

**M.S. Assistantship at the U.S. Geological Survey,
Maine Cooperative Fish and Wildlife Research Unit and the University of Maine
in Wildlife Ecology or Ecology and Environmental Sciences**

**Investigating the use of remote sensing technologies for collecting population
and habitat use information for colonial nesting birds in coastal Maine**

An M.S. research assistantship (including stipend, tuition, health insurance) is available in the U.S.G.S. Maine Cooperative Fish and Wildlife Research Unit at the University of Maine beginning September 2019 to develop remote sensing tools and guidelines for monitoring colonial nesting birds in Maine's coastal habitats. The student will collaborate with a team of graduate students and faculty testing the quality and efficacy of bird survey data collected across various specifications, including those collected with different imaging systems at varying spatial resolutions from fixed wing aircraft, ground surveys, and unmanned aerial systems (UAS), and analyzed with advanced image processing approaches. The student will assist with developing guidelines for deploying UASs for surveying nesting birds in coastal habitats and toolkits for collecting and analyzing imagery for avian population surveys in marine conservation, recreation, and industry applications. The study's geographic area spans the coastal regions of Maine, with a focus on islands hosting large nesting colonies of various seabirds and wading birds. Prior experience with geographic information systems, spatial and statistical analysis, and fieldwork is required. Prior experience with waterbirds, seabirds, or UASs is desirable but not required. The candidate must have a sincere interest in learning and combining traditional field survey techniques with emerging technologies and data analytical tools in wildlife survey applications. This project is a collaboration of several students and faculty from four academic programs on two University of Maine campuses, state, federal, and extension agency biologists, and will involve significant team science and community outreach and engagement during the project work. Applicants must have relevant coursework and field experience in ecology or wildlife biology, spatial ecology/GIS, and statistics.

The selected student will be supported by a research assistantship for 2 years and teaching assistantship for 1 semester, with an anticipated total program duration of 2.5 years. Stipend level (minimum \$22,500 annually) will be based on relevant experience and coursework. The student is responsible for 50% of the health insurance cost (waived with proof of insurance); tuition and the remaining 50% of health insurance is provided. The student may complete program requirements for either the [M.S. Wildlife Ecology](#) degree or the M.S. [Ecology and Environmental Sciences](#) degree in the Wildlife, Fisheries, and Conservation Biology department.

Please send a pre-application cover letter expressing interest in the position, CV with references, and unofficial copies of GRE scores and transcripts to Dr. Cynthia Loftin (Cynthia.Loftin@maine.edu), with subject line "Colonial Nesting Bird Surveys M.S. Assistantship". Review of pre-application materials will begin immediately.