

Department of Fish and Wildlife Conservation Meeting
September 21, 2011, 4:00 PM
315 Cheatham Hall

Minutes

1. Information items:

- Promotion to Professor Workshop, October 14, 2:00-4:00, Fralin Auditorium – presentations by Provost McNamee and Associate Provost Jack Finney
- Conference on Higher Education Pedagogy, February 8-10. Inviting proposals for research and practice sessions and for posters, due October 2.
- The group met post-doc Claire Sanderson, working with Kathy Alexander and Aimee Rockhill, instructor for Conservation Biology and Mammalogy.

2. Seeking nominees for student awards. Dr. Hallerman asked the group for nominees, and the following names were put forward:

- Outstanding recent undergraduate alumnus (since 2001): Erica Santana
- Outstanding recent graduate alumnus (since 2001): Darroch Whittaker
- Outstanding undergraduate alumnus (before 2001): Christie Gaborik
- Outstanding graduate alumnus (before 2001): Ed Pert

Dr. Hallerman will forward these nominations to Lane Guilliams.

3. Seeking contacts for CNRE Career Fair to be held November 10, 2011. Dr. Hallerman sought contact information for people at key agencies or other prospective employers, and the following names were suggested:

- VDGIF – Dave Steffen, Mike Pinder
- USFWS – Donald Dean or Bridgett Constanza, Environmental Services – Gloucester office
- USFS – Jesse Overcash
- USDA-NRCS – Andy Rosenberger
- The Nature Conservancy – Sam Lindblom, Abingdon office

Dr. Hallerman will forward these names to Arlice Banks.

4. McIntyre-Stennis and Hatch support – accountability. Dr. Hallerman noted increasing pressure for all faculty to have as approved VAES projects. Those currently lacking projects are Alexander, Fraser, Frimpong, Murphy, and Orth. Dr. Hallerman asked these individuals to initiate proposals. Dr. Haas questioned whether classical proposal documents were still needed – subsequent inquiry showed that they are.

5. Seeking input regarding missing receipts on P-card purchases. Dr. Hallerman noted that use of purchase cards (P-cards) helps with execution of field work, but also carries responsibilities for submitting receipts and completed activity logs. The frequency of non-compliance has risen, and he asked the group for its counsel regarding revocation of P-cards from non-compliers. After spirited discussion, the suggestion as made that a three-strikes-and-you-are-out policy would be appropriate. Dr. Hallerman will implement that policy.

6. Development. Dr. Hallerman noted that the Dean, development officer Bob Mollenhauer, and the department heads held a development retreat on August 24. He presented a list of possible development projects (and prospects), to which the group added several suggestions:

- Undergraduate scholarships based upon need
- Graduate student scholarships – for international students coming here, for U.S. students doing field work internationally, for interdisciplinary research
- Wildlife research and outreach facility
- Classroom renovation
- Boatshed
- Coastal ecology and conservation center
- Conservation aquaculture center
- Large animal holding facility (partner with VDGIF?)
- Chaired professorships
- Capital equipment
- Retirement of remaining debt from Cheatham expansion

7. Undergraduate curriculum. Much of the meeting was taken up with discussion of reform of the undergraduate curriculum. Brian Murphy and Don Orth presented the progress of the fisheries working group, and Sarah Karpanty and Jim Parkhurst that of the wildlife working group. Eric Hallerman and Bill Hopkins presented a proposal for an experiential learning requirement. Documents supporting the discussion are attached to these minutes. Discussion will continue at our October departmental meeting.

