. Sample titles of presentations from previous symposia that would fit into this session include: *Turtle conservation and fishery management in the U.S. Western Pacific; Sea turtle protection across frontiers: Exchange of expertise between the Netherlands, Benin, and Costa Rica, and; A regional conservation program for the Guianas.*

Sea Turtle Modeling and Prediction

Half-day: First half of Day 4 (Feb. 26), Session Chair: TBA

This session is intended to include presentations that discuss implementation, testing, development, or revision of population, behavior or ecosystem *models* that aim to predict fluctuations in sea turtle populations as well as the impacts of anthropogenic alteration to their natural ecosystems. This may include work on models that predict the course and impact of pollutants, the spread of disease, natural variation in population sizes, and responses of turtle populations to environmental changes or conservation efforts. This session is intended for those presentations that deal specifically with developing or improving research geared specifically for use in modeling. In previous years, presentations falling under this category have been placed in sessions with titles such as ‘Ecology’.

Because this is such a recently developing area of research, we expect new and unique contributions to this session from a variety of sectors of sea turtle research. Sample titles of presentations from previous symposia include: *Estimating productivity and the risk of hatchling loss to near shore predators at a high-density loggerhead nesting beach on southeast Florida; Sand temperatures and sea turtle nests: Tri-dimensional computational fluid dynamics modeling of heat flux; New developments in the population dynamics of pacific leatherbacks: What can population models tell us; Assessment of the Tortuguero, Costa Rica green turtle populations using deterministic matrix models, and; Predicting the magnitude of cold-stunning events in Cape Cod Bay, Massachusetts using classification and regression tree modeling.*

Technology and Sea Turtles

Half-day: Second half of Day 4 (Feb. 26), Session Chair: TBA

The technology session is intended to present advancements and developments in equipment, technology, and methodology associated with all aspects of sea turtle conservation and research (excluding those dealing with prediction and modeling). This includes improvements, advancements, and trials in research equipment such as tagging and transmitting devices, as well as studies of TEDs, long-line hooks, and other fishing gear. Additionally, developments in software applications related to sea turtle conservation, along with improvements, revisions, and developments in the methodologies associated with both laboratory and field research techniques. In the past, presentations that fit under this category have been grouped with the sector for which the technology or methodology was designed, and have often been presented as posters. This category will also involve both a trade show and workshops that will take place at the 24th Symposium. A separate session on technology is being created this year due to both the increasing role of technology in conservation efforts and the recognition that certain technologies are applicable in multiple sectors. Sample titles of presentations from previous symposia include: *Satellite tracking marine turtles: An assessment of data analysis options; The ARGOS global satellite tracking and data collection system for sea turtles; Dead without a TED: Turtles drowning in U.S. “certified shrimp nets”; Satellite tracking of green turtles, Chelonia mydas, at Tortuguero, Costa Rica; Methods aimed*

to reduce marine turtle interactions with longline fishing gear; Results of an experiment to evaluate effects of hook type on sea turtle bycatch in the swordfish longline industry, and; Genomics meets ecology: The use of molecular tools for the study of ecology, evolution, behavior and conservation.

Novel Insights in Sea Turtle Research and Conservation

Half-day: First half of Day 5 (Feb. 27), Session Chair: Nat Frazer

The novel insights session will be the final session of the 24th Annual Symposium. Its purpose is to inspire the audience to consider the future of sea turtle research and conservation in a progressive way by presenting novel ideas or practices related to sea turtle biology or conservation. This session will likely involve only a limited number of presentations on ideas and/or innovative approaches for future research projects, focusing on key issues or areas of sea turtle biology and conservation that either 1) have not yet been successfully addressed; or 2) would benefit from novel techniques or methodologies. This may consist of new discoveries in areas of biology such as physiology, genetics, development, or behavior, as well as successful developments in conservation techniques, policies, or agreements. During this session there will be ample time set aside for discussion. We hope that ending on such a note will leave us all with a positive outlook and a progressive attitude towards sea turtle conservation.

