

Holistic Biology 2010: Week 1

Syllabus and Schedule as of 3/28/10

Su	Mon MARCH	Tues	Wed	Thurs APRIL	Fri	Sa
28	29 0930 Introduction and overview (WG, SS) 1030 Objects and Artifacts: creative writing 1300 Safety training and library orientation 1530 Projects Overview 1700 Dinner on point	30 0900 Creating California in the World System: Land-seascape and legend (J. Walton) 1030 Scavenger Hunt 1430 Scavenger Hunt Reports 1500 <i>Two Years Before the Mast</i> I and Anne Fadiman (SS) 1630 Reports and Film: "Once Upon a Time in Old Monterey" 1900 Travels with Charley, S. Shillinglaw, Monterey Maritime Museum -- optional	31 0900 History of zoology and Hopkins (D. Epel) 1030 Local intertidal ecology and fauna (WG, J. Pearse) 1200 Lunch: "Objects and Artifacts" --readings 1330 <i>Two Years Before the Mast</i> II (SS) 1500 Ecological History of Monterey Bay (S. Palumbi)	1 (-0.6' @ 0705) 0630 Field Work HMS intertidal 1030 <i>Two Years Before the Mast</i> III (SS) 1300 Monterey: Gender, race, class, and culture. (J. Walton) 1430 Field Trip: Monterey Custom House, Larkin House, Pacific House	2 (-0.5' @ 0759) 0700 Field Work Pt. Pinos intertidal 1200 Conservation Biology - - Exequiel Ezcurra, Conservation in the Gulf of California 1430 Field Trip: Pt. Lobos	3

Readings – BOLDFACE posted on Coursework (Week 1)

For 3/29:

For 3/30: PM: Dana, *Two Years Before the Mast*, Chapters 1-10

Fadiman (2007) "Preface" and "Collecting Nature," from *At Large and At Small*

For 3/31: AM: **Kellogg, 1899**. The Hopkins Seaside Laboratory

Ricketts et al. (1985) Introduction, in *Between Pacific Tides*, 5th edition (p 1-14)

PM: **Duncan (1995)**, "River Teeth, a Definition," from *River Teeth, Stories and Writings*

Dana, *Two Years Before the Mast*, Chapters 11-18

For 4/01: AM: Ricketts & Calvin (1948) Rocky Shores: Middle Intertidal, in *Between Pacific Tides* 2nd edition, p29-40 (**optional**)

Ricketts et al. (1985) Rocky Shores: Middle Intertidal, in *Between Pacific Tides*, 5th edition, p51-70

Dana, *Two Years Before the Mast*, through Chapter 28

Robert Louis Stevenson excerpts -- **handout**

For 4/02: AM: Dana, *Two Years Before the Mast*, Concluding chapter and Appendix (optional -- Chapters 22-36)

PM: Sandy Lydon excerpt; Robinson Jeffers -- **handout**

Oral Reports: Scavenger Hunt – Tues, 3/30

Creative Writing: Objects and Artifacts – due Wed, 3/ 31

Holistic Biology 2010: Week 2

Syllabus and Schedule as of 3/28/10

	Mon APRIL	Tues	Wed	Thurs	Fri	
4	5 0900 Invertebrate zoology – selected taxa (CB) 1030 Friendship of John Steinbeck and Ed Ricketts (SS) 1300 Two Years Before the Mast III (SS) 1500 History of holism in ecology (CB)	6 (0.3' @ 1216) 0900 Reports: Intertidal field work 1030 Field Work: Vertical transects 1500 Complex dynamics in ecological systems (CB)	7 0900 Cannery Row (SS) 1130 Monterey fishing history (T. Thomas) 1300 Field Trip: Abalone farm 1500: Lessons from Fisheries Management (B. Thompson)	8 0900 Vertical transect Reports 1030 Jeffers in Big Sur: Poetry, place, ethnography (J. Walton) 1300 Projects Discussion 1500 Ecology and pantheism (CB)	9 0900 Reading Robinson Jeffers (SS) 1200 Conservation Biology – Don Croll, Seabirds: Ecology, declines, and conservation. 1430 Field Trip: Tor House, Carmel	10

