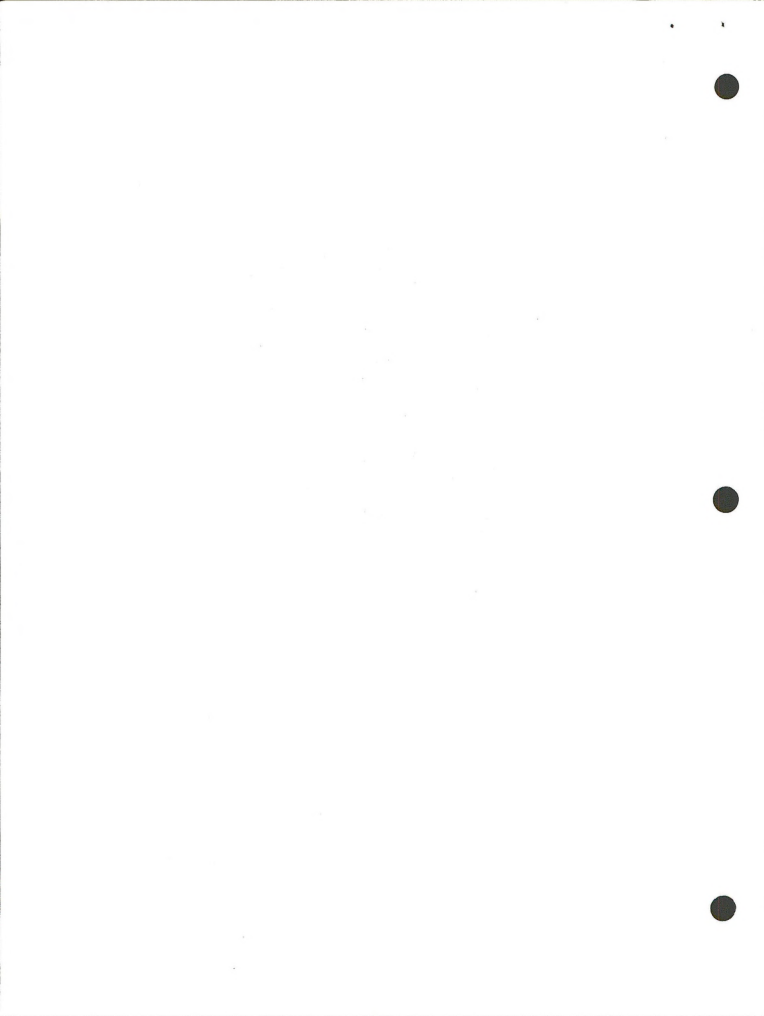


Prepared by:

Denise P. Meridith
Endangered Species Coordinator

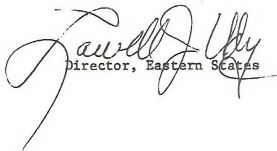


INTRODUCTION

This publication is intended to describe the relevancy of endangered and threatened species to the Bureau of Land Management's programs in the eastern 31 states.

It contains lists of species of concern to both Federal and State agencies, some sources of information, and names of people who may be able to provide more detailed assistance.

It will be useful to anyone—from wildlife specialist to interested layman—who needs help identifying endangered or threatened species in the East.



Director, Eastern States

U.S. Department of the Interior
Bureau of Land Management
Eastern States Office
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Silver Spring, Maryland 20910
(301) 427-7540

May 1979

Bureau of Land Management
Library
Denver Service Center

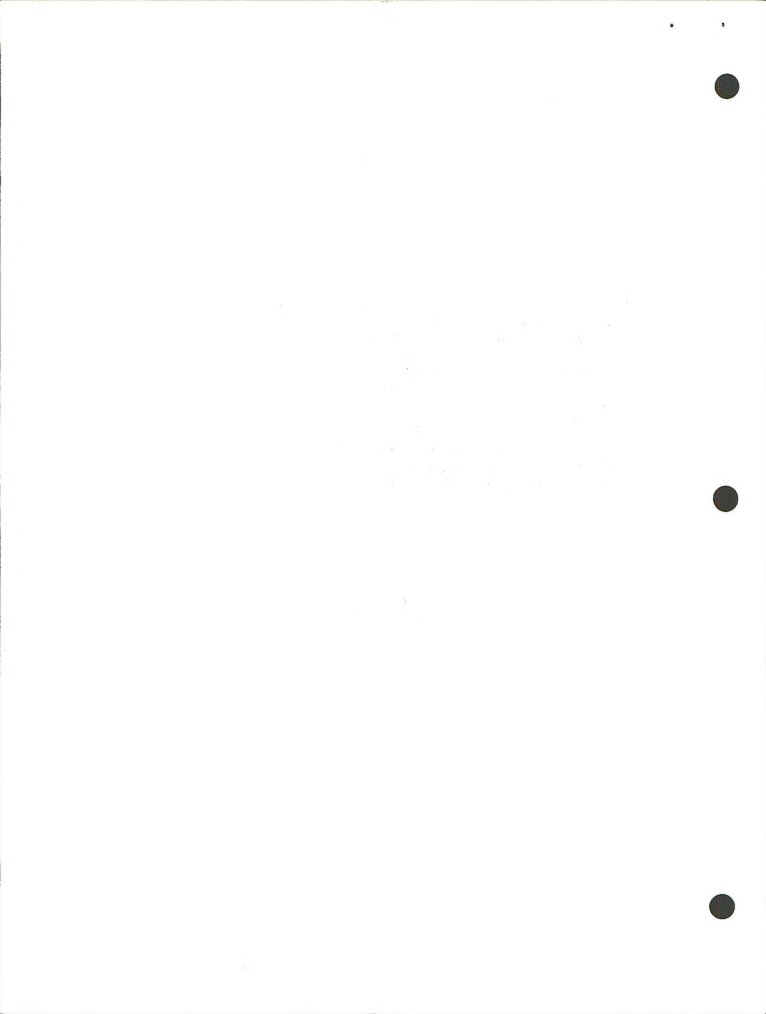


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I. Why We're Concerned

Background

During the past century, Americans have stepped out of a rickety dusty covered wagon onto the silent cratered surface of the moon. Darwin spoke of evolution, of natural selection and survival of the fittest. In an evolutionary war where this technological revolution has given Americans unequalled control over their environment, many "less fit" species have surrendered.

As creatures, like the buffalo, and passenger pigeon, which had once been innumerable, faded from the landscape, Americans began to become concerned. The modern environmental movement was hatched in 1905, when Pelican Island was designated as our first wildlife refuge.

However, formal involvement by the Federal Government in endangered species conservation did not begin until 1966 with the passage of the Endangered Species Preservation Act (PL 89669). It was "to provide for the conservation, protection and propagation of native species of fish and wildlife, including migratory birds, that are threatened with extinction..." It allowed the Secretary of the Interior to determine what species were endangered, to conduct research and to purchase habitat for them.

In 1969, the Endangered Species Conservation Act (PL 91135) broadened protection to all vertebrates, mollusks and crustaceans, and subspecies, authorized the acquisition of water as well as land and limited importation of endangered foreign animals.

Finally the most encompassing legislation of all was passed in 1973: the Endangered Species Act (PL 93203). This law attempted to clarify the distinction between threatened and endangered species, split responsibilities between Secretaries of Commerce and Interior, extend coverage to plants and invertebrates and increase funds for acquisition and enforcement authority.

An endangered species was defined as "any species which is in danger of extinction throughout all or a significant portion of its range." A threatened species was defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

There have been more than 600 species of mammals, fish, birds, reptiles, amphibians, crustaceans, mollusks and insects designated and many hundreds of more being considered as a result of endangered species legislation. This legislation has also generated a lot of controversy in recent years.

In June 1976, the Supreme Court ruled that water from a limestone cavern in Death Valley Monument, Nevada, could not be completely usurped for irrigation because it would exterminate the endangered Devil's Hole pupfish.

In an even more far reaching decision in June 1978, the Supreme Court ruled that the "language, history and structure" of the Endangered Species Act of 1973 demonstrated "beyond doubt that Congress intended endangered species to be afforded the highest of priorities." This decision would prohibit further work on the Tellico Dam in Tennessee and possibly over 50 other Federal projects in conflict with endangered species.

The controversy will continue for many years to come as Americans try to balance the tangible economic benefits that accompany "progress" with the intangible benefits of preserving vegetation and wildlife.

BLM Responsibilities

The responsibilities of the Bureau of Land Management in protection of endangered species is spelled out in BLM Manual 6840. As the Federal agency with responsibility for the largest amount of public lands in the U.S., it holds the key to the future of many endangered species through its management of wildlife habitat.

In August 1971, the Secretary of the Interior issued a memorandum that outlined BLM's policy towards endangered species. He stated to Interior's employees: "I expect you to encourage, plan and carry out deliberate, aggressive programs to benefit endangered species which occur on lands you administer, which use habitat under your control, or which may be affected by your programs. In addition, I expect you to take whatever actions are necessary to prevent any native animal from becoming endangered."

BLM attempts to do this by, first of all, cooperating closely with the U.S. Fish and Wildlife Service and state fish and game agencies to identify endangered and threatened species during its wildlife habitat inventories. During its planning process, BLM highlights the location and condition of endangered species habitat (in the Unit Resource Analysis) and suggests methods of maintaining or enhancing this habitat (in the Management Framework Plan). Endangered species habitat can be designated as crucial areas or areas of critical environmental concern in order to guarantee its protection during resolution of resource conflicts.

In addition, BLM identifies impacts of its actions on endangered species during its environmental assessment process. Identification of endangered species is often grounds for modification or rejection of proposals that significantly endanger protected species.

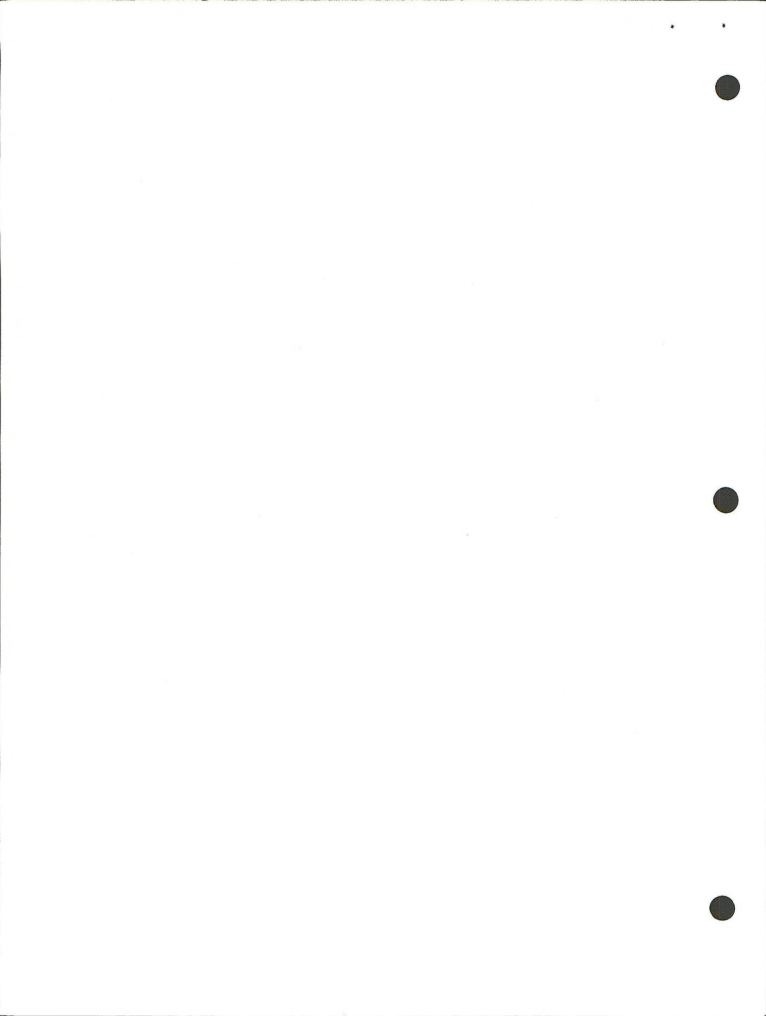
Wildlife specialists in state, district and area offices are responsible for monitoring protection of endangered and threatened species during the planning and environmental assessment processes. Now all state offices also have designated endangered species coordinators, who will keep abreast of and advise other specialists of the latest developments in the endangered species program and coordinate cooperative efforts with other agencies, particularly the USFWS.

The Endangered Species Coordinator in the Washington Office of BLM, who guides BLM policy regarding these species is:

Dick Vernimen
Wildlife Division (360)
18th and C Streets, N.W.
Washington, D. C. 20240
(202) 3436188

Eastern States Involvement

Eastern States Office has jurisdiction over some public lands and many acres of subsurface minerals throughout 31 states along the western border of and east of the Mississippi River (see map). We are concerned with endangered and threatened species because our actions, particularly mineral leasing, could affect wildlife throughout the eastern U.S. Our wildlife specialists in Silver Spring (Maryland), Tuscaloosa (Alabama) and Duluth (Minnesota) help prepare BLM planning and environmental documents and review environmental assessments from other agencies to ensure that Federal actions are consistent with the Endangered Species Act of 1973.



II. Federally-Listed Species

The Classification Process

A commonly asked question is "How did that critter/varmit/weed get on the list anyway?" The Secretary of the Interior has the responsibility of classifying a native animal as threatened or endangered if any of the following criteria apply:

1. The species' habitat is presently threatened with destruction, modification or curtailment.
2. It is being overutilized for commercial, sporting, scientific or educational purposes.
3. Its existence is being seriously endangered by predation or disease.
4. Existing regulatory mechanisms are inadequate.
5. Other natural or man-made factors are affecting its continued existence.

The secretary consults with many sources before a final determination is made. Information is solicited from the States where the animals or plants occur, after other Federal agencies, scientists (mammalogists, ornithologists, herpetologists, etc.), conservation groups and, if necessary, Secretary of Commerce and foreign countries. The Secretary of the Interior must announce that designation of a species is being studied in the Federal Register. This gives every interested agency, group and individual a chance to comment on the proposal before it is accepted or rejected.

Section 7

In January 1978, the regulations implementing Section 7 of the Endangered Species Act of 1973 were issued (Federal Register 43 (2): 870-876, January 4). Section 7 requires that all Federal agencies, in consultation with the Secretary of the Interior, insure that their actions do not jeopardize the existence of threatened or endangered species or of critical habitat.

As a result of these regulations, BLM must request formal consultation with the U.S. Fish and Wildlife Service (or National Marine Fisheries Service) if BLM thinks that one of its actions (or in the case of land use plans or regional environmental statements, a set of actions) may affect a listed species. Two instruction memoranda (WO IM 78-22 and 78-162) give guidance on the regulations and how they should be treated in the environmental statement process. Directions are due soon on their treatment in the inventory and planning process.

The end result of the consultation process is a biological opinion from USFWS stating that either (1) the proposed actions or plan will promote conservation of the listed species; (2) the action/plan would not affect the species or its habitat; or (3) the action/plan will harm the species. It is then up to BLM to document the opinion in its plans or assessments and take appropriate action to protect the species.

On November 10, 1978, President Carter signed "The Endangered Species Act Amendments of 1978". Among other things, the amendments modified the consultation process, added some new definitions, and established a cabinet-level committee to consider exemptions from compliance with the original Act.

Official List

The following lists show endangered and threatened species in the 31 states under BLM's Eastern States jurisdiction. The lists are accurate to the best of our knowledge at this point in time. Since these lists are continually being revised as species are added, reclassified or deleted, it would be advisable in the future to verify a specific classification with, or ask for more specific information about, these listed species from one of the contacts listed in Section V.

ENDANGERED SPECIES
FEDERAL LIST

Alabama

Watercress darter	(<i>Etheostoma nuchale</i>)
American alligator	(<i>Alligator mississippiensis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Bachman's warbler	(<i>Vermivora bachmanii</i>)
Florida panther	(<i>Felis concolor coryi</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)
Fine-rayed pigtoe pearly mussel	(<i>Fusconaia cuneolus</i>)
Shiny pigtoe pearly mussel	(<i>Fusconaia edgariana</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)
Alabama lamp pearly mussel	(<i>Lampsilis virescens</i>)
White warty-back pearly mussel	(<i>Plethobasis cicatricosus</i>)
Orange-footed pimpleback	(<i>Plethobasis cooperianus</i>)
Pale lilliput pearly mussel	(<i>Toxolasma (-Carunculina) cylindrella</i>)

Arkansas

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
American alligator	(<i>Alligator mississippiensis</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)
Fat pocketbook pearly mussel	(<i>Potamilus (-Propetera) capax</i>)

Connecticut

Indiana bat	(<i>Myotis sodalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Delaware

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
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Florida

Shortnose sturgeon	(<i>Acipenser brevirostrum</i>)
Brown pelican	(<i>Pelecanus occidentalis</i>)
Florida Everglade kite	(<i>Rostrhamus sociabilis plumbeus</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Dusky seaside sparrow	(<i>Ammospiza maritima nigrescens</i>)

Florida (continued)

Cape Sable sparrow	(<i>Ammodramus maritimus mirabilis</i>)
Florida panther	(<i>Felis concolor coryi</i>)
Florida manatee	(<i>Trichechus manatus latirostris</i>)
Key deer	(<i>Odocoileus virginianus clavium</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Okaloosa darter	(<i>Etheostoma okaloosae</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)
American crocodile	(<i>Crocodylus acutus</i>)
Pine barrens tree frog	(<i>Hyla andersonii</i>)

Georgia

American peregrine falcon	(<i>Falcon peregrinus anatum</i>)
American alligator	(<i>Alligator mississippiensis</i>)*
Brown pelican	(<i>Pelecanus occidentalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Florida panther	(<i>Felis concolor coryi</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)
Florida manatee	(<i>Trichechus manatus latirostris</i>)
Shortnose sturgeon	(<i>Acipenser brevirostrum</i>)

Illinois

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Fat pocketbook pearly mussel	(<i>Potamilus capax</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Longjaw cisco - in Lake Michigan	(<i>Coregonus alpenae</i>)
Gray bat	(<i>Myotis grisescens</i>)
Sampson's pearly mussel	(<i>Epioblasma (-Dysnomia) sampsoni</i>)
Tubercled-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) torulosa torulosa</i>)
Higgins' eye pearly mussel	(<i>Lampsilis higginsii</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)

Indiana

Fat pocketbook pearly mussel	(<i>Potamilus capax</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Longjaw cisco - in Lake Michigan	(<i>Coregonus alpenae</i>)
Gray bat	(<i>Myotis grisescens</i>)
Sampson's pearly mussel	(<i>Epioblasma (-Dysnomia) sampsoni</i>)

Indiana (continued)

White cat's paw pearly mussel	(<i>Epioblasma</i> (- <i>Dysnomia</i>) <i>sulcata delicata</i>) (including <i>perobliqua</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)
Kirtland's warbler	(<i>Dendroica Kirtlandii</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Iowa

Indiana bat	(<i>Myotis sodalis</i>)
Northern kit fox	(<i>Vulpes velox hebes</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Kentucky

Indiana bat	(<i>Myotis sodalis</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Gray bat	(<i>Myotis grisescens</i>)
Tuberculed-blossom pearly mussel	(<i>Epioblasma</i> (- <i>Dysnomia</i>) <i>torulosa torulosa</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)
Rough pigtoe pearly mussel	(<i>Pleurobema plenum</i>)
Cumberland monkeyface pearly mussel	(<i>Quadrula intermedia</i>)
Tan ruffle shell	(<i>Epioblasma walkeri</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Louisiana

American alligator - except in three parishes	(<i>Alligator mississippiensis</i>)*
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
American ivory-billed woodpecker	(<i>Campephilus principalis principalis</i>)
Brown pelican	(<i>Pelecanus occidentalis</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Red Wolf	(<i>Canis rufus</i>)

Maine

Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Shortnose Sturgeon	(<i>Acipenser brevirostrum</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Maryland

Maryland darter	(<i>Etheostoma sellare</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

*Threatened in some coastal areas

Maryland (continued)

Delmarva Peninsula fox squirrel	(<i>Sciurus niger cinereus</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)

Massachusetts

Indiana bat	(<i>Myotis sodalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Michigan

Kirtland's warbler	(<i>Dendroica kirtlandii</i>)
Gray wolf	(<i>Canis lupus</i>)
Longjaw cisco - in Lake Michigan, Lake Huron	(<i>Coregonus alpenae</i>)
Blue pike - in Lake Erie	(<i>Stizostedion vitreum glaucum</i>)
White cat's paw pearly mussel	(<i>Epioblasma (-Dysnomia) sulcata delicata</i>) (including <i>perobliqua</i>)
Indiana bat	(<i>Myotis sodalis</i>)

Minnesota

Gray wolf	(<i>Canis lupus</i>)**
Northern kit fox	(<i>Vulpes velox hebes</i>)
Higgins' eye pearly mussel	(<i>Lampsilis higginsii</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)

Mississippi

American alligator	(<i>Alligator mississippiensis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Mississippi sandhill crane	(<i>Grus canadensis pulla</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)

Missouri

Indiana bat	(<i>Myotis sodalis</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Gray bat	(<i>Myotis grisescens</i>)
Curtis' pearly mussel	(<i>Epioblasma (-Dysnomia) florentine curtisi</i>)
Higgins' eye pearly mussel	(<i>Lampsilis higginsii</i>)
Fat pocketbook pearly mussel	(<i>Potamilus (-Proptera) capax</i>)

New Hampshire

Eastern cougar - possible (Felis concolor cougar)
Indiana bat (Myotis sodalis)

New Jersey

Bald eagle (Haliaeetus leucocephalus)
Eskimo curlew (Numenius borealis)

New York

Shortnose sturgeon (Acipenser brevirostrum)
Longjaw cisco - in Lake Erie (Coregonus alpenae)
Blue Pike - in Lake Erie,
Lake Ontario (Stizostedion vitreum glaucum)
Eastern cougar - possible (Felis concolor cougar)
Indiana bat (Myotis sodalis)
Bald eagle (Haliaeetus leucocephalus)

North Carolina

American alligator (Alligator mississippiensis)
Brown pelican (Pelecanus occidentalis)
Bald eagle (Haliaeetus leucocephalus)
Red-cockaded woodpecker (Dendrocopos borealis)
Indiana bat (Myotis sodalis)
Eastern cougar - possible (Felis concolor cougar)
Gray bat (Myotis grisescens)

Ohio

Indiana bat (Myotis sodalis)
Longjaw cisco - in Lake Erie (Coregonus alpenae)
Blue Pike - in Lake Erie (Stizostedion vitreum glaucum)
Scioto madton - possibly extinct (Noturus trautmani)
White cat's paw pearly mussel (Epioblasma (-Dysnomia) sulcata delicata)
(including perobliqua)
Pink mucket pearly mussel (Lampsilis orbiculata orbiculata)
American peregrine falcon (Falco peregrinus)
Kirtland's warbler (Dendroica Kirtlandii)
Bald eagle (Haliaeetus leucocephalus)

Pennsylvania

Indiana bat (Myotis sodalis)
Eastern cougar - possible (Felis concolor cougar)

Pennsylvania (continued)

Longjaw cisco - in Lake Erie	(<i>Coregonus alpenae</i>)
Blue pike - in Lake Erie	(<i>Stizostedion vitreum glaucum</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Rhode Island

Indiana bat	(<i>Myotis sodalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

