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Source: BioScience, 58(9) : 882-883

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1641/B580917

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MYSTERIES OF THE DEEP

Coral Reefs. Gail Gibbons. Holiday House, New York, 2007. 32 pp., illus. $16.95 (ISBN 9780823420803 cloth).

Discovering Underwater Secrets with a Nature Photographer. Patricia J. Murphy. Enslow, Berkeley Heights, NJ, 2007. 24 pp., illus. $21.26 (ISBN 9780766028166 cloth).

Fabulous Fishes. Susan Stockdale. Peachtree, Atlanta, 2008. 32 pp., illus. $15.95 (ISBN 9781561454297 cloth).

I Wonder Why Whales Sing: And Other Questions about Sea Life. Caroline Harris. Macmillan, New York, 2008. 32 pp., illus. $6.95 (ISBN 9780753462331 paper).

Marshes and Swamps: A Wetland Web of Life. Philip Johansson. Enslow, Berkeley Heights, NJ, 2007. 48 pp., illus. $23.93 (ISBN 9780766028142 cloth).

Oceans. Beverly McMillan and John A. Musick. Simon and Schuster Books for Young Readers. New York, 2007. 64 pp., illus. $16.99 (ISBN 9781416938590 paper).

Secrets of the Deep: Marine Biologists. Mike Unwin. Heinemann-Raintree, Chicago, 2008. 32 pp., illus. $19.75 (ISBN 9781403499523 cloth).

The history of human survival can be traced to our dependence on the ocean, with its lunar tides, marine life, and minerals. And yet today, because of climate change and other human factors such as water pollution and overfishing, our interconnected system is threatened. A call to action, spurred by a clear understanding of our relationship to the ocean, is imperative in order to protect this vital resource for future generations. This process of awareness is seeping into our global conscience, where it will no doubt take root in our children.

Today's political current has helped to produce a tide of children's books about oceans and wetlands. The following titles include examples of some of the best tools to introduce young minds to the bounty and biodiversity of these ecosystems. Several of these books also strive to educate students about the effects oceans have on daily life.

For the younger reader

Young children will be fascinated by Susan Stockdale's picture book *Fabulous Fishes* (ages 2 to 6) as they observe exotic species in their habitats. The illustrations are magnificent, their colors bold and bright. The use of terms that are familiar to young children—"sand," "round," and "land," for example—provides a comfort level that will facilitate learning, while phrases such as "fish that ride" and "fish that flash lights" will pique their curiosity. This would be a valuable resource in preparing for a visit to an aquarium. An afterword lists pictures, names, and interesting facts about each fish, enabling children to associate names with pictures. Several reference books are also listed, and the child pictured on the last page may encourage underwater explorations—starting, perhaps, in the bathtub.

Coral Reefs (ages 4 to 8) is by Gail Gibbons, who has written and illustrated more than 135 books. Vivid pictures of life in the underwater world are displayed in brilliant color as daytime turns to nighttime. Information is presented clearly (the bold red type introducing each topic is a strength of the book), and the brevity of each statement is a plus for young readers. However, I feel that the number of pictures on each page is sometimes overwhelming, and some of the more difficult concepts will need to be explained to young readers. A thorough discussion of the formation, location, and types of reefs, as well as the life cycles and the adaptations of their inhabitants, is included. Overall, *Coral Reefs* is both fascinating and unique; however, perhaps because the book's audience is young children, the issue of global warming as a threat to the survival of this biome is given limited space. Problems such as pollution and physical destruction caused by boats are absent completely.

I Wonder Why Whales Sing (ages 4 to 8) may be used at home or in classroom enrichment activities to introduce young readers to marine life. Children are naturally curious about water, sand, and marine creatures, and author Caroline Harris highlights this curiosity by asking why, how, where, and what. This format comes naturally to Harris, who is a journalist. Colorful, detailed pictures invite further questions, and in this interactive process, a child may enjoy developing a personal glossary. Again, however, information about factors threatening the oceans is very limited.

Discovering Underwater Secrets with a Nature Photographer (ages 5 to 9) is a collection of striking images by leading underwater photographer Norbert Wu, presented in a question-and-answer format by Patricia Murphy. Wu combines an artistic eye and a desire to teach, presenting photos both exquisite and educational. The text makes a strong case in favor of underwater photography as a career or a hobby (and it may well motivate its young readers to learn how to swim). The book displays Wu's equipment and tools, clearly labeled, and offers a map showing where his photographs were taken. This makes for an excellent geography lesson, as he has traveled around the world. Additional facts, books, and Web sites about the photographer are listed at the end of the book, as well as an activity that

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challenges young readers to be scientists. *Discovering Underwater Secrets* serves as an inspiring first glance into our underwater world; it may also work as a first step toward a deeper involvement and greater interest in preserving our oceans.