Adjourn

Curricular Revision 2011 – Fisheries Section

Action Items from Faculty Retreat (10 August 2011)

1. Action item: *To help students grasp the integration of the curriculum, we should show them a curriculum map in all our classes.*
 - Integrated into student planning section in NR 1114.
2. Action item: *Promote membership in AFS among freshmen more strongly.*
 - Integrated into student development section of NR 1114.
3. Action item: *Consider developing an undergraduate seminar to expose students to what people in this field do and the job skills that employers seek. NR 1115 might be that Undergraduate Seminar to round out the first-year experience.*
 - Under discussion as a check sheet change in 2015 (see next section).
4. Action item: *Consider moving Principles of Fisheries and Wildlife Management to the first year and moving Fisheries Techniques to fall of the sophomore year to provide students with FIW classes every semester from early on.*
 - Under discussion as a check sheet change in 2016 (see next section).
5. Action item: *Engage Don Orth in a discussion of the possibility of dissecting papers from the literature in the FYE course. Competency development will continue with hypothesis identification in the Principles course. In Wildlife Biology, students should state hypotheses in papers they are given to review and in another paper that they find in the literature. We need to flesh out how to further develop competency in this area through the remainder of the curriculum right through the capstone. In particular, quantitative reasoning should be expressly included as an emphasis area for the proposed experiential learning requirement.*
 - Is presently an objective for NR 1114, and for FIW 3514 Fisheries Techniques. Murphy will integrate more specifically into Fisheries Management. Fisheries Section will discuss the quantitative reasoning aspect in more detail, and define specific learning objectives across the curriculum.
6. Action item: *Ensure that the full cycle of scientific method is explicitly addressed every year of the curriculum (courses identified where this should occur (to some extent) were FYE course, Fisheries Techniques, Human Dimensions, and Fisheries Management.*
 - Is presently an objective for NR 1114, and for FIW 3514 Fisheries Techniques. Fisheries Section will discuss specific integration into other courses.

Proposed check sheet revisions, under discussion

2014 check sheet (Fisheries Science)*

- Move BIOL 2804 Ecology from Fall semester Junior year to Fall semester Sophomore year
- Move FIW 4464 from Fall semester Senior year to Fall semester Junior year
- Shift FIW 4624 Marine Ecology from restricted elective to required course
- Shift FIW 4314 Conservation Biology from required course to restricted elective (and change FIW 4614 Fish Ecology to increase conservation coverage and concurrently change its name to Fish Ecology and Conservation)

2015 check sheet (Fisheries Science)*

- Move FIW 3514 Fisheries Techniques from Fall semester Junior year to Fall semester Sophomore year
- Move FIW 4424 from Spring semester Junior year to Spring semester Sophomore year (and remove prerequisite)
- Move FIW 4714 from Spring semester Senior year to Fall semester Senior year
- Consider creating an FIW (all majors) capstone course for Spring semester Senior year

2016 check sheet (Fisheries Science)*

- Move FIW 2114 from Fall semester Sophomore year to Fall semester Freshman year
- Shift all Chemistry lectures and labs from Freshman to Sophomore years
- Consider creating a 2nd semester FYE, and make each semester 1 credit

**Parallel changes proposed for Marine Fisheries option, where possible*

Wildlife Section - Curriculum Revision

Background for 09/15/11 Meeting

What we hope to accomplish at this meeting is as follows:

- Quickly review and summarize recommendations and suggested modifications as discussed and developed at the retreat on the first 4 learning outcomes (base of knowledge, skill set, quantitative reasoning, and communications);
- Continue the process utilized at the retreat to examine the next 2 learning outcomes (inquiry skills and problem-solving skills);
- Schedule the next meeting of the section to review the final set out learning outcomes (integration of learning skills and critical thinking).

In the meeting, we first reviewed the 4 learning outcomes that we explored in detail at the retreat. Faculty that were not present at the retreat added to this discussion.

1-2) Base knowledge/Skill Set

- adequacy in basic population and physiological ecology, GIS, human dimensions, management, ornithology
- Weak in –Community ecology, habitat ecology, landscape ecology, mammalogy, herpetology, our chem and biology courses may not be providing our students what we expect them to provide, and conservation biology may need rethinking to be the true capstone we envision
- order of our courses needs tweaking: techniques earlier?, stats earlier, ag econ and evolution earlier, organic chemistry later or as an option
- Need habitat and evolutionary ecology concepts communicated better across the curriculum
- experiential requirement
- move principles of FIW management to spring 1st year, rearrange bill and carola's classes such that we have a wildlife course every semester
- ecology—take general ecology?
- maybe moving pop dy to fall junior year; but not techniques earlier
- We discussed hiring an instructor (e.g. Lori Blanc, or existing post docs); but priority might be having her teach grad class that we lost when Dean moved into associate dean position
- discussed value of having students take animal behavior in PSYCH, asked Marcella to talk to her friend that teaches the course to see if there are possible seats for our students

