

Biology 434
Marine Community Ecology
Exam 3a Study Questions - Marine Fish

Chapter 8

Introduction

In what ways are members of the Agnatha, Chondrichthyes and Osteichthyes similar and different?

General Anatomy of Fishes

Relate fish body shape, niche and microhabitat utilization in any 5 different species of fish that you encountered (consult your logbook) on the field trip.

What are tail aspect ratios and how are they calculated?

Be able to list some species from your logbook that are examples of different aspect ratios.

Describe the methods of locomotion that are observed in marine fish.

Relate body shape to swimming modes in fish.

Why are fish that are active swimmers streamlined?

How do fish maintain their position in the water?

General Physiology of Fishes

In general, how do sharks osmoregulate?

In general, how do marine bony fish osmoregulate?

Describe the anatomy and physiology of the lateral line system in fish.

Describe how the countercurrent principle in a fish gill works.

How does a bluefish tuna thermoregulate?

How are fish mouths correlated with dietary habits (use some examples from your logbook).

Fish Behavior and Migration

What are the patterns that are observed in schooling fish?

Why do fish school?

Give some examples from your logbook of fish that school vs. those that appear to simply aggregate.

Distinguish and give examples of anadromous and catadromus fish.

Discuss the life cycle of the pacific salmon.

What organisms depend on migrating salmon for food (see Pack Creek example).

Discuss and contrast the life cycles of the American and European eels.

Discuss spawning and reproductive behavior in the Atlantic cod or haddock.

End

