

Zoology 499H: Monster Biology

Syllabus, Spring 2013

T TR 1100-1220

Plus: Movie and Presentation times to be arranged

Dr. Warrick

Week: _____ Lecture topic (*movie suggestions*)

- 1 A brief history of monsters: Personal to apocalyptic; Vampires, werewolves
(*The Wolfman, 1941* ★★★★★)
- 2 Real Big Monsters: The evolution of gigantism; Dinosaurs (*Jurassic Park, 1993* ★★★★★)
Cursorial vertebrates: Scaling, Biomechanics of musculoskeletal systems
(*Godzilla, 1954* ★★★★★; *Godzilla, 1998* ★; see also *Night of the Lepus* ★★★★★)
- 3 Cursorial invertebrates: Scaling, Biomechanics of walking, running, and adhesion
(*Them! 1954* ★★★★★; see also *Tarantula, 1955* ★★)
- 4 ☞ Quiz #1 (50 points); ☜
- 5 Volant vertebrates: Scaling, biomechanics and aerodynamics (*Rodan, 1953* ★★;
Jurassic Park III; Jonny Quest: Turu the Terrible, 1964) Volant invertebrates:
Scaling, Biomechanics, aerodynamics. (*The Deadly Mantis, 1957* ★★; see also *Mothra,*
1962 ★★★★★)
- 6 Aquatic animals: Diving Physiology, Reynolds number, flow, and locomotion. (*It Came From Beneath the Sea, 1955* ★★★★★; see also *Creature From the Black Lagoon 1954* ★★★★★; *Godzilla 1998*)
- 7 Fossorial critters: Biomechanics, scaling, and physiology (*Tremors* ★★★★★; *The Mole People, 1956* ★★; see also *Dune, 1984* ★★★★★)
- 8 The physiology of gigantism: scaling of the cardiovascular, respiratory, and nervous systems (*King Kong, 1932* ★★★★★; *Mighty Joe Young* ★★★★★; *The Deadly Mantis, 1957* ★★)
The development of monsters: Eggs, babies, and my how you've grown! (*Alien, 1982* ★★★★★; see also *Twenty Million Miles to Earth* ★★★★★, 1957)
- 9 Commie monsters: Parasitoids and other body snatching life cycles. (*Invasion of Body Snatchers 1956* ★★★★★; see also *Invasion of Body Snatchers, 1978* ★★★★★; *The Thing, 1951* ★★★★★ & *1985* ★★★★★)
Exobiology: Critters from other planets.

10 Monster trophic relationships, relic populations, and MVP (*The X-Files*, “*Big Blue*” ☆☆☆; see also *The Secret Of The Loch*, 1934)

11 ☞ Quiz #2 (50points); ☞

Grading:	Exams (50 x 2):	100 pts
	Paper	50 pts
	Presentation	<u>50</u>
	Total:	200