The Turtles' Tale: Flagships and Instruments for Marine Research, Education, and Conservation

John G. Frazier

ABSTRACT. Marine turtles are classic flagship species. Their remarkable natural history—large body size, dependence on both terrestrial and oceanic environments, delayed maturity requiring decades to reach adulthood, regular migrations that crisscross ocean basins, massive reproductive output, mammal-like physiology, and other features—make them attractive to researchers and the general public alike. This attraction is further enhanced by the fact that these reptiles are widely recognized as endangered species. They are "biomagnets" for people around the world, from various sectors of society; incredible amounts of time, energy, and resources go into diverse types of investigation, public education, conservation, and international policy directed specifically at these "lowly reptiles." Oceanographers, ecologists, geneticists, marine biologists, and specialists from other related disciplines frequently begin basic research projects on marine turtles. These activities quickly evolve into large multifaceted programs including conservation activities, community-based approaches, and public education together with other forms of development and social projects, and even policy initiatives for promoting regional and global cooperation in the conservation of these shared resources and the habitats on which they depend. Besides enhancing better understanding of the biology and ecology of these animals and nurturing more active and diverse conservation and education initiatives, work on marine turtles also promotes much-needed initiatives in interdisciplinary and international cooperation, which are fundamental challenges to marine work in general. This paper provides a summary of the flagship species concept and gives examples of how work focused on marine turtles has promoted diverse initiatives in marine research, education, and conservation at multiple scholarly, social, and political levels; it argues that this approach serves as a critical integrating force to nurture a wider comprehension and appreciation of the scientific endeavor and its role in society.

FLAGSHIP SPECIES AND THE INCREASE AND DIFFUSION OF KNOWLEDGE

Scientists, educators, and conservationists who specialize on marine organisms and marine environments may all be convinced of the fundamental importance of such things as larval nectophores, pedunculate siphonophores, disappearing zooxanthellae, discharged nematocysts, mitochondrial cytochrome oxidase 1, maximum parsimony, and other indicators of "good science," but what of the rest of society? Marine biodiversity is unique yet poorly understood or appreciated by the general public or decision makers;

John G. Frazier, Conservation and Research Center, National Zoological Park, Smithsonian Institution, 1500 Remount Road, Front Royal, Virginia 22630, USA (frazierja@si.edu). *Manuscript received 9 June 2008; accepted 20 April 2009.*

and a central question with which we all must contend is "How can we promote it?"

Many marine organisms have complex, intriguing life histories, and marine turtles, comprising just seven living species, are classic examples. These air-breathing reptiles are typified by highly complex life cycles: they live with fish but nest on land, relying on terrestrial, coastal, benthic, and pelagic environments during different parts of their life cycle; they can occur in extremely dense concentrations both on land and in the sea; they are "highly migratory," crossing ocean basins; they take a decade or more to reach sexual maturity and can live for half a century or more; and they have highly specialized morphological and dietary adaptations, including mammal-like physiology. A single female often lays more than 100 eggs in a nest and can lay several nests in a season. Their large body size (up to 1 ton), striking coloration, and primeval appearance all add to the attractiveness of these marine reptiles. The fact that marine turtles are globally recognized as endangered species adds a further level of importance. Hence, these reptiles are flagship species: ambassadors of the oceans. The attraction has led to not only enormous interest on the part of the general public but also disproportionate attention in academic circles (Frazier, 2003a, 2005a, 2005b): nearly as much research is conducted on just seven species of marine turtles as is carried out for the remaining 300-some species of chelonians.

In addition, marine turtles are widely valued as sources of meat, eggs, oil, skin, and shell, which have been utilized, crafted, and traded for millennia. A global trading network that supplied elite urbanites of the Mediterranean with raw materials from the shores of the Indian Ocean and beyond was well established before the time of Christ, and the most frequently mentioned commodity was tortoise shell (the external keratinous scutes of the hawksbill turtle, *Eretmochelys imbricata* Linn.). Intricately fashioned toilet articles, particularly ornamental combs, some of which were 85 cm wide, as well as a special style of French furniture luxuriously inlaid with tortoise shell and metal ("Boulle"), and religious accoutrements have all been made famous by the tortoise shell used in their creation. In addition to the tremendous diversity of objects crafted from turtle parts, these animals have been portrayed for millennia on a wide variety of media, from cave walls to carved rocks to delicate ceramics to the cylindrical seals of ancient Arabia (Frazier, 2003b, 2004a, 2005c). Hence, they have had very important cultural, social, and spiritual values in many societies. During contemporary times marine turtles have been celebrated in many and diverse forms, ranging from symbols of sacred nature and "pristine" environments to evidence of the evils committed by modern society on the environment (Campbell, 2003). All this conveys upon these animals a wide variety of values, from cultural and historic to economic and spiritual.

