

EXAM 3 - Ichthyology FALL 2005      Name \_\_\_\_\_  
Part 1 - Definitions (answer 10 of 11) - SHORT ANSWERS (3 pts each).

1. Minckley
  
2. Optimal foraging
  
3. Grazing
  
4. Indirect Effect
  
5. Ecosystem
  
6. Recruitment
  
7. Ecophenotypic differentiation
  
8. Commercial extinction
  
9. Cohort
  
10. Trophic ontogeny
  
11. Recruitment

Bonus: Name the 3 Great Lakes of Africa? Name the 5 Great Lakes of North America?

EXAM 3 - Ichthyology Fall2005 Name \_\_\_\_\_

Part 2 - Essay Questions - ANSWER 4 of 6 (12.5 Points each)

1. Food webs are thought to be controlled by a series of different processes. These can be broken down into two general categories: top down versus bottom up effects. Please explain the difference between the two.

2. What are five major causes of fish extinction?

EXAM 3 - Ichthyology Fall2005 Name \_\_\_\_\_  
Part 2 - Essay Questions - ANSWER 4 of 6 (12.5 Points each)

3. Name the five components of the predation cycle and describe each component.

4. Discuss selection pressures associated with schooling species. For example, what advantages are gained by schooling and what are the costs? Why do schooling fish show little morphological variation between individuals?

EXAM 3 - Ichthyology Fall2005 Name \_\_\_\_\_

Part 2 - Essay Questions - ANSWER 4 of 6 (12.5 Points each)

5. Please explain the difference between production and annual turnover? Please give examples of how different species have different production or how age affects turnover? Do those species that are the main thrust of our commercial fishing efforts have the greatest production?

6. In order to conserve something, our society often requires that we put a value on it. Please list five values associated with fish conservation and explain what each one is.

EXAM 3 - Ichthyology Fall2005 Name \_\_\_\_\_

Part 3 - Think about these - SHORT ANSWERS - ANSWER BOTH (10 Points each)

1. The findings of a Canadian investigation into the impacts of salmon net pen aquaculture operations in British Columbia were released recently (true story - see Sublegals, 4:14/09). The Report of the Leggatt Inquiry (named for former BC Supreme Court Justice Stuart Leggatt, who headed the investigation) "Clear Choices, Clean Waters," is the result of a review of BC's salmon farm industry and eight days of public hearings in five communities. The report presented findings that net-cage salmon farms are the cause of major environmental damage to the coastal environment and pose a significant threat to wild fish stocks and should be banned. Please summarize what you think the environmental damage and significant threats might be?

2. You are charged with managing fishes in a small stream in Arizona where your goal is to maintain sustainable populations of native fishes. Increased erosional deposition and exotic predatory fish species are the two major problems thought to be negatively impacting native fishes. Please briefly describe your 3 major management recommendations and advantageous and disadvantageous of each recommendation.