

Marine Biology

Group Contract, Spring 1981 -- Peter Taylor, Faculty Sponsor

This program was about the organisms of the open sea and coastal waters and their ecology. The main features of the sea as a habitat and the adaptations of organisms to the marine environment were considered. The marine invertebrates were surveyed most extensively; marine plants and vertebrates, more briefly. Activities included lectures, films, reading, review sessions, and laboratory and field studies.

Lectures and Films. Topics of the lectures were: introduction to marine environments and marine organisms; marine plants; cycle of life in the sea; synopses of the worms, crustaceans, molluscs, and fishes and other vertebrates; salt marshes, coral reef ecology, and marine biogeography. Films shown were about the biology of sharks and the feeding and social behavior of two marine birds (oystercatcher, gull).

Texts. The principal texts for reading and discussion were An Introduction to the Biology of Marine Life (J. L. Sumich, 1980), Pacific Seashores: A Guide to Intertidal Ecology (T. Carefoot, 1977), and Invertebrate Zoology (R.D. Barnes, 1980). Several other books served as identification guides and keys to seaweeds, plankton and benthic invertebrates of local coastal environments.

Review Sessions. Sessions were held once or twice weekly to review the assigned reading and related topics. The usual format was to begin sessions by distributing questions for written responses followed by discussion of the answers and related topics.

Field Trips. Group trips were conducted to the Evergreen College beach (gravelly-sandy-muddy beach, salt marsh, plankton-collecting, and beach-seining for fishes), San Juan Island (rocky intertidal and intertidal sandflat, marina floats and pilings, and bottom-dredging), Nisqually National Wildlife Refuge (salt marsh), and The Seattle Aquarium (marine invertebrates and vertebrates).

Laboratories. Mostly living specimens were examined during laboratory sessions. At Evergreen the lab sessions featured phytoplankton, zooplankton, and an introduction to the identification of shelled mollusks. During eight days at the University of Washington's Friday Harbor laboratories on San Juan Island, facilities and time were available to examine seaweeds, invertebrates and a few fishes collected from piers and floats, by "night-lighting," by bottom dredging, and from the shores.

Field and Laboratory Notes. Emphasis was given to the development of effective, detailed records of field and laboratory observations. The field note system was comprised of a Field Notebook from which observations were transcribed and expanded in a Field Journal and Species Accounts. A Laboratory Notebook was also required.

Species Resumes. Each student was expected to compile written summaries about ten species of marine organisms representing a variety of seaweeds, invertebrates and vertebrates. Each student talked about one species during a series of weekly sessions.