



Annual Report

Department of Fisheries and Wildlife Sciences

Academic Year 2009-2010

I. Selected Outstanding Outcomes

Grant of tenure – Bill Hopkins
CNR Outreach Award – Steve McMullin
Appointment to Professor Emeritus status: Mike Vaughan
NSF Graduate Research Fellowship recipients – Brian Gerber, Danielle Bridgers
President-Elect, Southern Division of the American Fisheries Society – Brian Murphy
CNR Outstanding Master’s Student Award – Brian Gerber
CNR Outstanding Ph.D. Student Award – Nick Lapointe
1986 M.S. recipient Curt Hensel won U.S. Fish and Wildlife Service Regional Director’s Conservation Award
Steve McMullin launched CNR Student Leadership Institute. Supported by family of fisheries science alumnus Ross Boucek. Six of 12 inaugural students are from FiW.
Hahn collection of taxidermy mounts secured for CNR and for Virginia Museum of Natural History
Marine Fisheries undergraduate option approved
Graduate Certificate in Quantitative Resource Assessment approved
Drs. Murphy, Karpanty, and Seiler organized and ran the 8th Biennial conference on University Education in Natural Resources held March 2010 in Blacksburg

II. Departmental Accomplishments

A. Learning

The department’s slate of courses for the academic year included:

- 18 undergraduate and 14 graduate classroom courses delivered
- Mean Student Perception of Instruction scores:
 - Fall 2009: 3.70/4.00
 - Spring 2010: 3.57/4.00
- New courses:
 - FiW/For 5014 – Constructing Sustainability (Hull and Angermeier)
 - FiW 6004 – Advanced Quantitative Methods in Fisheries (Jiao)
 - FiW 5984 (will get a permanent number) – Advanced Topics in Disease Ecology
- Special study courses:
 - FiW 4984 - Wetlands Restoration Service Learning (by Jeff Feaga)
 - FiW 4984 – Advanced Topics in Conservation Biology and Sustainability (by Amy Villamagna)

Marine Fisheries undergraduate option approved

Graduate Certificate in Quantitative Resource Assessment approved

Steve McMullin launched CNR Student Leadership Institute. Supported by family of fisheries science alumnus Ross Boucek. Six of 12 inaugural students are from FiW.

Drs. Murphy, Karpanty, and Seiler organized and ran the 8th Biennial conference on University Education in Natural Resources held March 2010 in Blacksburg

Drs. Murphy and Sible (CoS) led a special CIDER project on how to effectively teach in SCALE-UP teaching laboratories

Sarah Karpanty participates in Associate Provost Wubah’s “Transforming Teaching and Learning” project and in CIDER faculty learning group on the SCALE-UP concept.

Awards:

For undergraduates:

- Jean B. Duerr Memorial Scholarship – Thera Lombardi
- Girl Scouts of the USA Gold Award – Cari Squibb
- NOAA Hollings Scholarship – Scott Riley

Co-sponsorship of events:

Virginia/West Virginia Water Research Symposium, with Virginia Water Resources Research Center, Fall 2009
Ecology and Evolutionary Biology Seminar – co-organized with Biological Sciences

Recruitment efforts:

VT Majors Fair, October 5, 2009
CNR Showcase, April 7, 2010

B. Discovery

Overview of departmental productivity: 3books in press, 21 book chapters, 85 refereed journal articles, 32 other reports, 169scientific presentations
Overview of departmental grantsmanship: \$3,344,921 (2009 data, OSP)

Awards:

For graduate students:

CNR Outstanding Master's Student Award – Brian Gerber
CNR Outstanding Ph.D. Student Award – Nick Lapointe
A.B. Massey Honorarium – Nick Lapointe
H.S. Mosby Award – Sarah Durant
Burd S. McGinnes Graduate Fellowship – Christine Bergeron and Jeff Feaga
U.S. Forest Service Wings Across America Award – Mike St. Germaine
Jimmy Pigg Award, Southern Division American Fisheries Society – Ryan McManamay
International Student Scholarship – Yaw Ansah, Sunarto
Royal Thai Scholarship – Pawapol Kongchum
American Association of University Women International Fellowship – Maria Guadalupe Bravo Vinaja
NSF Graduate Research Fellowships – Brian Gerber, Danielle Bridgers
Sigma Xi Grants-in-Aid of Research Award, National – Sarah Durant, Brittney Hopkins
Society of Integrative and Comparative Biology Grants-in-Aid of Research Award – Sarah Durant
VT Graduate Research Development Program Research Award – Christine Bergeron, Devin Jones
National Geographic Society / Waitts Grant – Zach Farris
Ross Graduate Scholarship, Virginia Chapter American Fisheries Society – Dan Stich
Organization of Fisheries and Wildlife Information Managers Annual Meeting Travel Award – Tye Deweber
Best paper award:
Sarah Durant, Second Place, Best Oral presentation, Graduate Student Association Research Symposium

