

Things to know for the first Ichthyology lab exam

The first exam will cover material up to and including the labs on 28-29 September. This includes: internal and external fish anatomy, fish preservation and museums, fish identification, and information from student presentations. While the emphasis is on the lab, some of the information we covered can be reviewed in chapters 2-4 in Moyle and Cech.

You need to know common names and family, genus and species names. Spelling counts!! If you are off by a letter, I may let it slide. But if you get two or more letters wrong, you will start losing points.

- 1) Why are fish collections and museums important?
- 2) Know the steps for fish preservation – from catch to storing in a museum.
- 3) Know safety and handling of fish specimens in our collection.
- 4) Be able to make and use a dichotomous key.
- 5) Know how to correctly record fin structure (number and types of fin rays/spines).
- 6) Know how to measure and count the external features and shape of fish (e.g., scale number, total length vs. standard length, pre-orbital length, etc.).
- 7) Know information from the student presentations (available on course website).
- 8) Be able to identify all the external features we discussed in class (fins, sensory organs, body parts), including types of mouths, tails, teeth, etc., from handouts.
- 9) Internal organ identification:

Stomach	Kidney	All gill parts
Pyloric caeca	Heart	Brain
Intestine	Gonads	Otoliths
Liver	Kidneys	Red vs. white
Spleen	Gas bladder	muscle
- 10) Be able to identify the skeletal bones marked with asterisks on your handouts.
- 11) Internal and external identification may be from actual specimens, drawings, or slides.
- 12) Be able to identify fishes from lab (and know what features are used to identify them). You will need to know common and scientific names (including family name) for these fishes!

lamprey	longnose gar	herrings and shad
sturgeon	American eel	mooneye
paddlefish	bowfin	