

Miller  
Koblick

# LIVING AND WORKING IN THE SEA

James W. Miller  
Ian G. Koblick

SECOND EDITION

LIVING AND WORKING  
IN THE SEA

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## LIVING AND WORKING IN THE SEA

By James W. Miller  
and  
Ian G. Koblick

Earth's rich and fascinating oceans have long rewarded both explorers and treasure-seekers. The compelling benefits of actually living beneath the have been recognized only relatively recently, spurring ingenious attempts to construct human habitats for seafloor living.

You can trace the progress of these attempts in *Living and Working in the Sea*. This definitive source illuminates the challenges and excitement as well as the perils and frustrations of undersea living. It shows how the development of saturation diving and seafloor technology led to the use of over 65 undersea habitats during the past three decades.

Over 170 photographs—most of them shown here for the first time—illustrate the technical details and scientific capabilities of seafloor habitation. You will find out how a wide variety of habitats were designed and constructed, what materials were used, and how habitats are operated and maintained. The development of special saturation diving procedures is also traced.

In addition, revealing personal accounts from hundreds of aquanauts give you a vivid sense of life beneath the waves.

The authors fully document the operation of working habitats such as Sealab-II, Hydrolab, Conshelf-III, La Chalupa, and Helgoland. You gain practical information on—

- ! Food and water management
- ! Carbon dioxide and odor removal
- ! Communication, cooking, and lighting
- ! Emergency facilities and procedures
- ! Medical and psychological issues
- ! Open-sea operations

A brief history of diving recounts the earliest efforts to extend submergence time beyond normal human limits. You also get a look into the future of undersea habitation—a future with underwater hotels, classrooms, and even water-breathing aquanauts.

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Living and Working in the Sea covers every facet of the challenge of living beneath the seas. No other single source on the subject is as comprehensive or detailed. Oceanographic engineers, technologists, researchers, and explorers, as well as scientific and sport divers will refer to this undersea "bible" again and again.

## ABOUT the AUTHORS

**JAMES W. MILLER** received the B.A. (1949), M.A. (1950) and Ph.D. (1956) in physiological psychology from Michigan State University. After twelve years of research in physiological optics and visual display systems at the Kresge Eye Institute and Hughes Aircraft Company, he joined the Office of Naval Research in 1963 as director of engineering psychology. In 1964, he became responsible for the diver performance studies in the U.S. Navy's Sealab-II and later Sealab-III programs. Dr. Miller served as deputy program manager of Tektite-I in 1969 and as program manager of Tektite-II in 1970. From 1971 to 1980, he was the deputy director of the NOAA Manned Undersea Science and Technology Office. He participated as an aquanaut team leader in a two-week saturation diving mission in 1973 and again in 1974, both in the La Chalupa habitat. In addition to authoring and co-authoring over 100 scientific and technical publications, Dr. Miller was the writer and editor of the first two editions of the NOAA Diving Manual and a consulting editor for the third edition. The recipient of numerous professional awards, Dr. Miller served from 1980 to 1985 as Associate Director, and from 1985 to 1990 as the Florida Keys Coordinator of the Florida Institute of Oceanography. From 1982 to 1992, he was a consultant and President of Woodell Enterprises. Since 1991, he has served as Vice Chairman and member of the Federal Florida Keys National Marine Sanctuary Advisory Council.

**IAN G. KOBICK**, president of Marine Resources Development Foundation since 1970, is an international authority in undersea living. He received a B.A. in biology from California State University at Chico in 1964. He has served as special assistant to the Governor of the Virgin Islands for undersea programs and as special advisor for the development of marine resources under two governors of Puerto Rico. Mr. Koblick was an alternate aquanaut on Tektite-I, an aquanaut on Tektite-II, and served as Tektite-II program manager for the Virgin Islands' Government. He is responsible for twenty articles on ocean management and resource development and was a consulting editor of the second edition of the NOAA Diving Manual. Mr. Koblick designed and managed the La Chalupa undersea habitat program and has spent more than two months saturated in undersea habitats. Since 1984 he has operated and managed the Classroom in the Sea-MarineLab Habitat in Key Largo, Florida and was co-owner and developer of the Jules' Undersea Lodge, the world's first underwater hotel. In 1995, he developed the Scott Carpenter Man in The Sea Program, a hands-on experience using high-tech diving systems and equipment.

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