C. Engagement

CNR Outreach Award - Steve McMullin
Editorships: 4 faculty, 5 journals, including *Conservation Biology and Aquaculture*
Three officers in professional society (McMullin - Past-President, and Murphy – Vice President, Southern Division, American Fisheries Society; Parkhurst – President, Virginia Chapter, The Wildlife Society)
51 advisory boards and councils
36 workshops and symposia organized, involving 1175 participants
14 faculty have considerable international research, teaching, or outreach activity
Service-learning course led to management plan for YMCA land in north Blacksburg
Future Professariate Global Perspective Program participant – Sunarto

Awards:

- FDA-Center for Food Safety and Applied Nutrition Director's Special Citation Award – Michael Schwarz (adjunct faculty member in aquaculture)
- VT Chapter American Fisheries Society Outstanding Member Award – Jeremy Pritt
- VT Wildlife Society Outstanding Member Award – Chad Stochowiak
- Curriculum Clubs' Faculty Award for Fisheries and Wildlife Sciences – Dean Stauffer
- Dick Neves – Outreach to orphanage in Pignon, Haiti

D. Diversity

Our diversity:

- Faculty: 13 males and 5 females, including 1 Asian and 1 African
- Staff and research faculty: 12 females and 14 males, including 4 Asians
- Graduate students: 27 females, 28 males, including 8 Asians, 3 Hispanic-surnamed, 1 African-American, 2 African, and 1 Native American
- Undergraduates: *VT data are aggregated at the college level, hence I cannot break out FiW data*

Departmental diversity initiatives:

Faculty:

- Memberships: Organization of Women Faculty (2), Women in International Development Working Group, LGBT Faculty and Staff Caucus (2), SafeZone (2), East Asian committee of VT, Wildlife Society Ethnic and Gender Diversity Working Group
- Marcella Kelly is a role model for females at the Institute for Forestry in Nepal and mentors and co-advises female undergraduates at the University of Belize

Undergraduates:

- MAOP student Amada Wilson recruited to work with Bill Hopkins during summer 2010

Graduate students:

- Secured Work-Life Grant to support maternity leave for Jane Argentina

E. Foundation

- Gerald Cross Alumni Leadership Award – Ronald J. Kendall
- Engagement with T. Marshall Hahn led to donation of 24 taxidermy mounts to CNR and ~30 to Virginia Museum of Natural History
- Gift secured from Primland to support assessment of their natural resources

F. Material for Weave On-Line

Department Mission Statement: The Department of Fisheries and Wildlife Sciences aims to be a center of academic excellence in conservation management, fisheries and wildlife sciences, and aquaculture by providing quality programs in research, teaching, and outreach that will enhance fisheries and wildlife resource management at state, national, and international levels.

Objective: Strengthen and increase the undergraduate experience

Metric: Use of state-of art pedagogical approaches

Findings:

- Brian Murphy, Sarah Karpanty, and Jim Parkhurst are participating in a CIDER group discussing how best to integrate SCALE-UP pedagogical methods into our curriculum. They are discussing their ideas with many departmental faculty members.
- With my active participation, plans for renovating Cheatham 317A for practicing SCALE-UP instruction were developed.

Achievement analysis: Renovation of 317A should be completed this summer. Dr. Murphy is discussing application of SCALE-UP pedagogy into our fisheries capstone course. We are developing a freshman experience class based on case study and SCALE-UP pedagogy.

Metric: Offering of updated curricula

Findings:

- Both fisheries science and wildlife science curricula were revised to bring hours required down to 120. The wildlife curriculum now includes more writing-oriented courses. FiW 2324 – Wildlife Field Biology was revised to focus upon vertebrate natural history.
- The Marine Fisheries option under the B.S. in Fisheries Science was approved.
- Assessment of status of achievement of student learning outcomes is ongoing.
- The CNRE Student Leadership Institute was organized. for first offering in AY 2010-2011

Achievement analysis: Critical examination and updating of curricula is a never-ending process. Full implementation of the Marine Fisheries option will depend upon developing memoranda of understanding with partner institutions that can offer students on-sea experience. The first offering of the CNRE Student Leadership Institute will be in AY 2010-2011.

