

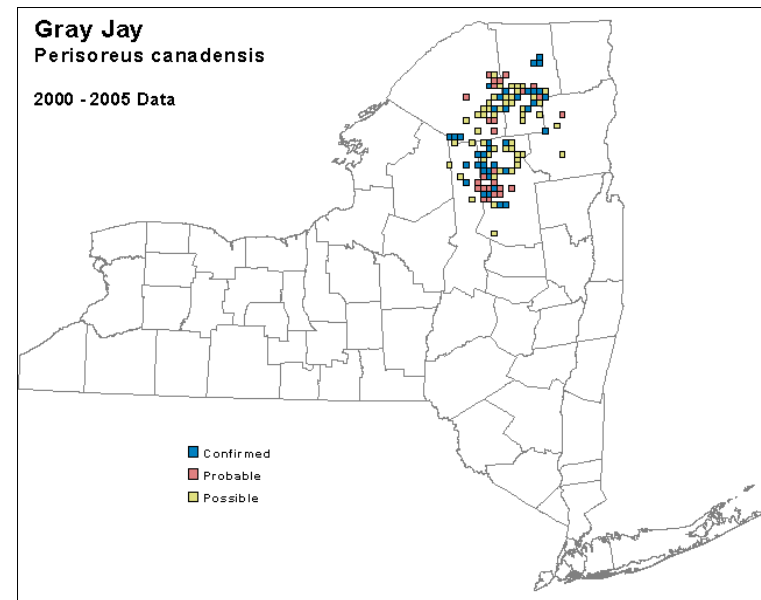
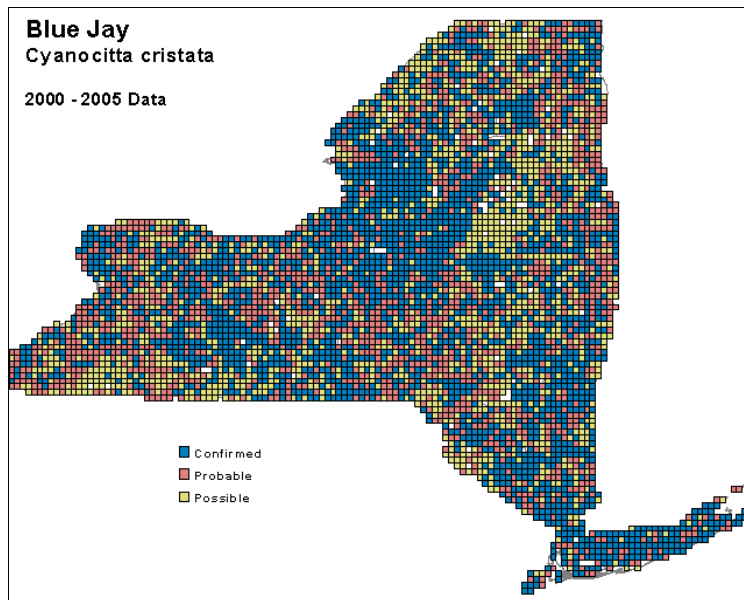
Worksheet: These Maps Are For The Birds

The Hudson River Valley and New York State are home to hundreds of kinds of birds. There are many different types of habitats here, and each has its own set of bird species. Cities have pigeons, starlings, and sometimes peregrine falcons; rivers have ducks, geese, and gulls. A city with a river flowing through it might have all these kinds of birds.

With the help of volunteers, scientists collect data on birds nesting in New York. Nesting locations are marked on maps of small sections of the state. A book that collects many maps together is called an atlas. So the collection of all the maps showing where birds nest is called the Breeding Bird Atlas.

