

## 18 - RURAL NATURE OF NYS

Eco-Regions  
Open Space  
Forests  
Wildlife

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## Wildlife Management Exercise

❖ **Optional Exercise 16** looks at wildlife management areas and bird nesting sites within the counties of New York State.

➤ It is due by the date of the final exam.

The list of all WMAs by county is at:  
<https://www.dec.ny.gov/outdoor/7768.htm>

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## Biosphere and Biodiversity

❖ **Biosphere** is the zone of life existing at the interface of the atmosphere, hydrosphere and lithosphere.

❖ **Biodiversity** refers to the total variety of life on Earth or within a given area, such as NYS or any of its parts (regions and counties).

- Includes all the species of animals, plants, fungi, and microorganisms and bacteria living in NYS.
- Includes genetic differences among those of the same species; and communities of plants and animals that occur together.
- There are tens of thousands of species of plants, insects and animals (including 4,000 beetles!) in NYS.

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## Biodiversity & Species Conservation

❖ **Importance of Biodiversity**

Variety benefits humans and of other species. Each species is a unique member of the biosphere and cannot be replaced if lost.

- Animals and plants provide food and materials for clothing, shelter and fuel.
- Insects pollinate crops and control agricultural pests.
- Plants produce the oxygen and absorb CO<sub>2</sub>.
- Plants are the source for many medicines.
- Microorganisms decompose waste products and recycle nutrients.
- Biodiversity provides enjoyment, recreation, and spiritual fulfillment.

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## Threats to Biodiversity

Threats to the nature of New York

- **Habitat destruction, alteration and fragmentation** - reduces ideal living space affecting food supplies and range of movement of a species.
- **Spread of invasive species** - kill off native species and change the balance of nature within an area
- **Pollution** - alters the chemical balance of water affecting plants, animals and fish
- **Illegal collection** - poaching, unregulated hunting, overfishing has reduced numbers
- **Climate change** - may cause species to shift their range and/or allow new species to enter the ecosystem.

NYS has experienced all of them over time.

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## Status of Biodiversity

<http://www.nynhp.org/>

Status	Percentage	Description
Believed Secure	56%	known at more than 100 sites.
Vulnerable	12%	known at 21 to 100 locations.
Imperiled	10%	known at just six to 20 locations.
Critically imperiled	15%	known at five or fewer locations in the state.
Historical	3%	No occurrences have been reported in the last 15 years, but more survey work is needed. These may still be present within NY or they may be extirpated.
Presumed extirpated	4%	All known occurrences are gone and there is little chance of finding new populations.

[http://www.dec.ny.gov/docs/wildlife\\_pdf/rareanimal2017.pdf](http://www.dec.ny.gov/docs/wildlife_pdf/rareanimal2017.pdf)

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## DEC Environmental Resource Mapper: Seeing what's there

<http://www.dec.ny.gov/qis/erm/>

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## Wildlife Management

- In 1885 NYS's Bureau of Wildlife was established (then called the Fisheries, Game and Forest Commission) when wildlife populations were at one of the lowest points in history.
- ❖ Many species have been brought back from extinction through habitat restoration and species reintroduction. *(Remember when the species began to disappear?)*
- ✓ Now BoW monitors the geographic distribution of wildlife and engages in population control through regulated hunting.
- ✓ BoW also tracks invasive species.

Watchable Wildlife web site: <http://www.dec.ny.gov/outdoor/55423.html>  
 List of Watchable Wildlife Sites by region: <http://www.dec.ny.gov/outdoor/55450.html>

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## KEENEY SWAMP WMA Allegany County

<https://www.dec.ny.gov/outdoor/83123.html>

Most of Keeney Swamp had been drained for agricultural purposes in the 1800's. By the late 1960's, most of the farms were abandoned. Beaver re-occupied the area and constructed several large impoundments. The area was purchased in 1978 by the DEC to ensure the permanent preservation of this diverse natural wetland. Consists mostly of shrub swamp, emergent marsh and wetland, open water and some brush and grassland. In 1990, 4 beaver impoundments failed and over half the shallow water impoundment was lost. By the late 1990's, this loss of habitat had decreased the diversity and number of many wildlife species, particularly water birds.