ACTIVITIES FOCUSED ON MARINE TURTLE RESEARCH AND CONSERVATION

The national marine turtle program in Brazil, which began as a dedicated study of reproductive biology and natural history, has evolved into one of the best known long-term programs in South America and the world in general, and the attraction of the turtle flagship over the years has resulted in the incorporation of massive efforts in public education and community development, including alternate livelihoods for community residents, training, and facilitated interactions between different sectors of government and society, not to mention national counsel for regional and international policy actions (Marcovaldi et al., 2005). Similarly, multiyear programs in Uruguay (Laporta and Miller, 2005), northwestern Mexico (Delgado and Nichols, 2005), the Caribbean (Eckert and Hemphill, 2005), and Nova Scotia (Martin and James, 2005) conduct research on diverse topics such as feeding ecology, reproductive biology, genetics, migration, and fisheries interactions. All this research, as well as the associated educational and conservation activities, has been greatly facilitated—if indeed not made possible—by the attractiveness of marine turtles and the ease with which researchers have been able to make use of these flagship species to promote interest in collaborating with different research activities. It is not uncommon for fishermen to go out of their way not only to inform researchers about sightings and captures of marine turtles but also to take on extra work, requiring time, effort, and materials to deliver information and specimens to researchers. Frequently this means allowing, or even inviting, researchers to come onboard and make free use of the fishermen's vessels and materials. Swordfish fishermen in Nova Scotia provide their vessels as research platforms for the complicated process of capturing, boarding, measuring, instrumenting, and releasing turtles of half a ton in body weight or more; researchers are very much aware that the success of their work depends on the altruistic behavior of fishermen (Martin and James, 2005). Uruguayan fishermen, many of whom live at a subsistence level, not only invite researchers to make use of their boats but are active collaborators in the research, attending meetings and participating in presentations (Laporta and Miller, 2005). A dramatic example of

the level of dedication to, and investment in, marine turtle projects is *Theeram Pakriti Samrakshana Samiti* (Coastal Ecosystem Protection Committee) in Kolavipalam Village, Kerala, India. A group of artisanal fishermen decided to protect nesting turtles and their eggs, formed the committee, built a modest beach station, and now run nightly beach patrols, maintain an interpretation center with live turtles, and give public education presentations: all these activities have been self-organized and self-motivated, thanks to the attractive power of the turtles (Shanker and Kutty, 2005). This sort of material and moral support is difficult to evaluate adequately in simple financial terms, but it has been absolutely essential in supporting various aspects of basic research, education, and conservation activities. Indeed, many of these activities would not only be far outside the operational budgets of the organizations involved but simply impossible to achieve without the full collaboration of the fishing communities.

Adventure tourism, often referred to as "eco-tourism," has been widely promoted around the world with marine turtles as the central attractants; indeed, there is even an international travel guidebook that is dedicated specifically to marine turtle tourism (Devaux and De Wetter, 2000). In addition to paying their travel costs, it is not uncommon for tourists to actually pay for the privilege of working as volunteers in turtle research projects, some of which have been operating for decades (Campbell and Smith, 2005). In this way the flagship attraction directly supports research through both funding and the availability of trained volunteer assistants.

An incredible diversity of outreach and public education has been developed with marine turtles as the centerpiece, a phenomenon common around the world and far too diverse to summarize easily (Frazier, 2005d). There are national and regional training programs specific to marine turtle biology and conservation, and some of these have been active for more than a decade, during which time they have seeded well-trained and enthusiastic researchers, educators, and conservationists throughout vast areas, such as India (Shanker and Kutty, 2005), the Caribbean (Eckert and Hemphill, 2005), and Latin America (Buitrago et al., 2008; Marcovaldi et al., 2005). In some cases, the activities and festivals organized by conservationists have been appropriated by local people, who have completely taken over what were initially devised to "sensitize" and "motivate" them to collaborate with marine turtle projects. One of the clearest examples of the rapidly increasing and powerful attraction of marine turtles is the Annual Symposium on Sea Turtle Biology and Conservation, an event that is attended by about a thousand people, with representation from scores of countries and hundreds of presentations (Frazier, 2003a). By using the turtles as attractants "to get people in the door," these activities, events, and projects clearly transcend the turtles and provide a wide basis of information on a diversity of marine organisms and environments, thereby promoting greater interest, research, and appreciation for these topics.

