

Holistic Biology 2008 -- General Plan

Week 1: Overview and history of the Monterey Peninsula. Ethnic and environmental diversity of the Monterey Peninsula and holistic approaches to ecology. Readings: Richard Henry Dana, *Two Years Before the Mast*, selections from E. F. Ricketts, *Between Pacific Tides*, and Sessions, *Deep Ecology for the 21st Century*. Field work on local rocky intertidal fauna and zonation. Field trips to Point Lobos Whaling Museum and Pacific Grove Natural History Museum. Creative writing: objects and place.

Week 2: Intertidal ecology. Intertidal ecology and fictional transformations. Readings: Steinbeck's *Cannery Row*, Robinson Jeffers' poetry, Ricketts' essays and selected scientific papers. Field work will examine the historic Hewatt transect in the Hopkins intertidal. Field trips to exposed outer coast, Ricketts' lab and Jeffers' Tor-House, Carmel. Creative writing: story.

Guest speaker: J. Pearse (UCSC)

Week 3: Oceanography and biology of the open sea. Oceanography; mesopelagic and pelagic biology; environmental fluctuations and climate change; religion and the environment. Readings: Rachel Carson, *Under the Sea Wind*, selections from E. O. Wilson, *The Creation*, plus selected scientific and philosophical works. Plankton collection and lab. Field trip to Elkhorn Slough mud flats. Creative writing: character.

Guest speakers: S. Jorgensen, S. Palumbi, G. Somero (Hopkins Marine Station); S. Bograd, R. Brownell, J. Field, R. Parrish, L. Zeidberg (NOAA), F. Chavez, B. Robison (MBARI)

Week 4: Biology and conservation of the Sea of Cortez. Exploration in Baja California; oceanography and biology of the Sea of Cortez; fisheries and aquaculture; marine conservation efforts. Readings: *Log from the Sea of Cortez* (Steinbeck and Ricketts), *Swimming in Circles* (Molyneaux) plus selected scientific works. Field trip to Monterey Bay Aquarium and Monterey Maritime Museum.

Guest speakers: O. Aburto (Scripps); M. Beman (USC); R. Cudney (Packard); C. D'Agrosa (ASU); E. Ezcurra (San Diego NHM); B. Gold (Moore); P. Molyneaux; T. Thomas (Monterey Maritime Museum); B. Thompson (Woods Institute, Stanford); M. Caldwell (Stanford Law School); S. Webster (MBA)

Week 5: Journey to the Sea of Cortez. Cultural, artistic and political history of Mexico; ecological history in Monterey Bay. Reading will continue with *Log from SOC*. Steinbeck films: "A Forgotten Village," "The Pearl," "Viva Zapata." Midterm exam. Travel to La Paz. Creative writing: journals.

Week 6: Retracing Steinbeck and Ricketts' Sea of Cortez. Classes in La Paz: Biology and conservation in Gulf of California, zoology of local fauna, squid biology and fishery. Field work at 1940 Steinbeck-Ricketts sites: Camancito (La Paz), Pt. Lobos (Isla Espiritu Santo), Isla Cayo and Bahia Amortajada (Isla San Jose). Overnight in La Paz and on *Don Jose*. Creative writing: journals.

Field work participants: M. Beman (USC); C. Salinas, S. Amarillo-Coop, J. Ramos (CIBNOR); D. Gendron, D. Escobeda-Urias (CICIMAR).

Week 7: Pelagic biology and oceanography. Shipboard studies focused on phytoplankton blooms – primary productivity; temperature and oxygen profiles; plankton tows. Exploration for Humboldt squid and deployment of pop-up satellite tags. Overnight on *Don Jose*. Creative writing: journals.

Field work participants: same as Week 6

Week 8: Exploring and monitoring. Exploration of Isla Santa Catalina and assessment for future monitoring program with subtidal (snorkeling) surveys of fishes and invertebrates. Intertidal surveys of invertebrates at Punta Marcial and Punta San Francisco as part of a long-term monitoring effort. Camping on Isla Santa Catalina and at Santa Marta with *Pez Sapo*. Creative writing: journals.

Field work participants: O. Aburto (SIO); C. Baxter, N. Burnett, F. Sommer (HMS); J. Ramos, A. Rebollo (CIBNOR).

Week 9: Baja missions, squid fishery, and Yaqui Valley agriculture. Field trips to missions in San Javier and Loreto. Travel to Santa Rosalia and observe squid fishery. Ferry to Guaymas and explore Yaqui Valley agriculture and aquaculture. Overnight in hotels. Creative writing: journals. Return from Hermosillo.

Field work participants: M. Beman (USC); P. Molyneaux; M. Morelli (Ocean Camp San Carlos)

Week 10: Projects, presentations and papers. Final data analysis for projects. Preparation of written reports. Oral presentations at Holistic Biology Symposium.