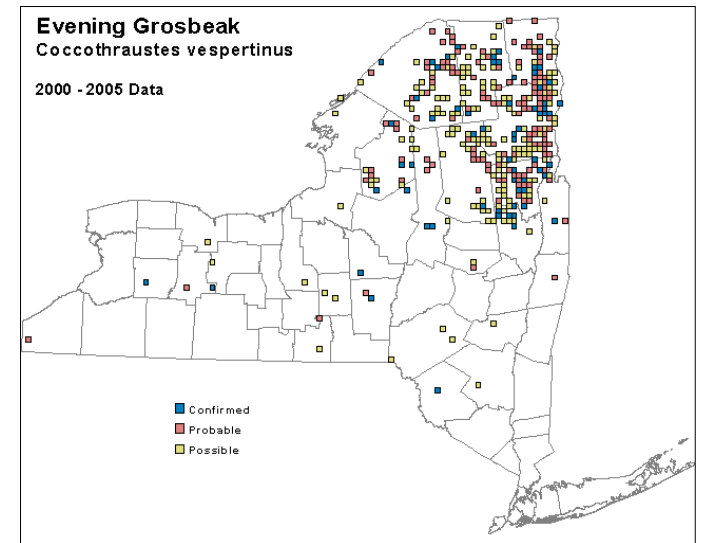
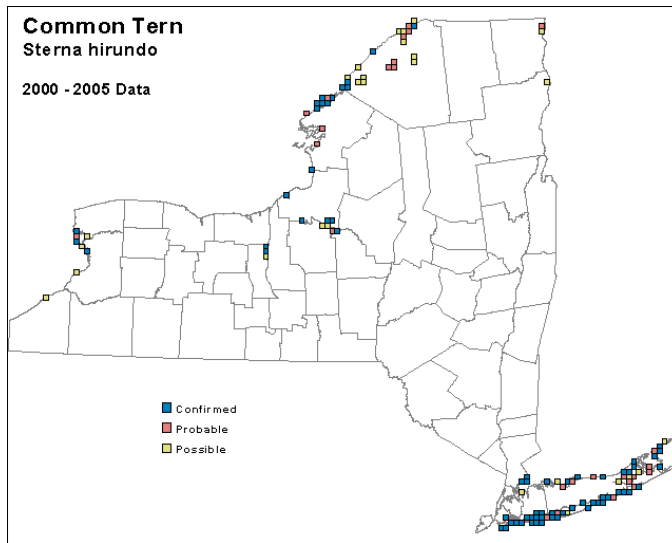
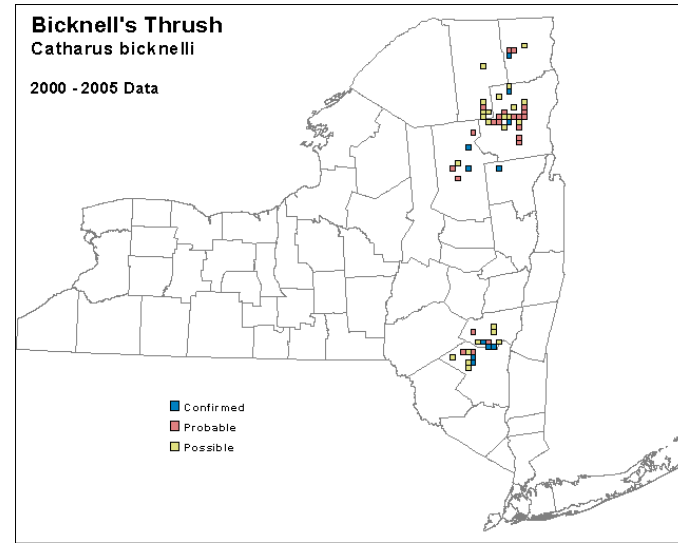
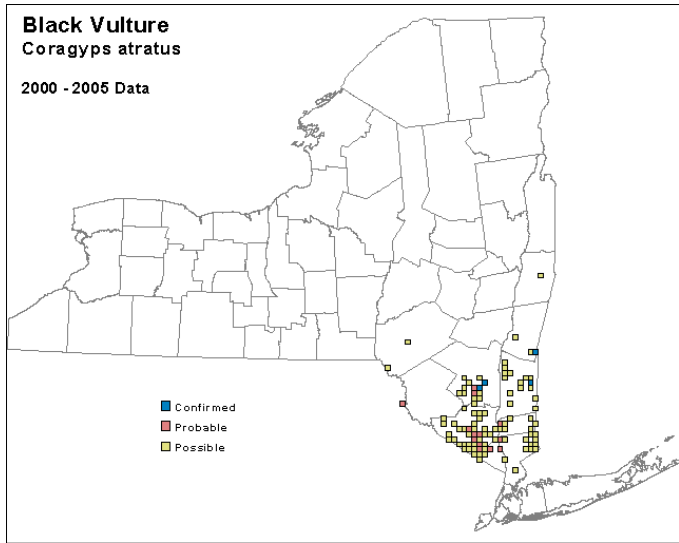
Here are two maps from the Breeding Bird Atlas. One is for a very common bird—the blue jay. It nests all over the state. The other is for the gray jay. Its scientific name—*Perisoreus canadensis*—gives a clue about where this jay is most common. In New York, it nests only in the Adirondack Mountains, where the forests are much like those in Canada.