South Carolina

American alligator	(<i>Alligator mississippiensis</i>)*
Brown pelican	(<i>Pelecanus occidentalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Eskimo curlew	(<i>Numenius borealis</i>)
American ivory-billed woodpecker	(<i>Campephilus principalis principalis</i>)
Bachman's warbler	(<i>Vermivora bachmani</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Gray bat	(<i>Myotis grisescens</i>)

Tennessee

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Gray bat	(<i>Myotis grisescens</i>)
Snail darter	(<i>Percina tanasi</i>)
Birdwing pearly mussel	(<i>Conradilla caelata</i>)
Dromedary pearly mussel	(<i>Dromus dromas</i>)
Yellow-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) florentina</i> <i>florentina</i>)
Green-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) torulosa</i> <i>gubernaculum</i>)
Tuberculed-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) torulosa torulosa</i>)
Pale lilliput pearly mussel	(<i>Toxolasma (-Carunculina) cylindrella</i>)
Fine-rayed pigtoe pearly mussel	(<i>Fusconaia cuneolus</i>)
Shiny pigtoe pearly mussel	(<i>Fusconaia edgariana</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)
White warty-back pearly mussel	(<i>Plethobasis cicatricosus</i>)
Orange-footed pimpleback	(<i>Plethobasis cooperianus</i>)
Rough pigtoe pearly mussel	(<i>Pleurobema plenum</i>)
Cumberland monkeyface pearly mussel	(<i>Quadrula intermedia</i>)
Appalachian monkeyface pearly mussel	(<i>Quadrula sparsa</i>)
Tan riffle shell	(<i>Epioblasma walkeri</i>)

*Threatened in some coastal areas

Vermont

Indiana bat	(<i>Myotis Sodalis</i>)
Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Virginia

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Bachman's warbler	(<i>Vermivora bachmanii</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Gray bat	(<i>Myotis grisescens</i>)
Appalachian monkeyface pearly mussel	(<i>Quadrula sparsa</i>)
Birdwing pearly mussel	(<i>Conradilla caelata</i>)
Dromedary pearly mussel	(<i>Dromus dromas</i>)
Green-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) torulosa gubernaculum</i>)
Fine-rayed pigtoe pearly mussel	(<i>Fusconaia cuneolus</i>)
Shiny pigtoe pearly mussel	(<i>Fusconaia edgariana</i>)
Rough pigtoe pearly mussel	(<i>Pleurobema plenum</i>)
Cumberland monkeyface pearly mussel	(<i>Quadrula intermedia</i>)
Tan riffle shell	(<i>Epioblasma walkeri</i>)

West Virginia

Indiana bat	(<i>Myotis sodalis</i>)
Eastern cougar - possible	(<i>Felis concolor cougar</i>)
Gray bat	(<i>Myotis grisescens</i>)
Tuberculed-blossom pearly mussel	(<i>Epioblasma (-Dysnomia) torulosa torulosa</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata orbiculata</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

Wisconsin

Gray wolf	(<i>Canis lupus</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Longjaw cisco - in Lake Michigan	(<i>Coregonus alpenae</i>)
Higgins' eye pearly mussel	(<i>Lampsilis higginsii</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)
Kirtlandis warbler	(<i>Dendroica Kirtlandii</i>)

THREATENED SPECIES
FEDERAL LIST

Alabama

Alabama cavefish	(<i>Speoplatyrhinus poulsoni</i>)
Eastern indigo snake	(<i>Drymarchon corais couperi</i>)
Slender chub	(<i>Hybopsis cahnii</i>)
Spotfin chub	(<i>Hybopsis monacha</i>)
Slackwater darter	(<i>Etheostoma beschungi</i>)
Yellowfin madtom	(<i>Noturus flavipinnis</i>)
Red Hills salamander	(<i>Phaeognathus hubrichti</i>)

Arkansas

Leopard darter	(<i>Percina pantherina</i>)
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Georgia

Eastern indigo snake	(<i>Dry marchon corais couperi</i>)
American alligator	(<i>Alligator mississippiensis</i>)*

Florida

Bahama swallowtail butterfly	(<i>Papilio andraemon bonhotei</i>)
Schaus swallowtail butterfly	(<i>Papilo aristodemus ponceanus</i>)
Eastern indigo snake	(<i>Drymarchon corais couperi</i>)
Atlantic saltmarsh snake	(<i>Nerodia fasciata taeniata</i>)

Idaho

Grizzly bear	(<i>Ursus arctus horribilis</i>)
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Louisiana

American alligator	(<i>Alligator mississippiensis</i>)**
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Michigan

Bald eagle	(<i>Haliaeetus leucocephalus</i>)
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Minnesota

Gray wolf	(<i>Canis lupus</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)

*Threatened in coastal areas

**Threatened in some coastal areas

Mississippi

Bayou darter (*Etheostoma rubrum*)
Eastern indigo snake (*Drymarchon corais couperi*)

North Carolina

Spotfin chub (*Hybopsis monacha*)

South Carolina

American alligator (*Alligator mississippiensis*)*
Eastern indigo snake (*Drymarchon corais couperi*)

Tennessee

Slender chub (*Hybopsis cahnii*)
Yellowfin madtom (*Noturus flavipinnis*)
Spotfin chub (*Hybopsis monacha*)
Slackwater darter (*Eitheostoma boschungii*)

Virginia

Slender chub (*Hybopsis cahnii*)
Spotfin chub (*Hybopsis monacha*)
Yellowfin Madtom (*Noturus flavipinnis*)

Wisconsin

Bald eagle (*Haliaeetus leucocephalus*)

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III. The States' Species of Concern

BLM and the States

Many states have now begun to compile and maintain lists of species that are considered "rare," "threatened," "endangered," "sensitive" or "unique" within their own boundaries. It is important for BLM to cooperate with the states in the identification and protection of these species. BLM Manual 6840 spells out BLM responsibilities towards state-designated species.

Increasing Concern

The 31 states' endangered species' programs are in varying stages of development. Some states only recognize those species already on the Federal list. Other states have done extensive research and have compiled long lists of species unique to their regions that far exceed the number of species on the Federal list. Some states have passed legislation to enforce protection of their listed species; others have not.

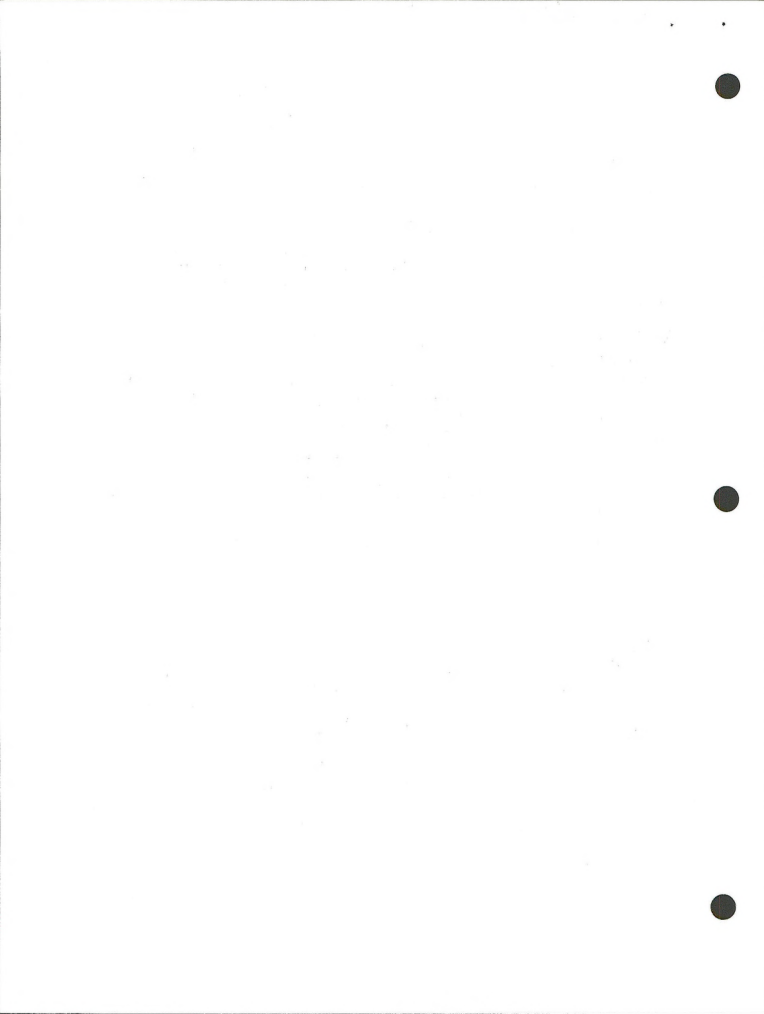
Quite a few states have signed cooperative agreements with the Fish and Wildlife Service and are eligible to receive grant-in-aid matching funds to aid their endangered species' programs.

The following Eastern States have signed such cooperative agreements as of June 1978:

Arkansas	New Jersey
Delaware	New York
Florida	North Carolina
Georgia	South Carolina
Maine	Tennessee
Maryland	Virginia
Michigan	Wisconsin
Missouri	

The State Lists

The following lists show state-classified endangered and threatened species in the 31 states under our jurisdiction. The lists are accurate to the best of our knowledge at this point of time. Since these lists are continually being revised as species are added, reclassified or deleted, it would be advisable in the future to verify a specific classification with, or ask for more specific information about these listed species from, one of the contacts listed in Section V.



Alabama

In 1975, a symposium was held at the University of Alabama which resulted in a list of endangered (E) and threatened (T) species, as well as species of special concern (S) within the State. The following lists were taken from Endangered and Threatened Plants and Animals of Alabama (Bulletin - Alabama Museum of Natural History Number 2) issued on October 15, 1976.

List of Species of the Naïad Mollusks in the Endangered Status (E), Threatened Status (T), Special Concern Status (S), Extirpated Status (X), and Uncertain Status (U).

- Order Unionoida Stoliczka, 1871
 Superfamily Unionacea Fleming, 1828
 Family Margaritellinae Ortmann, 1911
 (E) *Margaritifera hembeli* sp.
 Subfamily Cumberlandiinae Heard and Guckert, 1970
 (S) *Cumberlandia monodonta*
 Family Unioniidae (Fleming, 1828) Ortmann, 1910
 Subfamily Anodontae (Rafinesque, 1820) Ortmann, 1910
 (S) *Anodonta marginata*
 (E) *Anodonta mearnsi*
 (S) *Anodonta wrightiana*
 (S) *Anodonta triangulata*
 (E) *Pegina fabula*
 (E) *Lasmigona holstonia*
 (U) *Lasmigona georgiana*
 Subfamily Ambeulinae (Rafinesque, 1820) Morrison, 1955
 (S) *Quadrula apiculata apiculata*
 (E) *Quadrula cylindrica cylindrica*
 (E) *Quadrula intermedia*
 (E) *Quadrula stapes*
 (S) *Quadrula nodulata*
 (E) *Fusconia maculata maculata*
 (E) *Fusconia cuneolus*
 (F) *Fusconia cor*
 (S) *Fusconia escambia*
 (E) *Fusconia barnesiana*
 (E) *Lexingtonia dolabelloides*
 (S) *Plethobema cyphus*
 (E) *Plethobema cincticorax*
 (E) *Plethobema cooperianus*
 (E) *Plethobema obtusum*
 (E) *Plethobema nucleopsis*
 (E) *Plethobema clava*
 (E) *Plethobema oostforme*
 (E) *Plethobema declatum*
 (E) *Plethobema perovatum*
 (E) *Plethobema curtum*
 (E) *Plethobema shawleri*
 (F) *Plethobema houstonianus*
 (E) *Plethobema bathysum*
 (T) *Plethobema pyriforme*
 (E) *Plethobema rubellum*
 (F) *Plethobema intellium*
 (E) *Plethobema wartselli*
 (X) *Plethobema rubrum*
 (E) *Elipito arcus*
 (E) *Hemistena lata*
- Subfamily Lampsillinae (von Liebing, 1901) Ortmann, 1910
 (S) *Psychobrancheus fasciolaris*
 (E) *Psychobrancheus sublentum*
 (T) *Psychobrancheus greeni*
 (E) *Cyprogenia stetaria*
 (E) *Dromus dromas*
 (E) *Actinonaias ligamentina ligamentina*
 (E) *Actinonaias pectorosa*
 (E) *Obovaria olivaria*
 (E) *Obovaria jacksoniana*
 (E) *Obovaria unicolor*
 (E) *Obovaria subtundata*
 (E) *Obovaria retusa*
 (T) *Tinctella truncata*
 (E) *Leptodes leptodes*
 (E) *Potamilus inflatus*
 (E) *Potamilus lacustrinus*
 (E) *Toxolama lividus lividus*
 (E) *Toxolama cylindrella*
 (E) *Medionidus con-radicis*
 (E) *Medionidus megalmeriae*
 (X) *Lemiox rimarus*
 (E) *Villosa fabalis*
 (E) *Villosa laevigata laevigata*
 (U) *Villosa isentata punctata*
 (E) *Lampisilis viridescens*
 (S) *Lampisilis orbiculata*
 (E) *Lampisilis ovata*
 (E) *Lampisilis binominata*
 (E) *Lampisilis perovialis*
 (E) *Epioblasma triquetra*
 (X) *Epioblasma arcaeformis*
 (T) *Epioblasma brevidens*
 (E) *Epioblasma penila*
 (T) *Epioblasma metasirriata*
 (E) *Epioblasma otholobogensis*
 (X) *Epioblasma hoysiana*
 (X) *Epioblasma sulcata sulcata*
 (X) *Epioblasma lenior*
 (X) *Epioblasma personata*
 (X) *Epioblasma flexuosa*
 (X) *Epioblasma lewisii*
 (X) *Epioblasma stewardsoni*
 (X) *Epioblasma biemarginata*
 (X) *Epioblasma turgidula*
 (X) *Epioblasma florentina*
 (X) *Epioblasma torulosa torulosa*
 (X) *Epioblasma propinqua*

List of Freshwater Decapod Crustaceans of Threatened Status

- (T), Special Concern Status (S)
 Family Cambaridae
 Subfamily Cambarellinae
 (S) *Cambarellus diminutus*
 (S) *Cambarellus stuebeli*
 Subfamily Cambarinae
 (S) *Cambarus (Austicambarus) hamulatus*
 (S) *Cambarus (Austicambarus) jonesi*
 (S) *Cambarus (Austicambarus) sp. B*
 (T) *Cambarus (Austicambarus) sp. A*
 (S) *Procambarus (Leontocambarus) capillatus*
 (S) *Procambarus (Leontocambarus) escambienis*
 (S) *Procambarus (Ortmannicus) bivitatus*
 (S) *Procambarus (Ortmannicus) evermanni*
 (S) *Procambarus (Ortmannicus) lecontei*
 (S) *Procambarus (Pennsides) clewerni*
 (S) *Procambarus (Remotocambarus) pecki*
 Family Atyidae
 (S) *Palaeomonetes aleghensis*

List of Species of Fishes in the Endangered Status (E), Threatened Status (T), Special Concern (Extirpated) Status (X), and Special Concern (Surviving) Status (S).

- Family Petromyzidae
(E) *Lampetra lamottei*. American brook lamprey
Family Actinopterygii
(X) *Aripmer fulvirens*. Lake sturgeon
(T) *Aripmer oxyrinchus*. Atlantic sturgeon
(S) *Scaphirhynchus* sp. Alabama sturgeon
Family Cyprinidae
(S) *Clarusoma erythrogaster*. Southern redbelly dace
(S) *Hemiteles flammus*. Flame chub
(X) *Hybopsis diabolus*. Stracmillie chub
(S) *Hybopsis insignis*. Blotched chub
(X) *Hybopsis monacha*. Spotted chub
(X) *Notropis erythrogaster*. Popeye shiner
(S) *Notropis boopis*. Bigeye shiner
(S) *Notropis caeruleus*. Blue shiner
(S) *Notropis callistensis*. Bluestripe shiner
(S) *Notropis coccoensis*. Warpiest shiner
(S) *Notropis cunninghami*. Dusky shiner
(S) *Notropis enturus*. Broadstripe shiner
(X) *Notropis stamineus*. Sand shiner
(S) *Notropis* sp. Cahaba shiner
(S) *Notropis* sp. Sawfin shiner
(S) *Phenacobius utroque*. Stargazing minnow
Family Catostomidae
(T) *Cylocheilus elongatus*. Blue sucker
(S) *Lagochilus laevis*. Hairlip sucker
Family Ictaluridae
(S) *Noturus elegans*. Elegant madtom
(S) *Noturus flavus*. Stonecat
(S) *Noturus miurus*. Bridled madtom
(E) *Noturus fumivultus*. Freckle-belly madtom
Family Amlyopsidae
(E) *Speotletyrhinus postonii*. Alabama cavefish
(S) *Typhlichthys subterranea*. Southern cavefish
Family Cyprinodontidae
(X) *Fundulus albiventris*. Whiteline topminnow
(S) *Fundulus cingulatus*. Banded topminnow
(S) *Leptaleocania ornata*. Pygmy killifish
(S) *Lurania goodii*. Bluetin killifish
Family Centrarchidae
(E) *Etheostoma* sp. Spring pygmy sunfish
(S) *Atheroporus* sp. Shoal bass
Family Percidae
(T) *Ammocrypta asprella*. Crystal darter
(S) *Etheostoma bienniis*. Blenny darter
(T) *Etheostoma boesemani*. Slackwater darter
(X) *Etheostoma cinereum*. Ashy darter
(T) *Etheostoma disereum*. Coldwater darter
(E) *Etheostoma nigrum*. Watercrest darter
(X) *Etheostoma triale*. Tri-spot darter
(T) *Etheostoma tucumbia*. Tuscomb darter
(S) *Etheostoma t. snyderi*. Northern banded darter
(S) *Etheostoma* sp. Unnamed subnase darter
(E) *Percina viriolineata*. Goldline darter
(S) *Percina burtoni*. Blackside logperch
(T) *Percina lentiginosa*. Freckled darter
(T) *Percina* sp. ssp. Warrior muscadine darter
Family Gobiidae
(N) *Gobius harrisi*. Mottled sculpin
(E) *Gobius pygmaeus*. Pygmy sculpin

List of Amphibians and Reptiles of Endangered Status (E), Threatened Status (T), and Special Concern Status (S).

- Class Amphibia—Amphibians
Order Anura—Frogs and Toads
Family Hyliidae—Hyliid frogs
(S) *Limnocheilus oculatus*. Little grass frog
Family Ranidae—True frogs
(T) *Rana oreolepis*. Dusky gopher frog
(S) *Rana heckscheri*. River frog
(S) *Rana sylvatica*. Wood frog
Order Caudata—Salamanders
Family Ambystomatidae—Mole salamanders
(E) *Ambystoma cingulatum*. Flatwoods salamander
Family Cryptobranchidae—Giant salamanders
(T) *Cryptobranchus alleganiensis alleganiensis*. Hellbender
Family Plethodontidae—Woodland salamanders
(S) *Desmognathus aeneus*. Seepage salamander
(S) *Desmognathus ochopeus*. Mountain dusky salamander
(E) *Phreatophilus hubrichti*. Red Hills salamander
(S) *Eurycea equata*. Brown-backed salamander
(S) *Gyrinophilus polleucus*. Tennessee cave salamander
(S) *Plethodon cinereus polycentrus*. Georgia red-backed salamander
Family Proteidae—Mudpuppies, Waterdogs
(S) *Necturus* sp.—West Spiny Foot waterdog
Family Sirenidae—Sirens
(S) *Siren lacertina*. Greater siren
Class Reptilia
Order Crocodylia—Crocodylians
Family Alligatoridae—Alligators
(T) *Alligator mississippiensis*. American alligator
Order Squamata—Lizards and Snakes
Family Colubridae—Colubrid snakes
(S) *Drymarchon corais couperi*. Eastern indigo snake
(S) *Lampropeltis triangulum triangulum*. Eastern milk snake
(S) *Lampropeltis triangulum sylvatica*. Red milk snake
(E) *Pituophis melanoleucus lodrigi*. Black pine snake
(E) *Pituophis melanoleucus mugillus*. Florida pine snake
(S) *Rhadivoea flavilata*. Pine woods snake
(S) *Natrix cyclopion floridana*. Florida green water snake
(S) *Scotinotrix pygmaea pygmaea*. North Florida black swamp snake
Family Viperidae—Vipers
(S) *Crotalus adamanteus*. Eastern diamondback rattlesnake
Order Testudinata—Turtles
Family Cheloniidae—Sea turtles
(E) *Caretta caretta caretta*. Atlantic loggerhead
(E) *Chelonia mydas*. Green turtle
(E) *Eretmochelys imbricata imbricata*. Atlantic hawksbill
(E) *Leptochelys kempi*. Atlantic ridley
Family Dermochelidae—Leatherback sea turtle
(T) *Dermochelys coriacea*. Atlantic leatherback
Family Emydidae—Emydid turtles
(S) *Graptemys barbouri*. Barbour's map turtle
(T) *Pseudemys* (z. *Chrysemys*) *olabamensis*. Alabama red-bellied turtle
Family Kinosternidae—Mud and musk turtles
(T) *Kinosternon minor depressum*. Flattened musk turtle
Family Testudinidae—Tortoises
(T) *Gopherus polyphemus*. Gopher tortoise
Family Trionychidae—Soft-shelled turtles
(S) *Trionyx ferox*. Florida softshell
(S) *Trionyx spiniferus spiniferus*. Eastern spiny softshell

List of Species of Birds of Endangered status (E), Threatened Status (T), and Special Concern status (S).

- Order Pelicaniformes
Family Pelicauidae
(E) *Pelecanus occidentalis*—Brown Pelican
- Order Anseriformes
Family Anatidae
(T) *Anas fulvigula*—Mottled Duck
- Order Falconiformes
Family Accipitridae
(S) *Accipiter cooperii*—Cooper's Hawk
(S) *Accipiter striatus*—Sharp-shinned Hawk
(E) *Aquila chrysaetos*—Golden Eagle
(S) *Buteo lineatus*—Red-shouldered Hawk
(S) *Elaeoides forficatus*—Swallow-tailed Kite
(E) *Haliaeetus leucocephalus*—Bald Eagle
- Family Falconidae
(S) *Falco columbarius*—Merlin
(E) *Falco peregrinus*—Peregrine Falcon
- Family Pandionidae
(E) *Pandion haliaetus*—Osprey
- Order Gruiformes
Family Gruidae
(S) *Grus canadensis*—Sandhill Crane
- Family Rallidae
(S) *Larus delawarensis*—Black Rail
- Order Charadriiformes
Family Charadriidae
(E) *Charadrius alexandrinus*—Snowy Plover
- Family Haematopodidae
(S) *Haematopus palliatus*—American Oystercatcher
- Order Ciconiiformes
Family Ciconiidae
(T) *Diplomastix fuscescens*—Reddish Egret
(S) *Florida carolinensis*—Little Blue Heron
(S) *Myristicivora nycticorax*—Black-crowned Night Heron
- Family Ciconiidae
(S) *Myristicivora americana*—Wood Stork
- Order Piciformes
Family Picidae
(E) *Caprimulgus principalis*—Woody-billed Woodpecker
(E) *Dendrocopos borealis*—Red-necked Woodpecker
- Order Passeriformes
Family Fringillidae
(S) *Aimophila aestivalis*—Bachman's Sparrow
- Family Parulidae
(S) *Limothlypis swainsonii*—Swainson's Warbler
(E) *Parus bachmani*—Bachman's Warbler
- Family Troglodytidae
(S) *Thryomanes bewickii*—Bewick's Wren

List of Species of Mammals in the Endangered Status (E) and the Special Concern Status (S)

- Order Insectivora
Family Soricidae
(S) *Sorex longirostris*—Southeastern Shrew
- Order Chiroptera
Family Vespertilionidae
(E) *Myotis grisicinus*—Gray Myotis
(S) *Myotis austroriparius*—Southeastern Myotis
(S) *Myotis lucifugus lucifugus*—Little Brown Bat
(S) *Myotis keeni septentrionalis*—Keen's Myotis
(E) *Myotis sodalis*—Indiana Myotis
(S) *Plecotus rafinesquii*—Rafinesque's Big-eared Bat
(S) *Lasiurus floridanus*—Florida Yellow Bat
- Order Lagomorpha
Family Leporidae
(S) *Sylvilagus palustris palustris*—Marsh Rabbit
(S) *Sylvilagus transitionalis*—New England Cottontail
- Order Rodentia
Family Scuriidae
(S) *Sciurus carolinensis fuliginosus*—Bayou Gray Squirrel
- Family Cricetidae
(E) *Peromyscus polionotus ammobates*—Alabama Gulf Beach Mouse
(E) *Peromyscus polionotus trisyllepsis*—Perdido Bay Beach Mouse
(S) *Microtus ochrogaster ochrogaster*—Prairie Vole
- Family Zapusidae
(S) *Zapus hudsonius americanus*—Meadow Jumping Mouse
- Order Carnivora
Family Ursidae
(E) *Ursus americanus americanus*—Northern Black Bear
(E) *Ursus americanus floridanus*—Florida Black Bear
- Family Felidae
(E) *Felis concolor coryi*—Florida Panther

Arkansas

The State of Arkansas does not have an official list of endangered or threatened species separate from the Federal list given in Section II.

