

INVENTORIES OF RARE, THREATENED, AND ENDANGERED VERTEBRATES ON APPALACHIAN TRAIL LANDS

PMIS Number: new project

Estimated Cost: \$210,000

Cost Breakout: \$260,000

Mammals: approximately \$80,000 for the inventories described below, based on the cost of an inventory of all mammals, including RTE species, for the Blue Ridge Parkway.

Birds: approximately \$30,000, based on a survey of breeding birds, wintering birds and species of special concern for the BRP. If volunteers are utilized to conduct the inventory, as they were in the National Capital Region, the only cost of the inventory would be for volunteer management.

Reptiles and Amphibians: approximately 150,000, based on the cost on an inventory of herps for the Blue Ridge Parkway.

Description: Funding is needed to undertake an inventory of Rare, Threatened, and Endangered (RTE) Vertebrates on Appalachian Trail lands, with concentration given to ATPO lands. States containing considerable ATPO land are ME, MA, CT, NY, NJ, PA, MD, WV, and VA. Vertebrate groups to be inventoried include mammals, birds, and reptiles and amphibians (herps), and this project statement will be broken out by these three groups. Portions of the Appalachian Trail corridor have already been inventoried to varying degrees for some RTE vertebrate groups. US Forest Service land might be added to the inventory if Forest Service funding is made available.

Mammals:

Funding is needed to inventory all RTE mammals, including bats, along the AT corridor in ME, MA, MD, WV, and a portion of VA. The AT corridor lands in ME, MA, MD, and WV total about 59,000 acres and 640 miles of trail. In Virginia, only about 18,000 acres and 90 miles of ATPO lands would be included in the inventory of all RTE mammals. An inventory for mid-size and large mammals would also occur on 58,000 acres of the AT corridor in CT, NY, NJ, and PA. The distribution, relative abundance, and habitat associations of RTE mammals would be documented on AT corridor land. Populations of RTE mammals would be sought by a variety of sampling techniques. Sampling would occur in a variety of habitats, with greater concentration in habitats likely to yield results. Trapping and capture options would be utilized that are appropriate for the species being sought. Permission to trap would be sought from state and federal agencies that require permits. Surveying for RTE mammals will occur over the course of 1-2 years during the periods that are most likely to yield results (spring and fall for small mammals and summer for bats). Threats to the RTE species and management recommendations for their protection would be provided. The locations

where species are identified or captured will be mapped using GPS coordinates. It may be possible to document 90% of all mammals for little additional cost.

Birds:

Funding is needed to conduct inventories of all RTE birds along the AT corridor in ME, CT, NY, NJ, PA, MD, and WV. The AT corridor land in these states totals approximately 106,000 acres on 780 miles of the Trail. In Virginia, a bird inventory is needed for about 18,000 acres on 90 miles of the Trail on ATPO land. RTE birds will be surveyed and censused using point counts. The distribution, relative abundance, frequency of occurrence, and habitat associations of RTE birds would be documented on AT corridor land. Populations of RTE birds would be sought by a variety of sampling techniques. Sampling would occur in a variety of habitats, with greater concentration in habitats likely to yield results. Capture options would be utilized that are appropriate for the species being sought. Permission to capture would be sought from state and federal agencies that require permits. Surveying for RTE birds will occur over the course of 1-2 years during the periods that are most likely to yield results. Threats to the RTE species and management recommendations for their protection would be provided. The locations where species are identified or captured will be mapped using GPS coordinates. It may be possible to document 90% of all birds for little additional cost.

