

## MARINE AQUACULTURE

Group Contract, Spring 1976

Sponsor - Peter Taylor

### General Description

This group study is about the propagation of marine life for human use, paralleling the cultivation of plant crops and the rearing of livestock in land agriculture. The overall objective is to survey the present status and potential development of marine aquaculture featuring (but not limited to) activities in the Pacific Northwest. Biological aspects to be considered are: nutrition, growth, life histories, diseases and predators. Also relevant are the structures used in aquaculture, the control of water quality and fouling, the implications of governmental shoreline management and environmental protection standards, and the marketing of aquacultural products.

### Site Visits and Outside Resources

The group has visited facilities and/or with persons involved with aquaculture representing the following commercial firms and public agencies (location and subject in parentheses): Olympia Oyster Company (Shelton-oysters), Lummi Indian Tribal Enterprises (Marietta-oysters, salmon), National Marine Fisheries Service (Seattle, Manchester-salmon, shrimp, national policy, marketing economics), Washington State Department of Fisheries (Brinnon, Olympia-oysters, clams, shrimp, salmon), Washington State Department of Natural Resources (Olympia-shellfish, seaweeds, state policy), University of Washington, Botany Department, College of Fisheries (Seattle-seaweeds, salmonid genetics), Squaxin Island Tribe (Squaxin Island-salmon), Kramer Chin and Mayo (Seattle-aquacultural consulting), Washington State Department of Ecology (Olympia-shoreline management), Seattle Municipal Aquarium (Seattle-public aquarium systems), New England Fish Company (Seattle-seafood processing), U.S. Western Fish Disease Laboratory (Seattle-fish health), Swecker Fish Farm (Rochester-salmon), Bay Center Mariculture Company (Bay Center-oysters, salmon), Bioproducts, Inc. (Astoria-fish food), Oregon State University Seafoods Laboratory (Astoria-fish nutrition).

### Lectures and Films

The sponsor presented lectures on: the scope of aquaculture, oyster biology, salmon biology. Films shown were: "Take Two From the Sea" (clams and oysters), "Wonderful World of Salmon", "The Induced Breeding and Rearing of Grey Mullet."

### Laboratories

Laboratory work was limited. Sessions were held to examine gross anatomy of oysters, mussels and salmon.

### Seminars

The group met weekly to discuss progress on individual projects. One session was held to discuss published articles on "backyard fish farming" and related "low-technology" aquaculture.

### Individual Projects

For individual focus, each participant was expected to prepare a proposal to establish a hypothetical aquaculture venture, specifying all aspects of design and operation including economic considerations. Progress on the proposals was the basis for weekly seminars, and final written reports were submitted.