Research Cooperators

University of Massachusetts-Amherst, Dartmouth College,
Massachusetts Natural Heritage and Endangered Species Program,
Massachusetts Bureau of Forestry, US Geological Survey,
Mass. Metropolitan District Commission, Vernal Pool Association,
USGS-BRD Conte Anadromous Fish Research Laboratory,
Green Mountain National Forest, White Mountain National Forest,
Norwegian Institute of Nature Research (NINA),
Pitlochry Scotland Freshwater Research Laboratory,
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NE-4251
Wildlife and Fish Habitat Relationships in New England Forest Ecosystems

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Mission

To determine relationships of fish and wildlife to northeastern forest types and their management

Current Research Problems

Wildlife ecology and habitat research

- Effects of forest management on the distribution and ecology of mature forest and early-successional shrubland birds
- Terrestrial salamander distribution and response to forest management in the White Mountains
- Ecology, habitat use, and habitat-specific survival of juvenile Neotropical migrant passerines
- Nesting ecology of Neotropical migrant passerines as determined by videography: interactive effects of predator identity, habitat structure, and microclimate
- Forest bird population trends and habitat changes over 30 years in an unfragmented temperate forest
- Factors affecting the distribution and reproductive success of early-successional shrubland birds nesting in powerline rights-of-ways

Atlantic salmon habitat research

- Change in habitat, land use, hydrology, and food web structure; effects on Atlantic salmon and co-occurring species in New England stream ecosystems
- Forest change and management; effects on habitats and higher trophic levels in New England streams

Current Research Problems (continued)

Atlantic salmon habitat research (continued)

- Hydrologic regime effects on riparian and in-stream habitats and biota
- Early life history ecology and habitat use of Atlantic salmon in New England watersheds
- Development and application of new techniques to assess habitat-mediated dispersal of stream fishes
- Role of Atlantic-basin anadromous fish in the transfer of marine-derived nutrients to upland stream ecosystems
- Conservation genetics of northeastern salmonid fishes

Ecology of woodland vernal pools

- Individual pool dynamics and landscape-level effects on woodland vernal pool faunal composition
- Effects of pool size, isolation, and past land use on woodland vernal pool fauna
- Tree species contributions to catchment-scale evapotranspiration, and linking pool hydrology to regional-scale climate change models
- Validating the effects of tree evapotranspiration and assessing the potential effects of timber harvesting on pool hydrology