Each tiny square shows that the bird was found in that small map section during nesting season. Different colors show how likely it was that the species did nest. Finding a nest in use or babies would confirm breeding. Possible breeding means only that the bird was seen in the right nesting habitat.



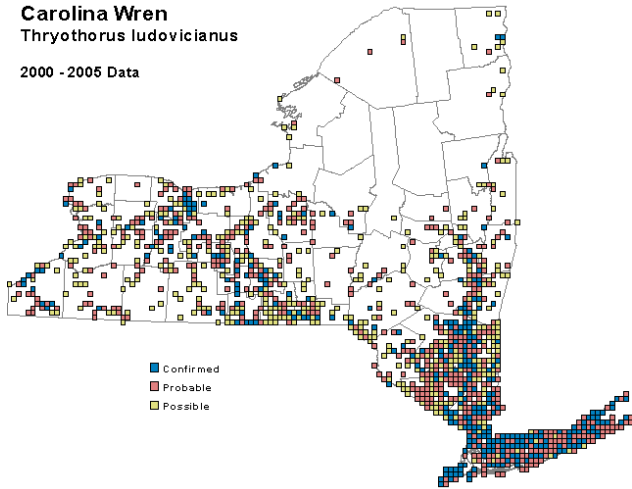
Breeding Bird Atlas maps do not show rivers, lakes, mountains, or other landscape features. To see how such features influence where birds nest, compare the Atlas maps to the relief map of New York State. Then answer these questions.

1. Which of these birds mainly nests in northern New York?
2. Which bird nests near large bodies of water?
3. Which of these birds nests on mountain tops?
4. Which bird is more common in states south of New York?

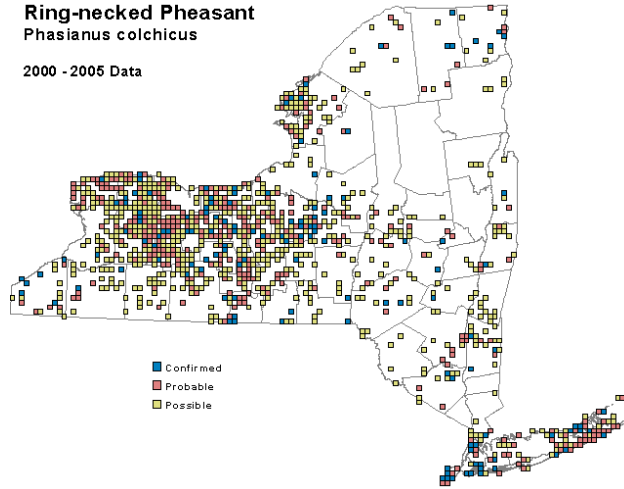


Breeding Bird Atlas data was collected from 1980 to 1985, and again from 2000 to 2005. By comparing maps from the two sets of years, you can see changes in the populations of New York's breeding birds. Look at each of the five pairs of maps on this page and the next. Does the number of places where each bird was found increase or decrease? Does the location of the squares change from one map to the next? Then write down which bird best fits each description in questions 5 - 9.