Presenters will be asked to submit abstracts within one of the above sessions if possible, and will be contacted prior to the Symposium by their Session Chair to assure that standard criteria are met for presentation length, quality and consistency within each Session.

1st Annual Global Sea Turtle Datafest

The ISTS, IUCN/MTSG and Conservation International are organizing the 1st Annual Global Sea Turtle Datafest in Conjunction with the 24th Annual Sea Turtle Symposium, and we hope to make this activity an annual event thereafter. It is well known that effective conservation of sea turtles can only be achieved through broad regional and global efforts that endeavor to conserve turtles throughout all of their life stages and during all the spatial wanderings of their long lives.

Sea turtles have been the target of substantial scientific investigation over the past fifty years, research that has yielded a plethora of valuable data for conservation planning. Yet the vast majority of this research has been highly localized. Data are not lacking at the level of specific beaches, countries or in rare cases basins (like the Caribbean), but there is a desperate paucity of useful *global-scale* presentations of accurately geo-referenced data. Regrettably, it is precisely these types of data that are most needed in undertaking GIS-based analyses for the development of broad regional conservation strategies, and for building alliances across national borders and among multiple partner communities that represent both the turtles and the threats to their survival.

The Data-Fest will piggy-back on the 24th STS using the forum and its human scientific resource as the data-gathering nexus for advancing the evolution of a high quality, consensus driven, geo-referenced database on various aspects of global sea turtle biology. Techniques for consensus-driven expert analyses of global conservation priorities have been perfected and utilized by CI since the late 1980's, and CI's Center for Applied Biodiversity Science (CABS) will provide the technical expertise for designing and executing the Data-Fest on-site in San Jose. Data types and sources will be identified in advance and base maps created from "best available information". These base maps will serve as the centerpieces of consensus workshops to be facilitated by CI/CABS, ISTS and MTSG experts at the Symposium.

Stay tuned for more information about this exciting initiative in upcoming notices about the 24th Symposium both here (MTN) and at the official website of the Symposium at www.seaturtle.org. If you are interested in contributing data or participating in the Data-Fest, please contact Brian Hutchinson at b.hutchinson@conservation.org.

Reminders to Participants in the 24th Annual Symposium

Registration: You must *register* to attend the Symposium. The preferred registration method is to visit the Symposium's web site (<http://www.seaturtle.org/symposium/>). There you will find everything you need to know in a user-friendly interface.

Lodging: Participants at the Symposium will stay at the Herradura Hotel in San Jose, where a block of discounted rooms has been reserved for the Symposium. Reserve your room by e-mail to gventas@hotelherradura.com, or call (+506) 239-0033. Be sure to make reference to the Sea Turtle Symposium.

International travel and pre & post-Symposium excursions: Learn about the offerings, and register through Manaca.com, which can be accessed directly on the web, or from www.seaturtle.org.

Submission of abstracts and Resolutions: Abstracts for oral papers or posters presentations must be received by November 15, 2003. This deadline applies also to resolutions for consideration by the by the ISTS Board.

Visas: If you are from Colombia, South Africa or if you envision that you may have difficulty obtaining a visa in your home nation, please seek advice from the Symposium Organizing Committee, c/o Clara Padilla (Clarits@hotmail.com) as soon as possible.

Manuals on sea turtle conservation

Harry Andrews

*Centre for Herpetology/Madras Crocodile Bank Trust
Postbag 4, Mamallapuram, Tamil Nadu 603104.
Email: mcbtindia@vsnl.net*

Five of the seven species of marine turtles are found in Indian coastal waters and at least four have significant nesting beaches and/or feeding areas. Many factors need to come together for the conservation of these species, but none more than cooperation between agencies in different states and sectors within the country.

The Wildlife Institute of India (WII) recently implemented a UNDP – Government of India sea turtle conservation project. The project included surveys of status and threats in all coastal states, research, training programs, education workshops, community based conservation, digital image analysis of coastal areas, Turtle Excluder Device implementation, and a review of coastal legislation. For a continuation of the conservation efforts and the extension of capability to a host of other organizations, it is of utmost importance that certain aspects are emphasized and training provided to appropriate targets.

