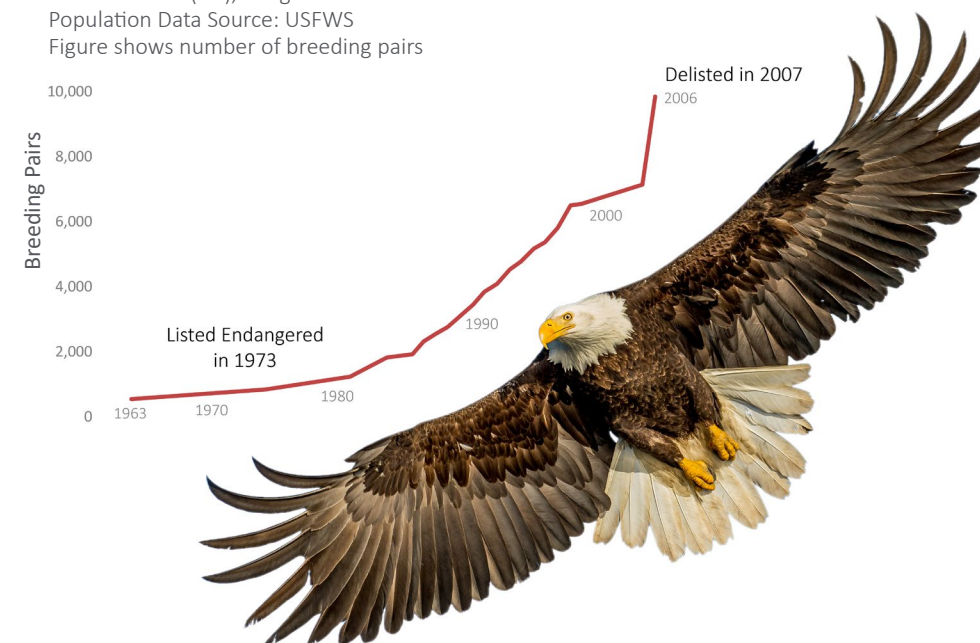


# We Protect Species

## NatureServe

Adirondack Mountains | Photo by Kerable2

Bald Eagle (*Haliaeetus leucocephalus*), NatureServe Global Status: Secure (G5), Range: North America  
Population Data Source: USFWS  
Figure shows number of breeding pairs



## Knowing Is Half the Battle

Protecting populations of plants and animals while they are healthy is preferable to desperate, last-ditch efforts to rescue species from the brink of extinction. Unfortunately many species are already in dire trouble—for these species we need the Endangered Species Act (ESA). Without the ESA, many iconic animals and plants would likely have disappeared forever from America's natural landscape.

Did you know that NatureServe data is critical to protecting species through the Endangered Species Act? NatureServe data provide objective and unbiased scientific assessments of a species' risk of extinction. Knowing how a species is doing is the first step to preventing its extinction.

Visit [NatureServe.org](http://NatureServe.org) to experience our new interactive *Story Map* and learn how you can support NatureServe and protect species.

## James Brumm Chair Board of Directors

Effective conservation always begins with sound information. What species and habitats are there? Where do they occur? How are they doing and what can we do about it? NatureServe is the authoritative source of comprehensive biodiversity data and analyses that can answer these questions. I'm proud to support NatureServe because our information empowers better stewardship of our shared lands and waters.

As the newly appointed Chair of the Board of Directors, I'm thrilled to begin my tenure alongside NatureServe's President & CEO, Sean T. O'Brien, Ph.D. His passion for conserving the Earth's vast variety of plants, animals, and ecosystems is evident, and he has already made great strides for NatureServe. I'm confident that he will continue to move the organization forward and reinforce our position as the premier source for biodiversity conservation information.





PRESIDENT'S LETTER

We are facing a crisis of our own making. While extinction is a part of nature, in the past 200 years the rate of extinction worldwide has greatly accelerated. Our planet, our home, is losing species—forever—at a faster rate than ever before.

Human activities are driving changes in the distribution and abundance of species and ecosystems, altering the interactions among them, and causing the extinction of species across the planet. Species are being permanently lost at 1,000 to 10,000 times the historical rate. This increase is due to human activities. Climate change is already affecting nearly every ecological process that has been studied, with vast and difficult-to-predict consequences for ecosystems.

This loss of species affects the ability of nature to provide vital goods and services upon which humanity depends. I believe we also have a moral obligation to protect species from extinction. Accessible, accurate, actionable information on biodiversity is required to identify the greatest threats, prioritize responses, and measure success of management interventions. NatureServe provides this information and is the foundation of species and habitat protection throughout North, Central, and South America.

As the new President and CEO of NatureServe I am excited to lead this amazing and unheralded organization into the future and to new levels of impact at protecting biodiversity. Please join me in this important work by supporting NatureServe.

