

Date:08/06/2003 URL:

<http://www.thehindu.com/thehindu/mag/2003/06/08/stories/2003060800360400.htm>

What ails the Ridley?

Said to be on the verge of extinction, the Olive Ridley turtle attracts a great deal of attention from conservationists and the media. But, argues KARTIK SHANKER, while a large number is dying, the 'war' between turtlers and trawlers is not helping the Ridleys. Instead, he urges objective monitoring, dialogue between stakeholders and long-term conservation actions involving local communities.



SEVERAL obituaries have been written for Olive Ridley turtles. Each season for the past few years, 10,000-15,000 dead turtles have been washed ashore on the coast of Orissa, drowned in fishing nets. Reportedly this fishery-related mortality and other factors such as pollution and habitat destruction will shortly lead to the extinction of this population. Is this true or merely the hype of overzealous conservation activists? Is there indeed justification for all the attention that Ridleys get? If so, what is the appropriate course of action? Unfortunately, these are questions that neither conservationists nor their opponents have addressed entirely truthfully. Sea turtles have attracted a lot of attention from biologists and lay persons due to their long distance breeding migrations and other remarkable features. They have also been severely exploited over centuries for their meat, shell and eggs, which has led to drastic declines in many populations worldwide. Olive Ridleys, the smallest of seven species of sea turtles, are particularly known for their mass nesting behaviour, called *arribadas*, when thousands of females come ashore simultaneously to nest. The globally distributed Olive Ridleys are the world's most abundant sea turtles, with mass nesting sites in Pacific Mexico, Pacific Costa Rica and Orissa. In India, they nest in small numbers along both coasts, a few thousand in Tamil Nadu and Andhra Pradesh and over a hundred thousand at Gahirmatha in Orissa.

In Gahirmatha, hundreds of thousands of eggs were once collected annually and revenue (*andakara*) was paid to the local zamindari before Independence, and to the Orissa Forest Department until 1975.

With the introduction of mechanisation in the 1970s, the trade in turtle meat also boomed, and some estimate that over 50,000 turtles were shipped to Calcutta each breeding season, with trains and trucks piled high. However, with the enforcement of the Indian Wildlife (Protection) Act (1972) by the Forest Department and Coast Guard, the trade declined by the early 1980s. Incidental mortality of Ridley turtles in trawl nets was first reported in Orissa in the 1980s. The mortality increased from a few thousand each year in the mid-1990s to 15,000 in 1999 and since then, it has not decreased significantly. The death of most of these turtles is due to drowning in trawl nets (and not by boat or propeller hits). As air breathing vertebrates, sea turtles need to surface to breathe, roughly every half hour or so. The nets are operated for much longer, and the prolonged submergence and stress usually leads to their death. One solution to this problem is the Turtle Excluder Device (TED), a grid that prevents the passage of large animals like turtles and dolphins into the cod end of the net, and instead allows them to escape through an opening.

In India, the Central Institute of Fisheries Technology (CIFT), Kochi, has developed an indigenous TED (about Rs. 2000) that is currently being provided free of cost in Orissa and other States. But even though Orissa has made them mandatory, TEDs are not currently used. The trawler owners argue loss of catch and unfair targeting of one of the causes of turtle decline, while other threats remain unregulated. Experiments with TEDs by CIFT and Wildlife Institute of India (WII) show that the loss of fish catch is generally less than 10 per cent, but this is yet to be accepted by the trawler owners in Orissa. Even if every trawler were forcibly fitted with a TED, they are easy to deactivate during operation, making them completely ineffective. Hence, the support and cooperation of fishers is unavoidable for widespread use of TEDs. Furthermore, many turtles also die in gill nets. In 2001-02, over 200 dead turtles were found entangled in some gill nets in Orissa. There are no excluder devices in these nets. Only seasonal and area wise no-fishing zones can prevent these deaths. And these too will, inevitably, require the cooperation of fishers. So, how soon are these Ridleys going to go extinct? Tomorrow, next year, after a hundred years? Local conservation activists and forest officials have alternately (and sometimes simultaneously) hailed this population of turtles as the "world's largest" and as "highly endangered".



While the former is a matter of pride and public attention, the second is the means of attracting large amounts of conservation funds. Clearly, however, both statements cannot be true.

Marine turtles are a long-lived species, which take many years to mature and reproduce, meaning that factors which adversely affect the population today may not cause declines in adult numbers for several years. Hence long-term data are essential to determine whether populations are increasing, decreasing or stable. Neither does the failure of an *arribada* in a particular year imply the decline of the population, nor does the occurrence indicate that all is well. The knee jerk reactions of conservation activists and media in this regard are completely without merit.

The available data suggests that the number of Ridentles in Orissa may have risen in the 1980s following a ban on commercial trade, but may now be declining due to an increase in fisheries-related mortality. During the 1999 *arribada* at Gahirmatha, the WII estimated about 180,000 nesting females, and the death of nearly 100,000 turtles over the past 10 years is sure to adversely affect this population. *Arribadas* have also failed to occur in Gahirmatha in 1997, 1998 and 2002, which suggests an imminent decline. Given their wide spread distribution and numbers, Ridentles are unlikely to go extinct soon in Orissa, let alone in India or the world. On the other hand, the current mortality and disturbance in offshore waters may lead to the collapse of *arribadas*, and surely they are important enough (culturally and biologically) to preserve for posterity.

