

## Bevan Series on Sustainable Fisheries (FISH/BIOL/ENVIR 478)

Instructor: Trevor A. Branch, tbranch@uw.edu, School of Aquatic and Fishery Sciences, room FSH322B

Teaching assistant for Bevan Series seminars: Iris Kemp, imkemp@uw.edu

### Lectures

Discussion lecture on Thursdays 1:30-3:20pm in room FSH107

Speaker seminar followed by light reception on Thursdays 4:30-5:50pm in fisheries auditorium FSH102

### Class websites

Class website with links to weekly readings for each speaker: <https://catalyst.uw.edu/workspace/tbranch/34645/235468>

Note: some "readings" are links to websites and are not contained in Electronic Reserves.

Discussion website, comments on weekly readings must be posted by **3pm on Wednesday** each week:

<https://catalyst.uw.edu/workspace/tbranch/34645/>

### Attendance and grading

50% of the grade will be based on active participation and discussion in the lectures, attending the seminars, and on posting to the online discussion board; 5% of the total grade per week.

50% of the grade will be based on the project; 10% of the total course grade for the three initial deadlines and 20% of the total grade based on the final project.

For conversion from percentages out of 100, to a grade, I will proceed as follows: (1) Identify a percentage score representing excellence for which I will assign a 4.0 grade (perhaps 1-4 students will receive a 4.0). (2) Identify a percentage score, corresponding to a 0.7 grade score, below which participants would receive a failing grade. (3) Draw a straight line between the two points to convert percentage scores to grades. For example, if  $\geq 90\%$  corresponded to 4.0 scores and 40% to 0.7, then this would yield grades as follows: 50% = 1.4, 60% = 2.0, 70% = 2.7, 80% = 3.3, 90% = 4.0. In past years the average grade for the class has been around 3.5.

### Class project: short literature review

Participants are required to write a short literature review in the format of a scientific paper on one of the topics below, that is related to the Bevan Series topic "Should we eat fish?". Word limits must be strictly followed: title ( $\leq 75$  characters including spaces), abstract ( $\leq 150$  words), introduction ( $\leq 300$  words) and discussion ( $\leq 1200$  words), literature cited ( $\leq 20$  references), and three illustrations (a combination of figures, photographs, tables). The references should be cited in text and formatted in the reference list exactly following the style in recent issues of the journal "Ecology". (NOT the "Journal of Ecology"!) For example in the text cite either that Welsh et al. (1996) found something or that a finding was found (Lambert and Smith 1992). Then the reference list would contain the reference formatted as follows:

#### Literature cited

Welsh, A. B., R. Cunningham, C. R. B. Donnelly, and D. Lindenmayer. 1996. Modeling the abundance of rare species: statistical models for counts with extra zeros. *Ecology* 88:297–308.

Lambert, D. X., and A. Smith. 1992. Zero-inflated Poisson regression, with an application to defects in manufacturing. *Technometrics* 29:1–146.

#### Literature review topic ideas

Feel free to choose one of these topics, mix them up, or invent a new topic (check with me first) related to fisheries or freshwater ecology.

1. Is eating seafood good for your health?
2. What is the archeological evidence for seafood being an important part of human diet?
3. What does the future hold for commercial fisheries?
4. Is eating seafood more sustainable than other sources of protein?
5. How much does fishing contribute to carbon dioxide emissions?
6. Should scientists be advocates of their science, or stand back from the fray?
7. Are catch share programs (individual fishing quotas) good or bad?
8. Are capture fisheries generating economic benefits?
9. Should pregnant women and nursing mothers eat seafood?
10. Do the risks of mercury consumption outweigh any health benefits of eating fish?
11. Can co-management and fisher knowledge improve fisheries management?
12. Are we fishing down, fishing up, fishing through marine food webs?
13. What are the politics behind exploiting natural resources in an ice-free Arctic?
14. What role does fishing play in alleviating poverty?

15. How will climate change affect fisheries production?
16. What does ocean acidification do to tropical reef fishes?
17. What are the strengths and weaknesses of the U.S. Sustainable Fisheries Act?