In this regard, sea turtle conservation manuals have been prepared by the Centre for Herpetology/Madras Crocodile Bank Trust (MCBT) for the UNDP – Government of India sea turtle project, for distribution to concerned individuals and agencies, including the state forest and fisheries departments, non government organizations and young researchers. The manuals are in English, but concerned departments may take the responsibility of translating the relevant manuals into the local language.

The manuals are aimed at an Indian audience, but they are general enough for use elsewhere, particularly in south and south east Asia. The manuals have been reviewed by a panel of international technical advisors including Jeanne Mortimer, Jack Frazier, Matthew Godfrey and Brendan Godley. They have been edited by Kartik Shanker and designed by ECOTONE, Chennai. **PDF files of all manuals are available at <http://www.kachhapa.org>.** Hard copies are available from the MCBT, Tamil Nadu.

Beach Management and hatchery programmes

Since most turtle nesting beaches in India are under threat, it is often necessary to have an appropriate conservation program associated with them. In-situ and ex-situ approaches have to be adopted, depending on the nature of threat and the objective of the program. In India, many Forest Departments and non government organizations already run hatchery programs. This manual provides information on beach management for the conservation of turtles. It also provides instructions on hatchery practices. There is a section on the biology and identification of sea turtles.

Research and management techniques

This manual focuses on research techniques for the study of turtles. Even without much equipment, some basic research can be carried which can be very useful for the conservation of sea turtles. Placing research

in the context of the biology of sea turtles, this manual provides information on studying nesting turtles, turtle nests and hatchlings, tracing migratory routes, and studying behaviour and evolution. It details methods such as tagging, genetics and telemetry. It also provides a brief account of sea turtle research resources such as journals and websites.

Population Monitoring and Census

This manual aims at providing methods for intensive and extensive surveys on nesting beaches and foraging habitats, and secondary information from market surveys and interviews. In this context, it provides details on identification of adults, hatchlings and tracks. It also provides a detailed method for counting turtles during arribadas, specifically aimed at the Forest Department and non government organizations in Orissa, who are involved in monitoring the mass nesting rookeries.

Eco (turtle) Friendly Coastal Development

The effects of urbanization and development have taken their toll on almost all the nesting beaches in India. However, the effects of many industrial and urban practices, particularly lighting, can be easily mitigated by adopting common sense approaches and new technologies. This manual deals with threats to coastal habitats such as sand mining, beach armouring, plantations, highways, ports and harbours, and artificial illumination. It also deals with tourism and offshore threats such as pollution and fisheries.

Manuals are available from:

Harry Andrews (mcbtindia@vsnl.net)
Madras Crocodile Bank Trust
Postbag 4, Mamallapuram, Tamil Nadu 603104.

For further information, contact:

Kartik Shanker, Series Editor (kartik@atree.org)

Satellite Tracking on the World Wide Web

Michael Coyne

SEATURTLE.ORG

Email: mcoyne@seaturtle.org

SEATURTLE.ORG recently introduced a new satellite tracking resource, in collaboration with the Marine Turtle Research Group and a consortium of conservation organizations and donors, that provides sea turtle researchers with an easy-to-use tool for collecting, managing and sharing their satellite telemetry data in near real-time. The public interface, available on SEATURTLE.ORG at <http://www.seaturtle.org/tracking/>, currently includes 12 turtles from three projects that have been tagged and are being actively tracked on the web from nesting beaches in the Cayman Islands, North Carolina and South Carolina. It is expected that other projects will join soon. Visitors to the site are able to find background information on each project and turtle and can register to receive daily e-mail updates about the movements of turtles in each of the active projects. All track maps are also updated daily. Behind the scenes is a data management system that takes most of the drudgery out of handling satellite telemetry data by automating data retrieval and archiving from the ARGOS system. A number of data filtering and management tools are in development, including a direct link to SEATURTLE.ORG's Maptool <http://www.seaturtle.org/maptool/> providing data owners

with on-the-fly mapping of their satellite telemetry data. If you are interested in adding a project to the Satellite Tracking resource on SEATURTLE.ORG, or have any questions, comments or suggestions, please contact Michael Coyne mcoyne@seaturtle.org.