There is ample evidence that the flagship attraction can be instrumental for developing popular and political support to affect local policy decisions, such as the creation of special protected areas and tourism management programs (Tisdell and Wilson, 2005). Moreover, international maritime and fisheries policies have been directly affected by international, regional, and national efforts to conserve marine turtles, particularly through such efforts as mitigation of fisheries bycatch (Bache, 2005). In fact, an extraordinary amount of attention has been paid to marine turtles in the field of international environmental law (Frazier, 2002). At present there are two bilateral agreements, an incipient trilateral agreement, a program under a United Nations Environmental Programme (UNEP) Regional Seas convention in the southeast Pacific, a memorandum of understanding for the Atlantic coast of Africa, and another memorandum of understanding for the Indian Ocean (both under the United Nations Convention for Migratory Species), and a "stand-alone" treaty for the Western Hemisphere, all focused specifically on the conservation of marine turtles. Every one of these instruments includes measures of habitat protection, and the term "habitat" is even included in the title of one accord. Hence, through activities to protect marine turtle habitats over vast areas, these instruments have direct relevance to a wide range of marine organisms and environments, again clearly transcending marine turtles.

In addition to these seven agreements specific to marine turtles, there are many other international agreements that are relevant to marine turtle research, conservation, and education: these include such major global treaties as the UN Convention on the Law of the Sea (UNCLOS), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Biological Diversity (CBD), and the Convention on the Conservation of Migratory Species of Wild Animals (CMS) (Wold, 2002). Moreover, intense concern for the conservation of marine turtles has been instrumental in shaping policy and management directions in fisheries and other maritime issues (Bache, 2002). For example, the Inter-American Tropical Tuna Commission (IATTC), which was constituted nearly 60 years ago to develop regional management of tuna stocks in the Eastern Tropical Pacific, has

been dealing specifically with accidental capture of marine turtles since 2003 and has adopted at least eight resolutions to promote mitigation measures on turtle bycatch. Even the United Nations Food and Agriculture Organization (FAO), originally created to enhance the production of food, has become intimately involved in marine turtle conservation. In March 2004 the "Expert Consultation on Interactions between Sea Turtles and Fisheries within an Ecosystem Context" was held in Rome (FAO, 2004), followed by a technical consultation at which guidelines for mitigating turtle bycatch in fisheries were proposed (FAO, 2005). These technical considerations and recommendations were then taken up by the political body, FAO's Committee on Fisheries, where the proposal was adopted at a global level (COFI, 2005). The result is a set of recommendations for all States that are members of FAO (virtually every country that exists). Some of the specific actions that States are supposed to carry out include stock identification and assessment, tagging and genetic studies, testing mitigation techniques, "pay urgent attention . . . to collection of statistics," collect and share information, and harmonize conservation and management initiatives.

At an even greater level of political importance was a dispute brought before the World Trade Organization (WTO), which challenged the right of a Party to the WTO to enact unilateral measures that ban certain imports in an effort to protect marine turtles from capture and mortality in certain fisheries operations. After several years of contentious debate and the production and exchange of thousands of pages of documentation, an WTO Appellate Body decision released on 22 October 2001 concluded that because marine turtles are endangered species, countries can take exceptions to the all-powerful free-trade rules of the WTO and—following certain procedures—enact unilateral measures to protect turtles, including trade embargos (Bache and Frazier, 2006; Frazier and Bache, 2002).

