

Biology 498/698

Arctic Ecology and Survey of Peregrine Falcons in Greenland, 2017

Instructor: Robert Rosenfield

Course Objective: To acquaint students to the biodiversity of arctic ecosystems and the design and implementation of field research to locate cliff-nests, count and band young, and (if allowed/directed) extract blood tissue samples for DNA analyses for genetic structure studies of northern hemispheric breeding Peregrine Falcons. We will relate our field activities in Greenland to broader avian ecology and conservation issues, with an emphasis on research design and endangered species management/conservation.

Important estimated dates (and see International Program handouts):

16 July – 31 July 2017: Survey for breeding Peregrine Falcons within about 50 km of Kangerlussuaq, Greenland. Travel primarily by foot with support using local vehicles. Self-sustaining wilderness camping will be primary means of daily lodging (with periodic overnight stays at Knagerlussuaq institute for Scientific Studies [KISS]). Access to cliff nest sites will be through rock climbing and rappelling.

Test and grades: There will be no exams. Grades will be based on discussion-based evidence of completing reading assignment (Study Abroad packet of selected publications about ecology of Peregrine Falcons in Greenland), and personal evidence of being meaningfully engaged in field activities while in Greenland, and completion and quality of written report documenting our findings.

Written report assignment: Each student is to participate with all their classmates in production of typewritten report that specifies calendric timing of and ilk of field activities while in Greenland. Said document is to be professionally rendered in technical scientific prose that can delivered to Dr. Kurt Burnham (High Arctic Institute) who is responsible for procuring requisite Denmark and Greenland Home Rule permits to allow us to conduct scientific field research on Peregrine Falcons in Greenland. Dr. Burnham uses our report as a required deliverable to document in part his overall research activities in Greenland on large breeding falcons. This assignment must be about 10 – 15 pages in length, list of references included. You must cite technical sources that are pertinent, and represent peer-refereed scientific journals (e.g., *Science*, *Conservation Biology*, etc.). This report is due in Robert's office (CNR 474) by 20 August 2017. I of course am happy to provide counsel regarding the preparation of your report.

I suggest that this document be organized in the following manner (see the 2012 student report I earlier delivered to students as a **general** guideline):

Executive Summary (briefly highlight major findings),

Introduction (render a basis for the research and explicitly state objectives),

Methods (describe the techniques such that a peer could replicate your study),

Results (matter-of-fact rendering of findings, no interpretation),

Discussion (restate objectives and indicate if you met such and what future studies should include based on your results), and

Literature Cited (must provide a technical basis for tenability of techniques employed and pertinent peer-refereed themes).

I note that readers of this document must be able to locate specific information with ease and thus organization of document is most salient (perhaps an Appendix or a Table construct[s] may be appropriate; again, see the aforementioned 2012 report). Governmental officials in Denmark and Greenland that read this report have charge over allowing future scientific expeditions to occur in Greenland; these colleagues read many reports and good organization will expedite their overview of your work and will reflect well on your professional abilities/integrity.

We are going to have some adventure guys!!