

PROTECTING MY EARTH: LOCALLY THREATENED HABITATS



“Protecting My EARTH” is an environmental education program offered by EARTH Ltd. to help students learn how to take better care of their community and their planet.

WHAT IS EARTH LTD?



Environmental



Awareness of



Resources and



Threatened



Habitats

To provide environmental and conservation education with an emphasis on animal ecology, endangered species, and threatened habitats.

WHAT IS A HABITAT?

The natural home or environment of an animal, plant, or other organism



WHAT IS A HABITAT?



WHAT ARE THREATS TO HABITATS?

H Habitat loss and destruction

I Invasive species

P Pollution & Pesticides

P Population growth (human) & Pet trade

O Over-hunting & Over-collecting

WHY SHOULD WE PROTECT HABITATS?

- Contributions to medicine
- Contributions to agriculture (food)
- Economic value (tourism)
- Unknown consequences because everything is connected!

A single disappearing plant can take with it up to **30** other species, including other plants, insects, and higher animals.



ENDANGERED SPECIES

International
Union for the
Conservation of
Nature (IUCN)

Convention on
International
Trade of
Endangered
Species (CITES)



Extinct



**Extinct in
the Wild**

Out of all species that have ever lived, 99.9% of them are now extinct. The IUCN has documented 830 species known to have gone extinct since 500 AD.

Currently the IUCN has 69 species listed as extinct in the wild. These species have been extirpated from their natural range and now exist only in captivity.



Threatened (encompasses CR, EN, and VU)



**Critically
Endangered**



Endangered



Vulnerable

To be listed as threatened, a species must fit one of the following qualifications

A projected population decline of greater than ____ over the next 10 years or three generations

80%

50%

30%

A global range of less than ____ km²

100

5,000

20,000

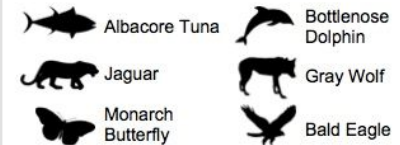
A stable global population size of less than ____ individuals

50

250

1000

*Two other categories exist, although they have more complicated thresholds: small population size AND decreasing population, or quantitative scientific analysis that shows a high likelihood of extinction.



**Near
Threatened**



**Least
Concern**

Near threatened species are in danger of becoming threatened. Species with least concern listings may still have declining populations or face threats, but not to the level required for a threatened listing.

Out of the RedList's 77,000 listed species, 35,000 are listed as least concern and 5,000 are listed as near threatened.



For species that have yet to be sufficiently evaluated, two additional classifications exist: data deficient (DD) and not evaluated (NE).

ENDANGERED SPECIES

“Endangered species are the fire alarms telling us that the living things being affected include us.” –US Fish & Wildlife

E **Endangered** - on the brink of extinction now, require immediate federal aid
*Species listed as endangered are afforded **full protection** under the ESA*

T **Threatened** - are likely to be on the brink of extinction in the near future without aid
*Species listed as threatened are afforded **some protections** under the ESA*

How are species **protected**?

Illegal to kill, harm, or harass protected species

Critical habitat identified and protected

Detailed recovery plans are drafted

Population changes are monitored

Currently **2,246** endangered and threatened plants (901) and animals (1345) covered by ESA

In US: 1,585 plants (898) and animals (687)

Endangered Species Act (ESA) 1973

- Provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend.

C **Candidate** - not currently listed as endangered or threatened but being considered
*Unlisted species are **not** afforded the protections of the ESA*

D **De-Listed** - previously protected by the ESA but have recovered enough to be removed

How are species **added** to the ESA?



ENDANGERED SPECIES- MASSACHUSETTS

Massachusetts Endangered Species Act (MESA) 1990

Taxonomic Group	Endangered	Threatened	Special Concern	Listed Total
MAMMALS (including 6 whales)	11 (7 FE)	0	3	14
BIRDS (breeding)	11 (1 FE)	7 (1 FT)	11	29
REPTILES (including 5 sea turtles)	8 (4 FE, 1 FT)	5 (2 FT)	2	15
AMPHIBIANS	0	2	2	4
FISH	4 (1 FE)	2	4	10
INVERTEBRATES (non-marine only)	31 (2 FE, 2 FT)	25	48	104
PLANTS (vascular)	154 (2 FE, 1 FT)	63	39	256
TOTALS	219 (17 FE, 4 FT)	104 (3 FT)	109 (0)	432 (24 FE or FT)

FE = species listed under the U.S. Endangered Species Act as **Federally Endangered** as of February 27, 2012.

FT = species listed under the U.S. Endangered Species Act as **Federally Threatened** as of February 27, 2012.



Not only has the **Timber Rattlesnake** declined in Massachusetts and throughout New England, it is now completely eliminated from Maine and Rhode Island. Humans are the greatest threat to Timber Rattlesnake.

Mount Zion is large enough that the snakes would have little motivation to leave.

The location proposed for this project is **Mount Zion**, the largest island in **Quabbin Reservoir** and off-limits to the public. At approximately 1,350 acres in size and 3.64 miles in length, this island is comparable to the habitat areas currently occupied by Timber Rattlesnake populations in other parts of the state, providing enough space to support a small but healthy population.



WHAT CAN YOU DO TO HELP?

- Protect wildlife habitat
- Create pollinator gardens
- Reduce threat of invasive species
- Keep pets inside
- Don't buy illegal animals or animal products
- Support zoos, animal sanctuaries, and wildlife reserves
- Recycle and reduce energy and goods consumption
- Dispose of trash properly
- Participate in local clean ups

WHAT CAN YOU DO TO HELP?

- Minimize use of herbicides and pesticides
- Put decals on windows to deter bird collisions
- Slow down when driving
- Fundraise
- Join a conservation organization

**EDUCATE YOURSELF AND
ENCOURAGE OTHERS TO LEARN!!**

QUESTIONS??