The species of fish given here merit some concern, however, due to scarcity, declining numbers and threatened habitat.

Additional species of concern can be found in Arkansas' Natural Area Plan available from the Natural Heritage Commission in Little Rock.

Threatened Fishes of Arkansas

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ABSTRACT

Intensive field collecting throughout Arkansas and a survey of literature and museum records revealed 37 fish species and subspecies in Arkansas to be threatened by human activities. Of these 37 threatened forms, seven are considered rare and endangered. One may be extinct. With regard to distribution, 19 threatened forms reside in the White River system and 11 and 10 inhabit the Arkansas and Red River systems, respectively. Nine fishes are considered threatened in the Ouachita River system, four threatened forms are known in the St. Francis drainage, and two are known in the Mississippi River proper.

INTRODUCTION

Currently there is considerable interest concerning native rare and endangered animal species. As man continues to upset the delicate ecological balance of nature, more and more animal species are threatened with eventual extinction. Thus it is imperative that the status of faunal members be elucidated so that the human encroachment can be minimized or stopped altogether.

Committees within certain scientific societies, notably the Conservation Committee of the American Society of Ichthyologists and Herpetologists and the Endangered Species Committee of the American Fisheries Society, have worked diligently to compile a list of threatened native fishes of the United States. The first concerted effort to protect native fauna resulted in the Endangered Species Preservation Act of 1966. The U.S. Department of the Interior published the Red Book of Rare and Endangered Fish and Wildlife of the United States (1968). The IUCN Red Data Book (Vol. 4, Pisces, 1969) was published to review threatened species on a global basis. McAllister (1970) reviewed the rare and endangered fishes of Canada. Miller (1972) was the first to compile a list of threatened fishes for the 50 United States. Unfortunately, data concerning the status of Arkansas fishes in Miller's paper were minimal and only two species were included for the state. Both species, the Ozark cavefish (*Typhlichthys subterraneus*) and the yellowcheck darter (*Etheostoma moorei*) were given a status of rare.

Because of the paucity of information concerning the status of Arkansas fishes, a more complete discussion of each threatened species was deemed necessary. This paper is an outgrowth of a report prepared by the writer on rare and endangered fishes of Arkansas national forest areas for the U.S. Forest Service and an ichthyofaunal survey of Arkansas which is in progress. This paper is intended to clarify the status of certain fishes in Arkansas which are believed to be threatened. Future changes in status will be documented in subsequent papers. Records of threatened fishes within the state were compiled from extensive field work, literature records and examination of Arkansas fish specimens housed at Tulane University, Oklahoma State University, University of Michigan, Northeast Louisiana University, Arkansas State University and Southern State College.

TERMINOLOGY

Use of scientific names follows that of Bailey et al. (1970). Definitions for terms describing the status of each species are the same as those used by Miller (1972):

Endangered - Actively threatened with extinction.
Continued survival unlikely without the

implementation of special protective measures.

Rare - Not under immediate threat of extinction, but occurring in such small numbers and/or in such a restricted or specialized habitat that it could quickly disappear. Requires careful watching.

ACKNOWLEDGEMENTS

Appreciation is expressed to Dr. R.M. Bailey, University of Michigan, for sending specimens and furnishing valuable data. Drs. G.A. Moore and R.J. Miller, Oklahoma State University, critically read the manuscript and gave helpful suggestions. Drs. G.L. Harp and J.K. Boudley, Arkansas State University, and T.M. Duchonay, Westark Community College, graciously shared collecting localities of several species. Finally, sincere appreciation is extended to the many students at Southern State College who collected with the writer throughout the state.

ANNOTATED LIST OF THREATENED FISHES OF ARKANSAS

Petromyzontidae (Lampreys)

- Lampetra aepyptera* (Abbott). Least brook lamprey... Arkansas distribution: Known only from Finney Creek (White River system) and Mill Pond Branch (Spring River drainage).
Remarks: G.L. Harp (pers. comm.) recently discovered this species in the state in Finney Creek (White River system) near Calico Rock and has since taken a specimen from Mill Pond Branch (Spring River drainage). As the three specimens collected are the only known representatives from Arkansas, the least brook lamprey is regarded as rare.
Status: Rare.
- Lampetra lamottei* (Lesueur). American brook lamprey, Arkansas distribution: White River system.
Remarks: The American brook lamprey is given a provisional status of rare based on the paucity of valid records. As lampreys are usually difficult to collect, *L. lamottei* may be removed from this status in the future if additional collecting reveals a greater abundance.
Status: Rare.

Aepenseridae (Sturgeons)

3. *Aepenser fulvescens* Rafinesque. Lake sturgeon.
Arkansas distribution: Mississippi River; a single record from Little Missouri River.

Remarks: A single 135-lb specimen of *A. fulvescens* was taken on hook and line from the Little Missouri River in 1958 (C. H. Barton, pers. comm.) and is mounted in the Game and Fish Commission Building in Little Rock. Though unverified, additional reports of the lake sturgeon come from commercial fishermen from the Mississippi River in northeastern Arkansas. The lake sturgeon has undergone a widespread decline in abundance throughout its range because of pollution and siltation of rivers, which adversely affect spawning sites and food supplies, and construction of dams that restrict access to suitable spawning sites (Cross, 1967).
Status: Rare.

4. *Scaphirhynchus albus* (Forbes and Richardson). Pallid sturgeon.
Arkansas distribution: St. Francis and Mississippi Rivers.

Remarks: Although there are no specimen records for the pallid sturgeon from Arkansas, Buchanan (1973) included it as a member of the state ichthyofauna on the basis of sight records. Primarily a large river species, *S. albus* has become rare throughout most of its range in the Mississippi Valley primarily because of channel modifications.
Status: Rare.

Hiodontidae (Mooneyes)

5. *Hiodon alosoides* (Rafinesque). Goldeye.
Arkansas distribution: Generally known from larger rivers.

Remarks: Although normally more tolerant of the increasingly turbid waters of the state than the related *H. tergisus*, *H. alosoides* is treated as rare because of the paucity of recent records. Only three collections of the goldeye have been made since 1960 (Buchanan, 1973). Future collecting from the riverine habitats may reveal additional goldeyes, but presently the status of this species is rare.
Status: Rare.

Umbridae (Mudminnows)

6. *Umbrina limi* (Kirtland). Central mudminnow.
Arkansas distribution: Known only from a single specimen from the St. Francis River drainage.

Remarks: Meek (1938) reported a single specimen of the central mudminnow; however, this species has not been taken subsequently in Arkansas. Meek's record is suspect as Prileger (1971) did not report *U. limi* from neighboring Missouri. Data switching is a possibility, as misidentification of this distinctive species seems implausible. Such data switching did occur during Meek's collecting trips (W. R. Taylor, pers. comm.).
Status: Rare.

Catostomidae (Suckers)

7. *Cykeptus elongatus* (Lesueur). Blue sucker.
Arkansas distribution: Scattered records from Red, Arkansas and White river systems.

Remarks: Lack of collecting in the big river habitats in Arkansas possibly explains the scarcity of records of the blue sucker from static waters, although Prileger (1971) reported a decline in abundance of *C. elongatus* in Missouri from the early 1900's until 1971. Robison et al. (1974) also regarded the blue sucker as rare in neighboring Oklahoma. Coker (1930) noted a decline of this species after construction of a dam in Iowa. Blue suckers require clean-swept substrates for spawning. With increased siltation resulting from continued impoundment of larger streams, abundance of the blue sucker should decline if additional impoundments are constructed.
Status: Rare.

8. *Erimyzon succetta* (Lacépède). Lake chubsucker.
Arkansas distribution: St. Francis River, White River system, Ouachita River and Red River drainage (Big Creek).

Remarks: Only four recent records of the uncommon lake chubsucker are known although it may be more widespread in lakes, oxbows and quiet pools of rivers than records indicate. Prileger (1971) reported this species as declining in abundance in Missouri in recent years, and the absence of recent collections in Arkansas may suggest a real decline in abundance, rather than a lack of collecting.
Status: Rare.

9. *Lagochila lucera* Jordan and Brayton. Harelip sucker.
Arkansas distribution: White River system.

Remarks: The harelip sucker is believed to be extinct, having been extirpated in the first part of the century. Jordan and Gilbert (1886) last reported *L. lucera* from the White River near Eureka Springs as *Quassilobus lucera* and noted only that it was "not rare". Siltation resulting from agricultural practices and deforestation possibly explains its disappearance throughout its former range (Ramsey et al., 1973; Trautman, 1957).
Status: Extinct.

10. *Moxyostoma anisurum* (Rafinesque). Silver redhorse.
Arkansas distribution: Known from the White River near Batesville and the Current River.

Remarks: Several specimens of the silver redhorse have been collected from the White River near Batesville by N. H. Douglas of Northeast Louisiana University and these, in addition to a single specimen (TU 65974) taken by R. C. Cashner and B. Thompson of Tulane University from the Current River near the Arkansas-Missouri state line, are the only known records of *M. anisurum* from the state. All specimens were identified by Dr. R. E. Jenkins, Roanoke College.
Status: Rare.

11. *Moxyostoma macrolepidotum pisolabrum* Trautman and Martin. Peallip redhorse.

Arkansas distribution: White River system and one record from the Illinois River (Arkansas River system).
Remarks: Because of a scarcity of records from the state, a status of rare is assigned the peallip redhorse in Arkansas. The paucity of localities may be explained partly by the difficulty of collecting in the big river habitats preferred by *M. m. pisolabrum*.
Status: Rare.

Cyprinidae (Minnows and Carps)

12. *Hypobrycon gracilis* (Richardson). Flathead chub, Arkansas distribution: Mississippi River. Remarks: This big river chub has been collected only twice from the Mississippi River in the northeastern part of the state. As the larger riverine habitats in Arkansas have been neglected by most investigators, *H. gracilis* may be more abundant than is currently known. However, its status now should be viewed as rare within the state. Status: Rare.
13. *Notropis atrocaudalis* Evermann. Blackspot shiner. Arkansas distribution: Red River drainage. Remarks: Initially, the blackspot shiner was known from southwestern Arkansas from only two specimens (Robison, 1974c). However, more recent collecting has revealed several additional specimens. The *N. atrocaudalis* habitat of clear streams with sand substrates is restricted and widely polluted in that part of the state. As oil field brine runoff has decimated the fish fauna in a considerable number of streams in the southwestern region of the state, the future of *N. atrocaudalis* remains in doubt. Status: Rare and endangered.
14. *Notropis butrifi* Hubbs and Ortenburger. Red River shiner. Arkansas distribution: Red River. Remarks: Only two series of the Red River shiner have been collected in Arkansas. The first (UMMZ 128214) consists of two specimens from the Red River at the ferry on Arkansas Highway 160 on the Lafayette-Miller County line taken on 8 July 1939. The second state collection (UMMZ 170013) was taken on 18 August 1940 at Fulton on the Miller-Hempstead County line and consists of four specimens. Seining at both of these stations has failed to reveal additional specimens. *N. butrifi* possibly exists in Arkansas as a wanderer, being swept down occasionally from Oklahoma by high waters. Status: Rare.
15. *Notropis cymurus* (Jordan and Meek). Bluntnose shiner. Arkansas distribution: Illinois River drainage with additional records from Frog Bayou and Illinois Bayou. Remarks: This rare minnow has been collected in small numbers from four locations in clear, continuously flowing, high-gradient, gravel-bottomed streams of the northwestern part of the state. Buchanan's (1973) maps indicate that this species has not been taken since 1900. Status: Rare.
16. *Notropis chalybaeus* (Cope). Ironcolor shiner. Arkansas distribution: Bayou Doreheat (Red River drainage) and Big Cypress Creek (White River system). Remarks: *Notropis chalybaeus* is an inhabitant of weedy, shallow, backwater areas of sluggish lowland streams of the southern White and Red river drainages. Disjunct populations have been found only in Bayou Doreheat in the southwestern part of the state and Big Cypress Creek in eastern Arkansas. Status: Rare.
17. *Notropis girardi* Hubbs and Ortenburger. Arkansas River shiner. Arkansas distribution: Arkansas River. Remarks: Known from the state from a single collection taken on 23 July 1939 by J. D. Black in the Arkansas River at the mouth of Piney Creek. *N. girardi* is found in the main channels of large sandy-bottomed rivers and streams directly tributary to the Arkansas River (Miller and Robison, 1973). Status: Rare.
18. *Notropis maculatus* (Hay). Taillight shiner. Arkansas distribution: Bayou Doreheat, Saline River (Ouachita River system), St. Francis River and lower White River drainages, and oxbows of the Current River. Remarks: This backwater inhabitant of sluggish streams and oxbow lakes of the West Coastal and Mississippi Alluvial plains is a rare member of the cyprinid ichthyofauna known from the state from six scattered records. Status: Rare.
19. *Notropis ortenburgeri* Hubbs. Kiamichi shiner. Arkansas distribution: Scattered localities in the Little River system, Arkansas and Ouachita river drainages. Remarks: Described originally from the Kiamichi River in Oklahoma, *N. ortenburgeri* has been found since in several localities in the Little, Arkansas and Ouachita river drainages in Arkansas. As this shiner is the subject of a present study by the writer, additional comments will be forthcoming. Status: Rare.
20. *Notropis perpalidus* Hubbs and Black. Colorless shiner. Arkansas distribution: Ouachita River system. Remarks: Increasing numbers of impoundments within, or very close to the limited geographic range of *N. perpalidus* threaten the preferred habitat of this species, i.e. small and intermediate-size rivers (Stebson and Jenkins, 1973). Already *N. perpalidus* has disappeared from the dam site area of DeGray Reservoir on the Caddo River where it was present prior to impoundment (N.H. Douglas, pers. comm.). Although known in Arkansas only from the Ouachita River system, the colorless shiner should be expected in the Little River system as it is found in this system in Oklahoma. Status: Rare.
21. *Notropis spilopterus* (Cope). Spottfin shiner. Arkansas distribution: Strawberry River (White River system) and Illinois River (Arkansas River system). Remarks: Beadles (1974) first reported the spottfin shiner in Arkansas from the Strawberry River. Later, another specimen was reported to the writer from the Illinois River by T.M. Buchanan (pers. comm.). Gibbs (1957) did not report specimens of *N. spilopterus* from Arkansas in his review of the species. That the populations of this shiner are so widely disjunct presents an extremely interesting zoogeographic problem. Pfeiffer (1971) does not show this species on his maps as inhabiting any of the streams in Missouri draining southward into Arkansas. Status: Rare.
22. *Phenacobius mirabilis* (Girard). Suckermouth minnow. Arkansas distribution: Small western tributaries of the Arkansas River. Remarks: The suckermouth minnow is extremely tolerant

of silty waters and thus should be more abundant as siltation rates increase but, in fact, only four collections of this species (all before 1960) have been made in Arkansas; therefore its status is rare.

Status: Rare.

Ictaluridae (Freshwater Catfishes)

23. *Noturus flavus* Rafinesque. Stonecat.
Arkansas distribution: Mississippi River.
Remarks: Buchanan (1973) first reported *N. flavus* in Arkansas from the Mississippi River. That these specimens were not strays or wanderers is substantiated by D.A. Etnier (pers. comm.) who reports populations of the stonecat from the Tennessee side of the Mississippi River.
Status: Rare.
24. *Noturus lachneri* Taylor. Ouachita madtom.
Arkansas distribution: Endemic to the headwaters of the Saline River (Ouachita River system).
Remarks: The Ouachita madtom was recognized formally as a distinct species by Taylor (1969). In its restricted area *N. lachneri* is generally found over gravel and rubble substrates. Because of its restricted distribution and the possibility of impoundment of the Saline River, *N. lachneri* populations should be monitored carefully in the future.
Status: Rare and endangered.
25. *Noturus phaeus* Taylor. Brown madtom.
Arkansas distribution: Boyon Dorchest drainage.
Remarks: Only three specimens are known from the state, having been first reported from Arkansas by Robison (1974a). The brown madtom is an inhabitant of small sand-bottomed, spring-fed streams (Taylor, 1969). Scarcity of this species in southwestern Arkansas may be due to oil field brine runoff which virtually eliminates aquatic life in these lowland streams.
Status: Rare.
26. *Noturus taylori* Douglas. Caddo madtom.
Arkansas distribution: Endemic to the headwaters of the Caddo River.
Remarks: Douglas (1972) first described *N. taylori* from the Caddo River where it is easily confused with the superficially similar *Noturus mirus*. *N. taylori* seems to be confined to the clear headwaters of the Caddo River and has not been taken below DeGray Lake.
Status: Rare and endangered.

Amblyopsidae (Cavefishes)

27. *Amblyopsis rosea* (Eigenmann). Ozark cavefish.
Arkansas distribution: Caves in northwestern Arkansas.
Remarks: Four records from caves in northwestern Arkansas constitute the known range of the Ozark cavefish within the state.
Status: Rare.
28. *Typhlichthys subterranea* Girard. Southern cavefish.
Arkansas distribution: Northcentral Arkansas.
Remarks: Woods and Inger (1957) reported one specimen from a well in Randolph County. Except for this single

specimen, no records are known from the state. Thus this troglolite one of our rarest fishes.

Status: Rare and endangered.

Percidae (Perches)

29. *Etheostoma fusiforme barretti* (Holbrook). Sealeyhead darter.
Arkansas distribution: Known from three records in the St. Francis and Arkansas river drainages and the White River Refuge.
Remarks: Although the sealeyhead darter is known from Tennessee and as far west as McCurtain County, Oklahoma (Collette, 1962), this species has remained elusive in Arkansas where only three localities are known. Generally living in dense vegetation, *E. f. barretti* is found in lowland swamps, backwater areas and oxbow lakes. As more of these lowland areas are investigated the sealeyhead darter should be found with increasing frequency.
Status: Rare.
30. *Etheostoma microperca* Jordan and Gilbert. Least darter.
Arkansas distribution: Illinois River (Arkansas River system) and headwaters of the Saline River (Ouachita River system).
Remarks: The least darter is considered rare because of its limited habitat of small, clear, spring-fed tributaries where it shows a decided preference for aquatic vegetation, mainly watercress. Only eight records are known and show two disjunct populations within the state. Impoundment particularly is a threat to the least darter because of its strict habitat preference.
Status: Rare.
31. *Etheostoma moorei* Raney and Suttkus. Yellowcheek darter.
Arkansas distribution: Little Red River system.
Remarks: The yellowcheek darter is endemic to the Little Red River system. Much of its limited range was impounded and habitat destroyed when Greers Ferry Lake was completed (Raney and Suttkus, 1964). The South Fork and Middle Fork of the Little Red River system today serve as sanctuaries for this colorful species, the only member of the subgenus *Nothonotus* west of the Mississippi River. Because of its specialized riffle habitat and the previous destruction of known populations, the yellowcheek darter must be considered rare and endangered. Additional impoundments on the Little Red River system could eliminate this species completely.
Status: Rare and endangered.
32. *Etheostoma pallidiorum* Distler and Metcalf. Paleback darter.
Arkansas distribution: Caddo River and an isolated population in the headwaters of the Ouachita River system (Mayberry Creek).
Remarks: Until recently the paleback darter was thought to exist as an isolated population in the extreme headwaters of the Caddo River. Robison (1974b) discovered an additional disjunct population in Mayberry Creek, a small tributary of Hallmans Creek which empties into Lake Hamilton (Ouachita River). Habitat typically is small, spring-fed streams in rivulets or shallow pool areas with leaf-litter bottoms. Because of its specialized habitat, *E. pallidiorum* must be considered rare and endangered.
Status: Rare and endangered.

33. *Etheostoma spectabile fragi* Distler. Strawberry River darter.
Arkansas distribution: Endemic to the Strawberry River.
Remarks: Distler (1968) described this endemic form found in the Strawberry River drainage. Although not uncommon in the drainage, *E.s. fragi* must nevertheless be considered rare because of its localized distribution. Pesticide poisoning, impoundment or other man-made disaster could eliminate this subspecies entirely.
Status: Rare.
34. *Etheostoma whipplei montanus* Hubbs and Black. Mountain redbfin darter.
Arkansas distribution: Endemic to Frog Bayou.
Remarks: The Frog Bayou (= Clear Creek) headwater population of *E. whipplei* was recognized as subspecifically distinct by Hubbs and Black (1931). The headwater-dwelling mountain redbfin darter is susceptible to drought, moving to downstream areas when low water is imminent. Because of its localized distribution, *E. w. montanus* should be considered rare.
Status: Rare.
35. *Percina pantherina* (Moore and Reeves). Leopard darter.
Arkansas distribution: Little River system.
Remarks: Although recent collecting has revealed a range larger than previously believed, the leopard darter remains rare and endangered because of the continued damming of its native Little River tributaries and destruction of habitat by impounded waters. *P. pantherina* has a very specialized habitat and cannot tolerate habitat alteration.
Status: Rare and endangered.
36. *Percina phoxocephala* (Neison). Slenderhead darter.
Arkansas distribution: Several localities in the White and Arkansas river drainages.
Remarks: Until recently many specimens of *Percina nasuta* were confused with and identified as *P. phoxocephala*, a close relative. Upon reexamination almost all of these have proved to be *P. nasuta* (B. Thompson, pers. comm.). Only three definite localities of *P. phoxocephala* have been recorded from the state (two from the White River system and one from the Petit Jean River). This species should be expected from additional localities in Arkansas, especially the Little River system of southwestern Arkansas as it is present in the Oklahoma part of this system.
Status: Rare.
- Mugilidae (Mullet)
37. *Mugil cephalus* Linnaeus. Striped mullet.
Arkansas distribution: Lower Arkansas River.
Remarks: Buchanan (1973) indicated a single record of the striped mullet in the state; however, *M. cephalus* probably will spread eventually up through the Arkansas River system to become more abundant, thus necessitating a change of status.
Status: Rare.

