Unfragmented Forest & Habitat Corridors

Description:

Unfragmented forests are relatively large forest or woodland tracts that are unbroken by major roads or other developments. Some of the forest types found in the Hudson River Estuary corridor include pitch pine-oak forest, Appalachian oak-hickory, chestnut oak forest, beech-maple mesic forest, hemlock-northern hardwood forest, spruce-northern hardwood forest, mountain spruce-fir forest, and mountain fir forest. Some examples of largely forested areas of the Hudson Valley include the Rensselaer Plateau, the Highlands, and the Catskill, Taconic, and Shawangunk mountains. Lowland forest floors that have deep leaf litter and uncompacted soils are rare remnants of features that may once have covered large areas in the Hudson River Valley.

Ecological Importance:

Unfragmented forest blocks are important for a number of species sensitive to disturbance and dependent on large areas to meet their habitat requirements. These species are typically defined as interior or area-sensitive species and include several large mammals (e.g., bobcat, black bear, fisher), raptors (e.g., red-shouldered hawk, Cooper's hawk), and songbirds (e.g., woodland warblers, forest thrushes). Furthermore, some species depend on the clean, cold water provided in headwater streams in forested regions. These streams are critical habitat for trout as well as several species of amphibians.

Sharp-shinned hawk.
Photo by Johann Schumacher.

Habitat corridors that link intact forest blocks are extremely important features in the landscape. Corridors are habitat for dispersing animals, and most importantly connect species populations. In many cases these corridors represent riparian habitat as well.

Although few examples of "old-growth" lowland forest remain, forests of moderate-sized and moderate-aged trees continue to provide valuable habitat and might provide valuable mature forest habitat in the future. Typical trees in a lowland forest include sugar maple, oaks (black, red, chestnut, white), American beech, and hemlock. Other trees that may be present include shagbark hickory, white ash, basswood, tulip tree, and black birch. Characteristic animals of unfragmented forests are red-shouldered hawk, barred owl, pileated woodpecker, ovenbird, wood thrush, cerulean warbler, and Acadian flycatcher. A diverse small mammal community and invertebrate community are usually also present. Rare fungi, lichens and bryophytes (mosses and liverworts) are associated with remaining lowland old-growth forests. The red-shouldered hawk may be rare in part due to fragmentation of forest habitat.

Conservation Strategies:

Habitat change and fragmentation are substantial pressures negatively affecting biological diversity in the Hudson River Estuary corridor. Floodplain forest and mesic lowlands are especially at risk of fragmentation and are under-represented on public lands (A. Finton, NY Natural Heritage Program, pers. comm.). Therefore, it should be stressed that intact, forested habitats should be conserved regardless of size. Within fragmented landscapes, the conservation of habitat corridors that link intact forest blocks is of particular importance. On a local level, this will involve the identification of forest blocks and corridors. Once identified, conservation tools aimed at protecting these areas (e.g., conservation easements, acquisition on a willing seller basis) should be implemented. Forestry plans for these areas should emphasize selective and low-impact harvesting, particularly of mature lowland forest. Forest management practices that reduce the impact of roads and compaction and disturbance by vehicles should be encouraged.

Chestnut oak forest.
Photo by Andrew Finton.

On a regional level, strategies to address habitat change and fragmentation should focus initially on identifying those lands most at risk, assessing the juxtaposition of protected forest blocks and corridors with unprotected land, and identifying critical areas for maintaining or establishing habitat connectivity. Spatial analyses of these features could be conducted using remote-sensing products. Other studies that examine the effects of human demographics on habitat fragmentation could be important for identifying priority areas for conservation efforts and directing development to less sensitive areas.