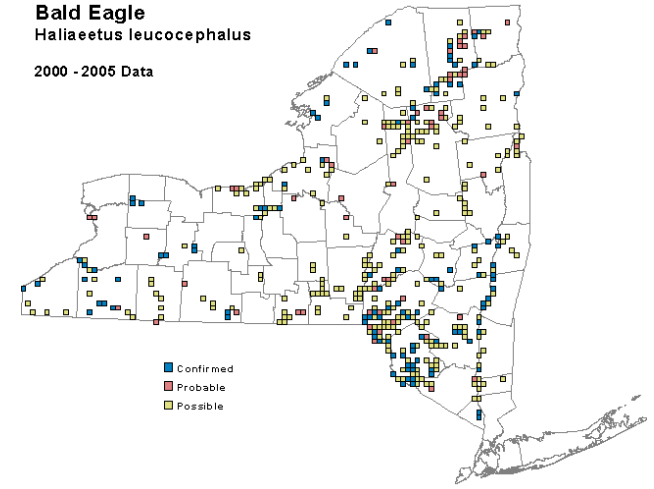
Carolina Wren
Thryothorus ludovicianus
 2000 - 2005 Data



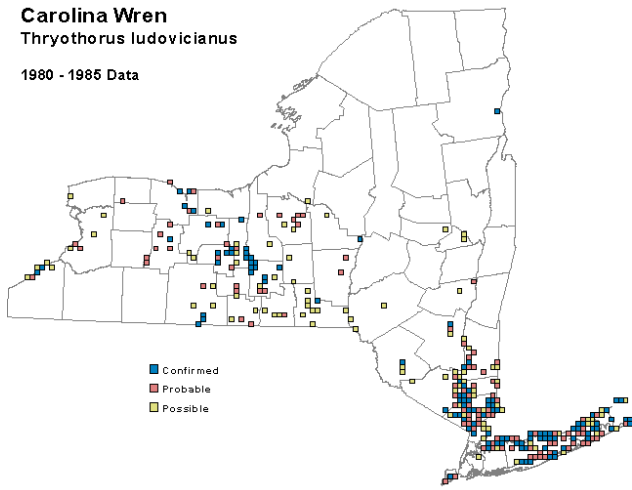
Ring-necked Pheasant
Phasianus colchicus
 2000 - 2005 Data



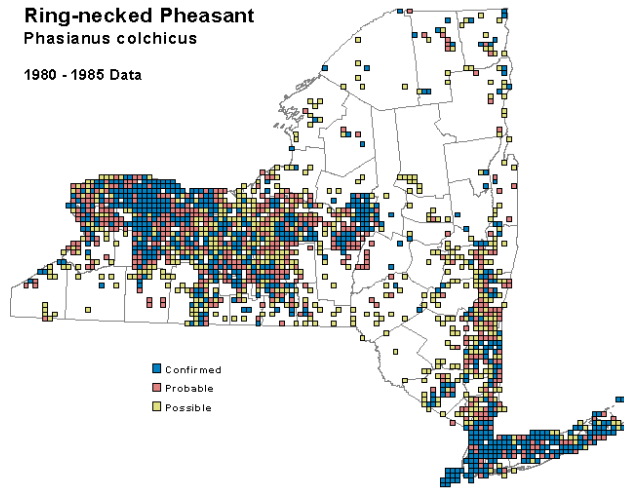
Bald Eagle
Haliaeetus leucocephalus
 2000 - 2005 Data



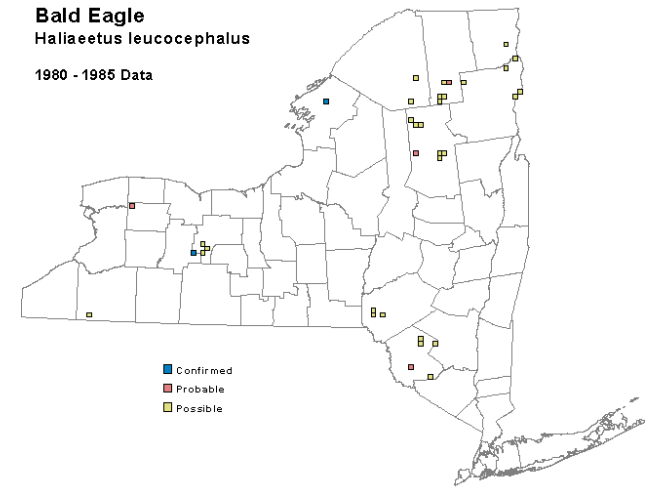
Carolina Wren
Thryothorus ludovicianus
 1980 - 1985 Data