DISCUSSION

Presently 186 native fish species are known from Arkansas (Robison, 1974d). Thirty-seven are recognized as threatened in the present study. Seven species are considered rare and endangered. Of the 37 threatened forms, six are endemic to the state: Ouachita madtom (*Noturus lachneri*), Caddo madtom (*Noturus taylori*), yellowcheek darter (*Etheostoma moorei*), paleback darter (*E. pallidiflorum*), Strawberry River darter (*E. spectabile fragi*) and mountain redbfin darter (*E. whipplei montanus*). Protection of this part of Arkansas' heritage is of paramount importance.

With regard to distribution, 19 threatened forms reside in the White River system and 11 and 10 inhabit the Arkansas and Red River systems, respectively. Nine fishes are considered threatened in the Ouachita River system, four threatened forms are known from the St. Francis drainage, and two are known from the Mississippi River proper.

Responsibility for the diminution of various fish faunas is shared by several factors including pollution (industrial, agricultural and domestic, including toxic chemicals and pesticides), excessive damming of rivers, deforestation, overgrazing, channelization, excessive removal of ground water and the introduction of exotic species (Miller, 1972). In Arkansas most if not all of these factors are at work and in some cases with extremely deleterious results. If the destruction of our fish fauna is to be stopped, a primary step is the recognition that a species or subspecies is presently threatened. After evaluation of locally threatened forms, appropriate legislative action can be taken for the protection and perpetuation of many of them.

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Connecticut
(Taken from Rare & Endangered Species of Connecticut
& Their Habitats, 1976)

Rare and endangered species in Connecticut include:

American brook lamprey	(<i>Lampetra lamottei</i>)
Shortnose sturgeon	(<i>Acipenser brevirostrum</i>)
Atlantic sturgeon	(<i>Acipenser oxyrhynchus</i>)
Round whitefish	(<i>Prosopium cylindraceum</i>)
Rainbow smelt	(<i>Osmerus mordax</i>)
Eelpout burbot	(<i>Lota lota</i>)
Slimy sculpin	(<i>Cottus cognatus</i>)
Bog or Muhlenberg's turtle	(<i>Clemmys muhlenbergii</i>)
Eastern mud turtle	(<i>Emydoidea blandingi</i>)
Five-lined skink	(<i>Kinosternon subrubrum subrubrum</i>)
Rough or keeled green snake	(<i>Eumeces fasciatus</i>)
Eastern smooth green snake	(<i>Ophedrys aestivus</i>)
Northern red-bellied snake	(<i>Ophedrys vernalis vernalis</i>)
Timber rattlesnake	(<i>Storeria occipitomaculata occipitomaculata</i>)
Mudpuppy	(<i>Crotalus horridus horridus</i>)
Northern spring salamander	(<i>Gyrinophilus porphyriticus porphyriticus</i>)
Four-toed salamander	(<i>Hemidactylium scutatum</i>)
Slimy salamander	(<i>Plethodon glutinosus glutinosus</i>)
Eastern spadefoot	(<i>Scaphiopus holbrookii</i>)
Common loon	(<i>Gavia immer</i>)
Great blue heron	(<i>Ardea herodias</i>)
American bittern	(<i>Botaurus lentiginosus</i>)
Cattle egret	(<i>Bubulcus ibis</i>)
Great or common egret	(<i>Casmerodius albus</i>)
Little blue heron	(<i>Florida caerulea</i>)
Yellow-crowned night heron	(<i>Nyctanassa violacea</i>)
Glossy ibis	(<i>Plegadis falcinellus</i>)
Cooper's hawk	(<i>Accipiter cooperi</i>)
Goshawk	(<i>Accipiter gentilis</i>)
Sharp-shinned hawk	(<i>Accipiter striatus</i>)
Red-shouldered hawk	(<i>Buteo lineatus</i>)
Marsh hawk	(<i>Circus cyaneus</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Osprey	(<i>Pandion haliaetus</i>)
American peregrine falcon	(<i>Falco peregrinus</i>)
Yellow rail	(<i>Coturnicops noveboracensis</i>)
Black rail	(<i>Laterallus jamaicensis</i>)
Piping plover	(<i>Charadrius melodus</i>)
Upland sandpiper	(<i>Bartramia longicauda</i>)

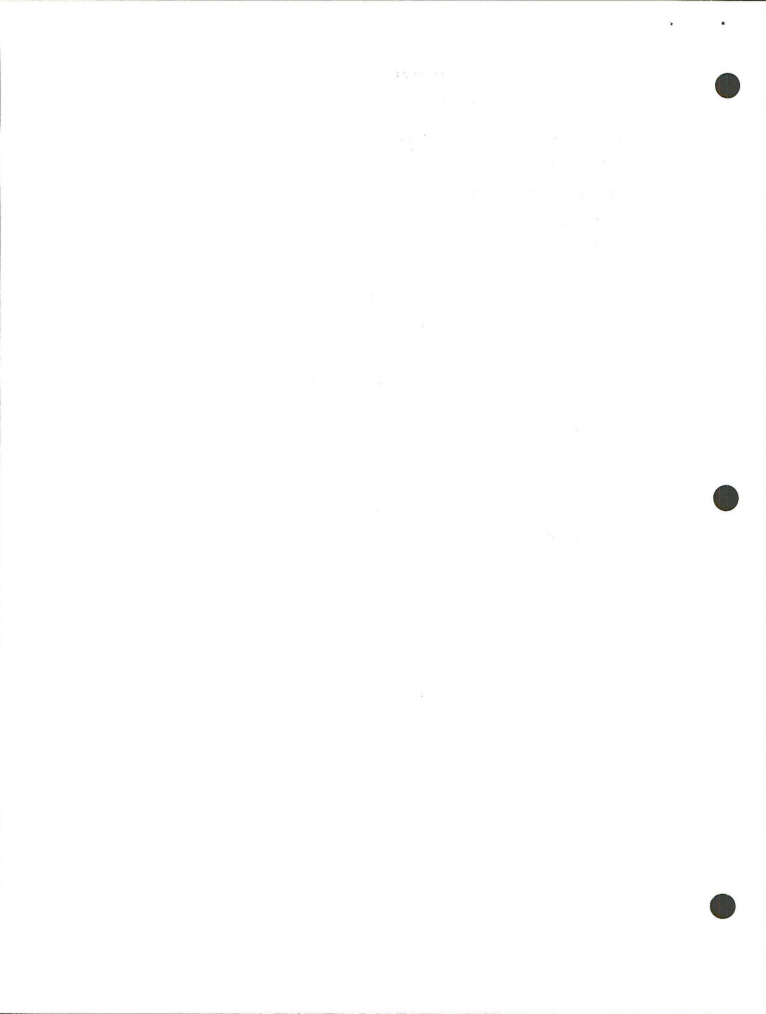
Rare and endangered species in Connecticut (continued):

Willet	(<i>Catoptrophorus semipalmatus</i>)
Least tern	(<i>Sterna albifrons</i>)
Roseate tern	(<i>Sterna dougallii</i>)
Barn owl	(<i>Tyto alba</i>)
Short-eared owl	(<i>Asio flammeus</i>)
Long-eared owl	(<i>Asio otus</i>)
Chuck-will's-widow	(<i>Caprimulgus carolinensis</i>)
Red-bellied woodpecker	(<i>Centurus carolinus</i>)
Red-headed woodpecker	(<i>Melanerpes erythrocephalus</i>)
Yellow-bellied sapsucker	(<i>Sphyrapicus varius</i>)
Acadian flycatcher	(<i>Empidonax virescens</i>)
Horned lark	(<i>Eremophila alpestris</i>)
Cliff swallow	(<i>Petrochelidon pyrrhonota</i>)
Purple martin	(<i>Progne subis</i>)
Short-billed marsh wren	(<i>Cistothorus platensis</i>)
Swainson's Thrush	(<i>Catharus ustulatus</i>)
Eastern bluebird	(<i>Sialia sialis</i>)
Golden-crowned kinglet	(<i>Regulus satrapa</i>)
Cerulean warbler	(<i>Dendroica cerulea</i>)
Yellow-rumped or myrtle warbler	(<i>Dendroica coronata</i>)
Magnolia warbler	(<i>Dendroica magnolia</i>)
Pine warbler	(<i>Dendroica pinus</i>)
Kentucky warbler	(<i>Oporornis formosus</i>)
Northern parula	(<i>Parula americana</i>)
Henslow's sparrow	(<i>Ammodramus henslowii</i>)
Grasshopper sparrow	(<i>Ammodramus savannarum</i>)
Evening grosbeak	(<i>Hesperiphona vespertina</i>)
Savannah sparrow	(<i>Passerculus sandwichensis</i>)
Ipswich sparrow	(<i>Passerculus sandwichensis princeps</i>)
Vesper sparrow	(<i>Poocetes gramineus</i>)
Least shrew	(<i>Cryptotis parva</i>)
Keen's bat	(<i>Myotis keenii</i>)
Small-footed myotis	(<i>Myotis leibilleibii</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Northern flying squirrel	(<i>Glaucomys sabrinus</i>)
Eastern woodrat	(<i>Neotoma floridana</i>)
Deer mouse	(<i>Peromyscus maniculatus</i>)
Southern bog lemming	(<i>Synaptomys cooperii</i>)
Black bear	(<i>Ursus americanus</i>)
Fisher	(<i>Martes pennanti</i>)
Eastern cougar	(<i>Felis concolor cougar</i>)

DELAWARE
ENDANGERED SPECIES

The following is a list of Federally-listed endangered and threatened species which are "resident" (as defined by the Endangered Act of 1973) in Delaware:

Sturgeon, Shortnose	<u>Acipenser brevirostrum</u> Lesueur
Turtle, Atlantic Ridley	<u>Lepidochelys kempi</u>
Turtle, Leatherback	<u>Dermodochelys coriacea coriacea</u>
Pelican, Brown	<u>Pelecanus occidentalis</u>
Eagle, Southern bald	<u>Haliaeetus leucocephalus leucocephalus</u>
Falcon, American peregrine	<u>Falco peregrinus anatum</u>
Falcon, Arctic peregrine	<u>Falco peregrinus tundrius</u>
Whale, Blue	<u>Sibbaldus musculus</u>
Whale, Bowhead	<u>Balaena mysticetus</u>
Whale, Finback	<u>Balaenoptera physalus</u>
Whale, Humpback	<u>Megaptera novaeangliae</u>
Whale, Right	<u>Eubalaena glacialis</u>
Whale, Sei	<u>Balaenoptera borealis</u>
Whale, Sperrn	<u>Physeter catodon</u>



FLORIDA ENDANGERED SPECIES LIST
15 December 1977

Revised official State List of Endangered and Threatened Species recommended by the Technical Advisory Committee on Endangered Species.

- ** Key Silverside (Menidia conchorum)
- * Okaloosa Darter (Etheostoma okaloosae)
- * Shortnose Sturgeon (Acipenser brevirostrum)
- * Pine Barrens Treefrog (Hyla andersoni)
- * American Crocodile (Crocodylus acutus)
- ** Atlantic Green Turtle (Chelonia mydas mydas)
- * Atlantic Hawksbill (Eretmochelys imbricata imbricata)
- * Atlantic Ridley (Lepidochelys kempi)
- * Atlantic Salt Marsh Snake (Nerodia fasciata taeniata)
- *** Short-tailed Snake (Stilosoma extenuatum)
- ** Wood Stork (Mycteria americana)
- * Florida Everglade Kite (Rostrhamus sociabilis plumbeus)
- * Peregrine Falcon (Falco peregrinus)
- Cuban Snowy Plover (Charadrius alexandrinus tenuirostris)
- * Ivory-billed Woodpecker (Campephilus principalis)
- * Red-cockaded Woodpecker (Picoides borealis)
- * Bachman's Warbler (Vermivora bachmani)
- * Kirtland's Warbler (Dendroica kirtlandii)
- ** Florida Grasshopper Sparrow (Ammodramus sавannarum floridanus)
- * Dusky Seaside Sparrow (Ammospiza maritima nigrescens)
- * Cape Sable Seaside Sparrow (Ammospiza maritima mirabilis)
- * Gray Bat (Myotis grisescens)
- * Indiana Bat (Myotis sodalis)
- ** Mangrove Fox Squirrel (Sciurus niger avicennia)
- ** Goff's Pocket Gopher (Geomys pinetis goffi)
- ** Cudjoe Rice Rat (Oryzomys sp.)
- ** Pallid Beach Mouse (Peromyscus polionotus decoloratus)
- ** Key Largo Cotton Mouse (Peromyscus gossypinus allapaticola)
- ** Key Largo Woodrat (Neotoma floridana smalli)
- * Florida Panther (Felis concolor coryi)
- * Key Deer (Odocoileus virginianus clavium)

- * Also included on Federal list of Endangered & Threatened Species.
- ** Recommended by Committee to be proposed by the Florida Game and Fresh Water Fish Commission to be included in the Federal list in the same status category as on the state list.
- *** Currently being reviewed by the U. S. Fish and Wildlife Service for possible inclusion on the federal list.

Revised official State List of Endangered and Threatened Species recommended by the Technical Advisory Committee on Endangered Species.

- Atlantic Sturgeon (Acipenser oxyrinchus)
River Haddorse (Hexostoma cerinatum)
Greyfin Haddorse (Hexostoma sp.)
Cypress Minnow (Hybomachus hayi)
Speckled Chub (Hybopsis sestivalis)
Bluestripe Shiner (Notropis callitensis)
Lake Eustis Pupfish (Cyprinodon variegatus hubbsi)
Saltmarsh Topminnow (Pundulus jenkinsi)
Rivulus (Rivulus marmoratus)
Crystal Darter (Ammocrypta apralis)
Harlequin Darter (Etheostoma histrio)
Southern Tessellated Darter (Etheostoma olinardi maculaticeps)
Goldstripe Darter (Etheostoma parvipinna)
Cypress Darter (Etheostoma proclivale)
Stergazing Darter (Percina puschites)
Shoal Bass (Micropterus sp.)
Key Blenny (Starksia stercki)
- ** Florida Gopher Frog (Rana areolata nasopus)
* American Alligator (Alligator mississippiensis)
*** Key Mud Turtle (Kinosternon bauri bauri)
*** Suwannee Cooter (Chrysemys concinna suwanneensis)
** Gopher Turtle (Gopherus polyphemus)
Atlantic Loggerhead Turtle (Caretta caretta caretta)
Florida Key Mole Skink (Eumeces sargensis sargensis)
** Blue-tailed Mole Skink (Eumeces sargensis lividus)
** Sand Skink (Moesops reynoldsi)
Big Pine Key Kingsnake (Dierophis punctatus scricus)
Red Bat Snake (Elaphe guttata guttata) (Lower Keys population)
Florida Brown Snake (Storeria dekayi vici) (Lower Keys population)
- *** Miami Black-headed Snake (Tantilla politica)
* Eastern Indigo Snake (Drymarchon corais couperi)
Florida Ribbon Snake (Thamnophis sauritus seckeni) (Lower Keys population)
* Eastern Brown Pelican (Pelecanus occidentalis carolinensis)

- Rothschild's Magnificent Frigatebird (Fregata magnificens rothschildi)
- Florida Great White Heron (Ardea herodias occidentalis)
- * Bald Eagle (Haliaeetus leucocephalus)
- Osprey (Pandion haliaetus)
- Southeastern Kestrel (Falco sparverius paulus)
- ** Audubon's Caracara (Caracara cheriway auduboni)
- ** Florida Sandhill Crane (Grus canadensis pratensis)
- American Oystercatcher (Haematopus palliatus)
- Roseate Tern (Sterna dougallii)
- Least Tern (Sterna albifrons)
- ** White-crowned Pigeon (Columba leucocephala)
- ** Florida Scrub Jay (Aphelocoma coerulescens coerulescens)
- Louisiana Seaside Sparrow (Amospiza maritima fisheri)
- ** Sherman's Fox Squirrel (Sciurus niger shermani)
- ** Choctawhatchee Beach Mouse (Peromyscus polionotus allophrys)
- ** Perdido Bay Beach Mouse (Peromyscus polionotus trissyllepsis)
- Florida Mouse (Peromyscus floridanus)
- Lower Keys Cotton Rat (Sigmodon hispidus exsputus)
- ** Florida Black Bear (Ursus americanus floridanus)
- Key Vaca Raccoon (Procyon lotor auspicatus)
- ** Everglades Mink (Mustela vison evergladensis)
- * West Indian Manatee (Trichechus manatus latirostris)
- * Also included on Federal List of Endangered & Threatened Species.
- ** Recommended by Committee to be proposed by the Florida Game and Fresh Water Fish Commission to be included on the federal list in the same category as on the state list.
- *** Currently being reviewed by the U.S. Fish and Wildlife Service for possible inclusion on the federal list.

FLORIDA

UNOFFICIAL LIST OF ENDANGERED, THREATENED, RARE,
SPECIES OF SPECIAL CONCERN, AND STATUS UNDETERMINED
FRESHWATER AND MARINE INVERTEBRATES IN FLORIDA

Common Name

Scientific Name

FRESHWATER INVERTEBRATES

ENDANGERED

Squirrel Chimney Cave Shrimp
Palm Spring Cave Crayfish
Enterprise Spring Snail

Palaemonetes cummingsi Chace
Procambarus acherontis (Lonnerberg)
Cincinnatia monroensis (Dall)

THREATENED

Gum Cave Crayfish
Alexander Springs Cave Crayfish
Simm's Sink Cave Crayfish

Procambarus lucifugus lucifugus (Hobbs)
Procambarus undescribed species
Procambarus undescribed species (Relyea
and Sutton, in press)

Wacissa Blue Spring Cave Crayfish
Oolit' Limestone Cave Crayfish
Gopher Sink Cave Crayfish
Sulfur Spring Aphaostracon (snail)
Wekiwa Spring Aphaostracon (snail)
Loose Coiled Snail
Blue Spring Aphaostracon (snail)
Clench's Goniobasis (snail)
Fuzzy Ramshorn Snail
Haddleton's Lampsilid Clam
Athearn's Villosa (clam)
Jones' Lampsilid Clam

Procambarus milleri Hobbs and Means
Procambarus milleri Hobbs
Procambarus orcinus Hobbs and Means
Aphaostracon theiocrenetus Thompson
Aphaostracon monas (Pilsbry)
Aphaostracon chalarogyrus Thompson
Aphaostracon asthenes Thompson
Goniobasis clenchi Goodrich
Lioplax pilsbryi choctawhatchensis Vanatta
Lampsilis haddletoni Athearn
Villosa choctawensis Athearn
Lampsilis jonesi van der Schalie

RARE

Hog Sink Cave Crayfish
Dougherty Plain Cave Crayfish
Pallid Cave Crayfish
McLane's Cave Crayfish
Florida Cave Amphipod
Hobbs' Cave Amphipod

Procambarus lucifugus alachua (Hobbs)
Cambarus cryptodytes Hobbs
Procambarus pallidus Hobbs
Troglocambarus maclanei Hobbs
Crayfish grandimanus Blousfield
Crayfish hobbsi Shoemaker

Common Name

Scientific Name

SPECIES OF SPECIAL CONCERN

Fenney Springs Aphaostracon (snail)	<u>Aphaostracon xynoelictus</u> Thompson
Thick Shelled Aphaostracon (snail)	<u>Aphaostracon pycnus</u> Thompson
Sand Grain Snail	<u>Cincinnatia mica</u> Thompson

STATUS UNDETERMINED

Hobb's Cave Isopod	<u>Asellus hobbsi</u> Maloney
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MARINE INVERTEBRATES

ENDANGERED

The following corals are considered endangered on all unprotected parts of the Florida Reef Tract, that is, outside Biscayne National Monument, Pennecamp Coral Reef State Park, and Fort Jefferson National Monument (Dry Tortugas).

Elkhorn Coral	<u>Acropora palmata</u> (Lamarck)
Staghorn Coral	<u>Acropora cervicornis</u> (Lamarck)
Staghorn Coral	<u>Acropora prolifera</u> (Lamarck)
Pillar Coral	<u>Dendrogyra cylindrus</u> Ehrenberg
Large Flower Coral	<u>Mussa angulosa</u> (Pallas)
Flower Coral	<u>Eusmilia fastigiata</u> (Pallas)
Lettuce Coral	<u>Agaricia agaricites</u> (Linnaeus)
Starlet Coral	<u>Siderastrea siderea</u> (Ellis and Solander)
Brain Coral	<u>Diploria clivosa</u> (Ellis and Solander)
Brain Coral	<u>Diploria labyrinthiformis</u> (Linnaeus)
Brain Coral	<u>Diploria strigosa</u> (Dana)
Small Star Coral	<u>Montastrea annularis</u> (Ellis and Solander)
Large Star Coral	<u>Montastrea cavernosa</u> (Linnaeus)
Brain Coral	<u>Meandrina meandrites</u> (Linnaeus)

THREATENED

Mangrove Crab	<u>Goniopsis cruentata</u> (Latreille)
Mangrove Crab	<u>Aratus pisonii</u> (H. Milne Edwards)

RARE

Atlantic Goeduck (clam)	<u>Panopea bitruncata</u> (Conrad)
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Common Name

Scientific Name

STATUS UNDETERMINED

Benedict's Wharf Crab

Sesarma (Holometopus) benedicti Rathbun

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FLORIDA

UNOFFICIAL LIST OF ENDANGERED, THREATENED, SPECIES
OF SPECIAL CONCERN, AND STATUS UNDETERMINED INSECTS
AND OTHER TERRESTRIAL INVERTEBRATES IN FLORIDA

Common Name

Scientific Name

ENDANGERED

*Schaus' Swallowtail Butterfly	<u>Papilio aristodemus ponceanus</u> Schaus
*Laman Swallowtail Butterfly	<u>Papilio andraemen bonhotei</u> Sharpe
Atala Butterfly	<u>Eumaeus atala florida</u> Roeber
Olive Hairstreak Butterfly	<u>Mitoura gryneus sweadneri</u> Chermock
Key Largo Scarab Beetle	<u>Acanthocerus</u> undescribed species
Minute Key Largo Packrat	
Dung Beetle	<u>Ataenius</u> undescribed species
Green Key Largo Packrat	
Dung Beetle	<u>Onthophagus</u> undescribed species
Ft. Walton Dune Scarab Beetle	<u>Polyphylla pubescens</u> Cartwright
Young's May Beetle	<u>Phyllophaga youngi</u> Cartwright
Blind Wingless Enicocephalid Bug	<u>Alienates</u> undescribed species
Key Largo Wood Cricket	<u>Gryllus</u> undescribed species
Koch's Giant Tailless Whipscorpion	<u>Tarantula fuscimana</u> (C. L. Koch)
Woodrat Nest Pillbug	undescribed genus and species

THREATENED

Florida Tree Snail	<u>Liguus fasciatus</u> (Muller)
Rosemary Wolf Spider	<u>Lycosa ereticicola</u> Wallace
White Sand-loving Mayfly	<u>Pseudiron meridionalis</u> Traver
Ghost Mayfly	<u>Homoeoneuria dolani</u> Edmunds
Hairv Sand-loving Mayfly	<u>Dolania americana</u> Edmunds et al.
Lesser Clubtailed Dragonfly	<u>Gomphus dimutus</u> Needham
Hogge's Clubtailed Dragonfly	<u>Gomphus hodgesi</u> Needham
Townes' Clubtailed Dragonfly	<u>Gomphus (Stylurus) townesi</u> Gloyd
Dusk-flying Dragonfly	<u>Neurocordulia molesta</u> Walsh
Big Pine Key Katydid	<u>Belocephalus micanopi</u> Davis
Keys Short-winged Coneheaded Katydid	<u>Belocephalus sleighti</u> Davis
Yucatan Katydid	<u>Phrixa maya</u> Saussure and Bictet
Blackwater River Caddisfly	<u>Agarodes ziczac</u> Ross and Scott
Turtle Mound Firefly	<u>Photuris</u> sp., near <u>salinus</u> Barber
Everglades Firefly	<u>Photuris brunneipennis florida</u> Barber
Gopher Tortoise Copris Beetle	<u>Copris gopheri</u> Hubbard
Southwest Florida Wingless Burrowing Beetle	<u>Mycotrupes pedester</u> Howden
Peninsular Gopher Tortoise Dung Beetle	<u>Onthophagus polyphemi polyphemi</u> Hubbard

Common Name

Scientific Name

Scarab Beetle	<u>Anomala exigua</u> (Schwarz)
Scarab Beetle	<u>Rutelata formosa</u> Burmeister
Scarab Beetle	<u>Cremastocheilus squamulosus</u> LeConte
Scarab Beetle	<u>Trigonopeltastes floridana</u> (Casey)
Scarab Beetle	<u>Hypotrichia spissipes</u> LeConte
Chironomid midges	<u>Nilothauma</u> spp.
Syrphid Fly	<u>Mercurymyia jactator</u> (Loew)
Syrphid Fly	<u>Mixogaster delongi</u> Johnson
Syrphid Fly	<u>Baccha parvicornis</u> Loew
Horse Fly	<u>Merycomyia brunnea</u> Stone
Horse Fly	<u>Asaphomyia</u> undescribed species near <u>A. texensis</u> Stone
Horse Fly	<u>Anacimas geropogon</u> Philip
Horse Fly	<u>Anacimas limbellatus</u> Enderlein
Horse Fly	<u>Hamatabanus annularis</u> (Hine)
Horse Fly	<u>Hamatabanus sexfasciatus</u> (Stone)
Horse Fly	<u>Stenotabanus (Aegialomyia)</u> <u>magnicallus</u> Stone
Horse Fly	<u>Stenotabanus daedalus</u> Stone
Horse Fly	<u>Tabanus cayensis</u> Fairchild
Horse Fly	<u>Tabanus fairchildi</u> Stone
Horse Fly	<u>Tabanus quirinus</u> Philip
Horse Fly	<u>Tabanus kisliuki</u> Stone
Deer Fly	<u>Chrysops amazon hubbelli</u> Philip
Deer Fly	<u>Chrysops cincticornis nigropterus</u> Fairchild
Deer Fly	<u>Chrysops (Liochrysops) hyalinus</u> Shannon
Deer Fly	<u>Chrysops nigribimbo</u> Whitney
Deer Fly	<u>Chrysops tidwelli</u> Philip and Jones

*Included on the Federal Endangered and Threatened Species List.