3) Quantitative

- where offered, we feel that we do well (calc, stats, pop dyn/techniques, cons biol); but it is fairly limited in other courses
- We agreed to coordinate efforts to build on the scientific method across the curriculum, starting w 1st yr experience
 - now we have full-fledged projects (start to end through scientific method in an FIW context) in human dimensions, field techniques only. Used to also have it in habitat ecology.
 - maybe incorporate it into experiential experience?

4) Communication

- step 1-let's inventory each other on what we are doing in writing in each class; start with posting syllabi through Tara
- diverse demands unfulfilled across the curriculum (written, visual, oral)—current coursework not doing it (engl/comm)

-We had a well thought out writing across the curriculum plan, but it has been lost with resource limitations and increasing enrollment...what to do now, reinvent or reinvigorate what we had before
-Suggestions: college-wide writing instruction?, work w English to get tailored class, more writing throughout, with evaluation, 1st year experience, reflective writing required for experiential projects (eportfolio); mandatory seminar attendance with writing (EEB, forestry, our club talks, thesis plan talks, defenses, etc)

5) inquiry skills: what is it: Collection, analysis, use of data---make conclusions

-We began with an informal inventory of what we do in 'inquiry' now
2114—information literacy assignment; collecting observations; looking at data in the context of case studies

Wildlife bio—pick from 7 topics, give them 3 papers to choose from each topic that bill had selected, now make them get a 4th on their own; then have to compare and contrast outcomes of papers; given prescribed questions to answer. Iterative writing process. Goal is synthesis.

Field biology: what types of info can you get from different sources (field guides, books, papers)...what types of info can you get where, sometimes need to use multiple sources. Still do a field notebook, observation. But no longer doing data collection, analysis...

pop dy is more problem solving. Field techniques—projects are in general set within a range, but do this as a group, so different individuals do not do whole package. But, they experience the whole process.

Human dimensions: semester long team project. Select a topic related to HD. Develop objectives, How they will sample the population (including IRB); lots of feedback on design; go out and collect data; then analyze write up and present data

Con Bio does a lecture a hypothetico-deductive process, do a quick and dirty PVA on song sparrows then apply to chinocteague and write a memo to refuge manager; management plan get data from wherever they can, goal is to synthesize the data into a management plan and apply the info from previous classes.

Wildlife disease: they are building up to a management plan that involves disease. Each week a class example of a disease, look at data; also does a big topic on library and use of different types of resources; how do you balance the various demands on a park (Chobe)—give reasons for prioritization decisions on management. Address research needs, group project. Will give them real data now from her projects (i.e. anthrax data)—is it important or not, when is it important. May now incorporate kathy's own long-term data sets.

Genetics: eric and Jason holliday. 4984. Will write a term paper and use original research papers. Inquiry is a big part. 4000 level course. Need to have stats. This would not be required.

Wetlands and Vert Pest Mgmt: problem-based learning, group project. Identify a conflict/problem. What is the evidence? Come up with a solution: incorporate regulatory, ecological

aspects...develop a plausible, legally correct . in wetlands—use heritage park as study site. Do 3 types of wetland evaluations..identify, delineate, classify.

Strengths

- exposure to information literacy and resources/data
- asking questions, forming hypotheses
- management planning
- group activities

Weaknesses

- the ability to use library and search literature is not being retained
- research process not complete across curriculum; groups are doing the whole process from start to end, but not individuals
- problem identification and hypothesis testing still a challenge to many students

Opportunities

- use library resources earlier, integrate through earlier courses
- identify critical problem areas and demands
- get creative with mini-research projects (i.e. the middle school model)

To do in short term

- align library skills discussions
- share scholar access and syllabi

Proposal for an Experiential Learning Requirement

DRAFT – CONSTRUCTIVE COMMENTS SOUGHT

Eric Hallerman and Bill Hopkins
September 20, 2011

Background. – In our retreat on August 10, there was considerable discussion of the concept of requiring students to access experiential learning within the context of an internship, undergraduate research, independent study, or study abroad course. There was broad agreement on the concept of requiring experiential learning in our curricula. As an action item, we agreed that Hopkins would represent wildlife and Hallerman fisheries to develop a more detailed proposal to share with the group. This document will support a discussion of our first-cut ideas.

