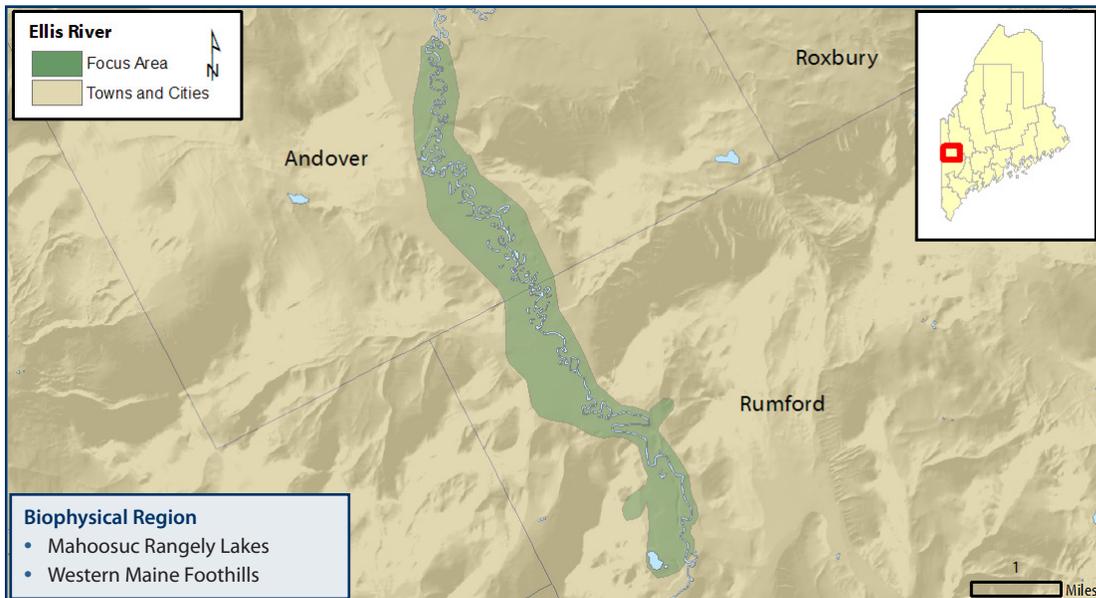


**Ellis River**



**WHY IS THIS AREA SIGNIFICANT?**

This focus area occupies over six miles of a broad stream valley along the meandering Ellis River in Rumford and Andover. Multiple rare species including turtles and freshwater mussels have been documented within the river, attesting to its excellent water quality and condition. A unique feature of the Ellis River Focus Area is a bat hibernaculum, one of only four known in the state to support any significant number of bats. The uplands above the floodplain also support an oak – ash woodland, a rare natural community that has only been found in one other site within this western foothills ecoregion.

**OPPORTUNITIES FOR CONSERVATION**

- » Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features to maintain ecological functions and values.
- » Encourage landowners to maintain enhanced riparian buffers to protect water quality and fisheries, and to provide valuable riparian habitat for wildlife.
- » Encourage town planners to improve approaches to development that may impact focus area functions.
- » Maintain natural hydrologic regime by avoiding drainage or impoundment of the wetlands, streams or adjacent water bodies.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: [www.beginningwithhabitat.org/toolbox/about\\_toolbox.html](http://www.beginningwithhabitat.org/toolbox/about_toolbox.html).

**Rare Animals**

- Bat Hibernaculum
- Creeper
- Wood Turtle

**Rare and Exemplary Natural Communities**

- Oak - Ash Woodland

**Significant Wildlife Habitats**

- Inland Wading Bird and Waterfowl Habitat

*Photo credits, top to bottom: Maine Natural Areas Program (all photos)*



*Wood Turtle, Maine Department of Inland Fisheries and Wildlife*

### FOCUS AREA OVERVIEW

The distinctive features of this focus area are the river valley and river itself. The large, mostly intact floodplain contains multiple sandy bars, channels, old oxbows, and pools, all of which provide excellent aquatic and riparian habitats. A small area of significant Inland Waterfowl and Wading Bird Habitat has been identified at the southern end of the focus area, although excellent waterfowl habitat is likely found throughout the Ellis River corridor.