COMPLEXITIES OF FLAGSHIP PERCEPTIONS

It is important to point out, however, that the inappropriate use of a flagship can lead to totally misguided policies and activities, counterproductive to both environmental and social needs. For example, easy access to highly attractive hatchling marine turtles led to an explosion of "sea turtle conservation hatcheries" along the coast of Sri Lanka, generously funded by unknowing tourists, despite the fact that these establishments were illegal and had negative impacts on hatchling recruitment (Tisdell and Wilson, 2005). Conservation programs that focus reflexively on an urgent need to do everything possible to protect marine turtles but ignore local sociopolitical complexities can create tremendous conflict, for different sectors of society often have divergent, even conflicting, views on how to respond to the flagship and what it primarily symbolizes (Shanker and Kutty, 2005; Frazier, 2008). Although conservationists view marine turtles as indisputable symbols of the need for people to cherish and protect the environment, other sectors of society—for example, certain ethnic groups—see the same turtles in very different ways, such as symbols of cultural identity and reclamation. This divergence in perceptions is true both on Pacific islands (Kinan and Dalzell, 2005) and on a Greek island in the Mediterranean, where contradictions in perceived value of the marine turtle flagship have resulted in violence, death threats, and other forms of intense conflict between different sectors of society (Theodossopoulos, 2005).

SHARED RESOURCES—THE ROOT PROBLEM

Because of their life history characteristics (particularly the long lifespan, dependence on a variety of diverse environments, and dispersal and migration across oceanic basins), marine turtles provide a classic case of shared resources, or "common property." Simple, but basic, questions such as "Who owns turtles?" or "Who has rights to turtles?" clearly show that many parts of many societies have direct impacts, rights, and responsibilities relating to these animals (Frazier, 2004b). This contention is easily illustrated by the fact that more than 2 million reproductive turtles were taken from the breeding grounds in Pacific Mexico between 1964 and 1980 (Frazier et al., 2007). Yet, animals from this population migrate widely throughout the eastern tropical Pacific, living at different times within the jurisdiction of different sovereign States or on the high seas (Morreale et al., 2007). Who had the right to slaughter so many reproductive animals that are part of the fauna of a vast region (an action that had enormous implications on the status of a shared population)? The same question can be asked of people who pollute the oceans with oil spills, plastics, or other wastes: What right do they have to contaminate a common resource? Similarly, when endangered species of marine wildlife, such as dolphins, whales, seabirds, and marine turtles, are caught and killed in fishing activities, the question arises: "What right does the fishing industry have to be killing (even if it is accidentally) wildlife species that are valued by the citizens of many nations?"

Dealing with shared resources is the root issue for nearly all questions regarding biological conservation—

particularly in marine environments. Hence, by highlighting the importance of this central problem, work on marine turtles brings even greater attention to this critical issue, and because these reptiles are regarded globally as endangered species, their importance is further enhanced. Investigations on marine turtles that help promote ways to resolve intractable issues of common property have implications that go far beyond chelonian biology and natural history: they bear on the way modern societies interact with the oceans.

CONCLUSIONS: PROMOTING MARINE RESEARCH, EDUCATION, AND CONSERVATION THROUGH FLAGSHIP SPECIES

The attention given to marine turtles spans the entire sociopolitical spectrum, from marginalized, politically insignificant fishing communities to the most politically powerful organizations on the planet. From one extreme of the political continuum to the other, these animals have been given extraordinary importance. These local, national, regional, and global policy decisions have enormous importance in the ways that individuals, governments, and organizations at various levels assign priorities and allocate resources. Even if the intent is only to comply superficially with obligations that are not enforced, the end result is resources and personnel allotted to some aspect of marine turtle research, education, and conservation.

Although the scientific enterprise and its practitioners strive to develop and maintain an objective, unbiased view of the world, there is no escaping the fact that both the enterprise and the practitioners are immersed within complex social and political systems. The result, despite the firmest of desires, is that there is close interplay and interaction between scientific activities and attitudes that dominate in the surrounding society (Rozzi, 1999). In fact, an anthropological study of the scientific establishment shows not that scientists and their practices are unique among humanity, but rather that they are immersed in a world of power struggles, politics, and myths—little different from the world of the lay public that is so often demeaned by the scientific community (Nader, 1996).

There is no inherent reason that information produced by scientific research will be read, understood, appreciated, followed, used, or even recognized in the halls of power; if practitioners of the scientific endeavor want their information to impact society outside the ivory towers of academia, it is essential that we learn how to "package" the information in digestible, understandable, interesting, and convincing ways (Frazier, 2005e). Flagship species greatly facilitate this exercise for they have values that are attractive to the general society. Used efficiently and appropriately, such species are powerful tools for promoting research, education, and conservation of countless marine issues.

