

OCEANOGRAPHY

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Quarterdeck

Richard W. Spinrad, Editor

Do we know what we don't know?

This issue of *Oceanography* is devoted to the Census of Marine Life, a rather daunting set of issues and experimental concepts. The subject reminds me of a section of the book by Tom Brown, entitled *The Tracker*, in which the protagonist, a field-hardened observer of nature, asks a group of his city-slicker subjects, to spend one full day, dawn to dusk, cataloguing every bit of visible flora and fauna contained within a square meter of the forest floor. Mr. Brown's point – and mine, as well – is that our ignorance of the diversity, abundance and distribution of biota, even within our everyday surroundings, can be as vast as it is astounding. Then consider the state of our knowledge of the biota of the grossly unexplored marine environment, and you are left wondering if we even know the full extent of our ignorance.

I was cautiously excited when Jesse Ausubel of the Sloan Foundation, and chief proponent of the Census of Marine Life, first discussed this issue with me. Like most folks, I initially viewed the prospects of such an endeavor with a somewhat jaundiced eye. After all, if we can't even resolve how to take a census of the American population, with its mere 270 million residents, how are we going to count all the fish in the sea? I leave it to the readers of this issue to learn how such a daunting task has been methodically addressed through a series of workshops and discussions. The Sloan Foundation has succeeded in guiding us to the gateway of a new set of revelations concerning the nature and dynamics of the biota of the sea. One can only imagine the new frontiers to which such knowledge might lead us.

Think back a century and you will learn the value of an exercise such as this. Prior to 1900 we knew little or nothing of the following organisms: hydrothermal vent bacteria, many of the gelatinous zooplankton, and the coelacanth, just to name a few. What we've learned from the discovery of these life forms extends well beyond their physiology. We've learned volumes about chemosynthesis, evolutionary biology, organismal biogeochemistry and ocean dynamics, from collecting and observing these species. This is the real message. The Census of Marine Life is not about counting critters in the sea; it is about understanding the complex nature of biological-physical-chemical coupling in the dynamic marine environment, arguably the most demanding and fertile environment on this planet. But, nevertheless, until and unless we begin this Census, we won't even know what we don't know. 

