

Life History Paper Instructions

In this assignment, you are to provide a clear, thorough description of all the important biological facets of any single fish species you choose. **Your final paper – and accompanying presentation – are due on the final day of class, Wednesday, June 20.** Your paper is to be at least 2500 words (1.5 line space) and should include the following sections:

1. Introduction

Please provide at least a paragraph of general introduction to your fish, and perhaps why you chose the species that you did.

2. Original description

Please provide the title, author, date, publisher (*i.e.*, the citation) for the publication where your fish species was first described and given a scientific name. This may be somewhat challenging if you choose a very common species that was described a long time ago. Some of those species descriptions were published in other languages. You can do standard library searches (even Google Scholar is ok), but if you are still having difficulty, then seek out the oldest research paper on the species that you can find and look through the references to find the original description. For example, when I was looking for the original description of one particular species, I found a paper on its nesting habits from 1914. Then I looked in the references and was able to find the original description cited. If you choose a recently described species, it will be much easier; however, you'll find a lot less information for the rest of the paper. **Note that I'm not asking you to provide a whole copy of the paper, just a citation for the paper that was the first to describe your fish as a distinct species.**

Please provide your original description **by Wednesday, Mar 21.** Just give me the species and the citation, by email, chli@shou.edu.cn.

3. General description

Include here a physical description of your species. What are the body measurements (*i.e.*, general length, maximum length, *etc.* – morphometrics; meristics are scale counts, fin ray counts, *etc.*)? You can either find as much of this as you can online or in a text or, if you're adventurous and choose a local species, you could even try to catch one and take measurements and meristic counts. I will describe these types of measurements either in a lesson or separately in a video file. It is not necessary to include your own actual physical measurements. In addition, how is the fish colored? Be as descriptive as you can. Are males and females different (*i.e.*, sexual dimorphism)?

4. Distribution and Abundance

Where do they occur? Why do they occur there and not other places? Are they common? Abundant? Rare? Do they migrate? If so, where from and where to? Are they considered invasive exotics (foreign, unwanted pests) anywhere?

5. Habitat Requirements

Why do they live where they live? Are they strictly freshwater? Strictly marine? Can they survive in brackish water (i.e., somewhat salty water found where freshwater meets the ocean)? Are they anadromous? Catadromous? Are there certain temperature requirements? Note that some icefishes spend their whole lives below the Antarctic ice caps while some pupfish occur in extremely HOT desert springs.

6. Biology

Do they have any unusual behaviors? How, when, and where do they reproduce (spawn)? What do they eat? How do they acquire their food? Where are they on the food chain? How fast do they grow? How long do they live? Are there any interesting physiological traits? Are there any interesting interactions with humans? Are populations stable? Declining? Expanding? Why?

7. Importance and Management

Is the species of any economic or recreational importance to humans? Are they reared or stocked by humans? Do they carry any diseases relevant to humans or to other species that are important to humans? Are we boosting populations by stocking anywhere? Are we purposely reducing/controlling populations anywhere?

8. Current Research

Find three examples of current research (within the past five years) that is being conducted on your species. This can range from basic research on behavior or diet, to phylogenetics (figuring out relationships with other species) to dietary value or disease modeling for humans. This may sound difficult, but depending on the species you choose, could be really easy.

9. Conclusion

Provide a brief summary of your findings here.

10. Works cited

Provide a list of references that you used in your paper. You must have at least ten – and **at least five of those must be from SCI journals**. There are a great many ‘fish’ journals out there. Some of the more prominent ones include:

Transactions of the American Fisheries Society
Copeia
Journal of Fish Biology
etc.

You can search paper by keywords using electric resources of SHOU library:

<http://www.blyun.com>

Note that introduction, general description and a preliminary list of references are due on Apr 18; the draft of the term paper is due on May 30; and the final paper is due on Jun 20.

Sent to me by email, chli@shou.edu.cn.