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GEORGIA'S PROTECTED WILDLIFE

Terrestrial Mammals

Felis concolor Subsp. "Cougar"
Geomys colonus "Colonial Pocket Gopher"
Geomys fontanelus "Sherman's Pocket Gopher"
Myotis grisescens "Gray Bat"
Myotis sodalis "Indiana Bat"

Aquatic Mammals

Eubalaena glacialis "Right Whale"
Megaptera novaeangliae "Humpback Whale"
Trichechus manatus latirostris "Manatee"

Birds

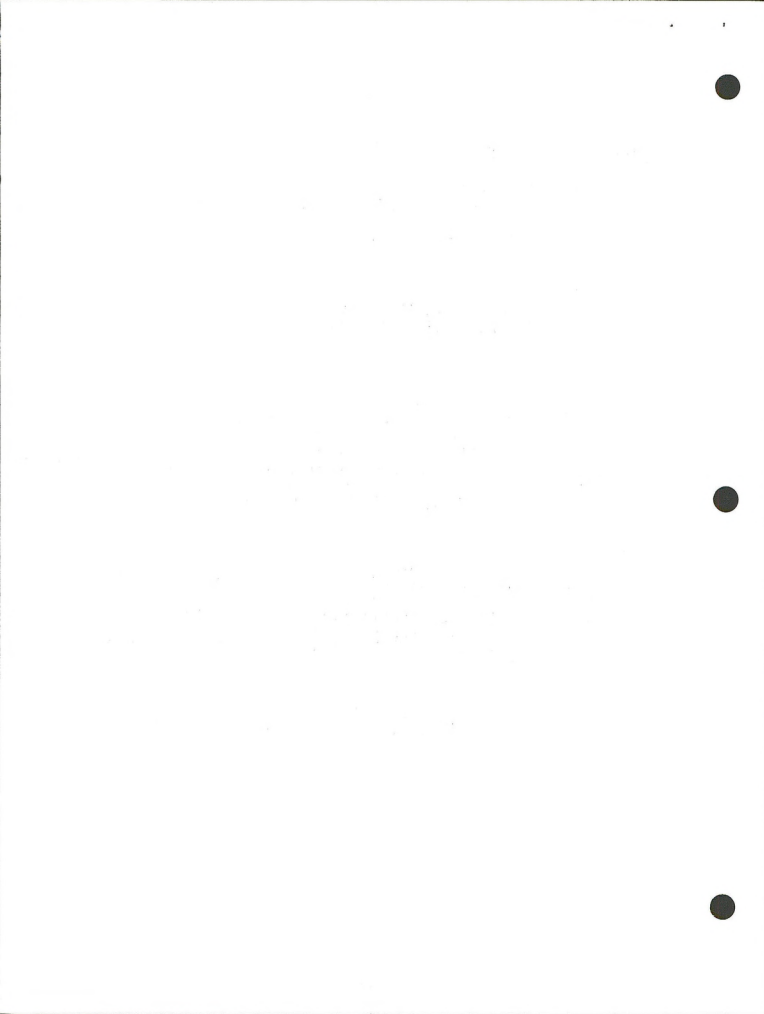
Campephilis principalis "Ivory-Billed Woodpecker"
Picoides borealis "Red-Cockaded Woodpecker"
Dendroica kirtlandii "Kirtland's Warbler"
Falco peregrinus Subsp. "Peregrine Falcon"
Haliaeetus leucocephalus leucocephalus "Southern Bald Eagle"
Pelecanus occidentalis carolinensis "Brown Pelican"
Vermivora bachmanii "Bachman's Warbler"

Reptiles

Alligator mississippiensis "American Alligator"
Dermochelys coriacea "Atlantic Leatherback Turtle"
Eretmochelys imbricata "Atlantic Hawksbill Turtle"
Lepidochelys kempii "Atlantic Ridley Turtle"
Drymarchon corais couperi "Indigo Snake"
Haideotriton wallacei "Georgia Blind Cave Salamander"

Fish

Acipenser brevirostrum "Shortnose Sturgeon"
Typhlichthys subterraneus "Southern Cave Fish"



STATE OF ILLINOIS
DEPARTMENT OF CONSERVATION
Administrative Order 1978

RECEIVED DEPARTMENT OF CONSERVATION
EAST ST. LOUIS, ILLINOIS
APR 17 1978
SILVER SPRING, MD

ARTICLE CXXXVIII - ILLINOIS LIST OF ENDANGERED AND THREATENED VERTEBRATE SPECIES
ISSUED IN ACCORDANCE WITH PROVISIONS OF SECTION 357 OF THE
ILLINOIS ENDANGERED SPECIES PROTECTION ACT.

The following list has been adopted by the Illinois Endangered Species Protection Board as the Official List of Endangered and Threatened Vertebrate Species of Illinois.

To be in compliance with the Federal and State Endangered Species Acts, the following definitions apply:

FEDERALLY ENDANGERED SPECIES -- Any species which is in danger of extinction throughout all or a significant portion of its range. (Denoted by two asterisks (**)) on adopted list).

FEDERALLY THREATENED SPECIES -- Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. (Denoted by a single asterisk (*) on adopted list).

STATE ENDANGERED SPECIES -- Any species which is in danger of extinction as a breeding species in Illinois.

STATE THREATENED SPECIES -- Any breeding species which is likely to become a state endangered species within the foreseeable future in Illinois.

Endangered Fishes of Illinois

Bigeye Chub	Hybopsis amblops
Bluebreast Darter	Etheostoma camurum
Bluehead Shiner	Notropis sp. (undescribed)
Harlequin Darter	Etheostoma histrio
Longjaw Cisco**	Coregonus alpenae

Threatened Fishes of Illinois

Cisco	Coregonus artedii
Longnose Sucker	Catostomus catostomus
Alligator Gar	Lepisosteus spatula
Pugnose Shiner	Notropis anogenus
Blacknose Shiner	Notropis heterolepus
Bantam Sunfish	Lepomis symmetricus
Lake Whitefish	Coregonus clupeiiformis
Lake Sturgeon	Acipenser fulvescens

Endangered Amphibians and Reptiles of Illinois

Dusky Salamander	Desmognathus fuscus
Silvery Salamander	Ambystoma platineum
Spotted Turtle	Clemmys guttata

Endangered Amphibians and Reptiles of Illinois, cont'd.

Slider	<i>Pseudemys floridana</i> x <i>concinna</i>
Illinois Mud Turtle	<i>Kinosternon flavescens</i>
Broad-banded Watersnake	<i>Nerodia fasciata</i>
Eastern Ribbon Snake	<i>Thamnophis sauritus</i>

Threatened Amphibians and Reptiles of Illinois

Illinois Chorus Frog	<i>Pseudacris streckeri</i>
Western Hog-nosed Snake	<i>Heterodon nasicus</i>
Whip Snake	<i>Masticophis flagellum</i>
Great Plains Rat Snake	<i>Elaphe guttata</i>

Endangered Birds of Illinois

Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Snowy Egret	<i>Egretta thula</i>
Great Egret	<i>Casmerodius albus</i>
Little Blue Heron	<i>Florida caerulea</i>
American Bittern	<i>Botaurus lentiginosus</i>
Black-browed Night Heron	<i>Nycticorax nycticorax</i>
Mississippi Kite	<i>Ictinia mississippiensis</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Red-shouldered Hawk	<i>Buteo lineatus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Osprey	<i>Pandion haliaetus</i>
Marsh Hawk	<i>Circus cyaneus</i>
Peregrine Falcon**	<i>Falco peregrinus</i>
Greater Prairie Chicken	<i>Tympanuchus cupido</i>
Yellow Rail	<i>Coturnicops noveboracensis</i>
Black Rail	<i>Laterallus jamacensis</i>
Purple Gallinule	<i>Porphyryla martinica</i>
Piping Plover	<i>Charadrius melodus</i>
Eskimo Curlew**	<i>Numenius borealis</i>
Upland Sandpiper	<i>Bartramia longicauda</i>
Wilson's Phalarope	<i>Steganopus tricolor</i>
Forster's Tern	<i>Sterna forsteri</i>
Common Tern	<i>Sterna hirundo</i>
Least Tern	<i>Sterna albifrons</i>
Black Tern	<i>Chlidonias niger</i>
Barn Owl	<i>Tyto alba</i>
Long-eared Owl	<i>Asio otus</i>
Short-eared Owl	<i>Asio flammeus</i>
Brown Creeper	<i>Certhia familiaris</i>
Bachman's Warbler**	<i>Vermivora bachmanii</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Bachman's Sparrow	<i>Aimophila aestivalis</i>

Threatened Birds of Illinois

Common Gallinule
Bewick's Wren
Veery
Loggerhead Shrike
Swainson's Warbler
Brewer's Blackbird
Henslow's Sparrow

Gallinula chloropus
Thryomanes bewickii
Catharus fuscescens
Lanius ludovicianus
Limothlypis swainsonii
Euphagus cyanocephalus
Ammodramus henslowii

Endangered Mammals of Illinois

Gray Bat**
Indiana Bat**
Eastern Wood Rat
White-tailed Jackrabbit

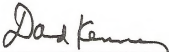
Myotis grisescens
Myotis sodalis
Neotoma floridana
Lepus townsendii

Threatened Mammals of Illinois

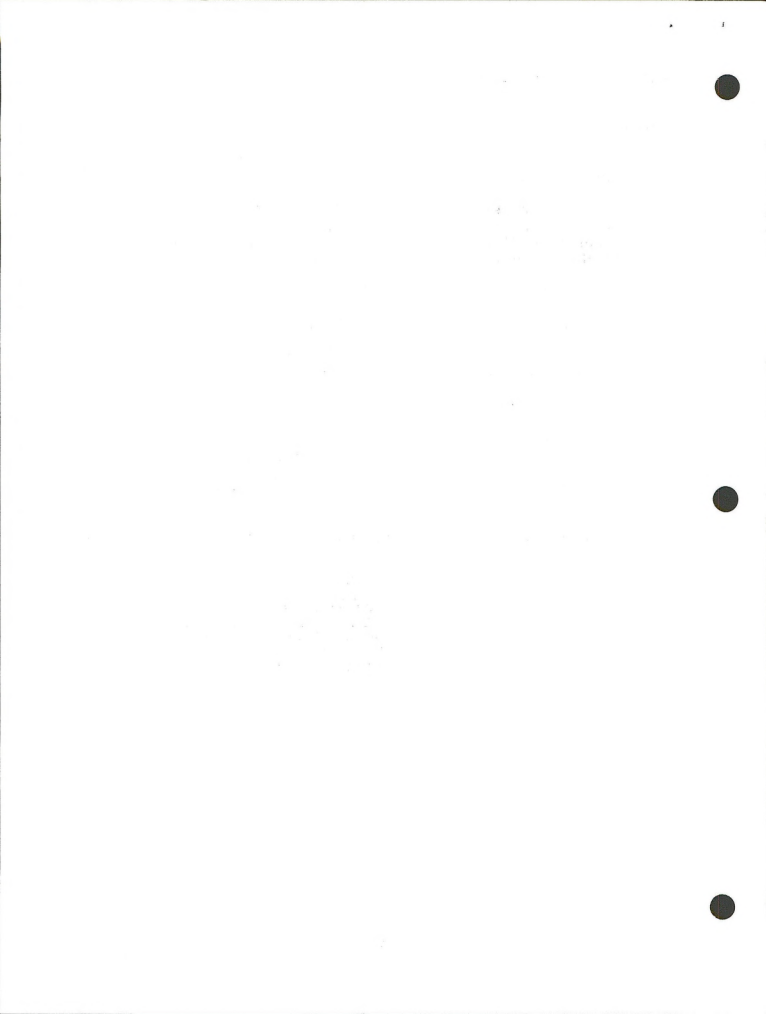
River Otter
Bobcat
Golden Mouse
Rice Rat

Lutra canadensis
Lynx rufus
Ochrotomys nuttalli
Oryzomys palustris

The effective date of this Administrative Order shall be December 31, 1977.



DAVID KENNEY
DIRECTOR
DEPARTMENT OF CONSERVATION



INDIANA

Non-game And Endangered Species Conservation
A Preliminary Report

The Department of Natural Resources, Division of Fish and Wildlife provides this summary report on the status of Non-game and Endangered Species Conservation, IC 1971, 14-2-8.5.

Prior to adoption of the above mentioned act by the 1973 General Assembly, the Department of Natural Resources issued regulations in 1969 in the form of Discretionary Order W-12 (IC 1971, 14-2-3-3) providing protection for the following mammals considered rare and endangered:

Bobcat	<u>Lynx rufus</u>
Badger	<u>Taxidea taxus</u>
Otter	<u>Lutra canadensis</u>
Elk	<u>Cervus canadensis</u>

Pursuant to the Non-game and Endangered Species Conservation Act, the Department amended W-12 in July 1975 by removing elk and adding the following mammals:

Indiana bat	<u>Myotis sodalis</u>
Gray Myotis	<u>Myotis grisescens</u>
Southeastern Myotis	<u>Myotis austroriparius</u>
Big-eared bat	<u>Plecotus rafinesquii</u>

Elk were removed from the list since there is no recent evidence of their existence. A small number of pen-reared elk were released in Brown County in 1963. More importantly, the existence of elk as a part of Indiana fauna is not deemed desirable under existing land use practices and human population density.

The various species of bats were added to the list of rare and endangered mammals on the recommendation of Dr. R.E. Mumford and John O. Whitaker, Jr. Although the terms of "rare" and "peripheral" were referred to, the definition of "endangered" in the Act encompasses these two terms.

Since the Act states that a determination of those non-game species in "need of management" and those "endangered" should be made, the following species

list is provided as a preliminary guide. This list is not intended to be complete or static. Species will be deleted or added periodically as investigations can be made to ascertain their true status.

The following listing includes species or subspecies to be considered endangered or threatened in Indiana (peripheral) as well as nation-wide. The list is based on recommendations received in response to a Memorandum sent to universities, appropriate federal agencies and other interested persons and organizations in January, 1975.

Birds

- Southern Bald Eagle -- Haliaeetus l. leucocephalus
 Arctic Peregrine Falcon -- Falco peregrinus tundrius

Mammals

- Indiana Myotis -- Myotis sodalis
 Gray Myotis -- Myotis grisescens
 Southeastern Myotis -- Myotis austroriparius
 Big-eared Bat -- Plecotus rafinesquii
 Bobcat -- Lynx rufus
 Swamp Rabbit -- Sylvilagus aquaticus
 Badger -- Taxidea taxus
 Star-nosed Mole -- Condylura cristata
 Plains Pocket Gopher -- Geomys bursarius
 Eastern Wood Rat -- Neotoma floridana
 Western Harvest Mouse -- Reithrodontomys megalotis
 Franklin's Ground Squirrel -- Spermophilus franklini

Reptiles

- Eastern Mud Turtle -- Kinosternon s. subrubrum
 Spotted Turtle -- Clemmys guttata
 Hieroglyphic Turtle -- Pseudemys concinna hieroglyphica
 Northern Copperbelly -- Natrix erythrogaster neglecta
 Butler's Garter Snake -- Thamnophis butleri
 Smooth Green Snake -- Opheodrys vernalis blanchardi
 Scarlet Snake -- Cemophora coccinea copei
 Eastern Massasauga -- Sistrurus c. catenatus

Amphibians

- Hellbender -- Cryptobranchus a. alleganiensis
 Silvery Salamander -- Ambystoma platineum
 Four-toed Salamander -- Hemidactylium scutatum
 Northern Red Salamander -- Pseudotriton r. ruber
 Illinois Chorus Frog -- Pseudacris streckeri illinoensis

Fishes

- Eastern Sand Darter -- Ammocrypta pellucida
 Spring Cavefish -- Chologaster agassizi
 Northern Cavefish -- Amblyopsis spelaea
 Southern Cavefish -- Typhlichthys subterraneus
 Silverband shiner -- Notropis shumardi
 Ribbon shiner -- Notropis fumeus
 Popeye shiner -- Notropis ariommus
 Crystal darter -- Ammocrypta asprella
 Stargazing darter -- Percina uranidea
 Gilt darter -- Percina evides
 Spotted darter -- Etheostoma maculatum
 Harlequin darter -- Etheostoma histrio
 Tippecanoe darter -- Etheostoma tippecanoe
 Spottail darter -- Etheostoma squamiceps
 Redside dace -- Clinostomus elongatus
 Rosefin shiner -- Notropis ardens
 Swamp darter -- Etheostoma swaini
 Blue Sucker -- Cycleptus elongatus
 Ohio River Muskellunge -- Esox masquinongy ohioensis
 Bluebreast darter -- Etheostoma camurum
 Variegated darter -- Etheostoma variatum

Mollusks

- Deers Toe -- Truncilla truncata
 Black Sand Shell -- Ligumia recta
 Snuffbox -- Dysonomia triquetra
 No common name -- Carunculina parva
 No common name -- Carunculina glans
 No common name -- Actinonaias ellipsiformis
 Fat Mucket -- Anodonta grandis
 Pocketbook -- Lampsilus ventricosa

Crustaceans

- Troglobitic crayfish -- Orconectes inermis testii
 Ostracods ectocommensal with Orconectes inermis testii (no common name),
Sagittocythere barri
 Troglobitic crayfish -- Orconectes inermis inermis
 Ostracods ectocommensal with Orconectes inermis inermis - (no common name),
Sagittocythere barri
 Burrowing Crayfish -- Cambarus ortmanni
 Crayfish -- Cambarus robustus
 Crayfish -- Orconectes indianensis sloanii and Orconectes juvenilis
 Conchostracan -- Lynceus brachyurus
 Cave Isopod -- Asellus stygia
 Jordan Cave Isopod -- Asellus jordani
 Big White Amphipod -- Crangonyx gracilis

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IOWA

In 1977, Iowa compiled preliminary lists of fish, reptiles, amphibians, birds and mammals classified as endangered, threatened, possibly extirpated or status undetermined in response to the Iowa Endangered Species Act (Chapter 109A of the Code of Iowa). The lists included here were extracted from four volumes of the Special Report of the State Preserves Advisory Board on endangered species done by Dean M. Roosa.

The following terminology has been employed in compiling the Iowa list:

extirpated - a species or subspecies formerly found in Iowa as part of the mammalian fauna; no longer found in the state. In some cases this will be preceded by a modifier; i.e. 'probably extirpated'.

endangered - a species or subspecies in danger of becoming extirpated in the state in the foreseeable future if its environment worsens and no management action is taken. This term may be followed by modifier clarifying the species' range restriction, for example, 'endangered, peripheral' or 'endangered, relict'.

threatened - a species or subspecies that may become endangered in the state in the foreseeable future if conditions worsen and no management action is taken.

undetermined - a species or subspecies that is known to exist in low numbers in the state, but of which we have insufficient information to make an accurate assessment of its status. Hopefully, enough data can be accumulated before the list is revised so the species can be included in the threatened or endangered category or deleted from the list.

