Book Review: Sensuous Seas Tales of a Marine Biologist By Eugene H. Kaplan

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Thinking of the biological world draws our minds to terrestrial examples of grassy fields with sparse trees, shrubs, chirping birds, and small animals. Although some may recall images movies like Finding Nemo or The Little Mermaid offer, we often do not envision the ecosystem which covers most of the world's surface: the aquatic ecosystem! Beneath the surface of water is a system full of diverse communities worthy of our attention. Eugene H. Kaplan takes us underwater on a journey to discover marine organisms and their physiology and aquatic habitats in his novel, Sensuous Seas: Tales of a Marine Biologist. He engages his readers in studying the aquatic ecosystem with illustrations and rich, vivid descriptions.

Themes described in Sensuous Seas closely relate to the ecology and evolution (a class I am taking this semester). One common concept in book is sexual selection for dimorphism. In Chapter 17, Kaplan explains that female fiddler crabs sexually select males with very large claws called the major chela, ranging 2-3 times its body size. Having such a large claw is morphologically disadvantageous to the male, thus highlighting the significance of mate selection in the biological world. Another theme is predatory relationships. Particularly in the light of natural selection, populations are selected for the best anatomy and survival mechanisms. Exemplified in Chapter 2 with the Great Jade Green Octopus, its beak is specialized to hook and tear away crab shells making prey easy to devour. Over generations, octopuses with beaks best fit for predation are naturally selected to dominate the gene pools, which explains their present beak shape. In view of the Red Queen Hypothesis introduced in the ecology course, the crabs may also have coevolved thicker and more complex shells to avoid being eaten by the octopus. Another theme Kaplan emphasizes is the relationship between species and habitat. As governed by evolution, species utilize their environmental conditions to maximize their benefits. The Samoan palolo worm's breeding behavior in relation to the environment in Chapter 7 is a clear example. The female worms release egg-laden reproductive bodies into the sea which are met by the males' sperm on the same night each year due to lunar cues. As discussed in the course, the Samoan palolo worm adapts to the environment to optimize reproduction with high fecundity, since newborns are at high risk of being eaten by predators. Recognizing common theories and their application enriches the reading experience and comprehension of the book.

Each chapter of Sensuous Seas: Tales of a Marine Biologist describes a particular organism's unique physiology and Prof. Kaplan's work experience with it. At the beginning of each chapter, Kaplan introduces the species in a creative and relatable way, either by sharing personal experiences or providing a fictitious scenario. For example, Chapter 6 opens with a date night where a man presents his girlfriend with flowers and the woman rushes to perfume herself before going out. Kaplan continues to describe how we use scent as a sexual instrument in our everyday lives, and he connects this behavior to the role of smell in fish, crab, and worm sexuality. After such introductions, the chapters are then divided into subsections focusing on principles unique to that species. Conceptually, Kaplan focuses on relationships the species has with its mates, predators or prey, and the environment. Referenced as "plates," illustrations with figure descriptions are provided to highlight important visuals for comprehending the information. Plate 15 shows an image of a snail radula. The corresponding figure details its material make up, functionality in both carnivores in herbivores, the way it is used, and evolutionary variants. To conclude each chapter, Kaplan often makes large scale comments about the topic discussed or closes with a witty story related to the marine organism.

I was delighted to read Sensuous Seas: Tales of a Marine Biologist, particularly as a student of biology and as a visual learner. My only conflict with the book was that I was slightly let down by its lack of a climax. Since the book is set up as an informational memoir of Kaplan's knowledge and research experiences, there is no particular culmination achieved. However, the book still satisfies my interests. Because most of the animals I am in contact with are terrestrial, it was refreshing to read about aquatic organisms that I am unfamiliar with. I found the illustrations and Kaplan's discussion of species and their or physiologies enlightening. The Great Jade Green Octopus' (Chapter 2) learning and memory ability was my favorite part of the book. For an organism with a relatively uncomplicated anatomy, it was fascinating to think about how its advanced minds develops over time. It was especially interesting to learn about how the same ecological principles manifest themselves in the various organisms discussed, while noting the unique conditions of each demonstration.

Dr. Kaplan tailored Sensuous Seas to be enjoyed by a large audience. It is an appropriate book for readers as young as high-schoolers because the language and vocabulary is at an intermediate level. Although it may enrich the reader, background knowledge in biology is not a prerequisite to understanding the concepts discussed. At the beginning of the novel, a description of marine biology as a field is presented. Every chapter contains rich and ample descriptions, both verbal and visual, all relevant ecological principles, evolutionary histories, habitats, and physiologies. A glossary is also available to define unfamiliar ecological and scientific terms. However, it is necessary at the very least to be interested in aquatic ecology to enjoy the content of the book. I highly recommend Sensuous Seas to readers interested in learning about marine species and their realized niches. It is a good mental exercise to expand one's thinking from terrestrial to aquatic environments. The book will enable the reader to develop a deeper appreciation for the evolutionary history and adaptions of aquatic species and to recognize their unique positions in the world.

Eugene H. Kaplan has made many significant contributions to biology, literature, and education. Kaplan is a professor and researcher of conservation biology at Hofstra University in New York. He also researches marine ecology, aquaculture, and parasitology in the Caribbean reef and tropical shores. Dr. Kaplan extends scientific conversations to the public by writing novels about his research experiences. Besides, Sensuous Seas: Tales of a Marine Biologist, (which is available in hardcover for $10-$29 and on Kindle or Nook for about $18.) he has also authored nine books. Dr. Kaplan's newest book is on parasitology called What's Eating you? People and Parasites. Because of his significant efforts in literature as a scientist, Kaplan is a recipient of the Herman Melville Award for Literary Contribution.

*This author wrote the paper as a part of BIOL220: Ecology and Evolution under the direction of Dr. Menke

Aside from these interests, Kaplan also has worked on curriculum development for elementary, secondary, and college level education and trained educators at the University of Rwanda.

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