Biodiversity areas notable for unfragmented forest & habitat corridors (Figure 11):

- Catskill Mountains
- Highlands
- Rensselaer Plateau
- Shawangunk Ridge
- Taconic Ridge

Other biodiversity areas that contain unfragmented forest:

- Palisades

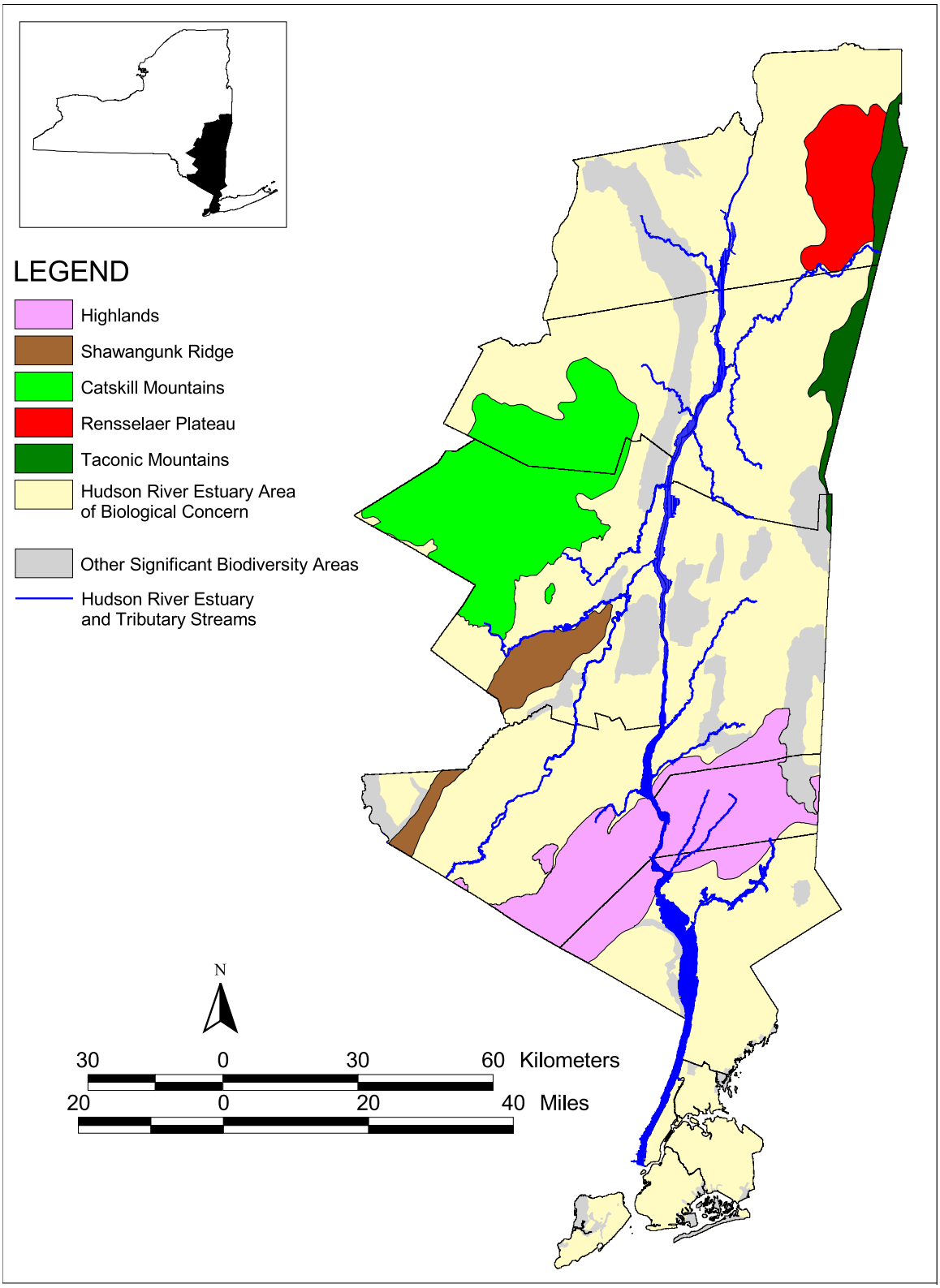

Figure 11. Significant biodiversity areas of the Hudson River Estuary corridor notable for unfragmented forest and habitat corridors.