Status of Iowa's Endangered or Threatened Fish

	Endangered	Threatened	Probably or Possibly Extirpated	Undetermined
Chestnut Lamprey		X		
American Brook Lamprey		X		
Lake Sturgeon	X			
Pallid Sturgeon	X			
Alabama Shad			X	
Skipjack Herring		X		
Grass Pickerel		X		
Redside Dace			X	
Sturgeon Chub			X	
Sicklefin Chub	X			
Lake Chub	X			
Gravel Chub		X		
Pugnose Shiner		X		
Ironcolor Shiner			X	
Blacknose Shiner	X			
Weed Shiner		X		
Silverband Shiner	X			
Topeka Shiner		X		
Pugnose Minnow				X
Pearl Dace	X			
Lake Chubsucker			X	
River Redhorse			X	
Black Redhorse	X			
Starhead Topminnow	X			
Plains Topminnow	X			
Longear Sunfish	X			
Crystal Darter				X
Western Sand Darter		X		
Mud Darter		X		
Bluntnose Darter		X		
Least Darter	X			
Orangethroat Darter	X			
Gilt Darter			X	
Pirate Perch				X

STATUS OF AMPHIBIANS AND REPTILES IN IOWA

	ENDANGERED	THREATENED
Stinkpot		X
Illinois Mud Turtle	X	
Wood Turtle	X	
Ornate Box Turtle		X
Red-eared Turtle		X
Blanding's Turtle		X
Five-lined Skink		X
Great Plains Skink	X	
Western Slender Glass Lizard	X	
Diamondback Water Snake		X
Yellow-bellied Water Snake		X
Graham's Water Snake		X
Western Earth Snake		X
Black Rat Snake		X
Speckled Kingsnake	X	
Northern Copperhead	X	
Prairie Rattlesnake	X	
Massasauga		X
Small-mouthed Salamander		X
Blue-spotted Salamander	X	
Central Newt	X	
Plains Spadefoot		X
Spring Peeper		X

ANNOTATED LIST OF ENDANGERED AND THREATENED BIRDS OF IOWA

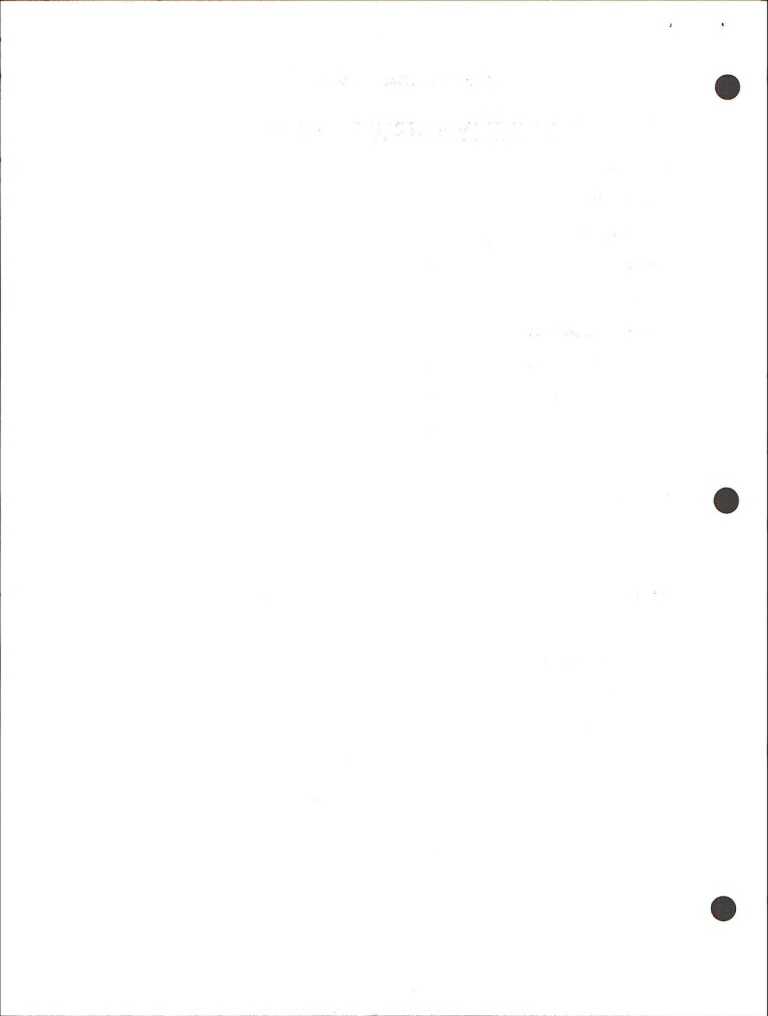
The following list applies only to breeding birds, not to those migrating through Iowa. For example, the Northern Harrier, Circus cyaneus, migrates through Iowa in fairly large numbers, but is a very rare breeding bird. It is the breeding population that is of concern. The list further applies only to those birds that have or had an established breeding population and does not address those species whose nesting in the state is accidental.

Status of Endangered or Threatened Birds in Iowa

	Extinct	Extirpated	Endangered	Threatened	Undetermined
Eared Grebe				X	
Trumpeter Swan		X			
Swallow-tailed Kite		X			
Sharp-shinned Hawk		X			
Cooper's Hawk				X	
Red-shouldered Hawk			X		
Broad-winged Hawk				X	
Bald Eagle		X			
Northern Harrier			X		
Peregrine Falcon			X		
Greater Prairie Chicken		X			
Sharp-tailed Grouse		X			
Whooping Crane		X			
Sandhill Crane		X			
Piping Plover			X		
Long-billed Curlew		X			
Upland Sandpiper			X		
Least Tern			X		
Passenger Pigeon	X				
Carolina Paroquet	X				
Black-billed Cuckoo					X
Barn Owl			X		
Burrowing Owl			X		
Long-eared Owl				X	
Short-eared Owl		X			
Say's Phoebe				X	
Loggerhead Shrike				X	
Bell's Vireo					X
Blue-winged Warbler				X	
Yellow Warbler					X

STATUS OF IOWA MAMMALS

	Endangered	Threatened	Extirpated	Undetermined
Pigmy Shrew				X
Least Shrew				X
Keene's Myotis		X		
Indiana Bat	X			
Evening Bat		X		
Big Free-tailed Bat			X	
Plains Pocket Mouse	X			
Grasshopper Mouse	X			
Red-backed Vole	X			
Pine Vole	X			
Porcupine			X	
Gray Wolf			X	
Black Bear	X			
Fisher			X	
Ermine				X
Long-tailed Weasel				X
Wolverine			X	
Spotted Skunk				X
River Otter		X		
Mountain Lion			X	
Lynx			X	
Bobcat	X			
American Elk			X	
Bison			X	
Pronghorn		63	X	



KENTUCKY

The following species are of concern to the Department of Fish and Wildlife Resources, but Kentucky has no official, legally-binding list.

Virginia (Townsend's) big-eared bat	(<i>Plecotus townsendii virginianus</i>)
Common shrew	(<i>Sorex cinereus</i>)
Bachman's shrew	(<i>Sorex longirostris</i>)
Southeastern bat	(<i>Myotis austroriparius</i>)
Small-footed myotis	(<i>Myotis leibii</i>)
Cloudland deer mouse	(<i>Peromyscus maniculatar nubiterrae</i>)
Cotton rat	(<i>Sigmodon hispidus</i>)*
Red-backed mouse	(<i>Clethrionomys gapperi</i>)
Woodland jumping mouse	(<i>Napaeozapus insignis</i>)
Meadow jumping mouse	(<i>Zapus hudsonius</i>)
Coyote	(<i>Canis latrans</i>)*
Spotted skunk	(<i>Spilogale putorius</i>)
River otter	(<i>Lontra canadensis</i>)*
Bobcat	(<i>Lynx rufus</i>)**
Black bear	(<i>Ursus americana</i>)
New England cottontail	(<i>Sylvalagus transitionalis</i>)**
Swamp rabbit	(<i>Sylvalagus aquaticus</i>)**
Golden eagle	(<i>Aquila chrysaetos</i>)
Osprey	(<i>Pandion haliaetus</i>)
Mississippi kite	(<i>Ictinia mississippiensis</i>)
Sandhill crane	(<i>Grus canadensis</i>)
Raven	(<i>Corvus corax</i>)
Western lesser siren	(<i>Siren intermedia</i>)
Three-toed salamander	(<i>Amphiuma means tridactylum</i>)
Four-toed salamander	(<i>Hemidactylum scutatum</i>)
Western bird voiced tree frog	(<i>Hyla avivoca avivoca</i>)
Green tree frog	(<i>Hyla cinerea cinerea</i>)
Mole salamander	(<i>Ambystoma talpoideum</i>)
Red-backed salamander	(<i>Plethodon cinereus cinereus</i>)
Northern crayfish frog	(<i>Rana areolata circulosa</i>)**
Banding tree frog	(<i>Hyla gratiosa</i>)
Triploid Jefferson's salamander	(<i>Ambystoma platineum</i>)*
Kirtlands water snake	(<i>Natrix kirtlandii</i>)
Eastern ribbon snake	(<i>Thamnophis sauritus</i>)*
Western ribbon snake	(<i>Thamnophis proximus</i>)
Western mud snake	(<i>Farancia abacura reinwardti</i>)*
Eastern coachwhip snake	(<i>Masticophis flagellum flagellum</i>)
Corn snake	(<i>Elaphe guttata</i>)
Northern pinesnake	(<i>Pituophis melanoleucus melanoleucus</i>)

*deletion from the list being recommended

**rare, but not endangered

Kentucky (continued)

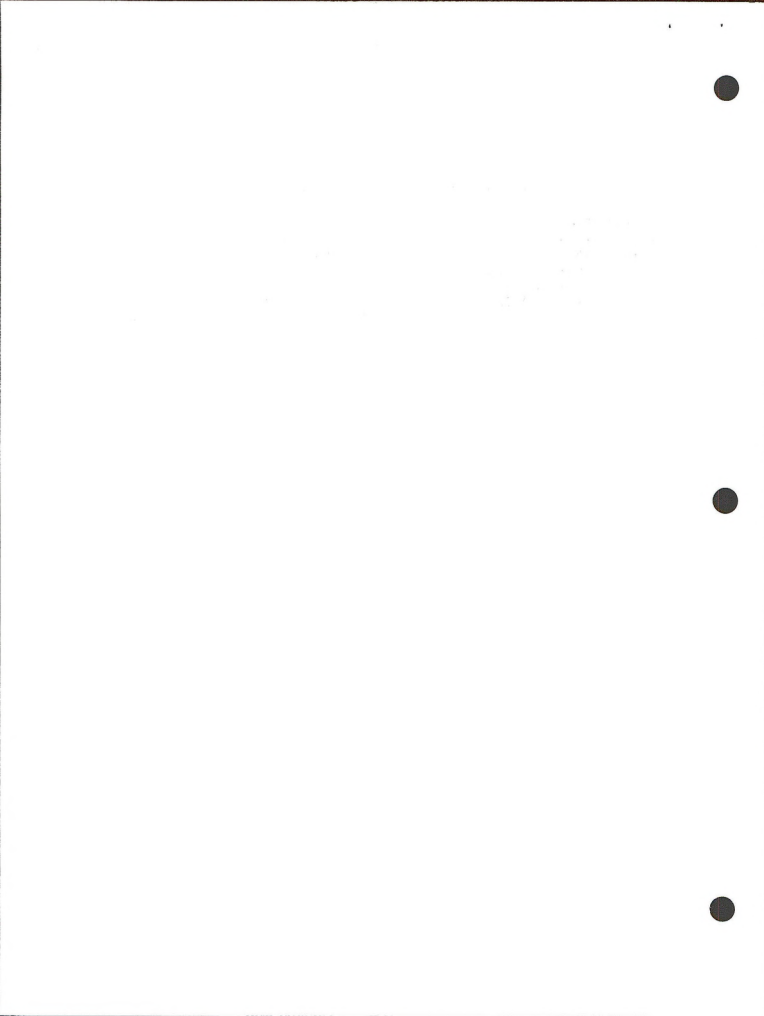
Prairie king snake	(<i>Lampropeltos calligaster calligaster</i>)*
Northern scarlet snake	(<i>Cemophora coccinea copei</i>)
Southeastern crowned snake	(<i>Tantilla coronata coronata</i>)*
Green water snake	(<i>Natrix cyclopion cyclopion</i>)
Broad-banded water snake	(<i>Natrix fasciata confluens</i>)
Scarlet king snake	(<i>Lampropeltis doliata doliata</i>)**
Red-milk snake	(<i>Lampropeltis doliata sypila</i>)**
Slender glass lizard	(<i>Ophisaurus attenuatus longicaudus</i>)
Northern coal skink	(<i>Eumeces anthracinus anthracinus</i>)
Alligator snapping turtle	(<i>Macroclerys temmincki</i>)
Fals map turtle	(<i>Graptemys pseudogeographica ouachitensis</i>)**
Mississippi map turtle	(<i>Graptemys kohni</i>)
Slider	(<i>Chrysemys concinna hieroglyphica</i>)**
Missouri slider	(<i>Chrysemys floridana hoyi</i>)**

*deletion from the list being recommended
 **rare, but not endangered

LOUISIANA

Endangered species recognized by the State of Louisiana include:

Florida panther	(<i>Felis concolor coryi</i>)
Brown pelican	(<i>Pelecanus occidentalis</i>)
Bald eagle	(<i>Haliaeetus leucocephalis</i>)
Red-cockaded woodpecker	(<i>Dendrocopos borealis</i>)
Peregrine falcon	(<i>Falco peregrinus</i>)
American ivory-billed woodpecker	(<i>Campepilus principalis principalis</i>)
Red wolf	(<i>Canis rufus</i>)



MAINE

Maine does not have a state list. It recognizes the following Federally listed species:

Short nosed sturgeon
Bald eagle

(*Acipenser brevirostrum*)
(*Haliaeetus leucocephalus*)



MARYLAND ENDANGERED SPECIES LIST
(Authority Title 10 Section 210 C)

WILDLIFE CONSERVATION REGULATION 08.03.01

- .43 ENDANGERED WILDLIFE SPECIES: It is unlawful, except by special permit, to take, export, transport or possess any of the following listed species of wildlife which have been declared threatened with State-wide extinction. The permit shall be obtained from the Administrator, Wildlife Administration, only upon written application which shall describe in such detail that the Administrator can determine whether it is in the best interest of the species to issue it. Each permit shall be subject to an expiration date and other such limitations as may be prescribed by the Administrator. Violation of any provision or restriction concomitant to the permit shall constitute a violation of this regulation and may include revocation of the permit and confiscation of those species held pursuant thereto at the discretion of the Administrator:

No.	Common Name	Scientific Name	Effective Date
1.	Delmarva Peninsula Fox Squirrel	(<u>Sciurus niger cinereus</u>)	3/1/72
2.	Coyote	(<u>Canis latrans</u>)	"
3.	Bobcat	(<u>Lynx rufus rufus</u>)	"
4.	Porcupine	(<u>Erethizon dorsatum</u>)	"
5.	Least Weasel	(<u>Mustela nivalis allegheniensis</u>)	"
6.	Mountain Lion	(<u>Felis concolor</u>)	"
7.	Black Bear	(<u>Ursus americanus</u>)	"
8.	Hellbender	(<u>Cryptobranchus alleghaniensis alleghaniensis</u>)	10/12/72
9.	Jefferson Salamander	(<u>Ambystoma jeffersonianum</u>)	"
10.	Eastern Tiger Salamander	(<u>Ambystoma tigrinum tigrinum</u>)	"
11.	Green Salamander	(<u>Aneides aeneus</u>)	"
12.	Eastern Narrow-mouthed Toad	(<u>Gastrophryne carolinensis</u>)	"
13.	Coal Skink	(<u>Eumeces anthracinus anthracinus</u>)	"
14.	Rainbow Snake	(<u>Faxancia erythrogramma erythrogramma</u>)	"
15.	Mountain Earth Snake	(<u>Virginia valeriae pulchra</u>)	"
16.	Bog Turtle	(<u>Clemmys mühlenbergi</u>)	"
17.	Atlantic Green Turtle	(<u>Chelonia mydas mydas</u>)	"
18.	Atlantic Hawksbill Turtle	(<u>Eretmochelys imbricata imbricata</u>)	"
19.	Atlantic Loggerhead	(<u>Caretta caretta caretta</u>)	"
20.	Atlantic Ridley	(<u>Lepidochelys kempi</u>)	"
21.	Atlantic Leatherback	(<u>Dermodochelys coriacea coriacea</u>)	"
22.	Maryland Darter	(<u>Etheostoma setiifera</u>)	1977
23.	Shortnose Sturgeon	(<u>Acipenser brevirostrum</u>)	1977



MASSACHUSETTS

Massachusetts list is unofficial; it has no legal status

Massachusetts Inland Fishes Existing in Limited Numbers

Species	Typical Habitat	Status*
American brook lamprey, <u>Lampetra lamottei</u>	Streams	Rare
Shortnose sturgeon, <u>Acipenser brevirostrum</u>	Streams	Rare and endangered
Atlantic sturgeon, <u>Acipenser oxyrinchus</u>	Streams and coastal rivers	Rare and endangered
Atlantic salmon ¹ , <u>Salmo salar</u>	Streams and coastal rivers	Rare and endangered
Sockeye salmon, <u>Oncorhynchus nerka</u>	Lakes, ponds	Rare
Lake trout, <u>Salvelinus namaycush</u>	Lakes, reservoirs	Rare
Lake chub, <u>Couesius plumbeus</u>	Streams	Rare and depleted
Northern redbelly dace, <u>Phoxinus eos</u>	Streams	Rare and depleted
Emerald shiner, <u>Notropis atherinoides</u>	Lakes, ponds, reservoirs and streams	Rare and depleted
Mimic shiner, <u>Notropis volucellus</u>	Streams	Rare

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¹Landlocked salmon not an indigenous strain; introduced and considered rare.

*Rare - not under immediate threat of extinction but occurring in such small numbers and/or in such a restricted or specialized habitat that it could quickly disappear. Requires careful watching.

Endangered - actively threatened with extinction. Continued survival unlikely without the implementation of special protective measures.

Depleted - Although still occurring in numbers adequate for survival, the species has been heavily depleted and continues to decline at a rate substantially greater than can be sustained.

<u>Species</u>	<u>Typical Habitat</u>	<u>Status</u>
Fathead minnow, <u>Pimephales promelas</u>	Streams	Rare
Longnose sucker, <u>Catostomus catostomus</u>	Streams	Rare
White catfish, <u>Ictalurus catus</u>	Lakes, ponds, reservoirs and streams	Rare and depleted
Channel catfish, <u>Ictalurus punctatus</u>	Streams	Rare
Black bullhead, <u>Ictalurus melas</u>	Streams	Rare and depleted
Threespine stickleback, <u>Gasterosteus aculeatus</u>	Inland and coastal streams	Rare inland
Fourspine stickleback, <u>Apeltes quadracus</u>	Inland and coastal streams	Rare inland
Rinespine stickleback, <u>Pungitius pungitius</u>	Inland and coastal streams	Rare inland
White crappie, <u>Pomoxis annularis</u>	Lakes, ponds and reservoirs	Rare and depleted
Longear sunfish, <u>Lepomis megalotis</u>	Streams	Rare and depleted
Swamp darter, <u>Etheostoma fusiforme</u>	Lakes, ponds, reservoirs and streams	Rare
Walleye, <u>Stizostedion vitreum vitreum</u>	Lakes, ponds, reservoirs and streams	Rare
Northern pike, <u>Esox lucius</u>	Lakes, ponds, reservoirs and streams	Rare
Burbot, <u>Lota lota</u>	Streams	Rare and depleted
Trout-perch, <u>Fercopsia omiscomaycus</u>	Streams	Rare and endangered

Massachusetts Wildlife Species Existing in Limited Numbers

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status*</u>
Eastern cougar <u>Felis concolor couguar</u>	(?) Inconclusive, un-verified sight reports from central and western Mass.	If present, cannot be more than a few.	Isolated mature or second growth woodlands and mountainous areas	Endangered
Eastern coyote <u>Canis latrans var.</u>	Berkshire, Franklin, Hampden, Hampshire and northern Worcester Counties	Probably several hundred.	Rural, wilderness areas of second and third growth woodlands interspersed with farm lots, swamps, and country roads.	Undetermined
75 Moose <u>Alces alces americana</u>	Occasional stragglers range into northeastern, central and western parts of the state.	None resident. Regular stragglers appear almost annually.	Wilderness areas of early successional mixed stands interspersed with bogs and shallow ponds.	Peripheral

*Rare - not immediately in peril and possibly stable at present, but existing in such low numbers or with such a restricted distribution that the entire species population could be seriously jeopardized by catastrophic events occurring within its range.

Endangered - in immediate danger of extinction or extirpation from the state due to critically low or drastically declining populations brought about by habitat modification, overexploitation, pollution, diseases or other factors.

Status Undetermined - not in immediate danger of extinction or extirpation, but showing signs of decline and causing justifiable concern; or being little known or apparently uncommon and possibly could be jeopardized by inadvertent actions. More information required to properly evaluate status.

Peripheral - reaches the limit of its usual range outside Massachusetts. Occasional individuals or stragglers may be found but no breeding populations within the state.

Threatened - likely to become an endangered species in the foreseeable future throughout all or a significant portion of its range.

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status</u>
Gray seal <u>Halichoerus grypus</u>	Muskeget and Tuckernuck Islands, Nantucket County and adjacent waters	12-18	Turbulent waters near rocky shores, cliffs; but in Mass. restric- ted to shallow seas, adjacent to sand bars and low islets.	Rare
Indiana bat <u>Myotis sodalis</u>	Scattered western Mass. locations	Unknown, but probably few.	Limestone caves, sub- terranean excavations, hollow trees, houses, beneath bridges.	Endangered
Southern bog lemming <u>Synaptows cooperi stonei</u>	Flymouth County	Unknown	Bogs; dense swamps; cool, dense forest undergrowth.	Undetermined
76 Yellow-nosed (Rock) vole <u>Microtus c. chrotorrhinus</u>	(?) Unknown, but may occur on Mt. Greylock, Berkshire County	Unknown	Dense forests at high elevations; grassy rock-stem areas above timberline.	Undetermined
Long-tailed shrew <u>Sorex d. dispar</u>	Known from Mt. Grey- lock, Berkshire County.	Unknown	Cool, moist talus surrounded by dense woodland frequently at high altitudes.	Undetermined
Beach meadow vole <u>Microtus breweri</u>	Known only on Muskeget Island, Nantucket County	5,000-15,000	Sandy beaches over- grown with beach grass (<u>Ammophila</u> <u>breviligulata</u>)	Rare
Southern bald eagle <u>Haliaeetus l. leucocephalus</u>	Migrants regularly at Mt. Tom; summer visitors at Quab- bin Reservation; irregulars state- wide	No breeders. A few have winters! at Quabbin Reservation since 1950.	Isolated woodlands near large bodies of water coastal and interior.	Endangered

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status</u>
American peregrine falcon <u>Falco peregrinus anatum</u>	Coastal areas	No breeders, migrants usually number less than a dozen annually.	Nests on high cliffs or ledges frequently overlooking water bodies or valleys.	Endangered
Osprey <u>Pandion haliaetus carolinensis</u>	Principally in Bristol, Barnstable and Dukes Counties	A few dozen in breeding season.	Isolated coastal or inland sites adjacent to sizable bodies of water.	Undetermined
Laughing gull <u>Larus stricilla</u>	Coastal, especially Cape Cod.	About 150-200 pairs in breeding population.	Salt meadows, shores of tidal creeks, grassy islets.	Undetermined
Common tern <u>Sterna h. hirundo</u>	Coastal beaches and islands, Plum Island south to Elizabeth Islands.	Fewer than 5,000 pairs.	Sandy beaches and island shores.	Undetermined
Arctic tern <u>Sterna paradisaea</u>	Outer Cape Cod and offshore islands.	Probably less than 50 pairs.	Rocky or sandy coastal and island beaches and shores.	Undetermined
Least tern <u>Sterna albifrons antillarum</u>	Coastal beaches from Essex County south to Bristol County.	Probably less than 1,000 pairs.	Broad flat sandy beaches on mainland and coastal islands.	Undetermined
Short-eared owl <u>Asio f. flammeus</u>	Nesting limited to coastal areas, Boston south to Cape Cod.	Unknown.	Open plains, scrub flats, dunes, and marshes.	Undetermined
Eastern bluebird <u>Sialia s. sialis</u>	Transient statewide, limited breeding, especially in Connecticut Valley.	Unknown.	Open woods, swamps, rural roadsides, farmland, burnt-over areas.	Undetermined