Where will Shelby, Myles, and Samia Go? Students, supporters in the community, and others worldwide are following the migrations of these post-nesting green and loggerhead sea turtles from the Cayman Islands. The turtles' positions are updated daily on SEATURTLE.ORG <http://www.seaturtle.org/tracking/>.

NEWS AND REPORTS

Report on the GOI - UNDP Sea turtle Workshop, Andaman & Nicobar Island, India

Aparna Singh¹, Harry Andrews² and Kartik Shanker²

1- Andaman and Nicobar Environmental Team,

Post Box- 1, Jungli Ghat P. O., Port Blair- 744103. Andaman and Nicobar islands.

2- Centre for Herpetology/Madras Crocodile Bank Trust

Postbag 4, Mamallapuram, Tamil Nadu 603104.

Email: mcbtindia@vsnl.net

A capacity building and training workshop was conducted on 26th and 27th June 2003 at Vansadan, Andaman & Nicobar Islands Forest Department, Port Blair, Andaman Islands. The workshop was organized by the Andaman Nicobar Environmental Team and Madras Crocodile Bank Trust, Tamilnadu, in collaboration with the Wildlife Institute of India, Dehradun.

The objectives of the workshop were to facilitate exchange of information, expertise and techniques, to provide training on basic biology of sea turtles, evaluation of threats, beach management and hatchery programmes for the conservation of sea turtles, to evaluate the status and threats to sea turtles, the best approaches to reduce threats and implementation of threat reduction measures. Further, the workshop aimed to introduce community based conservation with a view to integrating local communities in sea turtle conservation programmes and to emphasise public awareness programmes

Resource persons made presentations on an overview of sea turtles of the world and India, threats to sea turtles, biology of sea turtles, research techniques, sea turtle conservation, some aspects of data collection, hatchery management and beach management programmes. Subsequently, group discussions were used to identify problems and approaches to solving the problems. While a variety of different issues were raised, it was stressed that interaction between different agencies and interagency communication needed to be strengthened. Based on the above discussions, groups were formulated to discuss approaches to dealing with enforcement, threats and awareness.

Enforcement

Current enforcement at sea is by the Coast Guard and Indian Navy. There is lack of communication between Coast Guard and Navy with Forest Department and Police. No direct communication

channels are currently available. It was also pointed out that currently, the Coast Guard is empowered only for apprehending foreign vessels and not the local ships/boats, and is therefore constrained in the enforcement of the Indian Wildlife Protection Act. On the other hand, lack of skill, equipment, manpower and training makes it difficult for the Forest Department to enforce laws. With regard to laws, a number of issues were raised., including whether there were enough laws. It was suggested that surveillance radars could be used to locate all offshore ships, and information about wildlife laws related to marine environment needed to be made available to all agencies, including maps with boundaries of protected areas and national parks. Other suggestions included communication by a common channel between agencies, community awareness of laws, maps of sand mining areas and licenses, and the necessity for fishing boats to have proper permits.

Specific requests of the Coast Guard include:

???Relevant extract of Wild Life Act, Tribal Act, Fisheries Act

???Rules to effect maritime enforcement, notification for empowering the Coast Guard

???List of forest check posts to handover offenders

???Telephone numbers of forest outposts

???Directory of National Parks and their coordinates

???Lists and maps of designated sand mining areas

???Common channel for communication

Threats to sea turtles

Sand mining

The implementation and regulation of sand mining operations was discussed. It was agreed that sand mining had to be phased out over a period of time. It was recommended that sand could be provided on subsidy from mainland, and publicity and awareness could be generated on the use of pulverized sand for construction.

Pollution

Discussions also centred around pollution and waste disposal. Maximum plastic and debris are found in Coco channel, 10 degree channel and 6 degree channel, which is where most of the turtles and dugongs get hit by propellers as well. Deposits and waste from international vessels along the coast was also said to be high. A seasonal debris cleaning programme in collaboration with local non government organizations was suggested. It was also recommended that remote islands are cleaned before the nesting season so that sea turtles are not prevented from nesting. Ships' garbage disposal, recycling and solid waste management were discussed. Regulations and recommendations for bilge oil disposal need to be formulated. Used oil reception facility and bilge oil separators were recommended. A total ban on plastic bags was recommended. Biodegradable and non biodegradable waste handling and management and plastic solid waste management needs to be strengthened. Plasma incinerators and point of source restrictions were suggested.