Objectives of experiential learning requirement. – For students (1) to gain practical, hands-on experience in a conservation-related field, (2) to demonstrate the ability to formulate hypotheses, collect data, perform quantitative analyses, and/or (3) to gain real-world perspective on how complex cultural issues relate to natural resource conservation and management, and effectively report results in written and oral formats. The experiential learning may be paid or unpaid. We note at the outset that the success of each individual experience will depend upon effective interaction of the student, us as a faculty, and the employer or instructor of a study abroad course.

Overview of proposed process. – We will work with key agencies, NGOs, study abroad programs, and academic research programs to find available opportunities, although ultimately it is up to the student to find a suitable experience. We will need to convey our expectations to the employer/instructor and student. To administer this proposed program, the student will develop a simple proposal (e.g., 250- 500 words), to be signed off upon by their academic advisor, and then by the department head. The proposal should include a clear definition of the experience to be undertaken. For example, if the experience is research-based, they should identify the problem at issue, a description of the sort(s) of data to be collected, and a description of how they anticipate interpreting the data. The student then will undertake the learning experience. Completion of the course will include a short written report (e.g., < 5 pages), reflective essays in their e-portfolio, and a visual/oral presentation at an undergraduate experiential learning symposium to be held annually or semi-annually (TBD based on enrollment). After interaction with the employer/instructor, an ad-hoc committee of faculty members will assign the grade for the experiential learning course, after the research symposium. The research symposium will serve multiple functions including: 1) providing a venue for students to hone their writing and presentation skills, 2) building a sense of community within the department, 3) fostering professional discourse among the undergraduates as they learn about the positive and negative aspects of various career opportunities and conservation issues, 4) recruiting the next cohort of students into the best possible experiential opportunities, and 5) providing the opportunity to make assessment less burdensome on the faculty by having it focused on 1-2 days per year.

Ideally, the experiential learning requirement should be fulfilled by the end of a student's Junior academic year.

Responsibilities of key parties. – The three parties involved with the experiential learning process are the student, the employer/instructor, and the Department of Fish and Wildlife Conservation. Following are definitions and responsibilities of each.

The student will:

- In consultation with the employer/instructor and their academic advisor, prepare the experiential learning proposal and gain the approval of the employer/instructor, academic advisor, and department head.
- If needed, submit an application for employment with the employer or enroll in the course or program (i.e., independent study, undergraduate research, study abroad).
- Fulfill the minimum requirements, in terms of deadlines, time in the position, hours worked, content covered, etc. set forth by the employer.
- Write up and submit a report and make an oral presentation at the experiential learning symposium. The student also will write reflective essays and post them in their e-portfolio.
- At the end of the learning experience, ask the employer/instructor to send an evaluation of their efforts to the academic advisor and department head.
- Evaluate their internship experience and share this with their academic advisor and department head.

The employer/instructor will:

- Oversee the day-to-day activities of the student, in a manner that provides appropriate experience for the student and that fulfills institutional requirements.
- Provide the student's academic advisor and department head with any performance reviews or other information required pertaining to the student's assignment and progress.

The Department of Fish and Wildlife Conservation will:

- The academic advisor will be a faculty member, familiar with the student, who will approve the student's proposal, keep tabs on the student's progress, serve as the primary contact for the employer/instructor, and assist the department head with administrative aspects of the student's experiential learning process.
- The department head will supervise the experiential learning program, signing off on all proposals before the start of the experiential learning course.
- The faculty of the Department of Fish and Wildlife Conservation will attend the research symposium and assign grades using an agreed-upon rubric to be submitted to the department head.