

Environment of the Sea Notes

Spring 2011

1. Green Boats.

- (a) Green eMotion, a FastCat 445 built by African Cats B.V., a Dutch company, in Durban, South Africa, uses no fossil fuel other than that carried for use in an emergency generator. The boat has crossed the Atlantic twice without resort to its generator. Electric power is provided by bimini solar panels and a masthead wind generator. Cooking is done on an electric induction plate. The boat has retractable Motogen propulsion systems which will drive it at eight knots when there is no wind. For more information, including a virtual tour, go to www.africancats.com.
- (b) In the January-February 2011 issue of Ocean Navigator there is an article entitled "Electric and Hybrid Drives Become an Option" which discusses the foothold which electric and hybrid drives are gaining in the boating world. It describes the Hunter 27e which comes equipped with an EP 1000 electric motor from Elco Electronic Propulsion Systems. It also reports that Beta Marine on Minnesott Beach, North Carolina, has partnered with Hybrid Marine of Sandown on the Isle of Wight to produce a hybrid diesel solution for boats. The article contains an interesting discussion of the basic ways to set up a hybrid drive, diesel/electric, serial hybrid and parallel hybrid systems.

2. Large Cruise Ships Barred from Antarctic Waters.

Starting in August, 2011, regulations promulgated by the International Maritime Organization will prohibit large cruise ships from burning heavy fuel in Antarctic waters. Burning heavy fuel produces highly polluting emissions in the atmosphere and poses a serious risk to marine life if spilled. It is estimated that this will reduce the number of passenger visits to Antarctica from more than 15,000 a year to 6,400 all of whom will arrive on greener ships.

3. Books Worth a Read.

There continues to be no shortage of good books on the oceans and the problems facing them. Here are several worth a look.

- (a) Moby-Duck - The True Story of 28,800 Bath Toys Lost at Sea and the Beachcombers, Oceanographers, Environmentalists and Fools, Including the Author, Who Went in Search of Them by Donovan Hohn. On January 10, 1997, during a severe storm south of the Aleutians near the International Date Line, a ship en route

to Tacoma from Hong Kong lost several containers, at least one of which broke open and released 28,800 plastic bath toys. This fascinating book is about where they came from and what happened to them following their loss at sea. The tale takes the author to the shores of Alaska, to Hong Kong, to the Great Pacific Gyre, aboard a container ship in the north Pacific and to the Northwest Passage, among other places, always in the company of knowledgeable and interesting people. Nathaniel Philbrick has called the book a “masterpiece” and “a page turner”. Tom Bissell, the author of *Chasing the Sea*, suggests that readers read it twice and then “tell everyone you know that you have discovered a writer of immense skill and originality”. The title and sub-title alone should provide all the motivation one needs to read it.

- (b) *The View From Lazy Point* by Carl Safina. This book is from the author of *Song For the Blue Ocean* and *Eye of the Albatross*, both discussed in earlier editions of these Notes. Told from his home on the shores of Eastern Long Island and places as far afield as the Arctic Ocean or tropical coral reefs, it is an account of a year of the author’s observations focusing on the plight of our oceans and the wildlife which inhabits them. Mr. Safina is also the author of the recently published *A Sea in Flames - The Deepwater Horizon Oil Blowout*.
- (c) *Oceans - The Threat to Our Seas and What You Can Do to Turn the Tide*. Edited by John Bowermaster. This collection of about 30 essays by various experts who have studied the problems facing our oceans and/or are trying to protect them, is divided into three parts: Loving It, Losing It and Saving It. It concludes with a section entitled “What You Can Do” and has a lengthy list of organizations working on ocean issues.
- (d) *Four Fish - The Future of the Last Wild Fish* by Paul Greenberg. This book is about the global fisheries market and the relationship humans have with salmon, sea bass, cod and tuna, each threatened. It explores the contradiction between our desire to save these fish and to eat them. Sam Sutton, a restaurant critic for the New York Times, said of the book: “It is a necessary book for anyone truly interested in what we take from the sea to eat, and how and why.” For a shortened version of the book’s message, see an article adapted from it entitled “Tuna’s End”, which appeared in the New York Times Magazine on June 27, 2010.
- (e) *The Wave - In Pursuit of the Rogues, Freaks and Giants of Our Oceans* by Susan Casey. As the title suggests, is book is an exploration of the phenomenon of huge waves from the perspective of seafarers, scientists and surfers. It looks at the question whether global warming will lead to stormier oceans and bigger waves, the answer to which seems to be yes, making wave science more important than ever.
- (f) *Citizens of the Sea* by Nancy Knowlton. During 2010 many of the extraordinary results of the Census of Marine Life, conducted during the preceding decade, were made public. This book, which was published by the National Geographic Society, is a collection of amazing photographs of creatures identified during the study. They are accompanied by comments of the author, who is a marine scientist at the

National Museum of Natural History and was one of the leaders of the census project. Another book relating to the Census is World Ocean Census by Darlene Trew Crist, Gail Scowcroft and James M. Harding, Jr., with a foreword by Sylvia Earle. This book highlights the many stories behind the Census through text and images. For more on this subject, see “There’s Plenty of Awe Left in the Oceans” below.

