

Here Today, Gone Tomorrow

Study Units

Unit 1: Iowa's Wildlife Resource Base; Unit 3: Wildlife Management

Supplemental Information

Species extinction is analogous to a machine losing pieces. The machine can keep running for a while, even if it is missing a bolt, washer, or other seemingly nonessential part. But if parts keep falling off, how long can it go on functioning? Would you want to fly on an airplane after someone had spent an hour removing small rivets from the wing?

That is what is happening on earth. Small parts of our working ecosystems are being lost. How long can all the systems that support life continue to operate, while losing pieces? This analogy can also be used to describe the effects when an endangered species is able to recover. If we save all the pieces, we can make the machine work again.

See the background information in *Unit 1* and *Unit 3* for a more complete discussion of endangered and threatened species in Iowa and a chart of “Native Species Reintroductions.” Many species reintroduced or given protection through regulations are ones many students (and adults) didn’t know were ever gone from the state (e.g., white-tailed deer, wild turkeys, giant Canada geese, beaver). We may be amazed in the future at which species, once endangered or extirpated, will become working pieces of Iowa’s ecosystem again. (There are more and more sightings of bobcats, mountain lions, bald eagle nests, and even black bears.)

Several factors have contributed to successes with endangered species. Habitat preservation and reconstruction are essential. Changes in human behaviors and attitudes toward these species often are necessary for successful reintroductions. Laws now protect deer, turkey, geese, and beaver. They cannot be harvested during their breeding seasons and limits are set on the numbers taken during hunting and trapping seasons. Large predators are no longer thought of as vermin.

Teaching Suggestions

Read “On A Monument To A Pigeon” from Aldo Leopold’s *A Sand County Almanac*. He writes of the extinct passenger pigeon. This essay conveys a sense of the importance of trying to save endangered species. It may inspire students to write their own essays on how they would feel if a species now endangered became extinct. Endangered means there’s still time, extinct is forever.

Use the *Endangered and Threatened Animal Species in Iowa*, the *Endangered and Threatened Plant Species in Iowa*, and the *Here Today, Gone Tomorrow... Back Again* chart as starting points for the students’ investigations. As more data is gathered, endangered and threatened lists are revised. Check the web sites listed in the “Additional Materials” section for the most up-to-date listing of Iowa’s endangered and threatened species.

Have students research species of wildlife extirpated from Iowa. Which ones have returned or been reintroduced? See the activity, “Back from the Brink.”

Have students study data gathered by NatureMapping volunteers. It is a citizen science program that uses volunteers to collect presence or absence data on common wildlife species. This data can be used to keep common wildlife common and avoid expensive crisis situations that arise when a species becomes endangered and is in need of extensive efforts to save it.

Evaluation

See the activity. Have students list species of wildlife that have been successfully reintroduced in Iowa.

Student Materials

Here Today, Gone Tomorrow... Back Again

Teacher Aids

Endangered and Threatened Animal Species in Iowa

Endangered and Threatened Plant Species in Iowa

Additional Materials

Dinsmore, J.J. 1994. *A Country So Full of Game*. Iowa City: University of Iowa Press.

Galan, M. 1997. *There's Still Time; The Success of the Endangered Species Act*. Washington DC: National Geographic Society.

Leopold, A. 1949. *A Sand County Almanac, and Sketches Here and There*. New York: Oxford University Press.

Little, T.W. 2001. *Restoring Iowa's Wildlife*. Iowa Conservationist (Sept/Oct 2001). Des Moines: Iowa Department of Natural Resources.

endangered.fws.gov (federally endangered/threatened species list)

www.epa.gov (endangered species protection program)

www.extension.iastate.edu/naturemapping (data gathered by volunteers)

www.legis.state.ia.us (Iowa Administrative Code—#571, Chapter 77, state endangered/threatened species list)

www.iowadnr.gov - (Iowa threatened/endangered specieslist)

Here Today, Gone Tomorrow...Back Again

animal species	extinct	endangered state/federal	threatened state/federal	reintroduced	part or role in the system	factors affecting status

Endangered and Threatened Animal Species in Iowa

Endangered Animals

Mammals

Indiana bat
plains pocket mouse
red-backed vole
spotted skunk

Birds

bald eagle
common barn owl
king rail
least tern
northern harrier
peregrine falcon
piping plover
red-shouldered hawk
short-eared owl

Fish

bluntnose darter
freckled madtom
lake sturgeon
least darter
pallid sturgeon
pearl dace
pugnose shiner
weed shiner

Reptiles & Amphibians

blue-spotted salamander
copperbelly water snake
copperhead
crawfish frog
great plains skink
massasauga rattlesnake
prairie rattlesnake
western hognose snake
wood turtle
yellow mud turtle