The primary **management objective** of this WMA is to maintain quality wetland habitat for waterfowl. **Habitat management activities** include water level regulation and grassland maintenance.

**Wildlife:** mallards, heron, ducks, geese, muskrat, deer, mink, grouse, raccoon, woodcock, bitterns, variety of song birds

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## Breeding Bird Atlas

- NYS Bird Conservation Area Program (est'd. 1997) safe guards and enhances bird populations and their habitats.
- NYS Breeding Bird Atlas is comprehensive survey of the distribution of bird species in NYS and their breeding areas.
- <http://www.dec.ny.gov/cfm/extentaps/bba/index.cfm> - BBA search site
- <http://www.dec.ny.gov/animals/7312.html> - BBA home page

For a list of NYS Bird species and fact sheets, see: <http://www.dec.ny.gov/animals/54755.html>

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## Breeding Bird Atlas

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## Breeding Bird Atlas

**Study areas change over time.**

Difference in the number of sightings is due primarily to habitat change.

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## Nuisance and Invasive Species

- ❖ In 2003 legislation was passed and signed to study the growing problem of invasive species.
- ❖ Nuisance and invasive species are monitored **both** by the Department of Environmental Conservation and the Department of Agriculture and Markets.
  - Insects, fish, reptiles, amphibians, plants and animals deemed harmful or potentially harmful to the environment of NYS and/or threatening to its agricultural and forest resources are closely monitored and regulated.


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## Nuisance Species

**Examples:**

- Deer
- Black bear
- Moose
- Canadian geese
- Coyote
- Raccoons
- Skunks
- Numerous plants

**Nuisance species** are animals and birds whose habitats have been reduced by human encroachment and/or who have thrived in human areas by learning to seek food/shelter in populated areas.



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## Invasive Species

**Species that are not native to NYS.**

**Both the NYS DEC and Agriculture & Markets monitor the geographic distribution of non-native species in the state.**

- They are considered "biological pollution."
- They have no natural enemies or controls.
- They have the potential to cause harm to the environment or to human health (only 10-15% currently do).
- Usually entered the state as "hitchhikers."


**Examples:**

- Asian long-horned beetle
- Sea lamprey eels
- Zebra mussels
- Big-head carp
- Potato beetles
- Snakehead fish
- Pathogens (disease carrying organism as viruses and bacteria) as those that cause West Nile disease.


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## Invasive Species


**Snakehead fish** A top-level predator without natural enemies outside of its native environment (Africa and Asia).




**Sea Lamprey eel** attached to a native trout species from Lake Champlain. A parasite that attaches itself to the body of a fish, injects an anticoagulant and eats off of it until the fish dies; controlled by killing its eggs.



**Asian Long-horned beetle**  
Favors maple trees; no known biological or chemical defense; no predators in N. America.



**Giant Hogweed**  
A noxious weed whose sap irritates the skin; can grow to over 14 ft. tall; came from SE Europe.



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## Invasive Species Awareness



**ATTENTION BOATERS**  
Stop the Spread of Invasive Plants and Animals  
Before launching your boat or leaving the site please use this Invasive Species Removal Station kit.

**STOP AQUATIC HITCHHIKERS!**

**Wanted Dead or Alive**



**Preferably dead!**

The Asian longhorned beetle is a tree killer. Last seen on the west edge of Otsego Island. If you see one, please take note of the location and **CALL 311**

Invasive Species Tracking website: <http://www.nyis.info/>  
Interactive mapping site: <http://www.imapinvasives.org/>

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**N E X T**

**Agriculture  
in NYS**

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