Fisheries

With regard to fisheries, there are very few trawlers in the Andamans and they do not cause much damage. Even so, the purchase of equipments and subsidy on TEDs was deemed useful. A strict control on mesh size for trawlers and other fishermen was suggested. Some areas need notification as no fishing zones along sea turtle feeding and nesting habitats. The Fishery Regulation Act needs to be revised, with inputs from the Forest Department to incorporate new protected areas and nesting sites. Fishing boats need to display license in a predesignated colour. The Coast Guard also suggested that fishing licenses must incorporate maps showing prohibited areas (ie. tribal areas, turtle areas and protected areas), list of life saving equipment on board and a list and pictorial chart of protected marine species. The Coast Guard toll free number 1718 can be printed on the license. There also needs to be an effective procedure to punish boats for violation of laws.

Depredation of eggs

The menace of dogs in inhabited and uninhabited islands was highlighted. It was suggested that it should be made illegal for fishermen to take dogs to uninhabited islands. The sterilization of dogs in inhabited islands, ultrasonic frequency to repel dogs,

and use of fire crackers/sound scares or a combination of the above methods, were suggested. Similarly, pigs need to be kept away from nesting beaches as well. The depredation of eggs by humans also had to be addressed by education and awareness programmes.

Other issues

An island marine environment protection committee with Coast Guard, Forest and Fisheries Departments, Navy and NGOs was mooted. It was recommended that there should be a common format for collection of information on turtle nesting, incorporating all details. Unexplored islands should be surveyed in a phased manner and work by Forest Department should be published. A turtle monitoring cell could be established to serve as a node for information about sea turtles.

The need for education and awareness was stressed. It was suggested that combined community interaction with Forest and Fisheries Departments and the Coast Guard would be helpful. Turtle camps and turtle walks, production of awareness material and involving volunteers could promote awareness about sea turtle conservation in the islands.

In reaction to the discussions and recommendations of the group, the Chief Wildlife Warden responded that a state level environmental committee had been established. A no plastic zones was to be declared. All fishermen were to procure licenses by October 1, 2003. Following a Supreme court judgment, sand mining was to be reduced to 30% and then phased out.

The Principal of the Forest Training School offered that the trainees of the school would undertake the task of translating the MCBTs "Beach management and Hatchery Programmes" manual into Hindi for use by the local Forest Department staff.

The workshop was attended by officers from the Indian Navy, Indian Coast Guard, scientists from Central Agricultural Research Institute, National Institute of Ocean Technology, Fisheries and Forest Department officers, and a batch of trainees of the Forest Training School, Andamans. The resource persons included Kartik Shanker, Aparna Singh, Shreyas Krishnan and Harry V. Andrews (ANET), Ravi Shankaran (SACON), Mr. Yesu Ratnam, Principal, A & N Forest Training School, and Mr. M.Grahamdurai, DCF, A & N Forest Department.

OPERATION KACHHAPA NEWS

CEC on the Olive Ridleys in Orissa

Under the directions of The Supreme Court of India, the Central Government under a notification dated 18th September 2002, constituted the Central Empowered Committee (CEC) for the purpose of monitoring and ensuring compliance of orders of the Honourable Supreme Court covering the subject matter of forests and wildlife and related issues.

