

Seaweed Biology: Bi 457/557 OIMB Fall 2022

Instructor: Nancy Treneman

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DATES: Oct. 3 – Dec. 9

Monday 8:00 am-5:00

Seaweeds are members of the wonderful group of organisms that changed the planet: the primary producers. Green (Chlorophyta), Red (Rhodophyta) and Brown (Phaeophyceae) macroalgae, collectively known as seaweed are abundant in the coastal waters of the Northeastern Pacific. Seaweeds generate a huge amount of primary biomass and create habitat for a myriad of marine organisms. Climate change is affecting seaweed communities throughout the world's oceans. Algae in the intertidal zone must withstand wave action, desiccation, and predators. These are some of the topics of study in the class: get ready for Phycology, the study of seaweeds!

This class is an overview of seaweed diversity, evolution, biology and ecology. Students will become familiar with the diversity of seaweeds at Cape Arago and learn to identify and prepare seaweed herbarium specimens. Field trips to local intertidal and boat marina/dock sites for collection, surveys, and observation will emphasize community structure and interactions. Assignments include field studies, student projects, seaweed anatomical and taxonomic studies, individual and group research.

Classwork includes:

- Discussions (presentations by the instructor and guest lecturers)
- Overview of library tools and resources
- Seaweed Anatomy, identification, preservation
- Herbarium: examination of historical seaweed specimens and class additions
- Student Projects & Presentation
- Assignments in the field: data collection & analysis
- Research in to topics and discussions (Group and Individual)

Required Materials:

- Notebook with drawing paper (Laboratory Notebook)
- Dissection kit and 1 pair of fine tipped forceps
- Colored pencils
- Write-in-the Rain Field notebook
- Microscope slide box (100 slots)

Required Textbook: (ebook is ok)

Seaweed Ecology and Physiology, Herd, Harrison, Bischof, Lobban, 2nd Ed 2014
ISBN: 978-0-521-14595-4

Recommended Books:

Pacific Seaweeds, A guide to common seaweeds of the west coast (updated and expanded edition 2000), Druehl & Clarkston (hard copy recommended) ISBN: 978-1-55017-737-4

Keys to the Seaweeds and Seagrasses of Southeast Alaska, British Columbia,
Washington, and Oregon: Phycological Contribution #9
Gabrielson & Lindstrom, 2018 ISBN: 0-9763817-3-7

