NatureServe

SPECIES AT RISK

Featured Species

About the Map

From massive whales to diminutive pupfish, native species in the United States and Canada are more imperiled than ever before. This map features a vertebrate animal for each U.S. state and Canadian province particularly at risk of disappearing from that area.

Habitat destruction and degradation, introduced invasive species and diseases, exploitation, hydrological alterations, and climate change are but a few of the many human-caused threats that are ushering in the sixth mass extinction event in Earth's history. Although the fate of every species is to disappear, the current extinction rate is 1,000 times greater than pre-human background rates. Many species are disappearing before they are even formally described by scientists.

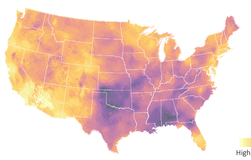
Today, no species or habitat remains unaffected by the pervasive footprint of human activities.

The NatureServe network records, compiles, analyzes, and shares the highest-quality scientific information on what species and ecosystems are present, where they occur, how they are doing, and what we can do to conserve them. With expert knowledge from biologists on the ground in every U.S. state, Canadian province, and a growing number of Latin American countries, the NatureServe network holds the primary data needed to assess the conservation status of the 80,000 species and 7,000 ecosystems we track using our standardized methodology. Assessments consider range-wide (global, or G-rank) and state/provincial (subnational, or S-rank) status to determine extinction risk.

Protecting species and habitats from extinction critically depends on this information. Government agencies, environmental nonprofits, academic institutions, and corporations all rely on NatureServe's comprehensive and objective biodiversity data to guide conservation decisions.

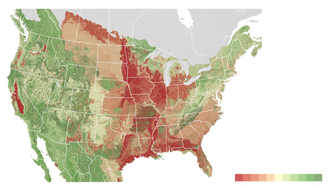
Understanding the Threats

NatureServe's geospatial scientists analyze, synthesize, and map threats to biodiversity to produce decision-quality information on the trends affecting species and ecosystems. Our work paints a spatially explicit picture of environmental change, informing which areas and which species are most at risk from factors such as climate change, ecosystem loss, and degraded landscape condition. Decision-makers rely on NatureServe analyses to target management and conservation actions where they are needed most.



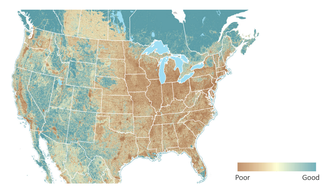
MAGNITUDE OF RECENT CLIMATE CHANGE

Climate influences many aspects of a species' natural environment—when, what, and how much food is available, what predators and diseases are present, when to migrate, and what extreme weather conditions might be encountered. This map, which depicts how summer climate in the United States has already changed, shows that many areas of the country are already experiencing novel conditions and highlights where species and ecosystems face the greatest climate stress.



LOSS OF ECOSYSTEM EXTENT

Human activity has drastically changed the natural vegetation of North America over the past 400 years. This map depicts the extent to which natural ecosystems have been transformed by human activities in that time. NatureServe is the nation's leading organization for classifying and mapping the historical and current extent of ecosystems, as well as measuring their ecological health.



LANDSCAPE CONDITION

Many human land uses affect ecological condition, including vegetation removal and alteration, stream diversion and altered hydrology, and introduction of invasive species. This map depicts NatureServe's landscape condition assessment, which applies principles of landscape ecology with mapped information to characterize ecological health.

AK: North Pacific Right Whale
Eubalaena japonica
G1, S1

YT: Buff-breasted Sandpiper
Calidris subruficollis
G4, S1

NT, NU: Peary Caribou
Rangifer tarandus pearyi
G5T1*, S2 (NT), SNR (NU)

BC: Vancouver Island Marmot
Marmota vancouverensis
G1, S1

SK: Black-footed Ferret
Mustela nigripes
G1, SX

AB: Greater Sage Grouse
Centrocercus urophasianus
G3, S1

MB: Burrowing Owl
Athene cunicularia
G4, S1

ON: Redside Dace
Clinostomus elongatus
G3, S2

QC: Copper Redhorse
Moxostoma hubbsi
G1, S1

NL: American Marten
Martes americana atrata
G5T1*, S1

PE: Little Brown Bat
Myotis lucifugus
G3, S1

NB: Bicknell's Thrush
Catharus bicknelli
G4, S2

NS: Atlantic Whitefish
Coregonus huntsmani
G1, S1

NH: Timber Rattlesnake
Crotalus horridus
G4, S1

WA: Western Pond Turtle
Actinemys marmorata
G3, S1

MT: Pallid Sturgeon
Scaphirhynchus albus
G2, S1

MN: Northern Pocket Gopher
Thomomys talpoides
G5, S2

ND, SD: Black-footed Ferret
Mustela nigripes
G1, S1

ME: New England Cottontail
Sylvilagus transitionalis
G3, S2

MA: North Atlantic Right Whale
Eubalaena glacialis
G1, S1

OR: Shortnose Sucker
Chasmistes brevirostris
G1, S1

ID: Snake River Sockeye Salmon
Oncorhynchus nerka
G5T1*, S1

WY: Wyoming Toad
Anaxyrus baxteri
G1, S1

WI: Piping Plover
Charadrius melodus
G3, S1

MI: Kirtland's Snake
Clonophis kirtlandii
G2, S1

NY: Black Rail
Laterallus jamaicensis
G3, S1

RI: Sharp-tailed Sparrow
Ammospiza caudacuta
G2, SNR

VT, CT: Northern Long-eared Bat
Myotis septentrionalis
G1, S1 (VT), SU (CT)