(g) Death & Life of Monterey Bay: A Story of Revival by Stephen Palumbi and Carolyn Sotka. The authors are, respectively, Director of the Hopkins Marine Center and the Harold A. Miller Professor of Marine Science at Stanford, and Project Coordinator For Communications Partnerships For Science and the Sea. The book provides a roadmap for how ordinary citizens can save their ecosystems and communities.

4. There’s Plenty of Awe Left in the Oceans. As mentioned above, last year the Census of Marine Life published its results, which provided an unprecedented view of life beneath the seas. The Census estimates that there are in excess of one million species in the oceans, three-fourths of which have yet to be discovered. It found more than 6,000 potentially new species. The effort involved more than 2700 scientists, 670 organizations and more than 500 expeditions spanning some 900 days at sea. Nearly 30 million observations of 120, 000 species were made. The census established a base-line over which changes during the course of this century can be monitored. For more information, including many beautiful images, go to www.coml.org.

The frontiers of the oceans continue to be explored in other ways. An article entitled “Jewels in the Mud” appearing in the September/October, 2010 issue of Explorations Magazine, published by the Scripps Institution of Oceanography, discusses efforts of William Fenical, a marine biomedical pioneer at Scripps to look to the oceans to battle drug-resistant diseases. Fenical believes that many of tomorrow’s new drugs will come from the oceans. In 1998 he founded the Scripps Center for Marine Biotechnology and Biomedicine.

Further exploration of the oceans is discussed in an article in the May/June, 2010 issue of Explorations Magazine in an article entitled “Wiring the Oceans”. With funding from the National Science Foundation, Scripps, together with colleagues at the Woods Hole Oceanographic Institution, will construct the world’s largest ocean observatory, known as the Ocean Observatory Initiative. Observatories will consist of deep water moorings and underwater gliders to provide long-term observations.

5. Final Recommendations of Ocean Policy Task Force. On July 19, 2010, President Obama signed an executive order adopting the recommendations of the Interagency Ocean Policy Task Force, which will establish a National Policy for the Stewardship of the Oceans and Great Lakes and create a National Ocean Council to strengthen ocean governance and coordination. Among other things, the recommendations call for a flexible framework to address conservation, economic activity, user conflicts and sustainable use of the oceans, our coasts and the Great Lakes.

6. International Coastal Cleanup - An Impressive Milestone. In September, 2010 the International Coastal Cleanup commemorated its 25th anniversary. According to the Ocean Conservancy, some half-a-million volunteers cleaned up approximately 6,000 sites in more than 100 countries and locations. For more information, visit www.oceanconservancy.org and see the report "Trash Travels: From Our Hands to the Sea, Around the Globe and Through Time." Information can also be found there about the sponsoring partners of the Cleanup, which include the Coca Cola Company, Bank of America, Altria Group, Booz Allen Hamilton and the Dow Chemical Company. The next coastal cleanup will take place on September 24, 2011.

7. Reducing Ship Strikes of Right Whales. An interesting article appeared in the September, 2010 issue of The Atlantic, describing efforts of scientists to protect right whales, one of the world's most endangered species, from extinction. These include aerial surveys, whale sighting hot-lines, acoustic buoys that detect whale calls and new shipping lanes that direct heavy shipping traffic away from whale habitats. An example of the latter is that in the Bay of Fundy, moving shipping lanes four miles eastward reduced the strike risk by as much as 90%. Engineers from Woods Hole Oceanographic Institution and the Cornell University Laboratory of Ornithology have used hydrophones on buoys near Boston and off the coasts of Georgia and Florida to pick up right whale call and alert ships to them. These alerts are posted on www.listenforwhales.org.

8. Sustainable Seafood. Last September, Whole Foods Markets announced that it is partnering with the Monterey Bay Aquarium and the Blue Ocean Institute to label all the wild caught seafood in its North American Stores according to the sustainability criteria of its partner organizations. The company has pledged to eliminate all seafood on the "Avoid" lists of Seafood Watch and the Blue Ocean Institute from its stores by Earth Day, 2013.