Readings – BOLDFACE posted on CourseWork (Week 2)

For 4/05: AM: “*About Ed Ricketts*” – Appendix to Penguin, *The Log from the Sea of Cortez* Steinbeck (1938), "The Snake", from *The Long Valley* -- **handout**

PM: Dana, *Two Years Before the Mast*, complete

Williams (2006) The half-second delay: what follows? *Pedagogy, Culture & Society* 14: 71-81

Clark (1995) I am John’s brain. *Journal of Conscious Studies* 2:144-148

Churchland (2004) How do neurons know? *Daedalus* Winter 42-50

Gopnik (2004) Finding our inner scientist. *Daedalus* Winter 21-28

Sagarin & Pauchard (2009) Observational approaches in ecology open new ground in a changing world. *Front Ecol and Environ* Doi:10.1890/090001 (**optional**)

For 4/06: AM: **Hand et al. (1947)** Distribution of cirripeds and gastropods on plain vertical rock surfaces in the upper intertidal and splash zones

PM: **Grobstein (2005)** Revisiting Science in Culture: Science as story telling and story revising. *J. Res. Practice* 1: 1-18

Abbott (2008) Narrative and emergent behavior. *Poetics Today* 29: 227-244

Grimm (2005) Pattern-oriented modeling of agent-based complex systems: lessons from ecology. *Science* 310: 987-991

For 4/07: AM: Steinbeck, *Cannery Row*, complete.

PM: **Ricketts (1945)** Outer shores transcript

Steinbeck (1948) Preface, in *Between Pacific Tides* 2nd edition, p. v-vi
Steinbeck, *Cannery Row*, complete.

For 4/08: AM: **Walton (2010)**. The poet as ethnographer: Robinson Jeffers in Big Sur. *California History* 87: 22-41

PM 4/09: AM: Robinson Jeffers, selected poetry -- **handout**

Oral Reports: Vertical transects – Wed, 4/8

Creative Writing: Tidepool Metaphor – due Fri, .

Holistic Biology 2010: Week 3

Syllabus and Schedule as of 3/28/10

Su	Mon APRIL	Tues	Wed	Thurs	Fri	Sa
11	12 0900 Basic Oceanography (L. Zeidberg) 1100 Ocean oxygen (WG) 1200 Lunch: Rachel Carson (SS) 1330 Ocean Cycles (F. Chavez) 1500 Field Trip Briefing (WG)	13 0900 Field Trip: Research cruise, Monterey Bay (MLO) -- Mapping of oxygen and temperature fields in southern Monterey Bay. R/V Fulmar CTD casts Towed glider Test pop-up oxygen tag Plankton tow Squid jigging	14 0900 Field Trip Debriefing and Project Ideas (WG) 1030 Squid Behavior and Environmental Influences (WG) 1300 Squid invasions and impacts on fisheries (J. Field) 1500 California Cycles and sardines (R. Parrish)	15 0900 Predatory whales (P. Tyack) 10:30 Drive to Stanford 1300 Ocean Nitrogen (K. Arrigo) at Stanford 1500 Peter Tyack, BioX at Stanford	16 0900 Nitrogen: What hath it wrought? (WG) 10:30 Projects Discussion 1200 Conservation Biology -- Carl Safina 1500 Field Trip: MBARI; Midwater biology (B. Robison)	17

Readings – BOLDFACE posted on CourseWork (Week 3)

