Ph.D. Graduate Assistantship

Improving management strategies linked to certification of sustainable forest practices for priority songbirds across multiple ownerships in West Virginia

Division of Forestry and Natural Resources, Wildlife and Fisheries Resources Program, West Virginia University

STARTING DATE: March, 2021 or as funds become available.

CLOSING DATE: Position will remain open until filled. Application review will begin immediately

DESCRIPTION The Division of Forestry and Natural Resources at West Virginia University is searching for a PhD student to monitor avian populations with a focus on Golden-winged Warblers (*Vermivora chrysoptera*), Cerulean Warblers (*Setophaga cerulea*) and Wood Thrush (*Hylocichla mustellina*), on Weyerhaeuser property in Greenbrier, Nicholas, and Fayette Counties West Virginia. These high-priority breeding songbirds have been experiencing range-wide population declines. Although these species each require different habitat conditions for nesting, each also uses a variety of forest structure and age classes as the breeding season progresses from nesting to post-fledging. Forest management planning at the stand and landscape scale must consider the range of habitat needs for breeding forest birds, from nesting to post-fledging, to ensure the diversity of forest structure and age classes to meet known requirements. This perspective supports the concept of a "shifting mosaic" as a construct for management planning at large scales. The objective of this research is to develop, and test means and efficacy of institutional landowner (Weyerhaeuser) engagement in both implementation and monitoring of practices to improve conditions for declining bird species, in concert with adjacent ownerships. The research will focus on the effects of forest management strategies as a dynamic shifting mosaic on forest songbirds. Forest blocks will be dynamic, meaning they will contain a mix of forest age classes and structural diversity including young forest, mature forest and late successional forest. The student will use standard point count protocols as well as Autonomous Recording Units (ARUs), to monitor the occupancy and abundance of the three focal species and the overall avian community in response to dynamic forest management in 2,000-ha blocks. The student will also evaluate the efficacy of ARUs for monitoring focal species, game bird (ruffed grouse [*Bonasa umbellus*], American woodcock [*Scolopax minor*]), and night bird (owls and nightjars) response to forest management. The project goal is to better understand multi-species approaches and practicalities of implementation with a focus on Sustainable Forestry Initiative certified forests and surrounding family forestlands to optimize outcomes at a landscape scale. This student will work with cooperators from Sustainable Forestry Initiative, the USGS Cooperative Research Unit at West Virginia University, Appalachian Mountain Joint Venture, West Virginia Division of Natural Resources, and US Fish and Wildlife Service. The student will be working towards an PhD in Wildlife and Fisheries Resources at West Virginia University. (http://wildlife.wvu.edu/).

QUALIFICATIONS The ideal applicant must be able to identify central Appalachian avian species by sight and by sound and have experience conducting point count surveys. Applicant

should also be familiar with collecting structural habitat measurements including but not limited to; DBH, canopy cover (using spherical densitometers), Robel pole, Daubenmire frame, etc. Preference will be given to applicants with avian survey and GIS experience. Applicants should be comfortable working long days in the field during hot summer months, ready to travel, and energetic and excited about applied avian conservation research. Applicants will also be responsible for hiring and supervising research technicians to assist with research duties. Applicants must have completed a BS and MS in Wildlife Biology, Ecology, or a closely related field. Applicants with peer-reviewed publications are preferred. Applicants must have a minimum 300 combined GRE score (V+Q) or 1100 on the previous scale, and a minimum 3.25 GPA.

Stipend/Salary: $22,804/year plus health insurance and university tuition waiver. Stipend is a full Research Assistantship for 4 years.

To Apply: Electronic applications are preferred. To apply send a **single** file including: 1) cover letter outlining any relevant work experiences with Golden-winged and Cerulean Warblers, Wood thrush, and with general bird surveys and identification, 2) resume including unofficial copy of transcripts and GRE scores, and 3) contact information for 3 references to Dr. Chris Lituma; cml0017@mail.wvu.edu