

Biology of Marine Mammals Laboratory

Spring 2012: Fridays: 10:05-11:25

Classroom: 10-A33

Instructor: Maria Iversen, +45 22 40 80 07

DIS Contacts:

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Information about the instructor, prerequisites, policies and expectations should be read in the syllabus for 'Biology of Marine Mammals'. These lab credits are an add-on to Biology of Marine Mammals, and that course information acts as background information for this lab credit.

Description

The purpose of this course is to add a laboratory credit to the course 'Biology of Marine Mammals'. This lab credit will give you a more hands-on experience in marine biology as well as in scientific writing, data collection and understanding scientific articles. Be aware you will be expected to use Excel in this course and only a brief introduction to Excel will be given. You will be expected to use excel extensively for stat. You should also be able to find relevant sources for your scientific paper through the internet and libraries in Copenhagen.

Objectives

In this laboratory course, you will learn the process measuring skull morphology in porpoises at the zoological museum of Copenhagen. After the measuring, you be given pre-manufactured data of harbor porpoises to supply the data you collected during your measurements. You will analyze and use the data for your own investigations of different parameters. A question could be: *Is the reverse sexual dimorphism of porpoises evident in all tissues and how does this link to maturity?* From the data and guidance, you should be able to state which questions are important and give the relationship between the different parameters. During your investigations you should search for and use relevant scientific publications and statistics and graphs to determine the relationship between the given parameters. A selection of scientific papers will be on Forum for you to use but you are welcome to compliment with others you may find for your chosen topic. You will give a short oral PowerPoint presentation of your findings, and then the class will discuss what could have been done differently. The oral presentations will give you a chance to practice presenting and will function as a draft at your research paper. You will therefore get plenty at feedback to your work and ideas to develop your paper further plus correct mistakes. In the end, you will produce a full manuscript, fit for the journal: Marine Biology.

Course Evaluations

Participation 35 %

Oral presentation 30 %

Paper 35 %

Deadlines

Outline: 21st February

Oral presentation: 29th February

Paper: 30th March

Readings: On Forum unless otherwise noted

Schedule

Friday, January 27th

10:05 – 11:25 DIS 10-A33

Introduction, expectations and discussion of the reading material

Readings:

Lockyer, C. & Kinze, C. (2003): Status, ecology and life history of the harbor porpoise (*Phocoena phocoena*) in Danish waters. *Harbor Porpoises in the North Atlantic*. Eds. Haug, T., Desportes, G., Víkingsson, G. & Witting, L. NAMMCO Scientific Publications **5**: 143-177.

Galatius, A. (2005): Sexually dimorphic proportions of the harbour porpoise (*Phocoena phocoena*) skeleton *J. Anat.* **206**: 141–154.

Perrin, W. F. (1975): Variation of Spotted and spinner porpoise (*Genus Stenella*) in eastern pacific and Hawaii. Bulletin of the Scripps inst. of Oceanography, University of California, San Diego, La Jolla, California, vol 21: read pg. 1-12.

Read, A.J. & Hohn, A. A. (1995). Life in the fast lane: the Life History of harbor porpoises from the Gulf of Maine (*Reader Compendim #33*)

Friday, February 3rd

10:05 – 11:25 DIS 10-A33

About sampling, article writing and source finding as well as handout of assignment.

Readings:

Laboratory handouts

Guidelines for publishing in Marine Biology

Galatius, A. (2010): Paedomorphosis in two small species of toothed whales (Odontoceti): how and why? *Biological Journal of the Linnean Society* **99**: 278–295.

Wednesday, February 8th - (13:00-18:00):

Meet Maria at Nørreport Station at **12:40 (DO NOT BE LATE)**

Field Study to Zoological Museum (Group #1)

Group 1:

Isabel Seixas
Victoria Troeger
Saira D Dar
Bethany Marie Klett
Emily Michelle Lawrence
Carly David
Kelsey Rae Naruse

Wednesday, February 15th - (13:00-18:00):

Meet at Nørreport Station at **12:40 (DO NOT BE LATE)**

Field Study to Zoological Museum (Group #2)

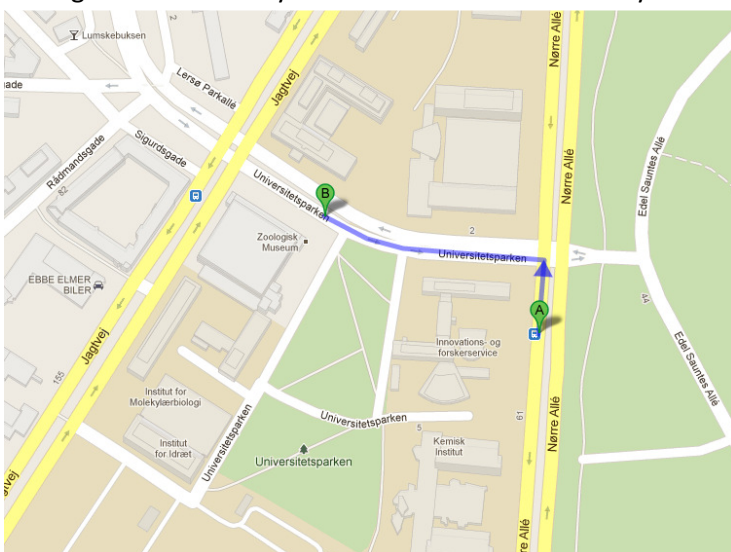
Group 2:

Colette Sidone Millard Peters
Ariana D Sanchez
Danielle Clancy Gendron
Megan Ryan Shaffer
Zachary Bodinger
Julia Moore
Thorey Krebs Munro
Mia Elizabeth Waliszewski

Directions to Zoological Museum

Universitetsparken 12, 2100 København Ø, København

From Nørreport station: Take 150S towards Kokkedal st. (It leaves from the station every ten minutes starting at 12:35). *Get Off at Bus Stop:* Universitetsparken (Stop before is Fredrik Bajers Plads, bus time approx. 7 minutes) Make a left at Universitetsparken and walk approximately 4 minutes and will hit the Zoological Museum to your left. We meet in the lobby at 13:00.



Friday, February 17th

10:05 – 11:25 DIS 10-A33

Necropsies wrap-up, paper discussion, how to make the presentation best

Readings:

Excel, statistics and other info on forum. Please make sure to do either MAC or PC Excel tutorial before class and come in with any questions you may have on how to use Excel to create charts and carry out statistics.

Tuesday the 21st of February: outline due in hard-copy in Lecture class

Friday, February 24th

10:05 – 11:25 DIS 10-A33 ** Outlines back**

Make-Up and/or Workshop Day

Wednesday 29th of February

08:30-12:30 DIS 10-A33

Oral presentation in PowerPoint and feedback

Readings: Read minimum 10 relevant scientific papers as references for your paper and talk. References can be found on folder on Forum.

****March 19-23 individual meetings with Maria**** (remember to book time in BMM)

Friday 30th of March:

Paper Deadline. Hand-in in digital to Maria and hard in copy before of Biology of Marine Mammals class