LITERATURE CITED

Bache, S. J. 2002. Turtles, Tuna and Treaties: Strengthening the Links between International Fisheries Management and Marine Species Conservation. *Journal of International Wildlife Law and Policy*, 5:49–64.

Bache, S. J. 2005. Marine Policy Development : The Impact of a Flagship Species. *MAST (Maritime Studies)*, 3/4:241–271.

Bache, S. J., and J. Frazier. 2006. "International Instruments and Marine Turtle Conservation." In *Sea Turtles on the Indian Subcontinent*, ed. K. Shanker and B. C. Choudhry, pp. 324–353. Hyderabad, India: Universities Press.

Buitrago, J., H. J. Guada, and E. Doyle. 2008. Conservation Science in Developing Countries: An Inside Perspective on the Struggles in Sea Turtle Research and Conservation in Venezuela. *Environmental Science and Policy*, 11(6):562–578.

Campbell, L. M. 2003. "Contemporary Culture, Use, and Conservation of Sea Turtles." In *The Biology of Sea Turtles*, Volume 2, ed. P. L. Lutz, J. A. Musick, and J. Wyneken, pp. 307–338. Boca Raton, Fla.: CRC Press.

Campbell, L. M., and C. Smith. 2005. Volunteering for Sea Turtles? Characteristics and Motives of Volunteers Working with the Caribbean Conservation Corporation in Tortuguero, Costa Rica. *MAST (Maritime Studies)*, 3/4:169–173.

Committee on Fisheries (COFI). 2005. "Outcome of the Technical Consultation on Sea Turtles Conservation and Fisheries, Bangkok, Thailand, 29 November–2 December 2004, COFI/2005/7." *Committee on Fisheries, Twenty-Sixth Session, Rome, Italy, 7–11 March 2005*. Rome: Food and Agriculture Organization of the United Nations.

Delgado, S., and W. J. Nichols. 2005. Saving Sea Turtles from the Ground Up: Awakening Sea Turtle Conservation in Northwestern Mexico. *MAST (Maritime Studies)*, 3/4:89–104.

Devaux, B., and B. De Wetter. 2000. *On the Trail of Sea Turtles*. Hauppauge, N. Y.: Barron's Educational Series.

Eckert, K. L., and A. H. Hemphill. 2005. Sea Turtles as Flagships for Protection of the Wider Caribbean Region. *MAST (Maritime Studies)*, 3/4:119–143.

Food and Agriculture Organization (FAO) of the United Nations. 2004. *Papers Presented at the Expert Consultation on Interactions between Sea Turtles and Fisheries within an Ecosystem Context, Rome 9–12 March 2004*, FIRM/R738 Suppl. Rome: Food and Agriculture Organization of the United Nations.

———. 2005. *Report of the Technical Consultation on Sea Turtles Conservation and Fisheries, Bangkok, Thailand, 29 November–2 December 2004*, FIRM/R765 (En). Rome: Food and Agriculture Organization of the United Nations.

Frazier, J., ed. 2002. International Instruments and the Conservation of Marine Turtles. *Journal of International Wildlife Law and Policy*, 5:1–207.

———. 2003a. Why Do We Do This? *Marine Turtle Newsletter*, 100: 9–15.

———. 2003b. "Prehistoric and Ancient Historic Interactions Between Humans and Marine Turtles." In *The Biology of Sea Turtles*, Volume 2, ed. P. L. Lutz, J. A. Musick, and J. Wyneken, pp. 1–38. Boca Raton, Fla.: CRC Press.

———. 2004a. "Marine Turtles of the Past: A Vision for the Future?" In *The Future from the Past: Archaeozoology in Wildlife Conservation and Heritage Management*, Volume 3, ed. R. C. G. M. Lauwerier and I. Plug, pp. 103–116. Oxford: Oxbow Books.

———. 2004b. "Marine Turtles: Whose Property? Whose Rights?" In *Marine Turtles: A Case Study of 'Common Property' from the 'Global Commons,' The Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP): The Commons in an Age of Global Transition: Challenges, Risks and Opportunities, 9–13 August 2004, Oaxaca, Mexico*. Bloomington, Ind.: Digital Library of the Commons. http://dlc.dlib.indiana.edu/archive/00001388/ (access date: 2 June 2009).

