



Pintail duck photo by Peter LaTourette

Climate Change, Wildlife, and Wildlands

Pintail Duck *Anas acuta*

Range:

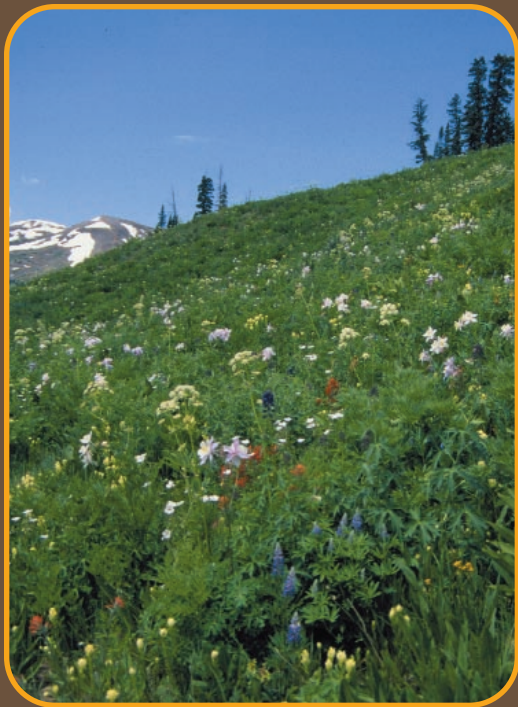
Breeding range extends from Alaska south to Colorado and east through the upper Midwest, Great Lakes, and eastern Canada. In winter, migrates to California, southern United States, Mexico, and northern South America.

Vulnerability to Climate Change:

Many pintails nest in the prairie pothole region, a major duck breeding habitat. The region is vulnerable to strong and persistent droughts—a potential impact of climate change. Pintails also are strongly affected by declines in submerged aquatic vegetation. Increased precipitation from climate change could cause more sediment runoff, reducing submerged vegetation.

Photo Credit: Peter LaTourette





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Alpine Meadow

Range:

Altitudes above the treeline in high mountain regions (e.g., 11,000–13,000 feet in Rocky Mountains).

Vulnerability to Climate Change:

A warmer climate could cause shrubs and trees to invade alpine meadows, crowding out wildflowers and other meadow species.

Photo Credit: David W. Inouye





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Cutthroat Trout *Oncorhynchus clarki*

Range:

Coastal subspecies are found off the coast and in the inland waterways of northern California, Oregon, Washington, British Columbia, and southern Alaska. Inland subspecies are found in most of the western United States.

Vulnerability to Climate Change:

Trout and other cold-water fish are vulnerable to increases in water temperature. Warmer waters also could affect aquatic insects and other species that trout depend on for food.

*Photo Credit: U.S. Fish and Wildlife Service,
Lloyd Hazzard*





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Sugar Maple *Acer saccharum*

Range:

Southeastern Manitoba to Nova Scotia and south to Tennessee.

Vulnerability to Climate Change:

One research study suggests that sugar maples could be replaced by more heat-tolerant oaks and conifers in most of the United States by the end of this century. A rise in average temperatures also could cause maple sap to run earlier and faster in the spring, thus shortening the length of the season for gathering sap.

Photo Credit: Cornell University Sugar Maple Research and Extension Program





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Karner Blue Butterfly *Lycaeides melissa samuelis*

Range:

Parts of New Hampshire, New York, Michigan, Wisconsin, Indiana, and Minnesota.

Vulnerability to Climate Change:

This species already is endangered due to habitat loss. The Karner blue butterfly requires a long-lasting winter snowpack to protect its eggs from freezing temperatures and dehydration, and its very specific habitat requirements make it hard for the butterfly to adapt to changes in its environment.

*Photo Credit: U.S. Fish and Wildlife Service,
John & Karen Hollingsworth*





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Kirtland's Warbler *Dendroica kirtlandii*

Range:

Very limited breeding range, mainly in Michigan with a few individuals recorded in Wisconsin and Ontario.

Vulnerability to Climate Change:

The bird's limited range makes it vulnerable to changes in its preferred habitat. If global warming reduces the extent of young jack pine stands where the warblers nest, populations could decline. On the other hand, warbler habitat may expand if climate change causes forest fires to become more frequent and widespread. Young jack pine stands are maintained by frequent fires.