NV: Woundfin
Plagopterus argentissimus
G1, S1

NE: Whooping Crane
Grus americana
G1, S1

JA: Pallid Sturgeon
Scaphirhynchus albus
G2, S1

IN: Swamp Rabbit
Sylvilagus aquaticus
G5, S1

OH, WV: Indiana Bat
Myotis sodalis
G2, S1

PA: Eastern Massasauga
Sistrurus catenatus
G3, S1

NJ: Allegheny Woodrat
Neotoma magister
G3, S1

CA: Owens Pupfish
Cyprinodon radiosus
G1, S1

UT, CO: Bonytail Chub
Gila elegans
G1, S1 (UT), SX (CO)

IL: Eastern Massasauga
Sistrurus catenatus
G3, S2

DE: Bog Turtle
Glyptemys muhlenbergii
G2, S1

KS: Peppered Chub
Macrhybopsis tetranema
G1, S1

VA: Slender Chub
Erimystax cahni
G1, S1

MO: Bachman's Sparrow
Peucaea aestivalis
G3, S1

KY: Buck Darter
Etheostoma nebra
G1, S1

MD: Maryland Darter
Etheostoma sellare
GH, SH

AZ: Quitobaquito Pupfish
Cyprinodon eremus
G1, S1

OK: Leopard Darter
Percina pantherina
G2, S1

NC: Carolina Madtom
Noturus furiosus
G2, S2

TN: Chucky Madtom
Noturus crypticus
G1, S1

SC: Carolina Pygmy Sunfish
Elassoma boehlkei
G2, S1

DC: Northern Bobwhite
Colinus virginianus
G4, S1

NM: Boreal Toad
Anaxyrus boreas
G4, S1

AR: Yellowcheek Darter
Etheostoma moorei
G1, S1

MS: Dusky Gopher Frog
Lithobates sevosus
G1, S1

GA: Frosted Flatwoods Salamander
Ambystoma cingulatum
G2, S1

TX: Houston Toad
Anaxyrus houstonensis
G1, S1

LA: Whooping Crane
Grus americana
G1, SH

AL: Alabama Sturgeon
Scaphirhynchus suttkusi
G1, S1

FL: North Atlantic Right Whale
Eubalaena glacialis
G1, S1

HI: Hawaiian Crow
Corvus hawaiiensis
GXC**, SX

NatureServe Conservation Status Ranks

Global Status	State/Provincial Status
GX: Presumed Extinct	SX: Presumed Extirpated
GH: Possibly Extinct	SH: Possibly Extirpated
G1: Critically Imperiled	S1: Critically Imperiled
G2: Imperiled	S2: Imperiled
G3: Vulnerable	S3: Vulnerable
G4: Apparently Secure	S4: Apparently Secure
G5: Secure	S5: Secure
GNR: Not Ranked	SNR: Not Ranked
GU: Unrankable	SU: Unrankable

* T-ranks describe the status of subspecies and populations
** C: Captive/cultivated only; reintroduction attempts are ongoing

Black-footed Ferret
Mustela nigripes
G1, S1 (AZ, CO, KS, MT, ND, NM, SD, UT, WY), SH (NE), SX (AB, NN, OK, SK, TX)
Photo by Kimberly Fraser

This charismatic mustelid once ranged across the grasslands of west-central North America, from southern Canada to northern Mexico. The black-footed ferret is heavily reliant on prairie dog colonies for food and the burrows where ferrets live. A dramatic drop in prairie dog populations in the 20th century due to habitat loss and persecution (to reduce competition with livestock for forage) has led to a corresponding decline in black-footed ferret populations.

No wild populations of the black-footed ferret remain today, but captive breeding programs have led to successful reintroductions. Currently, there are 30 reintroduction sites across the ferret's historical range.

Black Rail
Laterallus jamaicensis
G3, S1 (AZ, DE, GA, IL, KS, LA, MD, NC, NE, NY, OK, TN, VA), SH (IN, DC), SNR (CA, NV, TV, SC), SU (AR, MO), SX (CT)
Photo by Ashok Kholsa

This elusive bird is the smallest North American rail and, unfortunately, the most at risk. Although most people will never see a black rail in the wild, these furtive waterbirds are important members of salt and freshwater marsh ecosystems.

Climate change, sea level rise, coastal development, and invasive plants are just a few of the threats facing marshlands and, consequently, black rails. By some estimates, black rail populations have declined over 75% in the last two decades. The eastern U.S. population of the black rail was proposed for listing under the Endangered Species Act in late 2018. Protection measures afforded by listing may be the last hope for retaining this population.

Bonytail Chub
Gila elegans
G1, S1 (AZ, NV, UT), SH (CA), SX (CO, NN, NM, WY)
Photo by Brian Gratwicke

These long-lived (up to 50 years!) freshwater fish were once abundant in the Colorado River Basin in the southwestern United States but have been nearly wiped out by introduced predators and habitat alteration, such as river damming.

The bonytail chub is presumed extirpated (locally extinct) throughout much of its historical range, with few self-sustaining populations remaining. With continual advances in our understanding of the species' biology and increased hatchery rearing and release success, chances for persistence have improved. Spawning in the wild was detected for the first time in 2015 in the Green River floodplain in Utah.

Frosted Flatwoods Salamander
Ambystoma cingulatum
G2, S1 (GA, SC, FL)
Photo by Pierson Hill

The frosted flatwoods salamander is emblematic of the disappearing longleaf pine woodlands. The small, seldom seen creatures spend most of their lives underground where they consume small soil invertebrates, emerging to breed in ephemeral wetlands during the fall and winter.

Longleaf pine woodlands have nearly vanished from the region due to development, agriculture, intensive silviculture, and fire suppression. Efforts to protect the salamander are tied to restoration of its longleaf pine habitat. Fortunately, NatureServe and its network programs have extensive knowledge about this ecosystem and are partnering with land managers to mitigate threats and restore habitat.