Due to the apathy of the state towards safeguarding the sea turtles, Operation Kachhapa decided to file an application to the CEC in India's capital, New Delhi. The application was filed on 19th December 2002. It raised a number of issues in considerable detail, regarding the protection of olive ridley sea turtles in the State of Orissa. Since Operation Kachhapa already had a case pending in the Orissa High Court, and could be held in contempt of court for filing a similar application, it was filed by a legal colleague, Mr Alok Agarwal. Responding to the application, the CEC issued interim directions to the State Government of Orissa on 7th March 2003. These included:

1. The Forest Department must immediately set up permanent protection camps at Devi River mouth and Rushikulya River mouth, and hire sea-going patrol boats for each of the camps. In addition, a minimum of ten armed police personal should be posted at each camp for patrolling with Forest and Fisheries staff;
2. Funds for the protection of sea turtles already with the Forest Department must be utilised for the purchase and hire of equipment, etc.;
3. The State Government should provide land for two permanent boat stations between Paradeep and Rushikulya that are suitable for shallow water patrolling. The stations are to be established by the Coast Guard who have also been requested to intensify patrolling during the turtle nesting season;
4. The officers of the Coast Guard at Paradeep should be notified as Authorised Officer under the Orissa Marine Fishing Regulation Act (OMFRA). This will empower the Coast Guard to seize and impound trawlers operating in the restricted zone;

5. The Fisheries Department should suspend all licences of mechanised boats not using Turtle Excluder Devices (TEDs). In addition, stringent action needs to be taken against boats operating without licences and not having valid documents;
6. All gill-netters should be banned from operating within 5 km of the three turtle nesting sites;
7. All seized trawlers and boats should be kept in secure, well-guarded locations on dry land and confiscation proceedings initiated against them. Armed guards should be placed around the area to prevent owners from retrieving their boats.
8. Wireless communication should be enhanced between the Coast Guard and Forest Department for improved enforcement efforts;
9. Daily wage workers and volunteers need to be engaged for nest protection activities; and,
10. Facilities and incentives should be provided by the Chief Wildlife Warden for staff engaged in patrolling activities.

A second hearing on the application to the CEC took place on 28 March 2003. A number of senior officers from the Government of Orissa were present, including the Chief Secretary, the Principal Secretary, and the Chief Wildlife Warden, to give the State's response to the directions given on 7th March 2003.

Mr. Agarwal and the Project Director of Operation Kachhapa presented up-to-the-minute facts to counter the State's response. They were also able to confirm that, due to the CEC's interim directions, the following action had been taken by the State:

- Patrolling had been moderately intensified
- The Coast Guard had been empowered under OMFRA
- Shallow water patrols were now being carried out by the Coast Guard
- 2 licenses had been cancelled due to non-use of TEDs, and 20 additional boats had been seized for fishing without documents, and
- Nest protection was being carried out.

The CEC was not impressed by the limited action taken so far by the State of Orissa. The CEC asked Mr. Agarwal and the Project Director of Operation

Kachhapa to give an up-to-date report on the progress and shortfalls in the protection of the olive ridley turtle in Orissa. The report was submitted on 31 March 2003.

The hearings for this case have been completed and the Supreme Court is shortly expected to pass final orders.

OPERATION KACHHAPA EDUCATION & AWARENESS ACTIVITIES

In March and May 2003, five large rallies were organised by OpK for local students in the Devi River and Rushikulya area to spread the word on threats to olive ridley sea turtles. The students first learnt about the subject and then took an oath to do whatever they could to spread awareness of the turtles' plight in their communities. The students visited a number of villages shouting slogans and carrying placards. The participants also handed out flyers with messages to protect the turtles and put up posters at various locations within the villages. The students, along with some of the villagers and fishermen, were given woven bags with an image of a turtle and a message to save them. Students from Balabhadrapur UGM School, Papira Prathamika Vidyalaya, the Purunabandha Primary School, and both the Primary and U.P. School of Gokharkuda took part in the rallies. Refreshments were provided to the participating students and school staff.

School rally to raise turtle conservation awareness at Gundalba village

Two meetings were also held at Kantiagada and Podampeta Primary schools in the Rushikulya area. The need to safeguard the long-term future of the olive ridleys in Orissa was explained and school bags, posters and brochures distributed to the participants. It is hoped that these student rallies and meetings will help gain the support of the local communities to protect olive ridleys.

In addition, two state level quizzes on sea turtles were held for school students in March 2003 and for college students in May 2003 at Bhubaneswar.