Rare mussel and turtle species have been found within the Ellis River and along its banks, attesting to the water and habitat quality. Wood turtles, which require unfragmented connections between wetland and upland habitats, have been documented in multiple locations. The clean, free flowing water also provides critical habitat for creepers, a rare fresh water mussel species, and native brook trout.

Two other important features associated with the uplands within the Ellis River watershed include a rare natural community and bat hibernaculum. The slopes just above the river floodplain support an Oak-Ash Woodland, a rare forest type in Maine. This community typically occurs in small patches, and though the example near the Ellis River is small, it is one of

the five largest in the state and one of only two in the western foothills ecoregion. The bat hibernaculum east of the river is of particular significance because it is one of only four in Maine that have been documented as supporting any significant number of bats. Bats roosting and hibernating here likely feed upon the insects associated with the Ellis River, highlighting the important ecological connections between the Ellis River floodplain and its surrounding uplands.

### RARE AND EXEMPLARY NATURAL COMMUNITIES

Generally found in southwestern and central Maine, **iron-wood-oak-ash woodland** natural communities, are often subject to fragmentation and development pressure, and the majority of the known occurrences are on land that is not currently in any type of conservation. Sites that have Eastern red cedar present may host the rare juniper hairstreak butterfly, which uses cedar as its larval host plant. Two other insects, the columbine dusky wing butterfly and the aureolaria seed borer moth, may have historically inhabited this community type where they used uncommon larval host plants, columbine and false foxglove, respectively.

## CHARACTERISTIC SPECIES

The diversity of aquatic habitats in the Ellis River Focus Area is important for **wood turtles** (*Glyptemys insculpta*), which are a species of Special Concern and are protected from being collected in Maine. Wood turtles use riverine and floodplain habitats for hibernation, breeding, and nesting, though they may be found in upland habitats at other times. Maintaining an unfragmented riparian corridor and unrestricted access between riparian and upland habitats will continue to make the Ellis River Focus Area excellent habitat for the rare wood turtle.

A freshwater mussel species found in the Ellis River also highlights the significance of this river valley. **Creepers** (*Strophitus undulatus*) have been found in a few locations along the river. This species is widely distributed across the state and throughout its range, however where it has been found it is rarely abundant. Usually fewer than ten individuals are found at a single location, and there is considerable question about the long-term viability of such small populations. Consequently, this species has been listed as Special Concern in Maine. The creeper prefers clean, flowing water, and thus habitat degradation and pollution have probably affected this species.

Another unique wildlife feature nearby is a **bat hibernaculum** east of the Ellis River. Bats emerging from the hibernaculum in the spring likely find a large source of food in the insects hatching from the Ellis River below. This hibernaculum is one of only four known in the state to support any significant number of bats. Although it has been found to contain mostly common species such as little brown bats (*Myotis lucifugus*) and northern long eared bats (*Myotis septentrionalis*), this kind of supporting habitat for bats is extremely rare in Maine.

### Ecological Services of the Focus Area

- Contributes to water quality and ecological integrity of the Ellis and Androscoggin Rivers.
- Provides high quality habitat for waterfowl, wading birds, freshwater mussels, bats, native fish, and other wildlife.
- Provides ecological connectivity and habitat for area-sensitive wildlife species.

### Economic Contributions of the Focus Area

- Attracts tourism for wildlife observation, paddling, hunting, and angling.
- Provides scenic vistas that raise property values.
- Provides wildlife habitat for a number of game species that are seasonally important to Maine's rural economy, including local sporting camps.