———. 2005a. Marine Turtles: The Role of Flagship Species in Interactions Between People and the Sea. *MAST (Maritime Studies)*, 3/4:5–38.

———. 2005b. Flagging the Flagship: Valuing Experiences from Ancient Depths. *MAST (Maritime Studies)*, 3/4:273–303.

———. 2005c. "Marine Turtles: The Ultimate Tool Kit. A Review of Worked Bones in Marine Turtles." In *From Hooves to Horns, from Mollusc to Mammoth: Manufacture and Use of Bone Artefacts from Prehistoric Times to the Present. Proceedings of the 4th Meeting of the ICAZ Worked Bone Research Group at Tallinn, 26th–31st of August 2003*, Volume 15, ed. H. Luik, A. M. Choyke, C. E. Batey, and L. Lõugas, pp. 359–382. Tallinn, Estonia: Muinasaja Teadus.

———. ed. 2005d. Marine Turtles as Flagships. *MAST (Maritime Studies)*, 3/4:1–303.

———. 2005e. Science, Conservation, and Sea Turtles: What's the Connection? In *Proceedings of the 21st Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-528*, compilers M. S. Coyne, and R. D. Clark, pp. 27–29. Miami, Fla.: National Oceanographic and Atmospheric Administration.

———. 2008. Why Do They Do That? Ruminations on the Dhamra Drama. *Marine Turtle Newsletter*, 121:28–33.

Frazier, J., R. Arauz, J. Chevalier, A. Formia, J. Fretey, M. H. Godfrey, R. Márquez-M., and K. Shanker. 2007. "Human–Turtle Interactions at Sea." In *Biology and Conservation of Ridley Sea Turtles*, ed. P. T. Plotkin, pp. 253–295. Baltimore, Md.: The Johns Hopkins University Press.

Frazier, J., and S. Bache. 2002. Sea Turtle Conservation and the "Big Stick: The Effects of Unilateral US Embargoes on International Fishing Activities." In *Proceedings of the 20th Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-477*, compilers A. Mosier, A. Foley, and B. Brost, pp. 118–121. Miami, Fla.: National Oceanographic and Atmospheric Administration.

Kinan, I., and P. Dalzell. 2005. Sea Turtles as a Flagship Species: Different Perspectives Create Conflicts in the Pacific Islands. *MAST (Maritime Studies)*, 3/4:195–212.

Laporta, M., and P. Miller. 2005. Sea Turtles in Uruguay: Where Will They Lead Us . . . ? *MAST (Maritime Studies)*, 3/4:63–87.

Marcovaldi, M. Å., V. Patiri, and J. C. Thomé. 2005. Projecto TAMAR-IBAMA: Twenty-Five Years Protecting Brazilian Sea Turtles Through a Community-Based Conservation Programme. *MAST (Maritime Studies)*, 3/4:39–62.

Martin, K., and M. C. James. 2005. The Need for Altruism: Engendering a Stewardship Ethic Amongst Fishers for the Conservation of Sea Turtles in Canada. *MAST (Maritime Studies)*, 3/4:105–118.

Morreale, S. J., P. T. Plotkin, D. J. Shaver, and H. J. Kalb. 2007. "Adult Migration and Habitat Utilization: Ridley Turtles in Their Element." In *Biology and Conservation of Ridley Sea Turtles*, ed. P. T. Plotkin, pp. 213–229. Baltimore, Md.: The Johns Hopkins University Press.

Nader, L., ed. 1996. *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*. New York: Routledge.

Rozzi, R. 1999. The Reciprocal Links Between Evolutionary-Ecological Sciences and Environmental Ethics. *BioScience*, 49:911–921.

Shanker, K., and R. Kutty. 2005. Sailing the Flagship Fantastic: Different Approaches to Sea Turtle Conservation in India. *MAST (Maritime Studies)*, 3/4:213–240.

Theodossopoulos, D. 2005. *Troubles with Turtles*. New York: Berghahn Books.

Tisdell, C. A., and C. Wilson. 2005. Does Tourism Contribute to Sea Turtle Conservation? Is the Flagship Status of Turtles Advantageous? *MAST (Maritime Studies)*, 3/4:145–167.

Wold, C. 2002. The Status of Sea Turtles under International Environmental Law and International Environmental Agreements. *Journal of International Wildlife Law and Policy*, 5:11–48.