Objective: Enhance quality of graduate education

Metrics: New course and certification offerings

Findings:

- New courses in Constructing Sustainability, Advanced Quantitative Methods in Fisheries, and Advanced Topics in Disease Ecology, were approved and are now being offered.
- A Certificate in Quantitative Resource Assessment, an interdisciplinary option between CNRE and the Department of Statistics was approved by governance.

Achievement analysis: The new courses will be offered on an alternating-year basis. Final approval of the graduate certificate is pending; students will have to be attracted to enroll in the certificate program.

Objective: Enhance impact of discovery mission

Metrics: Enhance research infrastructure

Findings:

- Secured research laboratory in CRC for Bill Hopkins, whose research program is growing dramatically
- Space in the aquaculture center is being cleaned up and renovated for conservation aquaculture research

Achievement analysis: Enhancement of research infrastructure is a never-ending process of investment in future research outcomes. The enhancements reported here support research being initiated this year. The fruits of heightened activity in wildlife toxicology and conservation aquaculture will be observed in future years.

Objective: Enhance engagement of department with public and private sectors

Metrics: Establish or extend relationships with federal agencies

Findings:

- Proposal submitted to establish a U.S. Geological Survey Climate Research Center at Virginia Tech
- Proposal in development to extend the National Marine Fisheries Service Recruitment-Training-Research Unit contract with Virginia Tech
- Memorandum of Understanding to establish a U.S. Fish and Wildlife Service Cooperative Unit at Virginia Tech pending

Achievement analysis: Having invested in these initiatives, commitments are in the hands of the respective agencies.

Metrics: Enhance engagement with the private sector

Findings:

- We have been without an aquatic extension specialist since the retirement of Louis Helfrich, doing as best possible with a part-time extension associate.
- Virginia Cooperative Extension is in a period of retrenchment, re-envisioning, and rebuilding.

Achievement analysis: We must engage with VCE to seek the opportunity to reestablish the aquatic extension specialist position, or other positions as appropriate to fisheries and wildlife resources.

G. Department Head's personal achievements and successes

Successfully managed department's finances in a context of challenging budget cuts
Proposal for Marine Fisheries option for undergraduates in Fisheries Science approved
Proposal for Graduate Certificate in Quantitative Resources Analysis approved
Staff is effective and morale good
Developed and adopted policy for 2- and 4-year review of untenured faculty members
Developed and adopted promotion and tenure standards
Successful nomination of Steve McMullin CNR Outreach Award
Guided undergraduate curricular reforms – reduced requirements to 120 hours in both fisheries and wildlife sciences
Completed standard operating procedures for necropsy room in Latham Hall and put it to use
Secured laboratory space in CRC for Bill Hopkins
Secured donation of Hahn taxidermy collection, transported and mounted all specimens on display
Recruited a new leader for the Virginia Cooperative Fisheries and Wildlife Research Unit

H. Departmental goals for 2010-2011

General:

Continue to revise and update our strategic plan
Adopt standards for peer review of teaching
Encourage teaching that promotes active learning
Strengthen oversight of student and worker safety training
Shepherd Alexander through 2-year review, Jiao and Karpanty through 4-year review

Learning

Develop freshman class for FiW students fostering active, case study-based learning
More curricular reform – lessen stove-piping, broaden course choices
Complete revision of doctoral program; i.e., reach closure on implementing objectives and processes
Implement use of metrics tracking progress in achieving student learning outcomes for all degree programs

Discovery:

Establish Hatch or McIntire-Stennis projects for Fraser, Murphy, Orth, and Parkhurst
Once VT signs on, have USFWS and sign MOU to establish a Cooperative Research Unit
Once VT signs on, implement an MOU with Fisheries Research Center in Wuxi, China
Secure development dollars for design of Wildlife Research Center.

I feature my individual accomplishments in learning, discovery, and engagement in sections II-V below.

III. Department head's goals for 2010-2011

Attract Southeastern Climate Research Center to locate at Virginia Tech
Renew mandate for National Marine Fisheries Service – VT RTR Unit by securing a competitive grant renewal
Arrange MOUs for student exchange in support of undergraduate major in Marine Fisheries
Use retreats:

- to enhance departmental sense of community
- to implement metrics for tracking student learning outcomes
- to further strategic planning for department
- to change culture to foster teaching promoting active learning
- to promote engagement aspect of our mission

Complete development of policies for peer review of teaching and standards for promotion and tenure
Development – secure funding for Wildlife Research Center

Economic development – assist in establishment of commercial horseshoe crab culture facility in Virginia