Reptiles and Amphibians:

Funding is needed to conduct inventories of RTE reptiles and amphibians in the AT corridor of ME, MA, CT, NY, NJ, PA, MD, and WV. The AT corridor land in these states is approximately 118,000 acres on 870 miles of the Trail. In Virginia a herp inventory is needed for about 18,000 acres along a 90-mile stretch of the Trail on ATPO land. Full inventories of RTE reptiles and amphibians are needed in ME, NJ, PA, MD, and WV, and more complete inventories are needed in MA, CT, NY, and VA. RTE herps will be surveyed and censused using point counts. The distribution, relative abundance, frequency of occurrence, and habitat associations of RTE herps would be documented on AT corridor land. Populations of RTE herps would be sought by a variety of sampling techniques. Sampling would occur in a variety of habitats, with greater concentration in habitats likely to yield results. Capture options would be utilized that are appropriate for the species being sought. Permission to capture would be sought from state and federal agencies that require permits. Surveying for RTE herps will occur over the course of 1-2 years during the periods that are most likely to yield results. Threats to the RTE species and management recommendations for their protection would be provided. The locations where species are identified or captured will be mapped using GPS coordinates. It may be possible to document 90% of all reptiles and amphibians for little additional cost.

Justification:

Mammals:

Limited surveys or documentation of RTE mammals have occurred along portions of the AT corridor in ME, CT, PA, and VA. However, the results have been very limited, with only two species being documented: the eastern woodrat in CT and PA and the Virginia

northern flying squirrel in VA. It appears that only a few locations were inventoried for RTE mammals in these states. A small mammal inventory for RTE species has recently been contracted for CT, NY, NJ, and PA, so in these states, only mid to large size mammals need to be inventoried. An inventory of RTE mammals will make it possible for AT staff to help protect these species and their habitats. Without such knowledge, trail use may impact these mammals and the habitats where they live. The completion of this inventory will help to complete one of the twelve data sets of the NPS Inventory and Monitoring program.

Birds:

Natural heritage inventories have been completed for the AT corridor in each of the 14 states through the Trail passes. However, inventories of birds and other vertebrates in the AT corridor are not complete. Only in Massachusetts, where 130 bird species were documented, does the inventory of birds appear to be relatively complete. In Maine, the golden eagle, peregrine falcon, Bicknell's thrush, and merlin were documented in three natural heritage areas, all on state land. A boreal owl study has also been completed for the AT corridor in that state. In Connecticut, rare birds were documented at five natural heritage sites, though most of the records are at least a couple of decades old. In New York, only two rare bird species were documented, both at the Hudson River. In NJ, PA, MD, and WV, there appear to have been no inventories or documentation of rare birds. In Virginia, searches for RTE did occur in high priority areas, and they were documented at seven natural heritage sites, all of them on land of the US Forest Service, Shenandoah National Park, and the Blue Ridge Parkway. Funding for the currently proposed inventory of RTE birds in ME, CT, NY, NJ, PA, MD, WV, and a portion of VA would fill in the extensive gaps of our knowledge of RTE birds in these states. Completion of this inventory would also help to complete one of the twelve natural resource data sets of the NPS Inventory and Monitoring program.

Reptiles and Amphibians:

Natural heritage inventories have been completed for the AT corridor in each of the 14 states through the Trail passes. However, no inventories of RTE reptiles and amphibians have occurred in the AT corridor in ME, NJ, PA, MD, and WV. In MA, CT, NY, and VA, inventories of reptiles and amphibians are not complete. In Massachusetts, about one-third of the AT corridor has received some herp inventory work. In Connecticut, three RTE herps were found in six natural heritage sites along the AT corridor. In New York, three RTE herps, included the Federally Threatened bog turtle, were documented from the vicinity of the AT. In Virginia, there has been some survey work, which documented five species of RTE salamanders from six natural heritage sites, all of them located on land of the US Forest Service, Shenandoah National Park, or the Blue Ridge Parkway. Funding for the currently proposed inventory of RTE reptiles and amphibians in ME, MA, CT, NY, NJ, PA, MD, WV, and a portion of VA would fill in the gaps of our knowledge of RTE herps in these states. Completion of this inventory would also help to complete one of the twelve natural resource data sets of the NPS Inventory and Monitoring program.