

The Machine in Neptune's Garden

Historical Perspectives on Technology and the Marine Environment

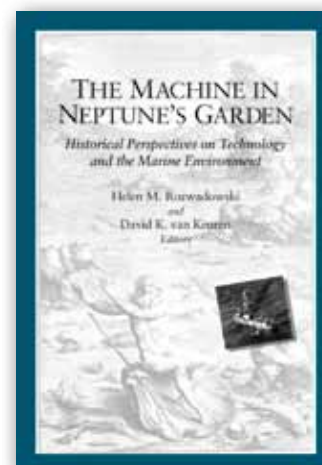
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REVIEWED BY JOHN KNAUSS

One measure of our science's maturity is that there are now a small but growing number of historians of science specializing in oceanography. In the United States, they meet periodically at Maury conferences where papers are presented and discussed. This volume contains the results of Maury III held in June 2001 at the Monterey Bay Aquarium Research Institute. The subtitle, "Historical Perspectives on Technology and the Marine Environment" is an apt description of nearly all ten contributions that comprise this text.

Except for the first two papers, the development of tide recorders and tidal records in Great Britain in the first half of the nineteenth century and the contributions of Henrick Mohn (1835-1916) to our understanding of oceanic circulation, the remaining eight chapters focus mostly on post World War II work. In order, they discuss: (3) Woods Hole director Columbus Iselin and his institution's heroic efforts to assist the navy in a variety of ways during World War II; (4) the role of Scripps in the first

atomic bomb tests, the use of radioactive fallout as an oceanographic tool, and, later on, Scripps scientists' use of radioactive material for studying oceanic processes; (5) the combined efforts of many, including a number of false starts, to establish a systematic system of recording instruments in the North Pacific that in time became the TOGA/TAO array that, today, successfully monitors El Niño events; (6) a crisp history of ocean drilling beginning with the first tentative efforts of the oil industry in the Gulf of Mexico and culminating with the Ocean Drilling Program and the *Glomar Challenger* drilling ship that has contributed so much to the scientific revolution of plate tectonics; (7) a once over lightly survey of Norwegian fisheries science with emphasis on the use of sonar acoustics in that development; (8) Mary Sears (one of the first women oceanographers, a long time staff member at Woods Hole, and an early editor of *Deep Sea Research*), mostly focusing on her time in the Navy as a Wave officer during World War II; (9) the hydraulic model of Chesapeake Bay (first proposed in 1965, finally completed in 1978, and scrapped in 1983), possibly the largest hydraulic model ever built, certainly the largest in the United States—more than 1000 feet long, 650 feet wide, and at its largest dimension held 450,000 gallons of water;



at the time of conception, computers were not large enough or fast enough to compete, but by the time the model was completed they were gaining fast; (10) the planning during the sixties of an artificial island some 2000 feet offshore of Scripps, connected by a causeway or bridge, and how, in time, enthusiasm waned, estimated costs increased and the project abandoned.

Many of the authors of the post World War II papers emphasize the growing role of oceanographers and oceanography both politically and scientifically. For one who grew up during this period (I began my oceanographic career in 1951), I found these articles interesting and, with a few minor exceptions, I have no quarrels to pick with either the stories the authors tell or their interpretations. As professional oceanographers, we have some responsibility for knowing a bit about the history of our field. This book will contribute to that education. ■

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