School rally to raise turtle conservation awareness

Community participation in the release of a leatherback turtle in south Kerala

The capture of a large turtle in shore seine on 11.12.02 at about 07.00 hrs at Pallithura, 10 km south of Vizhinjam, was reported in a local newspaper. One of the authors visited Pallithura at 08.30 hrs to collect information about the turtle. The turtle was a male leatherback (*Dermochelys coriacea*), measuring 200 cm in total length. The turtle was released back into the sea by 10.00 hrs by the local community.

Source: S. Krishna Pillai*, C. Unnikrishnan, K.K. Velayudhan, T.T. and Ajith Kumar
Vizhinjam Regional Centre, Central Marine Fisheries Research Institute,
Vizhinjam, Trivandrum, Kerala - 695 521
* Retd Principal Scientist, CMFRI, Deivakam, 7-49
F, Pilliyar Kovil Street, NGO Colony, Kottar PO,
Nagercoil 629002.

Leatherback turtle meat used as food in south Kerala

A female leatherback turtle, accidentally caught and landed on September 30, 2002, was sold in the Kattakada fish market, as food. The turtle, which was landed at Vizhinjam, Kerala, was sold at the site for Rs. 500.00. The turtle was then butchered and packed in bamboo baskets with ice. It was transported to the Kattakkada fish market, 20 km west of Vizhinjam, on October 3, 2002 and sold at Rs. 20 per kg. Undeveloped eggs of the turtle were also sold. Fleshy parts of the head were also cut into pieces and sold. The carapace and plastron were discarded in Vizhinjam and were later retrieved by a local diver for CMFRI. The carapace measured 141 cm in length and 106 cm in width.

Source: S. Krishna Pillai, *Fishing Chimes* 23 (3): 46-47 (2003).

Marine Turtle Newsletter

ONLINE - The *Marine Turtle Newsletter* and *Noticiero de Tortugas Marinas* are both available at the MTN web site <<http://www.seaturtle.org/mtn>> and <<http://www.seaturtle.org/ntm>>

Issue No. 100 April 2003

Marine Turtle Newsletter 100: A Celebration -
B.J.Godley & A.C.Broderick

MTN 100: Looking Back, Looking Forward -
N.Mrosovsky

Concerning Those Things Which We Ought to
Have Done: Reflections on the Future of Sea Turtle
Research - *N.B.Frazier*

Why Do We Do This ? - *J.G.Frazier*

From Ghosts to Key Species: Restoring Sea Turtle
Populations to Fulfill their Ecological Roles -
K.A.Bjorndal & A.B.Bolten

Improved Assessments and Management of Shrimp
Stocks Could Benefit Sea Turtle Populations,
Shrimp Stocks and Shrimp Fisheries - *C.Caillouet*

Challenges for Interdisciplinary Sea Turtle
Research: Perspectives of a Social Scientist. -
L.M.Campbell

Sea Turtle Conservation along the Atlantic Coast of
Africa - *A.Formia, M.Tiwari, J.Fretey & A.Billes*

Marine Turtles in Latin America and the Caribbean:
A Regional Perspective of Successes, Failures and
Priorities for the Future - *M.Â.Marcovaldi,
J.Thomé & J.G.Frazier*

Marine Turtle Conservation in South and Southeast
Asia: Hopeless Cause or Cause for Hope -
K.Shanker & N.J.Pilcher

News & Legal Briefs
Recent Publications

Issue No. 101 July 2003

Articles

Sea Turtles in Spanish Mediterranean Waters: Surprises in 2001 - *J. Tomás, M. Fernández & J.A. Raga*

Confirmed Leatherback Turtle (*Dermochelys coriacea*) Nests from North Carolina, with a Summary of Leatherback Nesting Activities North of Florida - *David R. Rabon et al.*

Monitoring Nesting Loggerhead Turtles (*Caretta caretta*) in the Central Caribbean Coast of Colombia - *Diego Amorcho*

Incidental Capture of Loggerhead Turtles (*Caretta caretta*) on Boa Vista (Cape Verde Islands) - *L.F. López-Jurado, N. Varo-Cruz & P. López-Suárez*