Sean T. O'Brien, Ph.D.  
PRESIDENT AND CEO

BRAMBLE CAY - AUSTRALIA

## Laying the Groundwork for No More Extinctions



Extinction of a species is more than tragic—it is literally the end of the world for that species.

The world was shocked at the recent extinction of the Bramble Cay melomys (*Melomys rubicola*). This charismatic, mouse-like rodent is the first mammal species known to have been permanently lost due to human-caused climate change—in the form of rising sea levels that led to increasing inundations of sea water on the low-lying island near Papua New Guinea it called home.

Leading scientists agree that a mass extinction event is underway and will likely get worse as our impact on the global environment increases.

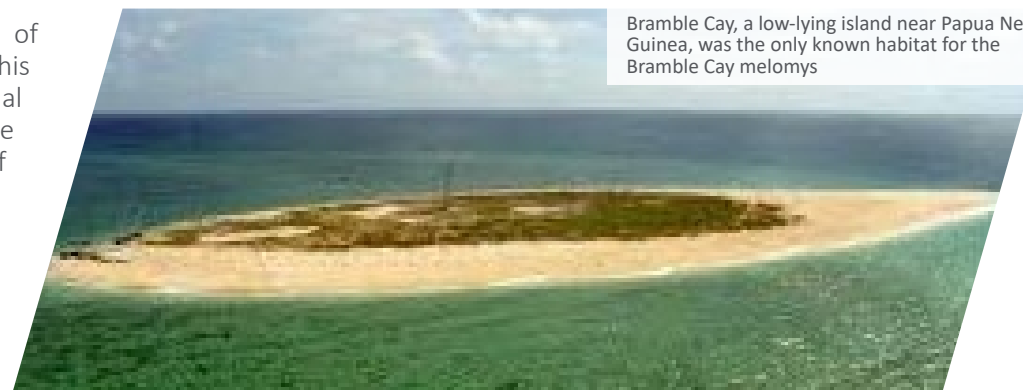
We have no way of preventing extinction if we do not first know what species are most at risk. In the Western Hemisphere, NatureServe is the organization that has this information and the data to assess the dangers. In collaboration with global experts, we recently published a foundational guide to assessing species' vulnerability to climate change in *WIREs Climate Change*, one of the most respected scientific resources on climate change.

Our report, *Climate Change Vulnerability Assessments of Species*, explains how to address five major questions: why, when, where, how, and how much species will be impacted by climate change. The answers to these questions empower decision-makers to create informed policies that reduce the risk that more species disappear forever.

It is too late for the Bramble Cay melomys, but with your support, NatureServe will continue working hard to make sure other species do not suffer the same fate.



The Bramble Cay melomys (*Melomys rubicola*)  
Photo by Ian Bell, EHP, State of Queensland



Bramble Cay, a low-lying island near Papua New Guinea, was the only known habitat for the Bramble Cay melomys



The yellow-banded bumble bee (*Bombus terricola*) NatureServe Status: Vulnerable (G3)  
Photo by USGS Native Bee Inventory and Monitoring Laboratory

## Taking Action for the Yellow-Banded Bumble Bee



The yellow-banded bumble bee has been experiencing tough times lately. In the last 10 years, the population of *Bombus terricola* has declined drastically throughout much of its range. However, because of research done by NatureServe and our network of member programs in the northeastern U.S., the yellow-banded bumble bee's long-term chance of survival has gotten a lot brighter. Using the data from this work, New York recently added *Bombus terricola* to its list of "species of greatest conservation needs," and has launched a new program for state biologists and citizen scientists to survey native pollinator populations in the state.

The yellow-banded bumble bee and other bee species are important pollinators of thousands of native plant and crop species, including cranberries, plums, apples, and tomatoes. The economic value of the pollination services of insects, especially bees, is estimated to be \$3 billion per year in the U.S. alone! Protecting bee species from extinction is as much an economic issue as it is one of conserving our natural heritage.

The NatureServe network, the yellow-banded bumble bee, and hundreds of other threatened and endangered species need your financial support to survive and thrive.

**“Because of the work by NatureServe and the New York Natural Heritage Program, bumble bees will be better conserved in our state.”**

— Joe Racette, New York State Wildlife Action Plan Coordinator —

### About NatureServe

NatureServe is an international nonprofit conservation organization that develops and provides actionable knowledge to sustain biodiversity.

Support NatureServe's mission to protect the Americas' most vulnerable species—because extinction is forever.

For more information about how you can help support our mission, please visit [NatureServe.org/donate](https://www.natureserve.org/donate) or contact Macailagh McCue at 703-908-1895. Learn more about our work at [NatureServe.org](https://www.natureserve.org).