



UPLAND FORESTS

Upland (non-wetland) forests are the most prevalent and extensive habitats in the region. They are extremely variable in vegetation, ages and sizes of trees, size of forest patches, and character of the forest habitats, but forests of all kinds can provide valuable habitats for common and rare plants and animals. **Large forests** are critical habitats for many area-sensitive species—including raptors, songbirds, reptiles, amphibians, large mammals—that are disappearing from our increasingly fragmented rural landscapes. Because forests facilitate efficient water infiltration through the soils, forest preservation is perhaps the most effective means of **maintaining the quality and quantity of groundwater and surface water resources**. Forests provide many other essential services such as **climate moderation** and **carbon sequestration**.



Upland hardwood forest



Upland conifer forest

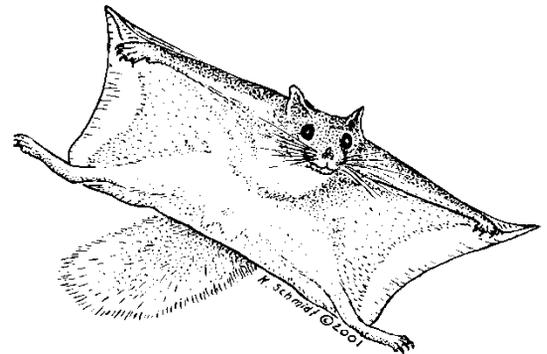
SPECIES OF CONSERVATION CONCERN

- Eastern box turtle, eastern racer, copperhead
- Sharp-shinned hawk, red-shouldered hawk, Acadian flycatcher, cerulean warbler, black-throated blue warbler
- Black bear, bobcat, fisher, southern flying squirrel
- Indiana bat, eastern small-footed myotis

These are just a few of the species of regional or statewide conservation concern that are known to occur in upland forests. See Kiviat & Stevens (2001) for a more extensive list.

TYPICAL PLANTS

- Maples, oaks, hickories, birches, white ash
- Eastern hemlock, white pine, eastern red cedar
- Wild sarsaparilla, Canada mayflower, trout-lily, Christmas fern, wood ferns



Southern flying squirrel

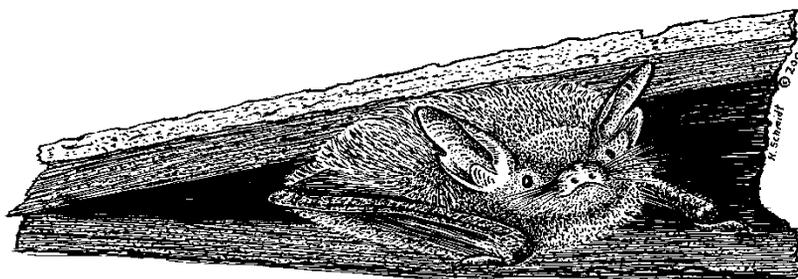
THREATS TO UPLAND FORESTS

Forests have long been affected by human activities such as **logging, recreation, and clearing** for agriculture and development. Forest disturbances such as **soil compaction, removal of overstory or understory vegetation, removal of standing snags**, downwood, and other organic debris can greatly diminish the habitat quality of forests for sensitive species. **Forest fragmentation** by construction of features such as roads, driveways, buildings, and utility corridors may be the most important and widespread threat to forest habitats in the region. Some of the **effects of fragmentation** are:

- **Reducing or eliminating areas of “interior forest” habitat** essential to many species of songbirds, raptors, and large mammals;
- **Creating pathways for intrusion** by
 - Human subsidized nest predators (e.g., raccoon, opossum, striped skunk),
 - The brown-headed cowbird, a nest parasite that lays its eggs in nests of other birds and reduces the reproductive success of the host species, and
 - Non-native plants (e.g., garlic-mustard, Japanese barberry, Bell’s honeysuckle) that outcompete native plant species, change the forest structure, and reduce native biodiversity;
- **Obstructing critical travelways** of amphibians, turtles, and other wildlife migrating overland between habitats.

CONSERVATION RECOMMENDATIONS

- ❖ Keep large forests and mature forests intact and unfragmented.
- ❖ Minimize construction of new roads, houses, and other forms of development in forests, and especially in large or mature forests. Concentrate any new developed uses at forest edges and near existing developed areas.
- ❖ Maintain intact habitats between forest patches to allow for migration and dispersal of plants and animals.
- ❖ Restrict logging to the winter months to minimize damage to soil, vegetation, and wildlife. Avoid logging on steep slopes, and leave tree crowns in the woods to conserve soil fertility and increase habitat diversity. Minimize gap size and road construction to prevent the establishment of non-native species (e.g., tree-of-heaven). Avoid high-grading (selectively harvesting the largest and most valuable) to preserve genetic diversity and forest structure.
- ❖ Minimize ATV use, which can damage vegetation and soil and disturb wildlife.



Indiana bat

References

Kiviat, E. and G. Stevens. 2001. Biodiversity assessment manual for the Hudson River estuary corridor. New York State Department of Environmental Conservation, Albany. 508 p.