Observations on Sea Turtles in the State of Paraíba, Brazil - *Rita Mascarenhas, Douglas Zeppelini Filho & Valdi Silva Moreira*

Epibiotic Associates of Oceanic-Stage Loggerhead Turtles from the Southeastern North Atlantic - *Michael G. Frick et al.*

Notes

The First Report of Oral Tumors Associated with Fibropapillomatosis in Florida, USA - *Michael J. Bresette et al.*

The First Records of Olive Ridleys in Florida, USA - *Allen M. Foley et al.*

Olive Ridley Sea Turtles in Porto-Novo, Tamil Nadu, India, with an Observation of an Asian Giant Softshell Turtle - *I. Sujjahad Hussain*

Green Turtle with Living Tag Captured in the Southern Bahamas - *Karen A. Bjorndal et al.*

Second Record of a Green Turtle (*Chelonia mydas*) Tagged in Brazil and Captured in Nicaragua - *Eduardo H.S.M. Lima*

When a Turtle is Worth a Hook - *Paolo Casale I & Giusy Cannavò*

Possible Factors Leading to Non-Occurrence of 'Arribada' at Gahirmatha, Orissa, India in 2001-02 - *Anup K. Nayak*

Meeting Reports, Announcements, News & Legal Briefs, Recent Publications

Editors

Kartik Shanker

Ashoka Trust for Research in Ecology and the Environment, Bangalore, India.

Phone: + 91 80 3533942

Email: kartik@atree.org

Belinda Wright

Wildlife Protection Society of India, New Delhi, India.

Phone: +91 11 26213864

Email: wpsi@vsnl.com

Editorial Board

B.C. Choudhury, *Wildlife Institute of India, Dehradun, India.*

John G. Frazier, *Conservation & Research Center, Smithsonian Inst., USA.*

Biswajit Mohanty, *Wildlife Society of Orissa, Cuttack, India*

Bivash Pandav, *Wildlife Institute of India, Dehradun, India.*

Nicholas J. Pilcher, *Marine Research Foundation, Kota Kinabalu, Sabah, Malaysia*

Webmaster

Karthik Ram, *University of California, Davis, USA.*

For more information about Operation Kachhapa, contact:

Wildlife Protection Society of India (WPSI),

M 52, Greater Kailash, Part - I

New Delhi 110048, India

Phone: +91 11 26213864 / 26292492 **Fax:** 011 26464918

Email: wpsi@vsnl.com

Web: www.wpsi-india.org

Cover Design: Vasundara Singh, ECOTONE

Produced by:

Wildlife Protection Society of India (WPSI), New Delhi, India.

Madras Crocodile Bank Trust, Tamil Nadu, India.

with assistance from:



The world's local bank

The opinions expressed in this publications are those of the individual authors and are not necessarily shared by the Editors, members of the Editorial Board, the Wildlife Protection Society of India, or any individuals or organisations providing financial support.

Contents

Editorial

WRIGHT, B. & MOHANTY, B.	Showing the way: Mass hatchling of olive ridleys in Rushikulya, Orissa	1
-----------------------------	--	---

Notes

AUREGGI, M. & CHANTROPORNSYL, S.	Conservation Project: Sea turtles at Phra Thong Island, South Thailand	3
PILLAI, S.K., SURESH, K.K. & KANNAN, P.	Leatherback turtle released into the sea at Kovalam, Kerala, India	5
KATDARE, V. & MONE, R.	Turtle conservation in Konkan, Maharashtra, India	7
KAPURASINGHE, T.	TCP, Sri Lanka initiates a new in-situ turtle nest protection programme	8

Announcements

Symposium 2004 - First Announcement	9
Symposium 2004 - Second Announcement	13
Manuals on sea turtle conservation - Madras Crocodile Bank Trust	17
Satellite tracking on the World Wide Web	18

News and Reports

Report on GOI UNDP Sea Turtle Workshop Andaman and Nicobar Islands, India	19
Operation Kachhapa News	21
Other News	23

Marine Turtle Newsletter Contents – Issue 94 and Issue 95	23
--	-----------