- For 4/12: AM: Nybakken (2005) Introduction to the marine environment, in *Marine Biology: An ecological approach* (6th ed) p1-39
 Nybakken (2005) Plankton and plankton communities, in *Marine Biology: An ecological approach* (6th ed) p42-72
 "Introduction" (p1-12) in Hardy, *The Open Sea (optional)*
PISCO (2007) FAQ about hypoxia and the Pacific Northwest 'Dead Zone',
Chan et al (2008) Emergence of anoxia in the California Current large marine ecosystem
Stramma et al (2010) Ocean oxygen minima expansions and their biological impacts, *Deep Sea Research*
Stramma et al (2008) Expanding oxygen-minimum zones in the tropical oceans (**optional**)
Grantahm et al (2004) Upwelling-driven nearshore hypoxia (**optional**)
 PM: Carson, selections from *Under the Sea Wind*
 For 4/14: AM: **Gilly (2010)** Commentary for Lindblad Expeditions (unpublished)
Zeidberg LD, Robison BH (2007) Invasive range expansion by the Humboldt squid, *Dosidicus gigas*, in the eastern north Pacific.
 PM: **Parrish (2000)** A Monterey sardine story. J.B. Phillips Historical Fisheries Report, 1(1):2-4. Maritime Museum Monterey, CA
 For 4/15: AM: **Tyack?**
 PM: **Arrigo?**
Duce et al (2008) Impacts of atmospheric anthropogenic nitrogen on the open ocean *Science (optional)*
 For 4/16: AM: **Galloway et al (2008)** Transformation of the nitrogen cycle: Recent trends, questions, and potential solutions. *Science* 320:899-892
Smil (2002) Nitrogen and food production: proteins for human diets??
Beman et al. (2005) Agricultural runoff fuels large phytoplankton blooms in vulnerable areas of the ocean (**optional**)
 PM: **Robison (2004)** Deep Pelagic Biology. *J. Exp. Mar. Biol. Ecol.* 300: 253-272
Robison (1995) Light in the ocean's midwaters. *Sci. Am.* July (**optional**)

Creative Writing: 'A day at sea' – due Mon, 4/19

Holistic Biology 2010: Week 4

Syllabus and Schedule as of 3/28/10

	Mon APRIL	Tues	Wed	Thurs	Fri	
18	19 0900 <i>The Log from the Sea of Cortez</i> (Ch.1-8) (SS) 1030 History of Baja (WG,SS) 1300 Geology and Baja (J. Ingle) 1500 Projects Discussion	20 0900 Changes in the Sea of Cortez (WG) 1030 Ocean Problems – COS (M. Caldwell) 1300 Field Trip: Elkhorn Slough (M. Silberstein) Read: "The Artic Hedonist" Fadiman 99 ??What is this related to??	21 0900 <i>The Log from the Sea of Cortez</i> (Ch.9-14) (SS) 1030 Ocean climate change (G. Somero) 1300: Film – <i>Forgotten Village</i> 1400: Discussion: Nonteological thinking and the real world	22 0900 Preparations	23 0900 <i>The Log from the Sea of Cortez</i> (Ch.15—29) (SS) 1200 Conservation Biology -- R. Cudney	24

Readings – BOLDFACE posted on CourseWork (Week 4)

For 4/19: AM: Steinbeck, *The Log From the Sea of Cortez* (Ch. 1-8)
 AM: North, *Mother of California* – to be determined
 PM: Ingle?

For 4/20: AM **Sagarin et al., 2008** Remembering the Gulf: changes to the marine communities of the Sea of Cortez since the Steinbeck and Ricketts expedition of 1940
 PM: **Changes in a California Estuary: A Profile of Elkhorn Slough** (Ch 1, Ch 7 (optional))

For 4/21: AM: *The Log From the Sea of Cortez* (Ch. 9-14)
 Sagarin (2007) Climate change, in Denny, M.D. and Gaines, S.D (eds), *Encyclopedia of Tidepools and Rocky Shores*, p137-140.
 Somero (2007) Heat stress, in Denny, M.D. and Gaines, S.D (eds), *Encyclopedia of Tidepools and Rocky Shores*, p266-270.
 PM: **Ricketts Antiscript to *Forgotten Village***

Hardin (1968) The tragedy of the commons. *Science* 162: 1243-1248
Stegner (1985) Living on our principal. *Wilderness* 48: 1-21 (also in *Marking the Sparrow's Fall*, 1998)
Snyder (1990) The place, the region and the commons (also in G. Snyder, in Sessions, *Deep Ecology*)
Sagarin and Crowder (2009) Breaking through the Crisis in Marine Conservation and Management: Insights from the Philosophies of Ed Ricketts. *Conservation Biol.* 23:24-30

For 4/23: AM: *The Log from the Sea of Cortez* (Ch.15—29)