TERM PAPER

• 5 pages double spaced
• At least 4 acceptable references
• ANY OCEAN RELATED TOPIC!!!!!
TERM PAPER

• TOPIC due week of February 13th in lab
  • SUBMIT TO ME BY EMAIL BEFORE LAB THAT DAY
  • Thesis statement and AT LEAST 3 HIGH LEVEL REFERENCES
• ROUGH DRAFT due week of March 13th in lab and digital copy by email
• FINAL DRAFT due and PRESENTATION week of April 24th in lab and digital copy by email

http://www.marinelifephotography.com/fishes/blennies/entomacrodus-marmoratus.htm

Marbled Blenny
Entomacrodus marmoratus
TERM PAPER

• Demonstrate that you can:
  • Select trustworthy sources
  • Build an argument/take a stance on a topic
  • Write a properly formatted paper with:
    • PROPER CITATIONS
    • CORRECT GRAMMAR
    • FORMAL LANGUAGE
    • GOOD ORGANIZATION


Zebra Blenny
Istiblennius zebra
PAO’O
TERM PAPER: GENERAL STRUCTURE

Start with an outline:

• Include your Name & Date
• Paper Title
• Introduction
• Supporting Paragraphs
• Concluding statement
• References

http://www.marinelife-photography.com/marine/echinoderms/urchins/colobocentrotus-atratus.htm
TERM PAPER: INTRODUCTION

- Introduce the main topic
- Background about the topic
- Thesis statement
  - What are you arguing? Or what is your question?
  - This is the last sentence of your introduction

*The introduction sets up the supporting paragraphs

Open Ocean Fisheries

Fish has long been a substantial form of food for humans. Early forms of human life hunted for fish as a food source using methods such as nets, spears and fishing poles. As hunter gatherers humans put an incredible amount of work into catching the fish. However as technological advances were made, fishing boats made it increasingly simple to catch fish in large quantities to provide for a booming population. Now, farming fish is just as easily available as farming cattle. This new method of producing and harvesting fish is similar to that of cattle: a large pen is created in the animal's natural habitat and the animal is then bred in mass numbers.

For fish, this means open ocean waters that have access to natural habitats. Currently there is much controversy over whether or not this is a safe way to harvest fish. This essay contains...
TERM PAPER: SUPPORTING PARAGRAPHS

• Supporting paragraphs (3+)

• Start with a topic sentence that summarizes what that paragraph will be about and connects it to the thesis

• Focused on a topic surrounding your main topic: for example if your paper is about open ocean fish farms:
  • What do they do in these farms?
  • Why are fish farms important?
  • Where does fish farming occur?
  • What is the problem with what they do?

To begin, open ocean fish farms take place in areas just off the coast or bordering the shores. In this essay many examples will be given using the Scottish salmon farms. A fish farm consists of pens in the open ocean that allow the fish access to their natural habitat without escaping. The most common type of fish pen uses framing and nets to hold out predators, and hold the fish in. This allows for fresh water to filter through the nets everyday, carrying nutrients.

Just as with livestock, fish farmers provide substantial amounts of food for the fish. The food fed to farmed fish varies from pellets to fish meal such as sardines. In a study conducted near Norwegian salmon farms, it was found that the fish were fed pellets developed from a combination of fishmeal and land grown components, primarily vegetables. The combination of the fishmeal and vegetables leads to an increase in omega6 fatty acids. This study found that

Similarly to livestock and chicken farming, fish farms are now adding hormones to increase certain elements in the fish, not found naturally. Certain problems are faced by farms when breeding fish, such as successful spawning, egg quality and early sexual maturation that can lead to smaller fish. The controlling factors in these processes can stem from the use of hormones and hormone levels within the fish themselves. A recent development in hormone research came from Professor Betta Levin- Sivan from the Department of Animal Sciences, who
To conclude, fish farms are a way of dealing with the wild fish populations dwindling. As a sustainable resource, fish farms are outproducing the wild catch, and show no signs of stopping. However, there is plenty of evidence supporting a theory that the farmed fish does more harm than good to the ecosystems around them. With open water pens, diseases and bacteria flow freely through the currents and into wild populations. Hormones and excess food pellets are also becoming more available to natural fisheries causing genetic mutations and fattening of the fish. Even harmful algae blooms form around the fish farms as they provide an excellent food source for the algae. In the end, fish farming is a controversial topic, but is still a young business. There is much room for improvement and scientists are doing the best they can to make the process safer, and more fruitful.