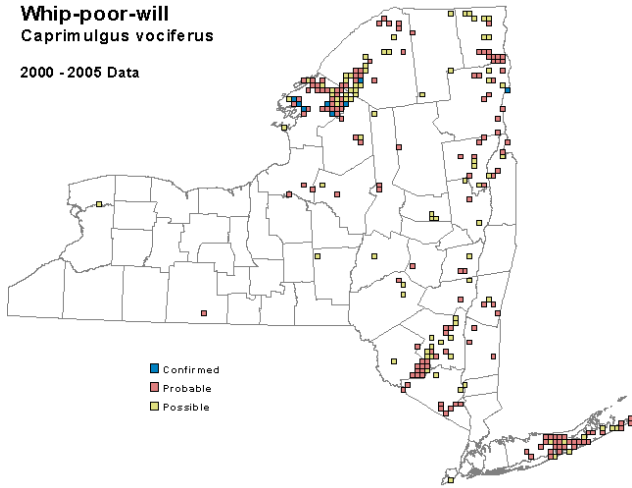
Ring-necked Pheasant
Phasianus colchicus
 1980 - 1985 Data



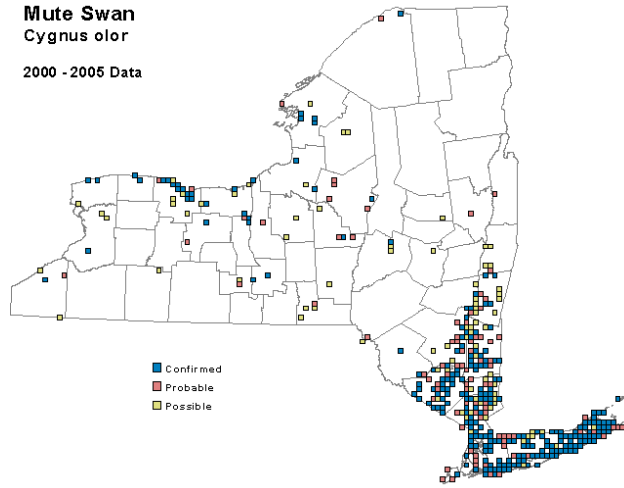
Bald Eagle
Haliaeetus leucocephalus
 1980 - 1985 Data



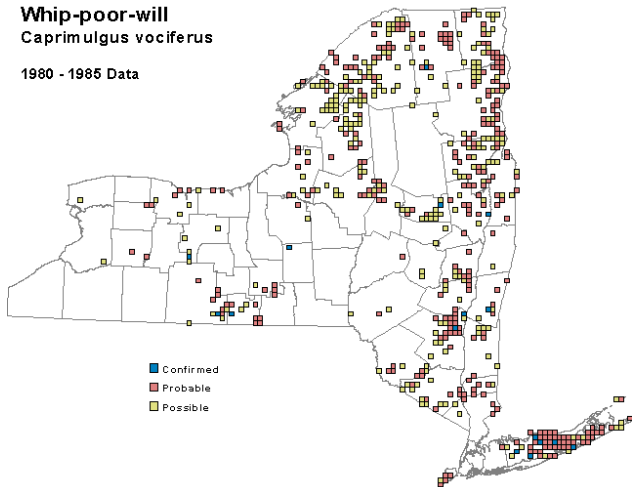
Whip-poor-will
Caprimulgus vociferus
 2000 - 2005 Data