*Photo Credit: U.S. Fish and Wildlife Service,
Richard Baetson*





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Baltimore Oriole *Icterus galbula*

Range:

Breeding range extends from Alberta to Nova Scotia and throughout most of the central and eastern United States, except Florida and the Gulf Coast. In winter, migrates to Mexico and South America.

Vulnerability to Climate Change:

According to one research study, global warming could cause this species to shift its range northward out of Maryland. There might be no more Baltimore orioles in Baltimore by the year 2100.

Photo Credit: U.S. Fish and Wildlife Service, Dave Menke





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Canvasback Duck *Aythya valisineria*

Range:

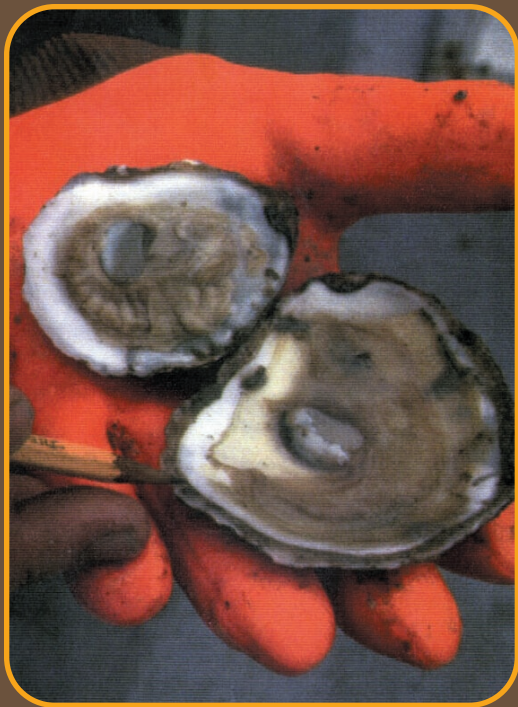
Summer: Alaska south through western Canada to the upper Midwest. **Winter:** British Columbia south to Central America and east through much of the Midwest and eastern states.

Vulnerability to Climate Change:

If droughts become more frequent or severe in the northern Midwest—a potential impact of climate change—duck breeding habitat could decline. Virtually all of the canvasbacks that overwinter in Chesapeake Bay nest in the prairie pothole region of the northern Midwest.

*Photo Credit: U.S. Fish and Wildlife Service,
William Vinje*





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American Oyster *Crassostrea virginica*

Range:

Gulf of St. Lawrence to the Gulf of Mexico and the West Indies.

Vulnerability to Climate Change:

Oyster diseases may increase if bay waters become warmer and saltier from higher temperatures and sea level rise. If coastal storms become more frequent or severe, oysters may be harmed by sudden large influxes of freshwater runoff into bays.

Photo Credit: Maryland Sea Grant College





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Florida Panther *Felis concolor coryi*

Range:

The only known self-sustaining population occurs in south Florida, generally in the Big Cypress Swamp.

Vulnerability to Climate Change:

Some researchers are concerned that climate change and sea level rise could push the Florida panther even closer to extinction, because its remaining population may be squeezed between the rising sea and human populated areas.

Photo Credit: U.S. Fish and Wildlife Service





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Coral Reefs

Range:

Off the coasts of Florida, Georgia, Hawaii, Louisiana/Texas border, Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands.

Vulnerability to Climate Change:

Warmer ocean waters can lead to coral “bleaching,” in which corals expel the algae that provide nutrients and color. Corals can survive short-term bleaching episodes, but prolonged bleaching can kill them.

Photo Credit: U.S. Fish and Wildlife Service, Gary M. Stolz





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American Alligator *Alligator mississippiensis*

Range:

Coastal areas and wetlands from the Carolinas south to Florida and west to Texas.

Vulnerability to Climate Change:

The alligator's preferred habitat is freshwater. Sea level rise from climate change could push coastal alligator populations farther inland where they may encounter human development. Alligators already may be shifting their range northward in response to a warmer climate.

*Photo Credit: U.S. Fish and Wildlife Service,
George Gentry*