- Refresh the reader on your main points and thesis (first sentence of conclusion is your thesis statement)
- What are the take-aways
- What are the implications for the future
- Concluding Sentence
  - e.g. “Fish farming clearly is a young business and has much need for improvement, but is a necessary practice for the future protein needs of the world.”
TERM PAPER: GENERAL STRUCTURE

Start with an outline:
• Include your Name & Date
• Paper Title
• Introduction
• Supporting Paragraphs
• Concluding statement
• References – in-text citations and references list (APA style)

Helmet urchin
*Colobocentrotus atratus*

http://www.marinelifephotography.com/marine/echinoderms/urchins/colobocentrotus-atratus.htm
TERM PAPER - WHERE TO FIND INFORMATION

• UNACCEPTABLE References:
  • Wikipedia, National Geographic, World Wildlife Fund, Youtube, SaveTheWhales.org, Fox News or MSNBC (or any nightly news type), Personal Blog sites

• ACCEPTABLE References (3 levels):
  • Low level: Science or educational websites that cite the primary literature (=Scientific Journal Articles)
    • e.g. ScienceDaily, anything.edu
  • Mid level: Government Records and Websites (NOAA.gov, EPA.gov, NASA.gov, other .gov)
  • High level: Scientific Journals, Published Textbooks, Conference Proceedings (at least 3 of the 4)

http://www.marinelifephotography.com/fishes/filefishes/pervagor-spilosoma.htm

© Keoki Stender

Fantaile Filefish
Pervagor spilosoma
'ō'ili 'uwi 'uwi
WHAT IS A SCIENTIFIC JOURNAL ARTICLE?

1. A new contribution to knowledge that a scientist worked very hard to produce and share with the world
2. OR a review-synthesis of existing knowledge on a topic
   • similar to your paper

• Not all of our work gets published
  • what does get published is usually Peer-reviewed

http://www.marinelifephotography.com/fishes/filefishes/pervagor-spiosoma.htm

Sea slug *Caloria sp.*
HOW TO FIND AN ACCEPTABLE REFERENCE?

• Can **START with Wikipedia** or Google search to find journal articles

• Use Google Scholar or Web of Science (through UHM library)

• Keywords are important! Can get you very different results.
  • Broad v.s. Specific: Chemicals, fish, water V.S. Mercury, tuna, ocean

• How to know if it is acceptable...
  • The 4 references **must at least cite the primary literature** OR be a government or .edu website
  • .gov websites don’t often make their sources clear but information is provided by experts in the field
HOW NOT TO PLAGIARIZE A REFERENCE

• Example Paper topic: Mercury in marine food webs
  • Paragraph 1 topic: Background information
    • Example resource: (1) http://oehha.ca.gov/fish/hg/index.html
    • “Mercury is a natural element found in rocks, coal, and soil”(1).

Do not copy and paste! Even if you think that’s the best way to say it.

• 5 words in a row that are identical is technically plagiarism .... SO :
• Think about what you are trying to say and how you would talk about it, then rewrite it in your own words

• Not-plagiarizing:
  “Mercury naturally occurs in rocks, soil and coal (1) and it gets into the coastal ocean primarily through freshwater runoff from land (2)....”
MICHELLE OBAMA'S SPEECH (2008)
'And Barack and I were raised with so many of the same values: that you work hard for what you want in life; that your word is your bond and you do what you say you're going to do; that you treat people with dignity and respect, even if you don't know them, and even if you don't agree with them.
'And Barack and I set out to build lives guided by these values, and pass them on to the next generation.
'Because we want our children – and all children in this nation – to know that the only limit to the height of your achievements is the reach of your dreams and your willingness to work for them.'

MELANIA TRUMP'S SPEECH (2016)
'My parents impressed on me the values that you work hard for what you want in life.
'That your word is your bond and you do what you say and keep your promise, that you treat people with respect. They taught and showed me values and morals in their daily lives.
'That is a lesson that I continue to pass along to our son. And we need to pass those lessons on to the many generations to follow. Because we want our children in this nation to know that the only limit to your achievements is the strength of your dreams and your willingness to work for them.'

RESOURCES FOR YOU

• Never written a Research Paper before?
  • Purdue University Online Writing Lab: Writing a research paper
  • UH Manoa Libraries, library website
    • Hamilton Library
    • Sinclair Library
  • The Writing Center
    • offers writing consultations free of charge
    • Open 9-5 daily

http://www.marinelifephoto.jpg