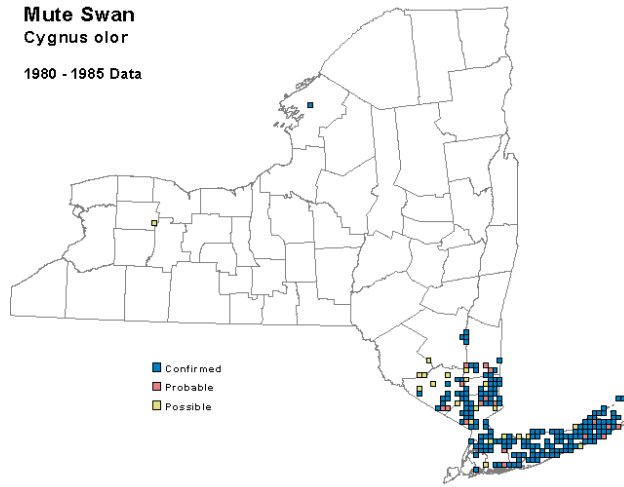
Mute Swan
Cygnus olor
 2000 - 2005 Data



Whip-poor-will
Caprimulgus vociferus
 1980 - 1985 Data



Mute Swan
Cygnus olor
 1980 - 1985 Data



5. Poisoned by pesticides, this bird nearly vanished from New York but is now coming back.

6. As climate change makes winters milder, this bird is spreading into New York from states to the south.

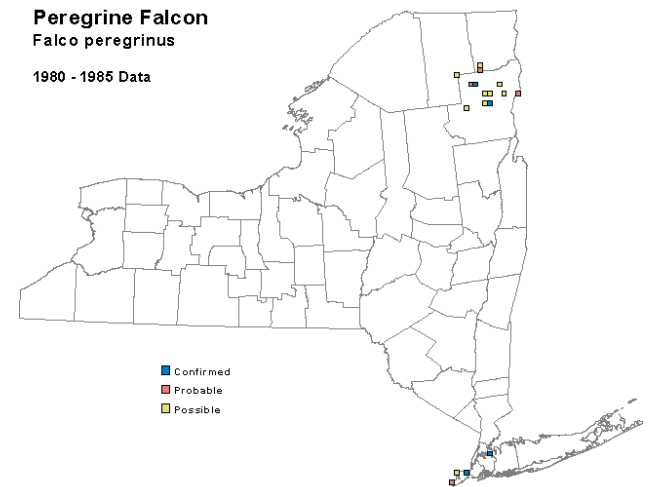
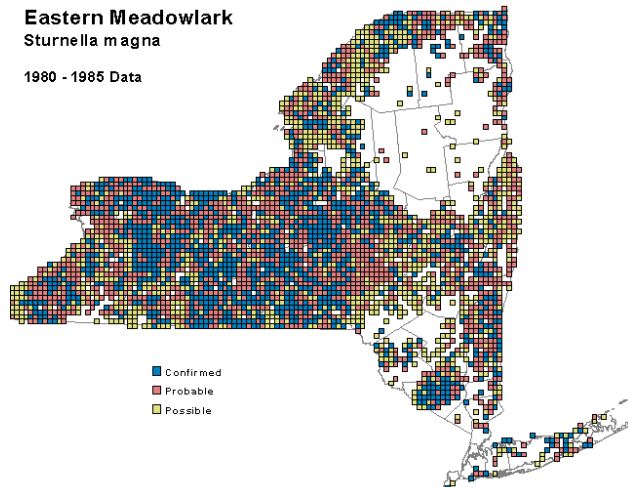
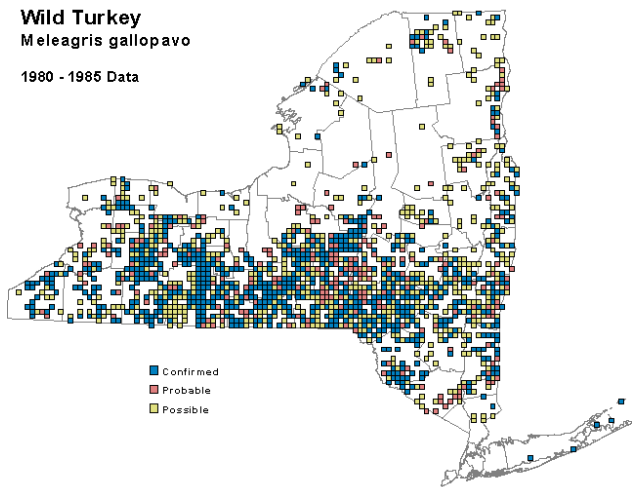
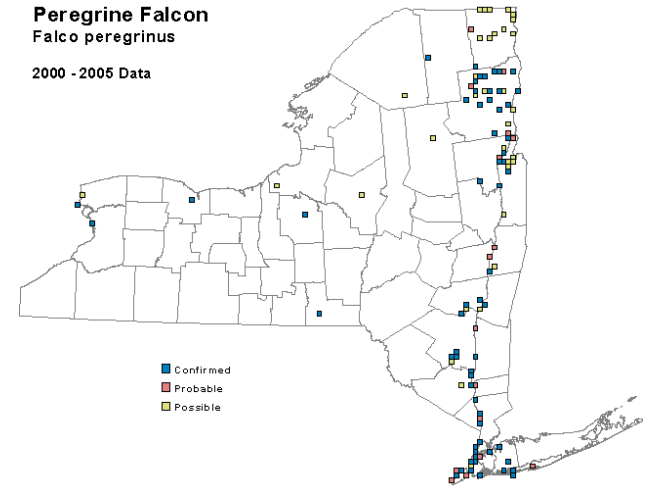
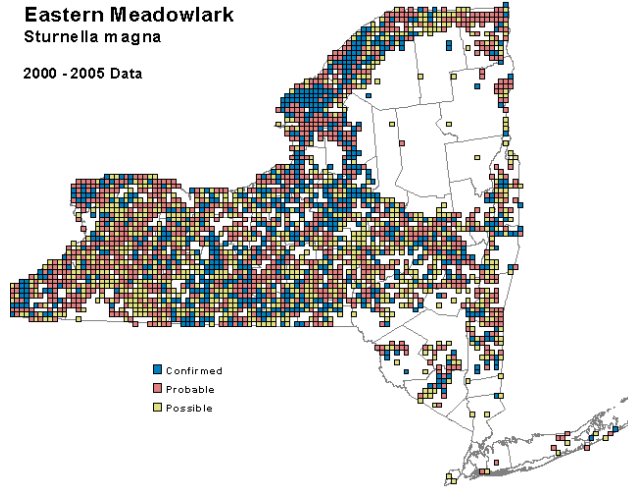
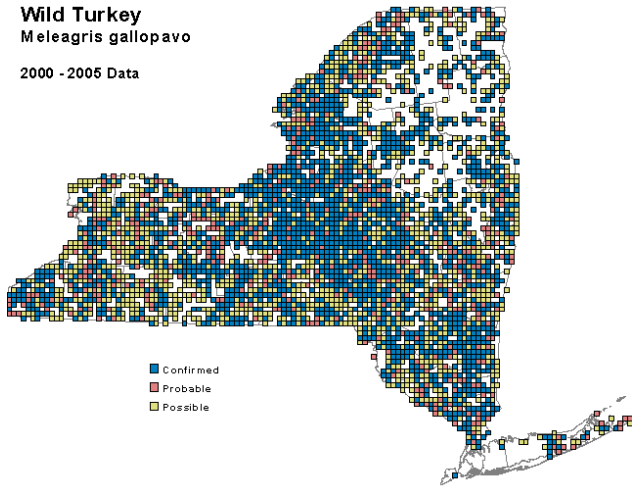
7. This bird used to sing out its name over much of New York, but now nests in fewer places than it used to. Its decline may be caused by loss of openings in forests as trees grow and as houses, other buildings, and roads spread into these habitats.

8. This bird is not native to North America. People admired its beauty and brought it from Europe to Long Island in the late 1800s. However, it is spreading and competing with native birds for food and territory.

9. This bird nests in fields. In New York, fields are mostly found on farms. Many farms are going out of business. Unused farm fields fill up with trees, or with houses, stores, and other buildings. Thus this bird is losing the habitat it needs to nest.



10. Look at the maps showing where these three birds nest. Are their populations increasing or decreasing? Of the reasons for such change that you learned about in the last question, which ones might explain the changes you see in the breeding populations of these species?



11. Imagine how the Hudson Valley would have looked when the *Half Moon* sailed up the river in 1609. What sort of habitats would Henry Hudson and his sailors have seen along the river? Would they have been the same ones that we see today? Would there have been more of some habitats and less of others?

Using what you've learned about what causes breeding bird populations to change, write down whether each bird in this list would have been common, uncommon, or absent in the Hudson Valley when Hudson explored it in 1609. Explain your reasons for choosing common, uncommon, or absent.

- a. bald eagle
- b. eastern meadowlark
- c. wild turkey
- d. Carolina wren
- e. mute swan



