

Title: Strengthening the Roosevelt Wild Life Station upon Its Centennial

Core Team: Roosevelt Wild Life Station Scientists-in-Residence (Belant, Cohen, Dovciak, Frair, Gibbs, Giegerich, J. Farrell, Leopold, McNulty, Powell, Rundell, Schulz, Schummer, Stewart, Underwood, Whipps)

Discovery Opportunity. - “Wild life¹”, or in more modern terms “biodiversity,” affects our health, culture, prosperity, and persistence – yet its impact remains undervalued by society. For example, New York State leads the nation in wildlife-related expenditures (\$10.6 billion annually in wildlife watching and hunting/trapping) and fuels nearly 6% of the state’s economy—facts recognized by few. Yet, in our domination of the planet and ever-growing demand for resources, our actions diminish the very thing that nourishes us—causing massive ecosystem changes and revitaliz species extinctions. This is ‘the folly our descendants are least likely to forgive us.’² The mission to conserve wild species in the face of this extinction crisis is what drives strong, sustained growth of student and public interest in “wild life” related programs at ESF (with Conservation Biology, Wildlife Science, and Aquatic and Fisheries Science in aggregate representing the largest and fastest-growing corpus of students at ESF).

Theodore Roosevelt championed science as the foundation for gaining reliable knowledge for effective conservation action, and towards that end he enthusiastically endorsed the Roosevelt Wild Life Station (RWLS)³. The RWLS has a distinguished history of bringing together scientists, managers, and decision-makers to solve conservation problems while educating the next generation of conservation leaders. The Roosevelt Wild Life Station has also proved an unprecedented vehicle for *attracting outside funds* to enhance ESF’s contributions to natural resource conservation and natural history training in higher education. Over just the last 5 years, the RWLS has secured over \$14M in private, state and federal funding for: 1) ESF’s first fully endowed faculty chair (Camp Fire Professor of Wildlife Conservation) with a second in development (Wetlands and Waterfowl Conservation), 2) a program dedicated to biodiversity conservation on private lands, 3) an innovative teaching and vertebrate collections space in the College’s Gateway building, and 4) critical conservation research and student training. In addition, RWLS “BioBlitzes” have yielded over \$110,000 in discretionary funding for the RWLS. The RWLS is clearly a successful, strategic model for showcasing ESF’s leadership in wildlife conservation research and education and for attracting external investments.

Sustaining current RWLS programs and leveraging further growth is at significant risk given a critical lack of capacity, specifically support staff. Through the Discovery Challenge we seek a base of support that would enable us to make critical realignments and enhancements to existing academic programs, develop new programs for community-wide and public engagement in natural history inquiry at ESF, and elevate

¹ Predating the modern profession of conservation, the two-word “wild life” was a comprehensive term encompassing all living things.

² E.O. Wilson, *Biophilia*, 1984.

³ The first ever university program dedicated to the study of wild animals in their natural habitats established 1919 at what was then known as the NY State College of Forestry at Syracuse University.

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ESF's visibility as a leader in conserving the diversity of "wild life." The timing is perfect since the RWLS will commemorate its 100th anniversary in May 2019⁴.

Our seed grant request focuses on investment in four key support positions: administrative and program support, post-doctoral researcher, fund-raiser (part-time), and communications manager (outside contract). The post-doc will focus on critical program realignments and development of new courses and modules (described below), and will undertake creative inquiry that connects on-campus collections to field-based inquiries and engages the broader ESF community and the public through citizen science. The fundraiser will focus specifically on securing long-term, sustainable financial investment in RLWS programs. We anticipate leveraging this strategic support into enhanced student opportunities, greater visibility for ESF, and significant external investment in ESF.