### Literature review deadlines

Components of reviews must be posted using GoPost: <https://catalyst.uw.edu/collectit/dropbox/tbranch/25158>

(10%) Deadline 1: 1 February, 5pm. Title ( $\leq 75$  characters including spaces); list of references formatted following the exact style of the journal "Ecology" ( $\leq 20$  references); ideas for tables and figures (3).

(10%) Deadline 2: 15 February, 5pm. Tables and figures, including table and figure captions; topic sentences (one sentence per intended paragraph of the paper).

(10%) Deadline 3: 1 March, 5pm. Complete draft manuscript: introduction ( $\leq 300$  words), discussion ( $\leq 1200$  words), and abstract ( $\leq 150$  words).

(20%) Final deadline: 15 March, 5pm. Rewrite manuscript to improve readability, incorporate all suggested changes.

### Resources for writing scientific papers

Gopen, G. D., and J. A. Swan. 1990. The science of scientific writing. *American Scientist* 78:550–558. (Outstanding article on ordering sentences within paragraphs, and elements within sentences to transform your scientific writing.)

Tufte, E. T. 2001. *The visual display of quantitative information*. Graphics Press. (Transformative book on how to present tables and figures to display information.)

Strunk Jr, W., and E. B. White. 2000. *The elements of style*. Longman. (Classic pocket-sized book on how to write with sparse, direct, and clean prose.)

Day, R.A., and B. Gastel. 2008. *How to write and publish a scientific paper*, 6th edition, Cambridge University Press. (Book on the elements of scientific papers.)

### Notes on project titles

A good title will be clear, concise, and catchy. It should both explain the topic being chosen and draw in potential readers. Here are some of the more arresting titles I have come across:

1. Deep-sea mystery solved: astonishing larval transformations and extreme sexual dimorphism unite three fish families
2. Hitch-hiking parasitic wasp learns to exploit butterfly antiaphrodisiac
3. On velvet worms and caterpillars: science, fiction, or science fiction?

### Notes on project writing

1. I expect references to be formatted exactly as they are found in the journal "Ecology" (NOT the "Journal of Ecology"!), including spaces, punctuation, italics, capitalization, etc. I will grade strictly on this aspect of the project. I encourage you to explore using Endnote or Endnote Web, which allows you to enter your articles and then it formats them according to the journal style of whichever journal you are using.
2. For those unfamiliar with finding references, one good resource is the Web of Science (<http://www.lib.washington.edu/types/databases/>), which also exports references into Endnote Web. Another common resource is Google Scholar. If you find a good paper, look for papers that are cited within it, and for papers that cite it in turn.
3. Scientific names of species are always italicized, with the first word (the genus) capitalized, and the second word (the species) in lower case. Thus *Gadus morhua*, not Gadus Morhua or *gadus morhua*, or any other equally jarring variant.
4. Higher level taxonomic units (family, order, class, phylum) are capitalized but not italicized, when referring to them as proper nouns. For example: "Atlantic cod (*Gadus morhua*) come from the family Gadidae. In other words, cods are gadids." If you don't know if a scientific word is a higher level or a genus/species, it is as simple as looking it up on Wikipedia.
5. There is a subtle distinction between the hyphen joining words like deep-water, the medium en dash which is used for number and date ranges like 456–879 and March–April, and the long em dash which separates phrases—like this one—correctly. In Word, these can be found under Insert-Symbol-More Symbols-Special Characters (alt+H+S gets there quickly).
6. If you need an indented line, do not use Enter-Tab. Instead, change the settings on the ruler in Word (Home tab, Paragraph, little arrow bottom right, Indentation, Special, Hanging.)

### University policy on plagiarism and misconduct

Plagiarism, cheating, and other misconduct are serious violations of the student conduct code. We expect that you will know and follow the UW's policies on cheating and plagiarism. Any suspected cases of academic misconduct will be handled according to UW regulations. More information, including definitions and examples, can be found in the Faculty Resource for Grading and the Student Conduct Code (WAC 478-120).