

RANCHO BODEGA HISTORICAL SOCIETY

The UC Davis Bodega Marine Lab

by Susan Teel - 2014

Most of us are familiar with the UC Davis Marine Laboratory by visiting it, reading about it, or listening to a presentation by Dr. Gary Cher, Director of the Lab. Upon doing some research, I came across a couple of facets of the Lab that I had previously not been aware of. The first is the Bodega Marine Reserve, and the second is the BOON or Bodega Ocean Observing Node.



As a diverse land-and-sea site, the Bodega Marine Reserve straddles a peninsula of coastal granite thought to have been displaced hundreds of miles northward along the San Andreas Fault. The reserve encompasses a broad range of upland, wetland, and marine habitats including coastal scrub, coastal prairie, freshwater and salt marsh, active and stabilized dunes, harbor tidal flats, exposed and protected sandy beaches, and rocky shore with rich intertidal habitats.

These diverse habitats support a wide variety of flora and fauna, including numerous migratory shorebirds, intertidal invertebrates, coastal bluff plants, and marine algae. The UC Davis Bodega Marine Laboratory (BML) provides cutting-edge research facilities and an extensive database for reserve researches. In 1993, a single plant of showy Indian Clover, previously thought to be extinct, was discovered, and that led to a successful propagation program and reintroduction experiments. Research has also led to a study of soil nutrients, herbivores and coastal grassland community dynamics, the effects of invasive green crabs on shorebird population and native invertebrates, the effects of pathogens on native and introduced clovers, and the effects of local adaptation in grasses on ecological restoration.

The BOON, Bodega Ocean Observation Node, is a node in larger regional and global systems that are under development. BOON's aim is to work toward the development of innovative research that benefits society and the economy through the pursuit of a sustainable relationship between humans and the ocean. These projects are data-based and derived from the deployment and operation of state-of-the-art observing technology. Bodega Bay Marine Laboratory's Node continuously monitors meteorological and oceanographic conditions on the Bodega Marine Reserve and adjacent coastal waters.

This automated data acquisition system was first deployed in 1988 and has been expanded several times to measure additional parameters and apply new technologies. The resulting data sets describe the climatological context for all field studies at the site and are a central element of many research and resource management programs. Meteorological sensors measure wind, air temperature, humidity, barometric pressure, rainfall, solar and photo synthetically-active radiation. Oceanographic sensors measure seawater temperature and salinity. In addition, there have been studies that have measured Carbon Monoxide (CO) and the Ozone. In addition to this, BML operates a seawater monitoring station at Fort Point on the southern site of the Golden Gate at the entrance to San Francisco Bay. Data collected at this site include temperature, conductivity, pressure, salinity and density measurements. Additional sensors collect chlorophyll fluorescence and transmittance.