Ironwood Oak Ash Woodland, Maine Natural Areas Program



Creeper, Ethan Nedeau,



Bat, Jonathan Mays

## CONSERVATION CONSIDERATIONS

- » An adequate buffer should be retained between timber harvest areas and the wetlands. Because different species can have different buffering requirements, better protection will be afforded to the collective wetland plants and animals when larger buffers are used. Any timber harvesting within and adjacent to wetlands should be implemented with strict adherence to state or local Shoreland Zoning guidelines, the Maine Natural Resources Protection Act, and Maine Forest Service Best Management Practices.
- » Ironwood – Oak – Ash Woodland natural communities and rare plant populations found here will be best maintained by leaving them undisturbed.
- » Freshwater mussels are sensitive to contaminants and changes in habitat. Maintenance and/or improvement of water quality and habitat integrity via protection of riparian buffers is essential. Any activities that may potentially degrade water quality or negatively alter habitat type (including substrate, flow rate, water levels) should be avoided. A minimum of 250-foot contiguous, forested buffer is recommended on waterways that provide habitat for rare, threatened, and endangered mussel species. Likewise, because larval freshwater mussels require a specific fish host, activities that may result in changes to the fish community or prevent access by fish should be avoided. When designing projects near known mussel habitat consult with a MDIFW biologist to assist with planning, and refer to the Maine Forest Service's forestry Best Management Practices handbook or the Maine Department of Environmental Protection's Maine Erosion and Sediment Control Recommendations.
- » This area includes Significant Wildlife Habitat for waterfowl and wading birds. Both land managers and private landowners should follow best management practices with respect to forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Maintaining wide forested buffers along all lakes, rivers, streams, and wetlands will provide valuable riparian habitat for many wildlife species. Consult with a MDIFW biologist prior to planning any activity that may disturb the forest around Inland Waterfowl and Wading Bird Habitat.
- » The integrity of wetlands and aquatic systems including all the processes and life forms they support are dependent on the maintenance of the current hydrology and water quality of these systems. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution. These effects could have devastating impacts on populations of rare freshwater mussels, native fishes, and other aquatic life. Improperly sized crossing structures such as culverts can impede movement of fish and aquatic invertebrates effectively fragmenting local aquatic ecosystems and ultimately leading to local extirpation of some species. Future management activities should avoid additional impacts to the site's hydrology.
- » Work toward long-term protection of the habitat surrounding the bat hibernacula by exploring a variety of conservation strategies, including agreements with the landowner.
- » Invasive plants and aquatic organisms have become an increasing problem in Maine and a threat to the state's natural communities. Disturbances to soils and natural vegetation and introductions of non-native species to terrestrial and aquatic habitats can create opportunities for colonization. Landowners and local conservation groups should be made aware of the potential threat of invasive species, of methods to limit establishment, and/or of appropriate techniques for removal. For more information on invasive plants visit: <http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm>.
- » With expected changes in climate over the next century, plant and wildlife species will shift their ranges. Maintaining landscape connections between undeveloped habitats will provide an important safety net for biodiversity as species adjust their ranges to future climate conditions.

**RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA**

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals Plants	Bat Hibernaculum	Bat Hibernaculum		SNR	GNR
	Creepier	<i>Strophitus undulatus</i>	SC	SNR	G5
	Wood Turtle	<i>Glyptemys insculpta</i>	SC	S4	G4
Natural Communities					
	Oak - Ash Woodland	Ironwood - oak - ash woodland		S3	G3G5

**State Status\***

- E** Endangered: Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.
- T** Threatened: Rare and, with further decline, could become endangered; or federally listed as Threatened.
- SC** Special Concern: Rare in Maine, based on available information, but not sufficiently rare to be Threatened or Endangered.

*\*State status rankings are not assigned to natural communities.*

**State Rarity Rank**

- S1** Critically imperiled in Maine because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres).
- S2** Imperiled in Maine because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (on the order of 20–100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.

**Global Rarity Rank**

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation.
- G2** Globally imperiled because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (on the order of 20–100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.