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status</u>
Plymouth red-bellied turtle <u>Chrysemys rubiventris bangsi</u>	Scattered ponds in Plymouth County, Naushon Island and possibly Ipswich.	Probably less than 200.	Quiet, shallow warmwater ponds.	Endangered
Bog turtle <u>Clemmys mühlenbergii</u>	Known only from Pittsfield, Berkshire County	Unknown, but only one colony known.	Wet meadows and sphagnum.	Endangered
Blandings's turtle <u>Emys blandingii</u>	Northern Middlesex County and Haverhill (Essex County) and Lancaster (Worcester County)	Unknown	Shallow, weedy ponds, slow-moving streams.	Undetermined
Northern diamondback terrapin <u>Malaclemys t. terrapin</u>	Buzzards Bay and Cape Cod Bay from Barnstable to Wellfleet.	Unknown	Salt marshes, tidal creeks and estuaries.	Undetermined
Eastern box turtle <u>Terrapene c. carolina</u>	Stateside	Unknown	Fields, meadows, open woodlands, usually near water.	Undetermined
Timber rattlesnake <u>Crotalus h. horridus</u>	Scattered colonies in southern Berkshire, Hampden and Hampshire Counties and Blue Hill Reservation, Norfolk County.	Unknown	Rocky fields, woodlands and mountainsides.	Endangered
Northern copperhead <u>Akistrodon contortrix mokeson</u>	Blue Hill Reservation, Norfolk County, Connecticut River Valley, southern Worcester and Southern Berkshire Counties.	Unknown	Rocky, wooded hillsides, often moving to bottomlands near water during summer.	Undetermined

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status</u>
Black rat snake <u>Elaphe o. obsoleta</u>	South-central Mass. east to Webster, west to Westfield, north to Sunderland.	Unknown	Wooded uplands, hillsides, forest edges.	Undetermined
Eastern worm snake <u>Carpophis a. amoenus</u>	Hampden County in vicinity of Connecticut River	Unknown	Lowlands; burrows in soft, moist earth; found under boards, slabs, stones and logs.	Undetermined
Blue-spotted salamander <u>Ambystoma laterale</u>	Recorded from various areas of Middlesex County; Springfield, Hampden County; and a few Essex County towns.	Unknown	Lives underground in moist woodland.	Endangered
79 Spotted salamander <u>Ambystoma maculatum</u>	Statewide	Unknown	Lives underground in moist woodland.	Threatened
Marbled salamander <u>Ambystoma opacum</u>	Principally Worcester County, with remnant colonies in Middlesex, Plymouth and Bristol Counties.	Unknown	Woodlands	Threatened
Jefferson salamander <u>Ambystoma jeffersonianum</u>	Connecticut River Valley	Unknown	Lives underground in moist woodland.	Undetermined
Four-toed salamander <u>Hemidactylium scutatum</u>	Scattered from Connecticut River Valley eastward to Cape Cod.	Unknown	Swamps, sphagnum bogs, acidic meadows.	Undetermined
Atlantic green turtle <u>Chelonia m. mydas</u>	Coastal seas; Cape Cod and southward.	Unknown	The seas.	Threatened
Atlantic hawksbill <u>Eretmochelys i. imbricata</u>	Coastal seas; Cape Cod and southward.	Unknown	Atlantic littoral waters.	Threatened

<u>Species</u>	<u>Distribution</u>	<u>Estimated Numbers</u>	<u>Typical Habitat</u>	<u>Status</u>
Atlantic loggerhead <u>Caretta c. caretta</u>	Atlantic coastal waters from New Hampshire to Rhode Island.	Unknown, but common summer and autumn.	Probably highly pelagic when young, becoming more littoral with age.	Threatened
Atlantic ridley <u>Lepidochelys kempi</u>	Atlantic coastal waters from New Hampshire to Rhode Island.	Unknown, but rather common summer and autumn.	Atlantic littoral waters.	Threatened
Atlantic leatherback <u>Dermochelys c. coriacea</u>	Atlantic coastal waters from New Hampshire to Rhode Island.	Unknown	Open ocean in northern migration, often in-shore during autumn.	Endangered

Michigan

Michigan's comprehensive endangered species law, Act No. 203, became effective in 1974. It gave the Department of Natural Resources the responsibility to conduct scientific investigations for the protection and enhancement of endangered species of plants and animals on Federal and state lists and authorizes management programs.

The following is a list of endangered (E), threatened (T), peripheral (P) and rare or scarce (R) animals in Michigan.

Mussels

Simpsoniconcha ambigua (E)	{ <i>Simpsoniconcha ambigua</i> }
Obovaria leibii (E)	{ <i>Obovaria leibii</i> }
Pleurobema clava (T)	{ <i>Pleurobema clava</i> }
Elliptio complanatus (T)	{ <i>Elliptio complanatus</i> }
Cyclonaias tuberculata (T)	{ <i>Cyclonaias tuberculata</i> }
Anodonata subgibbosa (T)	{ <i>Anodonata subgibbosa</i> }
Actinonaias ellipsiformis (T)	{ <i>Actinonaias ellipsiformis</i> }
Lampsilis fasciola (T)	{ <i>Lampsilis fasciola</i> }
Dysnomia triquetra (T)	{ <i>Dysnomia triquetra</i> }
Carunculina glans (R)	{ <i>Carunculina glans</i> }
Villosa fabilis (R)	{ <i>Villosa fabilis</i> }
Dysnomia sulcata (R)	{ <i>Dysnomia sulcata</i> }

Snails

Lymnaea megasoma (T)	{ <i>Lymnaea megasoma</i> }
Pomatiopsis cincinnatiensis (T)	{ <i>Pomatiopsis cincinnatiensis</i> }
Paludetrina nicklineana (T)	{ <i>Paludetrina nicklineana</i> }
Zmnicola binneyana (T)	{ <i>Zmnicola binneyana</i> }
Zoogenetes harpa (T)	{ <i>Zoogenetes harpa</i> }
Mesodon sayana (T)	{ <i>Mesodon sayana</i> }
Mesodon elevata (T)	{ <i>Mesodon elevata</i> }
Tripodopsis notata (T)	{ <i>Tripodopsis notata</i> }
Anguispira kochi (T)	{ <i>Anguispira kochi</i> }
Mesomphix cupreus (T)	{ <i>Mesomphix cupreus</i> }
Haplotrema concavum (T)	{ <i>Haplotrema concavum</i> }
Discus patulus (T)	{ <i>Discus patulus</i> }
Lymnaea haldemani (R)	{ <i>Lymnaea haldemani</i> }
Lymnaea contracta (R)	{ <i>Lymnaea contracta</i> }
Helisoma multivolvis (R)	{ <i>Helisoma multivolvis</i> }
Pyrgulopsis letsoni (R)	{ <i>Pyrgulopsis letsoni</i> }
Planogyra astericus (R)	{ <i>Planogyra astericus</i> }
Philomycus carolinianus (R)	{ <i>Philomycus carolinianus</i> }

Insects

Appalachia arcana (R)	(<i>Appalachia arcana</i>)
Atlanticus davisii (R)	(<i>Atlanticus davisii</i>)
Oecanthus pini (R)	(<i>Oecanthus pini</i>)
Oecanthus laricis (R)	(<i>Oecanthus laricis</i>)
Liodessus cantralli (R)	(<i>Liodessus cantralli</i>)

Fishes

Longjaw cisco (E)	(<i>Coregonus alpenae</i>)
Deepwater cisco (E)	(<i>C. johannae</i>)
Blackfin cisco (E)	(<i>C. nigrispinnis</i>)
Shortnose cisco (E)	(<i>C. reighardi</i>)
Shortjaw cisco (E)	(<i>C. zenithicus</i>)
Blue pike (E)	(<i>Stizostedion vitreum glacum</i>)
Lake sturgeon (T)	(<i>Acipenser fulvescens</i>)
Cisco or lake herring (T)	(<i>Coregonus artedii</i>)
Bloater (T)	(<i>C. hoyi</i>)
Kiyi (T)	(<i>C. kiyi</i>)
Silver shiner (T)	(<i>Notropis photogenus</i>)
Redside dace (T)	(<i>Clinostomus elongatus</i>)
River herring (T)	(<i>Moxostoma carinatum</i>)
Northern madtom (T)	(<i>Noturus stigmosus</i>)
Eastern sand darter	(<i>Ammocrypta pellucida</i>)

Amphibians

Marbled salamander (T)	(<i>Ambystoma opacum</i>)
Small-mouthed salamander (T)	(<i>Ambystoma texanum</i>)
Western lesser siren (T)	(<i>Siren intermedia nettingi</i>)
Four-toed salamander (T)	(<i>Hemidactylium scutatum</i>)

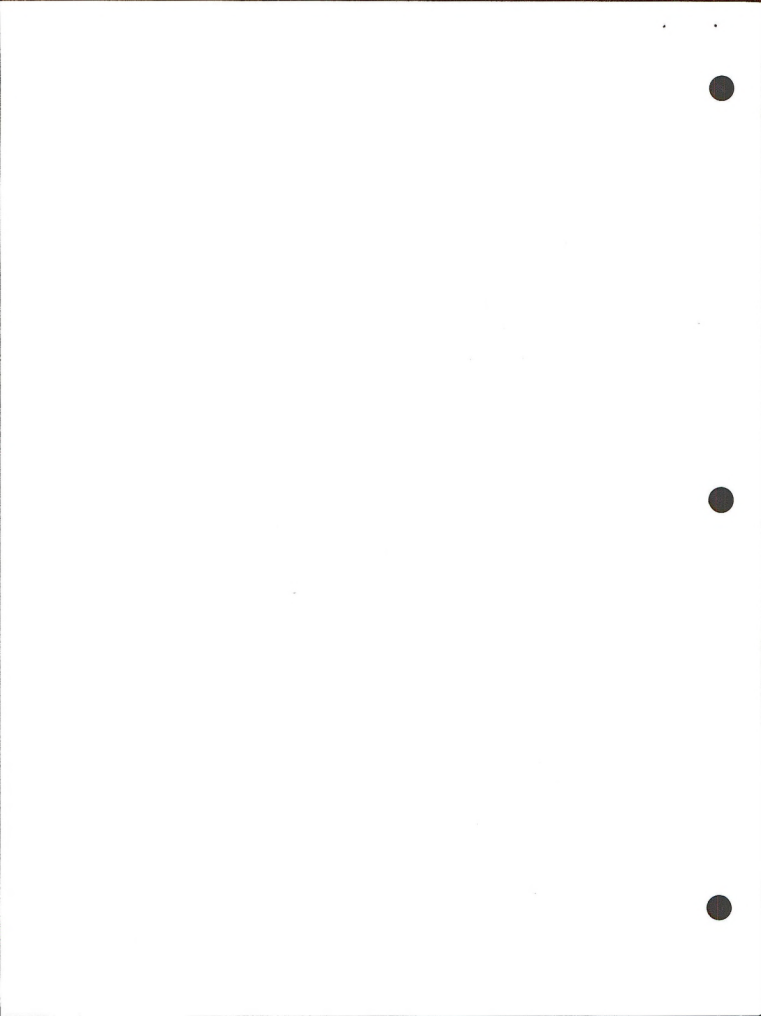
Reptiles

Black rat snake (T)	(<i>Elaphe obsoleta obsoleta</i>)
Northern copperbelly	(<i>Natrix erythrogaster neglecta</i>)
Kirtland's water snake (T)	(<i>Natrix kirtlandi</i>)
Eastern box turtle (T)	(<i>Terrapene carolina carolina</i>)
Five-lined skink (R)	(<i>Eumeces fasciatus</i>)
Eastern spiny softshell	(<i>Trionyx spiniferus spiniferus</i>)
Spotted turtle	(<i>Clemmys guttata</i>)
Wood turtle	(<i>C. insculpta</i>)

Peregrine falcon (E)	{ <i>Falco peregrinus</i> }
Kirtland's warbler (E)	{ <i>Dendroica kirtlandii</i> }
Double-crested cormorant (T)	{ <i>Phalacrocorax auritus</i> }
Cooper's hawk (T)	{ <i>Accipiter cooperi</i> }
Red-shouldered hawk (T)	{ <i>Buteo lineatus</i> }
Bald eagle (T)	{ <i>Haliaeetus leucocephalus</i> }
Marsh hawk (T)	{ <i>Circus cyaneus</i> }
Osprey	{ <i>Pandion haliaeetus</i> }
Greater prairie chicken (T)	{ <i>Tympanuchus cupido</i> }
Piping plover (T)	{ <i>Charadrius melodus</i> }
Barn Owl (T)	{ <i>Tyto alba</i> }
Loggerhead shrike (T)	{ <i>Lanius ludovicianus</i> }
Common loon (R)*	{ <i>Gaver immer</i> }
Black-crowned night heron (R)*	{ <i>Nycticorax nycticorax</i> }
American bittern (R)*	{ <i>Botaurus lentiginosus</i> }
Sharp-shinned hawk (R)*	{ <i>Accipiter striatus</i> }
Pigeon hawk (R)*	{ <i>Falco columbarius</i> }
Sandhill crane (R)*	{ <i>Grus canadensis</i> }
Caspian tern (R)*	{ <i>Hydroprogne caspia</i> }
Barred owl (R)*	{ <i>Strix varia</i> }

Mammals

Indiana bat (E)	{ <i>Myotis sodalis</i> }
Gray wolf (E)	{ <i>Canis lupis</i> }
Least shrew (T)	{ <i>Cryptotis parva</i> }
Pine Marten (T)	{ <i>Martes americana</i> }
Southern bog lemming (T)	{ <i>Synaptomys cooperi</i> }
Pine vole (T)	{ <i>Microtus pinetorum</i> }
Arctic shrew (R)*	{ <i>Sorex arcticus</i> }
Water shrew (R)*	{ <i>Sorex palustris</i> }
Hoy's pigmy shrew (R)*	{ <i>Microsorex hoyi</i> }
Hoary bat (R)*	{ <i>M. thompsoni</i> }
Badger (R)*	{ <i>Lasiurus cinereus</i> }
Canada lynx (R)*	{ <i>Taxidae taxus</i> }
Eastern pipistrelle (P)*	{ <i>Lynx canadensis</i> }
Evening bat (P)*	{ <i>Pipistrellus subflavus</i> }
Gray fox (P)*	{ <i>Nycticeius humeralis</i> }
Prairie vole (P)*	{ <i>Urocyon cinereoargenteus</i> }
Moose (P)*	{ <i>Alces alces</i> }



MINNESOTA

The State of Minnesota maintains a list of species that merit varying degrees of special consideration and management. The list given here, however, does not constitute an official list as described in Minnesota Endangered Species Act (MSA 97-488). The classifications (extracted from . . . the Uncommon Ones published by the Minnesota Department of Natural Resources in 1975) utilize the following symbols and terminology:

E - Species classified as endangered under Federal regulations

P - Afforded some degree of protection by Minnesota laws

U - Specifically listed under Minnesota laws as unprotected

N - Status not specified under Minnesota laws

R - Probably have always been rare

Endangered - Species in danger of extinction in Minnesota in near future

Threatened - Species which could become endangered

Changing or Uncertain Status - Species uncommon or local in Minnesota which could become threatened

Special Interest - Species meriting special attention and monitoring, though they are not apt to become threatened or endangered in the near future

Extirpated - Species that once lived in Minnesota, but have been displaced; there's little possibility of reestablishing viable, wild populations

Endangered Species

American peregrine falcon (E,P,R) (*Falco peregrinus*)
Whooping crane (E,P,R) (*Grus americanus*)

Threatened Species

Pine marten (P) (*Martes americana*)
Bobwhite quail (P) (*Colinus virginianus*)
Burrowing owl (P) (*Speotyto cunicularia hypugea*)
Greater Sandhill crane (P) (*Grus canadensis tubida*)
Greater prairie chicken (P) (*Tympanuchus cupida*)

Threatened Species (continued)

Blue-tailed skink (N)	(<i>Eumeces fasciatus</i>)
Massasauga (N,R)	(<i>Sistrurus catenatus</i>)
Cricket frog (R)	(<i>Acris crepitans</i>)

Changing or Uncertain Status

Canada lynx (U)	(<i>Lynx canadensis</i>)
Gray wolf (E,P)	(<i>Canis lupus</i>)
Fisher (P)	(<i>Martes pennanti</i>)
Rock vole (U)	(<i>Microtus ochrogaster</i>)
Common tern (P)	(<i>Sterna hirundo hirundo</i>)
Double-crested cormorant (U)	(<i>Phalacrocorax auritus auritus</i>)
Franklin's gull (P)	(<i>Larus pipixcan</i>)
White pelican (P)	(<i>Pelecanus erythrorhynchos</i>)
Cooper's hawk (P)	(<i>Accipiter cooperii</i>)
Marsh hawk (P)	(<i>Circus cyaneus hudsonius</i>)
Bald eagle (P)	(<i>Haliaeetus leucocephalus</i>)
Osprey (P)	(<i>Pandio haliaeetus</i>)
Western grebe (P,R)	(<i>Aechmophorus occidentalis</i>)
Blanding's turtle (N)	(<i>Emys blandingii</i>)
False map turtle (N)	(<i>Graptemys pseudogeographica pseudogeographica</i>)
Wood turtle (N)	(<i>Clemmys insculpta</i>)
Black redhorse (P,R)	(<i>Moxostoma duquesnei</i>)
Lake sturgeon (P)	(<i>Acipenser fulvescens</i>)
Paddlefish (P,R)	(<i>Polyodon spathula</i>)

Special Interest

Bobcat (U)	(<i>Lynx rufus</i>)
Common egret (P,R)	(<i>Casmerodius albus egretta</i>)
Common loon (P)	(<i>Gavia immer</i>)
Great blue heron (P)	(<i>Ardea herodias herodias</i>)
Pileated woodpecker (P)	(<i>Dryocopus pileatus</i>)
Six-lined racer (N)	(<i>Cnemidophorus sexlineatus</i>)
Snapping turtle (N,P)	(<i>Chelydra serpentina</i>)
Common newt (N)	(<i>Notophthalmus viridescens</i>)
Redbacked salamander (N)	(<i>Plethodon cinereus</i>)
American brook lamprey (N)	(<i>Lampetra lamottei</i>)
Blue sucker (R)	(<i>Cycleptus elongatus</i>)
Least darter (R)	(<i>Etheostoma microperca</i>)
Pugnosed shiner (R)	(<i>Notropis anogenus</i>)

Extirpated Species

Bison (N)	(<i>Bison bison bison</i>)
Eastern cougar (U,R)	(<i>Felis concolor schorgeri</i>)
Elk (P)	(<i>Cervus canadensis canadensis</i>)
Grizzly bear (U,R)	(<i>Ursus horribilis</i>)
Pronghorn antelope (P,R)	(<i>Antilocapra americana americana</i>)
Wolverine (P,R)	(<i>Gulo luseus</i>)
Woodland caribou (P)	(<i>Rangifer tarandus sylvestris</i>)
Swallow-tailed kite (P,R)	(<i>Elanoides forficatus forficatus</i>)
Trumpeter swan (P)	(<i>Olor buccinator</i>)
Blackfin cisco (P)	(<i>Coregonus nigropinnis</i>)
Blue catfish (P,R)	(<i>Ictalurus furcatus</i>)
Skipjack herring (N)	(<i>Alosa chrysochloris</i>)



STATE GAME AND FISH COMMISSION
PO BOX 451
JACKSON, MISSISSIPPI 39205

PUBLIC NOTICE NO. 1916

The Game and Fish Commission, pursuant to the requirements of The Non-Game and Endangered Species Act (Sections 49-5-101 through 119, Mississippi Code of 1972), at their regular meeting in Jackson, Mississippi on April 12, 1977 conducted a review of the official State list of endangered or threatened vertebrates adopted by the Commission on April 8, 1975. Prior notice of intent to conduct this review process as required by Section 25-43-1, Mississippi Code of 1972, was given in Public Notice No. 1906 on February 18, 1977. After conducting this review of the official State list of endangered or threatened vertebrates and after consideration of all related petitions received, the Commission passed an order adopting the following regulations for the protection and management of endangered or threatened vertebrates:

AN ORDER AND REGULATIONS ADOPTING AN OFFICIAL LIST
OF ENDANGERED OR THREATENED VERTEBRATES IN MISSISSIPPI

Be It Ordered by the Game and Fish Commission, pursuant to a resolution adopted on July 9, 1974, and to conform with the Endangered Species Act of 1973 (Public Law 93-203) and The Non-Game and Endangered Species Act (Sections 49-5-101 through 119, Mississippi Code of 1972), that the following regulations pertaining to the official listing and management of endangered or threatened vertebrates in Mississippi, are hereby adopted. The Game and Fish Commission in listing endangered or threatened species or sub-species as set forth below has been guided by surveys conducted by qualified persons and by the best scientific data available on the designation of species as endangered or threatened.

ENDANGERED OR THREATENED VERTEBRATES REGULATIONS

Be It Ordered that no person shall sell or offer for sale any endangered species as defined below and in Section 49-5-105, Mississippi Code of 1972. No person shall take or possess any endangered species defined and listed below except as authorized by the Director of Conservation.

Endangered species - a species which is in danger of extinction throughout all or a significant portion of its range in the State due to (1) destruction, drastic modification or severe curtailment of habitat, or (2) its over-utilization for commercial or sporting purposes, or (3) effect of disease or pollution, or (4) other natural or man-made factors:

Atlantic Sturgeon (*Acipenser oxyrinchus*)
Sturgeon species (*Scaphirynchus* sp., undescribed),
Tombigbee River
Frecklebelly Madtom (*Necturus maculatus*)
Crystal Darter (*Ammocryptes asprella*)
Bayou Darter (*Petrotomas rubrum*)
Southern Reibelly Dace (*Phoxinus erythrogaster*)
endangered only for the disjunct population in
stream north of Vicksburg in Warren County.
Green Salamander (*Ambystoma opacum*)
Cave Salamander (*Ambystoma lucifuga*)
American Alligator (*Alligator mississippiensis*)
Southern Hop-nosed Snake (*Heterodon simus*)
Rainbow Snake (*Farancia erythrogramma*)
Eastern Indigo Snake (*Drymarchon corais couperi*)
Black Pine Snake (*Pituophis molinosus loedingi*)

Black-knobbed Sawback Turtle (*Chelys nigripada*)
Atlantic Green Turtle (*Chelonia mydas mydas*)
Atlantic Loggerhead Turtle (*Caretta caretta caretta*)
Atlantic Ridley Turtle (*Leptochelys kempi*)
Huskbill Turtle (*Chelydactylus imbricata*)
Leatherback Turtle (*Dermochelys coriacea*)
Indiana Bat (*Myotis sodalis*)
Red Wolf (*Canis rufus*)
Eastern Cowbird (*Pelecanus occidentalis*)
Brown Pelican (*Pelecanus occidentalis*)
Bald Eagle (*Haliaeetus leucocephalus*)
Peregrine Falcon (*Falco peregrinus*)
Mississippi Sandhill Crane (*Grus canadensis pulla*)
Red-cockaded Woodpecker (*Colaptes borealis*)
Ivory-billed Woodpecker (*Campylurus principalis*)
Bachman's Warbler (*Vermivora bachmani*)

Be It Further Ordered that no person shall sell or offer for sale any threatened species as defined and listed below except as authorized by permit from the Director of Conservation, nor shall any threatened species be taken or possessed except as authorized by specific Commission regulation or by permit from the Director.