A picture begins to emerge here. While this is undoubtedly an important population, maybe it will not disappear as soon as many newspaper reports and conservation activists seem to suggest. As a consequence of the hype that has been generated over this issue, every conservation action has been a hurried reaction to a particular threat, resulting in short-term remedial measures, which have created more heat than light. While TEDs reduce by-catch of various sorts, not just turtles, and can be used at little additional cost by trawlers, they cannot be forced upon trawler owners. In response to criticism, trawler owners have responded with absurd claims that turtles die of migration fatigue and labour pains. In sharp contrast to Orissa, state fisheries agencies have encountered far less resistance in the implementation of TEDs in Andhra Pradesh, where the legacy of turtle conservation carries far less emotional baggage. Conservationists have certainly done much to ensure the continued survival of Olive Ridley turtles on the Orissa coast

— the reduction of the meat trade in the 1980s, legal action to prevent the construction of large ports near mass nesting grounds in the 1990s, and so on. However, most programmes have failed to deal with many other problems such as habitat loss and lighting. They have also failed to address people-related issues, because these take much longer to implement and are inherently more complex.

Many large and charismatic species (mostly large mammals) have been singled out for special conservation attention. One of the main reasons for the channelling of large proportions of conservation funds to these species has been that these animals can be used as flagships to gain broad support. However, in practice, many actions in support of particular species may create substantial antagonism towards conservation and conservationists, especially among local communities who are victims of the actions. In Orissa, huge amounts have been spent in enforcement while only a fraction has been spent in attempts to engage various parties in dialogue.



In Costa Rica, local communities are allowed to collect eggs from the first *arribada*, since turtles nesting later mostly destroy these. Perhaps this is an option for Orissa, though it needs to be carefully thought out and implemented. Perhaps the population can even sustain the exploitation of a few hundred or a few thousand adult turtles each year. If this were true, the real tragedy would be that the turtles that die each year are not consumed or traded by an economically backward State. Of course, until better studies are done, we will not know whether this is feasible, and until better social and legal systems are in place, it may not be safe to allow exploitation in Orissa. However, the very idea of utilisation or management of wildlife resources seems anathema to many conservationists or "preservationists".

Unfortunately, this is not an issue of marine turtles alone. The difference lies in the philosophies of animal rights on the one hand, and environment and wildlife conservation on the other. Conservation philosophy does not suggest that there is anything morally or ethically wrong with using animals, particularly as food, though this does not mean that cruelty is condoned. In fact, sustainable utilisation can be a powerful tool in motivating communities to conserve a resource. Many preservationists are opposed to any kind of utilisation, perhaps because their actions and ideas stem from animal rights philosophy.

Animal liberation and environmental ethics have been distinguished as being based on different intuitions, principles and behaviour. The bio-centric approach (on which animal rights is based), which posits that nature should be preserved because of its inherent right to exist, has been considered and discarded as a philosophy for environmental conservation. As a compromise between the extreme positions of bio- and anthropocentrism, environmental ethics can invoke "weak anthropocentrism", which stresses the cultural value of nature in human society, in

addition to its utilitarian value. Animal liberation and environmental conservation may thus be served by very different approaches and actions.

Some conservation activists believe that one can use any means to achieve their end, including hype and distortion of the truth. Much evidence suggests that conservation will not be achieved without the support of people, for which conservationists need to build a relationship with other stakeholders based on mutual trust and credibility. So let us admit that we do not know enough about the Olive Ridleys of Orissa and take steps to remedy this by fostering collaborations between scientists and managers. Let us admit that our laws there fail because the trawler owners whom they target do not understand the need for conservation. In order to achieve this consensus, we have to make various aspects of human welfare our primary concern. But conservationists either feel that this too large a task or, more likely, not the kind of work that we like to do.

Today, what are required in Orissa and elsewhere are careful objective monitoring, solid scientific research and information sharing. Biologists (or ecologists) are best equipped to collect information and interpret the data because, after all, it is their profession. However, conservationists who work at the grassroots level with local communities and at the policy level with government need to ensure that this information is shared accurately. Finally, once accurate information has been shared, decisions have to be made by all stakeholders, particularly local communities. Many small NGOs on both coasts have beach protection programmes or hatcheries and have been instrumental in spreading awareness about sea turtles and coastal conservation.

THEERAM in Kerala is of particular interest since it was initiated by a young group of fishers. The beach should serve as a classroom where we can educate people about the value of sea turtles and marine habitats rather than as a battlefield where we alienate people because of a narrow turtle (or tiger) -centric view of the world. It would indeed be a pity to lose the mass nesting populations of Olive Ridleys in Orissa. But it would be much worse to lose the turtles and the sympathy of the people towards conservation.

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