Philip Johansson has written a four-book series called Wonderful Water Biomes, each title focusing on a unique ecosystem and the flow of energy and life within it. In *Marshes and Swamps: A Wetland Web of Life* (ages 8 to 10), readers are taught the physical characteristics of wetlands, as well as the adaptations and interdependence of its plants and animals, in order to foster an understanding of the fragility of this rapidly disappearing biome. New terms are well defined, appealing photos complement the text, and a salt-marsh food web makes the concept of interdependence easier to comprehend. A shortcoming of the book is the limited space given to the role that wetlands play in our lives—preventing erosion, controlling flooding, and protecting our groundwater by filtering pollutants. Johansson states that many wetland species are disappearing, and that we depend on many of these for food; however, a discussion of human activities that threaten the wetlands—or a plea for action to help save them—would greatly enhance this book.

For the older reader

Oceans (ages 9 to 12), by Beverly McMillan and John A. Musick, is a picturesque book presented in two sections. In the first section, the topics introduced are consistent with basic principles of oceanography. The second section focuses on ocean habitats such as beaches, estuaries, and coral reefs. Major concepts (e.g., the formation and re-formation of Earth's oceans, the oceans' relationship to climate, factors threatening the oceans' ability to be self-sustaining) are clearly addressed, although some readers may require further explanation. Each topic begins with a concise overview that helps encourage students to embark on their reading, and labeled illustrations keep their interest and attention. One of 12 books on various subjects forming this Insiders series, *Oceans* uses three-dimensional model imagery to display a "cross-section" of an underwater lab. A reference section, glossary, and index are all included, adding to the extensive study that can be done using this book.

Like the early explorers, we are in awe of the mysteries that lie below. It is still a vast frontier with many unknowns, and the mystery makes for books that are tantalizing while also being highly educational for children.

The history of marine biology probably began with ocean voyages by the Phoenicians, although Aristotle first recorded descriptions of a variety of species, among them mollusks and crustaceans. Later came Captain James Cook, who logged descriptions of numerous plants and animals during his voyages. Of course, Charles Darwin collected and studied marine organisms on the *HMS Beagle* and sent them to the British Museum for cataloging, and Sir Charles Thomson, on the *HMS Challenger,* plotted ocean currents and temperatures while collecting and analyzing thousands of marine specimens. Now it is your child's or student's turn. *Secrets of the Deep: Marine Biologists* (ages 9 to 12) takes a conceptual approach to learning about the ocean. Author Mike Unwin uses a question-and-answer format in his content-rich book, with each answer proving to be specific and readily comprehended. The reader instantly becomes involved. Beginning with the history of marine biology, Unwin lists pioneers in the field, moves on to describe the working environments of marine biologists, then explains why this area of study is so vital to our existence. Young people need to be made aware of the threat to this ecosystem, which affects climate change and global warming. That is why Unwin emphasizes, throughout the book, the factors threatening the survival of oceans. A glossary, index, suggested further readings, and Web sites are included. The illustrations and well-defined topics make this book appealing, and it conveys a serious message.

Lessons for learning

From the beginning of civilization, oceans have produced food, transportation, medicine, recreation, and an aura of mystery. Our quest for adventure, knowledge, and riches has led to exploration, and technology has allowed our explorations to deepen, literally, and expand exponentially, resulting in an explosion of information and a surge in careers in marine biology and related fields. Yet we face unlimited challenges in this ecosystem, and, like the early explorers, we are in awe of the mysteries that lie below. It is still a vast frontier with many unknowns, and the mystery makes for books that are tantalizing while also being highly educational for children.

With all of our technology and exploration, we have discovered only a minuscule portion of what the oceans offer. The future of younger generations depends on what we know and what we have yet to learn of the dynamics of this ecosystem. With the availability of books for every reading level that are accurate and enticing, children will be both informed and enthralled as they learn the oceans' secrets. If we introduce the ocean world to children at an early age, perhaps we can teach them to appreciate this vital natural treasure; if we introduce our older children to its complexities and its threats, perhaps they will strive to protect it and learn to adapt their own life styles to ensure its survival.

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doi:10.1641/B580917
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