Fisheries and Wildlife Graduate Students Earn Record Awards

With education funding exceedingly scarce, department head Eric Hallerman has strongly encouraged graduate students in fisheries and wildlife sciences to pursue outside funding sources. The efforts of a number of doctoral candidates, as well as the value and integrity of their research, have earned students an unprecedented number of prestigious honors in the past year.

Christine Bergeron was awarded a fellowship from the Environmental Protection Agency’s (EPA) National Center for Environmental Research as part of its Science to Achieve Results (STAR) program. The EPA STAR fellowship, which encourages promising students to obtain advanced degrees and pursue careers in environmentally related fields, will provide $111,000 over a three-year period to cover tuition, stipend, and research expenses. Bergeron’s dissertation research examines the effects of mercury on the reproduction success of adult American toads and development of their offspring from eggs through metamorphosis, and focuses on life history traits and responses to mercury that have implications for population size and sustainability.

Maria Bravo-Vinaja also received an International Peace Scholarship of $4,000 from the Philanthropic Educational Organization. Bravo-Vinaja used the scholarship to pay for tuition fees, books, and research equipment, which she says will help her succeed in her studies. Her main interest is studying the relationships between wildlife and habitat, especially those wildlife species of special concern. She has studied the use of habitat by the Mexican spotted owl in Mexico and now researches the landscape habitat relationship of golden eagles in northern Mexico using Geographic Information Systems to best predict where their highest habitat quality is located.

Sarah DuFaut received Grants-in-Aid Research awards from both Sigma Xi and the Society of Integrative and Comparative Biology for her research on wood ducks. Sigma Xi, a science research society, recognized DuFaut for her research on immunological and energetic tradeoffs in young birds. The Society of Integrative and Comparative Biology awarded DuFaut in the Comparative Physiology and Biochemistry division for her work titled “Slight changes in incubation temperature affect early growth and stress endocrinology in wood duck (Aix sponsa) ducklings.”

Claudia Wultsch received a Kaplan Graduate Award (KAP) of $24,900 from Panthera — Partners in Wild Cat Conservation for the second year in a row; she received $28,500 in fall 2007. The KAP aims to support the next generation of wild cat biologists by recognizing the conservation efforts of graduate students studying wild cats in the field. Wultsch also received an $8,000 International Peace Scholarship from the Philanthropic Educational Organization, which provides scholarships for international female students to pursue graduate study in the United States and Canada. Wultsch, originally from Austria, came to the United States as a Fulbright Scholar. The funds will help cover the costs of her research and analysis on noninvasive monitoring (molecular scatology and remote camera trapping) of jaguars and other wild cats in Belize.

Jessica Homyack received a $1,000 predoctoral scholarship from the Association for Women in Science. The scholarship, which is awarded on the national level to five to 10 female students per year, supports women in a science or engineering program, particularly in fields where women are underrepresented. Homyack’s research focuses on the effects of forest regeneration methods on salamander populations in Virginia and West Virginia. She is examining the long-term effects of seven oak regeneration practices on salamander populations as part of a larger, multidisciplinary project that also considers effects to nutrient cycling and understory vegetation.

Danielle Bridgers was awarded a 2009 National Science Foundation Graduate Research Fellowship. The fellowship, which recognizes masters and doctoral students who have done outstanding research in science or engineering, provides three years of funding, a tuition supplement, and a $30,000 annual stipend. Bridgers researches bog turtles, an endangered species, and is the first person to successfully study this turtle species with sonar.

Forestry Senior Garners Double Honors

Senior forestry major Ritchie Vaughan was named the college’s Outstanding Graduating Senior for the 2008-09 academic year. The Outstanding Senior Awards, co-sponsored by the Virginia Tech Alumni Association and the senior class, recognize outstanding student performance in each college in academic achievement, extracurricular activities, leadership positions, and contributions of service to the university and/or community.

Vaughan is the recipient of numerous academic awards and scholarships, and has been named to “Who’s Who Among Students in American Universities and Colleges.” She is a member of the Virginia Tech Wildland Fire Crew, where she has served as assistant fire management officer. Her many outreach activities include volunteering with The Rock Climbing Gym and the Montgomery County Humane Society, serving on the Claytor Lake State Park Forest Management Plan, and serving as the Blacksburg Bicycle Cooperative’s president and head mechanic.

Vaughan was also awarded a Carter Academic Service Entrepreneur (CASE) grant for $1,000 from the Jimmy and Rosalyn Carter Foundation to fund part of her under-graduate research at the Catalwa Sustainability Center, a property owned by the college. The grant is helping to fund the cost of carving out streamside management zones in hay fields, mapping the 377-acre property, and adding hardware to support an organic farming Incubator on-site. Vaughan’s research was a part of an independent study and undergraduate research course through which she gained such job skills and work experience as consenting between multiple stakeholders, writing proposals, obtaining grants, and conducting research.

Vaughan will start on her master’s in environmental resource management with an emphasis on non-timber forest products after spending the summer working on a U.S. Forest Service trail crew in Moose Pass, Alaska.

Student Receives Rachel Carson Award for Scientific Excellence

Rachel Mair (’00 B.S. in fisheries science), a fisheries and wildlife sciences graduate student, received the first-ever Rachel Carson Award for Scientific Excellence from the U.S. Fish and Wildlife Service. Mair is a biologist at the agency’s White Sulphur Springs National Fish Hatchery.

The award recognizes service employees who demonstrate superior scientific involvement and application to achieve extraordinary results in fish and wildlife conservation. Rachel received the award for her work developing successful culture systems and feeding regimes for the culture and propagation of endangered freshwater mussels. She successfully cultured the endangered northern riffleshell, spiny mussel, and oyster mussel.

Mair received the award, named in honor of renowned ecologist Rachel Carson, author of the groundbreaking book Silent Spring, from U.S. Fish and Wildlife Service Director H. Dale Hall at a ceremony at the Natural Resources Conservation Service facility in Shepherdstown, W. Va. The White Sulphur Springs National Fish Hatchery will also receive $50,000 in additional operational funds for mussel research in acknowledgment of Rachel’s achievements.

Mair plans to continue working for the U.S. Fish and Wildlife Service after completing her master’s degree. “I would also like to continue my research on the advancement of freshwater mussel propagation technology,” explained Rachel.

Rachel Mair cleans vials containing juvenile northern riffleshells, an endangered mussel species. Photo by Matthew Patterson, USFWS.