Butterflies

Dakota skipper
ringlet

Land Snails

bluff vertigo
Briarton pleistocene vertigo
Iowa pleistocene ambersnail
Iowa pleistocene snail
Iowa pleistocene vertigo
Minnesota pleistocene ambersnail
frigid ambersnail

Fresh Water Mussels

buckhorn
bullhead
Higgin's-eye pearly mussel
Ohio River pigtoe
Ozark pigtoe
slippershell
slough sandshell
spectacle case
yellow sandshell

Threatened Animals

Mammals

least shrew
southern bog lemming

Birds

long-eared owl
Henslow's sparrow

Fish

American brook lamprey
black redhorse
blacknose shiner
burbot
chestnut lamprey
grass pickerel
orangethroat darter
Topeka shiner
western sand darter

Reptiles & Amphibians

Blanding's turtle
central newt
common musk turtle
diamondback water snake
mudpuppy
ornate box turtle
slender glass lizard
speckled kingsnake
western worm snake

Butterflies

Baltimore
byssus skipper
mulberry wing
silvery blue
Poweshiek skipperling

Snails

Midwest pleistocene vertigo
occult vertigo

Fresh Water Mussels

butterfly
creek heelsplitter
cylinder
ellipse
purple pimpleback
strange floater



Endangered and Threatened Plant Species in Iowa

Endangered Plants

annual skeletonweed
 arrow arum
 bearberry
 bigroot pricklypear
 black chokecherry
 black-based quillwort
 blue giant-hyssop
 bog bedstraw
 bog clubmoss
 bog goldenrod
 Canada plum
 cinnamon fern
 clammyweed
 cleft conobea
 clustered broomrape
 cordroot sedge
 crossleaf milkwort
 Douglas' knotweed
 dwarf dandelion
 eared milkweed
 eastern prairie fringed orchid
 false mermaid
 fern-leaved false foxglove
 frenchgrass
 jointweed
 large-bracted corydalis
 large-leaved aster
 large-leaved violet
 long beechfern
 Matricary grape fern
 Mead's milkweed
 meadow spikemoss
 narrow-leaved milkweed
 northern lungwort
 northern panic-grass
 northern St. Johnswort
 pale false foxglove
 pale green orchid
 pickering morning-glory
 pineweed
 pink shinleaf
 poppy mallow (*Callirhoe triangulata*)
 povertygrass
 prickly rose
 purple cliffbrake
 purple milkwort
 ricebutton aster
 ricegrass
 rough-leaved goldenrod
 rough-seeded fameflower
 roundleaved sundew
 running clubmoss
 rusty woodsia
 Schreber's aster

silky prairie-clover
 swamp loostrife
 three-toothed cinquefoil
 water marigold
 water-willow
 waxy meadowrue
 whiskbroom parsley
 winterberry
 yellow-eyed grass
 yellow-lipped ladies-tresses

Threatened Plants

beaked rush
 black huckleberry
 blue ash
 bog birch
 bog buckbean
 bog willow
 buffaloberry
 bunchberry
 creeping juniper
 dayflower
 false hellebore
 fameflower
 flax-leaved aster
 forked aster
 fragrant false indigo
 glandular wood fern
 golden corydalis
 golden saxifrage
 green violet
 hairy pinweed
 hairy waterclover
 hooded ladies-tresses
 Hooker's orchid
 intermediate pinweed
 jeweled shooting star
 kidney-leaved violet
 kittentails
 large arrowgrass
 leathery grapefern
 little grapefern
 little pricklypear
 low nutrush
 low sweet blueberry
 marginal shield fern
 meadow beauty
 northern bog orchid
 northern currant
 northern wild monkshood
 nodding wild onion
 oak fern
 one-sided shinleaf
 Oregon woodsia
 oval ladies-tresses
 pagoda plant

partridge berry
 Pennsylvania cinquefoil
 Philadelphia panic-grass
 pinesap
 pink corydalis
 pink milkwort
 pipsissewa
 poppy mallow (*Callirhoe alcaeoides*)
 prairie bush clover
 purple fringed orchid
 queen of the prairie
 rock clubmoss
 rosy twisted-stalk
 round-stemmed false foxglove
 royal fern
 rush aster
 scarlet globemallow
 shining willow
 showy lady's-slipper
 showy milkweed
 shrubby cinquefoil
 silverweed
 slender beardtongue
 slender cottongrass
 slender ladies-tresses
 slim-leaved panic-grass
 small arrowgrass
 small sundrops
 spotted coralroot
 spring ladies-tresses
 sweet Indian-plantain
 tree clubmoss
 twinflower
 twinleaf
 velvetleaf blueberry
 Virginia snakeroot
 water parsnip
 western parsley
 western prairie fringed orchid
 wild lupine
 winged monkeyflower
 woodland horsetail
 woolly milkweed
 yellow monkeyflower
 yellow trout lily

