

Behavior and Ecology of Fishes (SIO 296) - Winter Quarter 2014

4 units, combined lecture and seminar (student presentations)

Grading option: S/U

Meeting: Tues/Thurs, 2:00-3:20; VH 300

Instructor: Phil Hastings, phastings@ucsd.edu; 822-2913; VH 201

Office hours: by appointment

This class will review recent literature on the behavior and ecology of fishes with emphasis on phylogenetic interpretations of character evolution and/or implications for conservation biology. The class will be a mixture of lectures on the background of a topic and student presentations of recent literature. Student presenters will assign readings, prepare a brief handout on the topic and lead discussions. Topics to be covered are open and may include habitat selection, foraging strategies, reproductive biology, ontogeny of behavior, speciation, radiations, macroecological patterns, and specialized behaviors.

Week	Dates	TOPICS (speaker)
Week 1: Introduction/Phylogenetic biology		
	7 Jan.	Diadromous fishes (PH)
	9 Jan	Phylogenetic biology (PH)
Week 2: Evolution of behavior		
	14 Jan	Evolution of behavior (PH)
	16 Jan	Display evolution in chaenopsids (PH)
Week 3: Mating systems		
	21 Jan	Mating systems - Introduction (PH)
	23 Jan	Mating systems – demersal eggs & parental care (PH)
Week 4: Mating systems		
	28 Jan	Mating systems – internal fertilizers & monogamy (PH)
	30 Jan	Mating systems - spawning aggregations (Brad Erisman, SIO)
Week 5: Mating systems		
	4 Feb	Mating systems - hermaphroditism (PH)
	6 Feb	Sexual selection & signaling (Sam Mascuch)
Week 6: Habitat selection (& Niches)		
	11 Feb	Habitat use - ontogeny (Cali Turner)
	13 Feb	Habitat use mesopelagic fishes (Noelle Bowlin)
Week 7: Community structure		
	18 Feb	Recruitment (Emily Callahan)
	20 Feb	Resilience (Rachael Morrison)
Week 8: Symbioses		
	25 Feb	Mutualism: gobies and pistol shrimp (Andrew Thompson, NOAA)
	27 Feb	Microbes (Jon Tarn)
Week 9: Conservation Biology & Fisheries		
	4 Mar	Fishing effects on behavior (Brett Garner)
	6 Mar	Human influences on behavior (Elena Perez)
Week 10: Conservation Biology & Fisheries		
	11 Mar	Climate change and fisheries (Chelsey Nieman)
	13 Mar	Swimming in fishes (Yuzo Yanagitsura)