Undergraduate and Graduate Programs Impacted.- For *undergraduate programs*, this seed grant will be used as a vehicle for critical realignment and enhancement of existing programs that would increase opportunities for "wild life" focused majors while also better serving other majors that require training in wildlife conservation. For *MS and PhD programs* we will focus and expand coursework in: 1) foundational theory in ecology, 2) applied statistics, and 3) conflict resolution – with the latter two areas being extended to highly desirable certificate programs. In addition to these curricular changes, we envision a *community-wide* learning seminar ("The Conservationist") that will integrate the resident student learning community, engage the public on campus and online, extend to distance education via ESF's Open Academy, and be adapted into a "fish and wildlife conservation" unit within an existing ESF in the High School course ("Global Environment"). Taken together, these changes will more effectively engage thousands of students over 5 years in "wild life" conservation. They will also help close the gap between the demographic composition of conservation professionals and the general public by making a rewarding career in fish and wildlife conservation more accessible to underrepresented groups. To this end, we will establish an experiential learning network focused on professional fish and wildlife internships in conjunction with Adirondack-based NGOs and based out of ESF's Huntington Wildlife Forest.

Agencies, Partners, and Funding Entities. - Our recent fundraising successes signal a close match between RWLS's research and academic focus and a significant pool of potential funding. We foresee continued, enhanced, and new opportunities for funding scholarships, internships, expanded courses, and research from the following list of existing program partners: New York State Department of Environmental Conservation, The Camp Fire Conservation Fund and Camp Fire Club, Safari Club International, Honeywell International, The Wetland Trust, Panthera, Galapagos Conservancy, Chobani and many others.

Partnerships.- Providing base support staff will enable better service to our funding partners (more timely and impactful communications and reporting, increased responsiveness to inquiries). Faculty will then be able to engage more effectively and

⁴ May 10, 2019 marks the 100th anniversary of the Roosevelt Wild Life Station.

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creatively with collaborators (e.g., through courses, research and consulting) – enabling us to be more proactive and nimble when opportunities arise and to cultivate greater connectivity between external collaborators and ESF’s programs. We also will advance as part of our efforts a formal submission to the SUNY Empire Innovation Program as much of the RWLS activities relate to sustainability, a key focus of the EIP. Moreover, RWLS links directly to EIP on the basis of enhancement of economic stability and growth in New York because ESF / RWLS is by far the largest source of recruits for those who “manage” the state’s “wild life” resources, which fuel over 5% of the state’s economic activity.

Increasing use of ESF assets.- Connectivity between the urban Syracuse campus, remote forest properties, and our state, federal and international partners is an enviable model for education in wild life conservation nationally and globally. We plan to establish a direct linkage to the AEC facility through student internships, grant opportunities, and potentially providing Syracuse City School students greater contact with wild places through the ESF in the High School program. Desired course realignments involve greater use of Heiberg Forest and the AEC for long-term monitoring and management that touches on multiple classes (inside multiple departments), supporting an integrated educational experience from freshman to capstone courses. Moreover, capitalizing on our collections and three concurrent statewide surveys, we will engage students and the public more directly through campus assets.

Informing Policy Decisions, Enhancing ESF’s Reputation, and Global Impact.- Our affiliated faculty have considerable influence in advising local and foreign governments and NGOs, and our alums disproportionately staff state and federal agencies—a pattern that will only grow more impactful given our enhanced educational programs. Moreover, with a specific focus on creative inquiry (post-doc) and communications, we will elevate ESF’s visibility locally, regionally, and internationally. For both our students and the public, targeted engagement on discovering the “biodiversity in their backyards” through our citizen science programs will help catalyze a profoundly needed revival in natural history and increase the profile of ESF and student recruitment to it. Three exciting (and fully funded) initiatives mapping New York State’s “wild life”— the first-ever Mammal Survey, the “Herp” Atlas, and the third round of Breeding Bird Atlas—provide unprecedented opportunities for raising ESF’s profile and engaging the public in “what we do” via citizen science.

New Investments Needed for Program Sustainability.- The RWLS requires seed funding to strategically realign programs, effectively capitalize on recent developments (new faculty, spaces and research investments) and shore up long-term discretionary funding. In perpetuity, one full-time, state-funded program support staff will be needed since soft money and rotating positions among students is not a viable long-term solution. Three additional graduate teaching assistantships would be dedicated to the new courses we envision. The remaining resources needed for long-term program sustainability we will secure externally.