Threatened species - a species which may become an endangered species with the foreseeable future in all or a significant portion of its range in the State due to (1) destruction, drastic modification or severe curtailment of its habitat, or (2) its over-utilization for commercial or sporting purposes, or (3) effect of disease or pollution, or (4) other natural or man-made factors:

Southern Coal Skink (*Emmeces anthracipriscus pluvialis*)
Ringed Sawback Turtle (*Chelydactylus oculifera*)
Yellow-blotched Sawback Turtle (*Chelydactylus flavimaculata*)

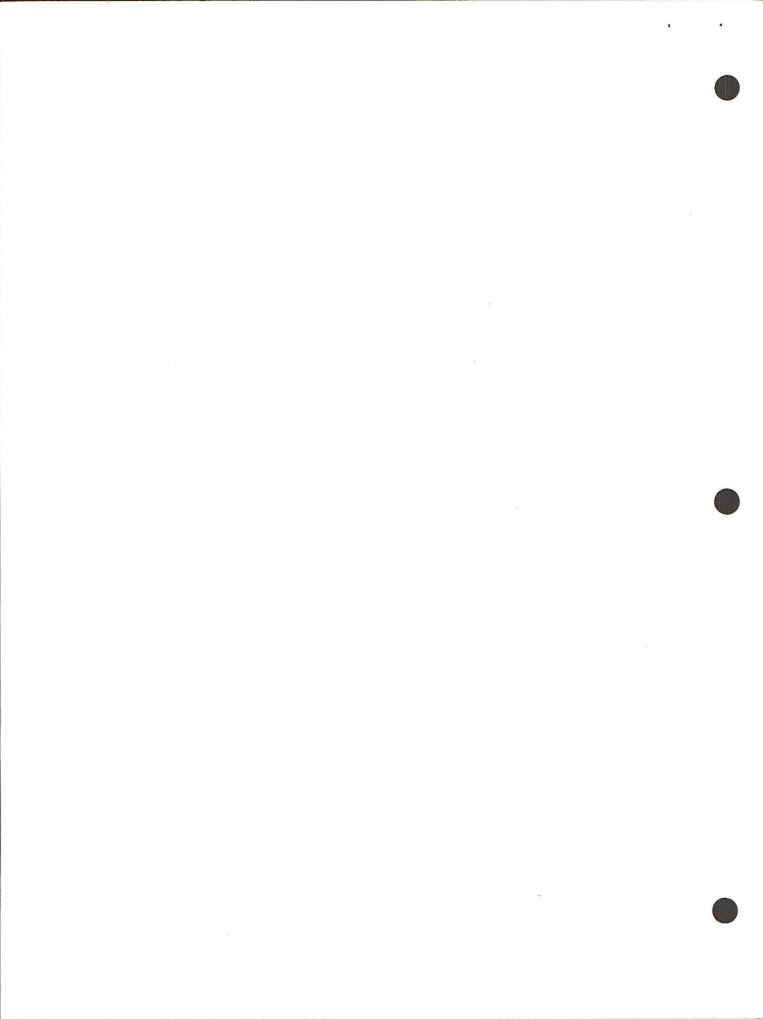
Black Bear (*Ursus americanus*)
Cliff Swallow (*Petrochelidon pyrrhonata*)

The above regulations shall become effective after publication as required by Law on June 1, 1977 and on that date a former order and regulations in Public Notice No. 1790 are rescinded.

Witness my hand this the 14th day of April, 1977



Joe Stone
Director of Conservation



MISSOURI

In 1972, Missouri's General Assembly passed Section 252.240 RSMo., an act which established protection for endangered species listed by the Department of Conservation. The following species are classified endangered (E) or rare (R), if their status is known. This list was extracted from Rare and Endangered Species of Missouri, revised in 1977 by the Missouri Department of Conservation and the Soil Conservation Service. This publication also includes a long list of invertebrates (not given here) that are thought to be rare or localized in distribution within Missouri, but whose status has not been determined.

Mussels

Actinonaias pleasii	(Actinonaias pleasii)
Stout floater (E)	(Anodonta grandis corpulenta)
Heel splitter (E)	(Anodonta suborbiculata)
Rock pocketbook (E)	(Arcidens confragosus)
Spectaclecase (R)	(Cumberlandia monodonta)
Western fan shell (R)	(Cyprogenia aberti)
Curtis' riffle shell (E)	(Epioblasma florentina curtisi)
Lefevre's riffle shell (E)	(Epioblasma lefeurei)
Snuffbox (R)	(Epioblasma triquetra)
Fusconaia ebena	(Fusconaia ebena)
Fusconaia ozarkensis	(Fusconaia ozarkensis)
Higgins' eye orb mucket (E)	(Lampsilis higginsii)
Neosho mucket (E)	(Lampsilis rafines queana)
Scale shell (E)	(Leptodea leptodon)
Obovaria jacksoniana	(Obovaria jacksoniana)
Hickory nut (R)	(Obovaria olivaria)
Plectomerus dombeyana	(Plectomerus dombeyana)
Bullhead (E)	(Plethobasus cyphus)
Fat pocketbook (E)	(Potamilus capax)
Western heel splitter (R)	(Potamilus purpuratus)
Rabbits foot (E)	(Quadrula cylindrica cylindrica)
Warty-back (R)	(Quadrula nodulate)
Little purple (E)	(Toxolasma lividus glans)
Pond-horn (R)	(Unio merus tetralasmus)
Villosa lienosa	(Villosa lienosa)
Elephant's ear (E)	(Elliptio crassidens)

Fishes

Southern brook lamprey (R)	(Ichthyomyzon gagei)
American brook (R)	(Lampetra lamottei)
Lake sturgeon ()	(Acipenser fulvescens)
Pallid sturgeon (E)	(Scaphirhynchus albus)
Alligator gar (R)	(Lepisosteus spatula)
Alabama shad (R)	(Alosa alabamae)
Cypress minnow - poss. extirpated	(Hybognathus hayi)
Sturgeon chub (R)	(Hybopsis gelida)
Sicklefin chub (R)	(Hybopsis meeki)
Pallid shiner - possibly extinct	(Notropis amnis)
Blacknose shiner (E)	(Notropis heterolepis)
Taillight shiner (E)	(Notropis maculatus)
Sabine shiner (R)	(Notropis sabiniae)
Pugnose minnow (E)	(Notropis emiliae)
Eastern slim minnow (R)	(Pimephales tennellus parviceps)

Fishes (continued)

Lake chubsucker (R)	(<i>Erimyzon sucetta</i>)
Brown bullhead (R)	(<i>Ictalurus nebulosus</i>)
Neosho madtom (E)	(<i>Noturus placidus</i>)
Mountain madtom (R)	(<i>Noturus eleutherus</i>)
Spring cavefish (E)	(<i>Chologaster agassizi</i>)
Ozark cavefish (R)	(<i>Amblyopsis rosae</i>)
Burbot (R)	(<i>Lota lota</i>)
Golden topminnow - possibly extirpated	(<i>Fundulus chrysotis</i>)
Plains killifish (R)	(<i>Fundulus kansae</i>)
Pumpkinseed (R)	(<i>Lepomis gibbosus</i>)
Bantam sunfish (R)	(<i>Lepomis symmetricus</i>)
Harlequin darter (E)	(<i>Etheostoma histrio</i>)
Niangua darter (R)	(<i>Etheostoma nianguae</i>)
Goldstripe darter (E)	(<i>Etheostoma parvipinne</i>)
Redfin darter (R)	(<i>Etheostoma whipplei</i>)
Bluestripe darter (R)	(<i>Percina cymatotaenia</i>)
Longnose darter (R)	(<i>Percina nasuta</i>)

Reptiles and Amphibians

Four-toed salamander (R)	(<i>Hemidactylium scutatum</i>)
Oklahoma salamander (R)	(<i>Eurycea tynerensis</i>)
Dwarf salamander (E)	(<i>Eurycea quadridigitatus</i>)
Wood frog (E)	(<i>Rana sylvatica</i>)
Alligator snapping turtle (R)	(<i>Macrochelys temminckii</i>)
Yellow mud turtle (R)	(<i>Kinostemon flavescens</i>)
Blandings turtle (E)	(<i>Emydoidea blandingii</i>)
Great Plains skink (R)	(<i>Eumeces obsoletus</i>)
Green water snake (R)	(<i>Natrix cyclopion</i>)
Queen snake (E)	(<i>Natrix septemvittata</i>)
Western hognose snake (R)	(<i>Heterodon nasicus</i>)
Smooth green snake (R)	(<i>Ophiodryx vernalis</i>)
Scarlet snake - status un- determined	(<i>Cemophora coccinea</i>)
Massasaugua (R)	(<i>Sistrurus catenatus</i>)
Canebrake rattlesnake (E)	(<i>Crotalus horridus atricaudatus</i>)

Birds

Red-shouldered hawk (E)	(<i>Buteo lineatus</i>)
Ruffed grouse (R)	(<i>Bonasa umbellus</i>)
Greater prairie chicken (R)	(<i>Tympanuchus cupido</i>)
Barn owl (E)	(<i>Tyto alba</i>)

Birds (continued)

Double-crested cormorant (E)	(<i>Phalacrocorax auritus</i>)
Marsh hawk (E)	(<i>Circus cyaneus</i>)
Mississippi kite (R)	(<i>Ictinia mississippiensis</i>)
Sharp-shinned hawk (E)	(<i>Accipiter striatus</i>)
Cooper's hawk (E)	(<i>Accipiter cooperii</i>)
King rail (R)	(<i>Rallus elegans</i>)
Black rail - status undetermined	(<i>Laterallus jamarensis</i>)
Upland sandpiper (R)	(<i>Bartramia longicauda</i>)
Least tern (E)	(<i>Sterna albifrons</i>)
Swainson's warbler (E)	(<i>Limothlypis swainsonii</i>)
Henslow's sparrow (R)	(<i>Ammodramus henslowii</i>)
Bachman's sparrow (R)	(<i>Almophila aestivalis</i>)
Blad eagle (R)	(<i>Haliaeetus leucocephalus</i>)
Osprey (E)	(<i>Pandion haliaetus</i>)
American peregrine falcon (E)	(<i>Falco peregrinus</i>)

Mammals

Indiana bat (E)	(<i>Myotis sodalis</i>)
Small-footed myotis - status undetermined	(<i>Myotis leibii</i>)
Gray bat (E)	(<i>Myotis grinescens</i>)
Keen's bat (R)	(<i>Myotis keenii</i>)
Western big-eared bat (R)	(<i>Plecotus townsendii</i>)
Eastern big-eared bat (R)	(<i>Plecotus rafinesquii</i>)
Black bear (R)	(<i>Fuarctos americanus</i>)
Lease weasel (R)	(<i>Mustela nivalis</i>)
Long-tailed weasel (R)	(<i>Mustela frenata</i>)
River otter (E)	(<i>Lutra canadensis</i>)
Cougar (E)	(<i>Felis concolor</i>)
White-tailed jackrabbit (E)	(<i>Lepus townsendii</i>)
Black-tailed jackrabbit (R)	(<i>Lepus californicus</i>)
Swamp rabbit ()	(<i>Sylvilagus aquaticus</i>)

HARD TO FIND NATIVES

by Lee Salber

The creaky "pump handle" call of blue jays drifted with the cool, early-spring breeze. To my right, a chipmunk sounded off defiantly — he's full of bravado so long as his rock-wall fortress is close at hand. I was up early, but two red squirrels chattered in the pines to let me know I wasn't the first one in motion on the mountain. In front of me a track-filled patch of snow in the shape of a poorly-flipped pancake gave away the runway of a snowshoe hare, and in the field below, a woodchuck was poking his head up, surveying 1974 for the first time.

It's spring, and with backyards bustling with wildlife, it's easy to forget that some of New Hampshire's animals are scarce while others are in danger of extinction. The National Wildlife Federation, the largest non-profit conservation organization in the world, is devoting this year's Wildlife Week observance to problems faced by endangered species. It seems particularly appropriate for us to join in their year-long observance by taking a look at the status of our state's wildlife.

EXTINCT

Since the settlement of the state, extinction has already claimed the following five species once known to occur in New Hampshire.

Passenger Pigeon. A classic case of man's effect on wildlife, the passenger pigeon is believed to have once been the most abundant bird in existence. Across New Hampshire skies, flocks blotting out the sun were observed to continue for half a day or more. Believe it or not, trees were even known to fall from the sheer weight of roosting birds. The pigeon was found primarily in the dense forests of the state and, for the most part, nested in the northern counties. The last official record of a passenger pigeon in New Hampshire was made in 1885, and the last individual of the species died in the Cincinnati Zoological Park in 1914. Land clearing, forest fires and market hunting led to its demise.

Heath Hen. This member of the grouse family was found in southern New Hampshire, but was not abundant. Records show that the hen existed in Hillsborough County as late as 1820. Killed off by man, dogs and cats, and adversely affected by the loss of habitat, the last Heath hen died on Martha's Vineyard in 1932.

Labrador Duck. Though it never actually took up permanent residence, this species passed through the state during spring and fall migrations at which time it was probably seen along the coast. It became extinct about 1875, apparently because of depredations on its breeding grounds for "eider" down, eggs and food.

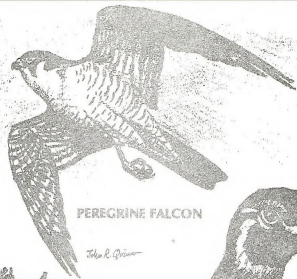
Great Auk. This bird is known to have wintered south of New Hampshire and so it is likely that the Auk passed along our coast during migration. Overhunting brought about its extinction around 1844.

Eastern Elk. A preserved elk antler found in a lime deposit in Lime Pond, Columbia, New Hampshire in 1945 indicated that at least one elk was present in the state, though there are no other records of its presence (the western elk was introduced in 1903 and again in 1933 but there are none believed to be in existence in New Hampshire today outside of the Blue Mountain Forest in Croydon). The eastern elk became extinct in 1880.

ENDANGERED

Like ecology, the word endangered has come to have many meanings. It does, however, have a specific definition when applied to fish and wildlife, for it refers to the List of Endangered Fish and Wildlife published in the Federal Register and maintained by the Secretary of the Department of the Interior. Each animal entered on this list is threatened with extinction and its chances of survival are in immediate peril. If an endangered species doesn't get help, it will probably become extinct, that is, be eliminated from the face of the earth.

An animal may be added to the list because its habitat is being altered or destroyed, or because of overexploitation, disease, or predation. But, guidelines for determining if an animal qualifies are complicated. A species, such as the brown pelican, though quite numerous, may still be considered endangered if the threat—in this case pesticides—jeopardizes the entire species with disaster. Odd as it may seem, other species, which are few in number, may not be endangered. The special habitat requirements of these animals may have always limited their population, and those in existence may not be dwindling in numbers at all. Because of the complexity of the problem,



PEREGRINE FALCON

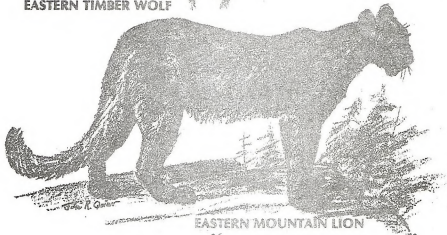
Wm. R. Ginter



SPRUCE GROUSE

Wm. R. Ginter

EASTERN TIMBER WOLF



EASTERN MOUNTAIN LION

Wm. R. Ginter

it's impossible to set specific criteria for judging whether or not a species should be included on the list. Rather, the Secretary of the Interior relies on the advice and recommendations of specialists and agencies with expertise on the subject. Since 1967, when the first list of endangered species was issued, the number of animals included has increased from 78 to 109. Of these, the following species are, or were at one time, New Hampshireites.

Eastern Mountain Lion. Also called puma, cougar, panther or catamount, this large cat was found throughout New Hampshire at the time of settlement, but not as one of the more common animals. The decline in deer around 1800, and the encroachment of man led to the mountain lion's decline. Few were seen after the 1800's, and it was considered extirpated from New Hampshire. However, recent sightings by reliable sources indicated it may be making a comeback. A cat sighting was reported near Success Pond as recently as August of 1971. The mountain lion has been protected by state legislative action since 1967; New Hampshire provides full protection to the mountain lion.

Eastern Timber Wolf. This predator was numerous throughout the state at the time of settlement. In Warren, for example, wolves prowled about houses, sometimes standing with their paws on the window sills to peer inside. During the 1700's most towns had a bounty on wolves, and by 1880 most of these predators had disappeared though there was an official report of two being taken in 1895. The wolf is considered to have been exterminated

in New Hampshire. It is not protected by state law.

American Peregrine Falcon. The fastest of all birds (known to reach speeds of 175 mph in a dive), the Peregrine falcon or duck hawk, originally nested in the rocky cliffs of New Hampshire. There have been recent sightings of it migrating through the state, and some indications of possible nesting attempts. Pesticides are believed to be the cause of its decline. All hawks are protected in New Hampshire.

Eskimo Curlew. The curlew once passed through the state during migration. The last known sighting in North America was in 1963.

Whales. The Humpback, Finback, Sei, Blue whale, Spem and the Atlantic Right whale have all been reported to occur along the New Hampshire coast from time to time.

Indiana Bat. This mammal is found throughout the state in association with cavernous limestone areas, but is uncommon.

THREATENED WILDLIFE

The Department of the Interior maintains a record of threatened wildlife used in compiling the official list of endangered species. Threatened species are defined as those animals which, though not yet in immediate danger of extinction, are on the decline and must be watched closely. The following threatened species are found in New Hampshire.

Ipswich Sparrow. This bird breeds on Sable Island off Nova Scotia, and during migration, it is occasionally seen among the sand dunes along the New Hampshire coast.

Sunapee Trout. Originally found in Sunapee Lake, this fish was

introduced into several New Hampshire lakes, but later introductions of lake trout, resulting in cross-breeding, appear to have caused the Sunapee's disappearance. The species is now known to exist only in Connor Pond in Ossipee and possibly in Tewksbury Pond in Grafton.

UNCOMMON WILDLIFE

The following list of animals make their homes in New Hampshire in limited numbers and are considered uncommon to rare. It must be remembered that, although these animals are in short supply in the Granite State and warrant our care, they are not necessarily in trouble, and may even be common in other states.

Moose. This huge mammal was once plentiful, being especially numerous in northern New Hampshire. Historical records noted one hunter shooting eighty in a season; another ninety-nine in one winter. By 1820, moose were getting hard to find in southern Coos. The first hunting season was set in 1875, but it was not until 1901 that complete protection was afforded. Today there are believed to be approximately 200 moose in the state, and recent information indicates that the animal is on the increase. A brain worm disease may be acting as a limiting factor, slowing down the moose's comeback.

Canada Lynx. Since settlement, this cat has never been very abundant; it became almost extinct by the last quarter of the 19th century. They are now considered rare, and few have been taken since 1937. The lynx is suited to the higher elevations of the White Mountains and has been protected since 1971.

Marten. The Pine marten, or sable, was once an abundant species providing substantial income to Coos County trappers. The destruc-

tion of its range and trapping practically exterminated it. The marten is now considered rare and has been protected since 1935.

Caribou. The caribou has always been a very rare species in New Hampshire, migrating into the state only occasionally. The animal hasn't been seen during this century, and has been protected since 1901.

Cottontail Rabbit. Both the Eastern cottontail and the New England cottontail are found in limited numbers, primarily in the southern portions of the state. While the New England cottontail is a native, the Eastern cottontail has moved into the state from Massachusetts over the past thirty or forty years. Changes in land use are blamed for the rabbit decline. During the 1800's and early 1900's, the state was over half cleared land (ideal rabbit cover) and rabbits were in abundance. Today, the state is 90 percent wooded.

Hawks. The Cooper, Sharpshin, Marsh, and Red-Shouldered hawks are becoming more uncommon in the state.

Turkey. The turkey was the largest game bird found in New Hampshire, ranging over the entire southern half of the state. Within 100 years after settlement, it was essentially exterminated by man. In 1969, the Fish and Game Department released twenty-five wild birds from West Virginia. By the fall of 1970, they doubled in number but started on a downhill skid during the following hard winter. Turkey signs are still noted occasionally, and the Department is considering another release of birds this year.

Spruce Grouse. This grouse species was never really abundant at the time of settlement. Lumbering off of the spruce forests reduced their numbers as did market hunting. The spruce grouse is now considered very rare, and there has been a closed season on hunting them since 1941. Most of the few remaining birds are located at higher elevations in the deep woods of the north.

Eagles. Both the American bald eagle and the Golden eagle are found here in limited numbers. The Golden was always rare, but there have been recent flight and nesting reports. The Bald eagle used to nest here, but there have been no confirmed reports of it doing so recently. There have been sightings of the bird in flight within the past few years. Pesticides are causing its decline. Eagles are provided full protection under Federal and State law.

Osprey. This species was found in northern New Hampshire, but was never a common nester. It too is believed to be on the decline nationally because of pesticides though it appears to be holding its own in northern New Hampshire around Lake Umbagog.

Loon. A symbol of the North Country, the loon is becoming more uncommon as motor boats disturb the nesting birds (some even thoughtlessly run down the mother and her young) and second home developments destroy its nesting sites. Pesticides are also causing the thinning of their eggshells.

Great Gray Owl. This owl is very rare, but only because it seldom migrates southward from the Hudson Bay area into the state.

Snowy Owl. This species is uncommon, but again, only because its primary range is north of New Hampshire and its migration into the state is only occasional. The owl's presence is believed to be dependent upon food supplies to the north. All of the state's over eight species of owls are protected.

Northern Three-Toed Woodpecker. It is rare to very rare in New Hampshire. This species, along with the Black-backed three-toed woodpecker (uncommon to rare), were never common, and the loss of old growth spruce has caused a further dwindling of their numbers. Both are found year-round in the northern portion of the state.

Purple Martin. The martin is entirely dependent on birdhouses and originally extended its range into New Hampshire with the help of the Indians who provided them with hollowed-out gourds. Because of lack of repair of their bird houses, the loss of open land, recent cool, wet springs and nesting competition from house sparrows and starling, purple martins are declining as summer residents of our state.

Bluebird. The Blue Robin, better known as the Bluebird, is now an uncommon species in New Hampshire and is on the decline. The bird is losing its nesting sites to house sparrows and starlings. It is also a bird of semi-open land which, in New Hampshire, is reverting back to forest.

Prebles Lemming Mousse. This unique species lives in New Hampshire's boreal habitat (limited to the Mount Washington area) and has never been abundant.

Gapper's Red-Backed Mouse. This medium-sized vole is uncommon in New Hampshire and only a couple of specimens have been found in Northern Coos County.

Rock Vole. The vole is located in the mountains of northern New Hampshire, but is uncommon throughout its range.

Gray Long-Tailed Shrew. A rare shrew found only in the Mount Washington area.

Tompson Pigmy Shrew. Found in the northern half of the state; it is rare throughout this range.

Hoary Bat. The Hoary bat is found throughout the state but is uncommon.

Blanding's Turtle. The Blanding's turtle is at the outer limits of its range in New Hampshire and has never been numerous, though it is common in Illinois, Wisconsin, and Indiana. The turtle is typically found near wet, marshy areas. This amphibian is one of the seven species of turtles in the state.

Purple Salamander. Also known as the Green or Northern Spring salamander, the Purple salamander is the largest of our nine species. The state has only a small number of Purple salamanders, however, it is likely that there were never very many. It is found throughout the state usually in cold mountain streams in thickly-wooded sites.

Marble Salamander. This salamander is rare and likely to be found in habitats that vary from dry hillsides to damp sandy areas. It is the least known of the New Hampshire amphibia.

Northern Timber Rattlesnake. The rattler is one of eleven species of snakes in the state. It is uncommon although there are pockets of them in the Allenstown, Deerfield, Candia area and on Wintziquet Mountain in Winchester.

Smooth Green Snake. This snake is uncommon throughout the state and is usually located in brushy fields and clearings.

Blacknose Shiner. This shiner has a limited distribution in New Hampshire and is found only in the Isinglass River and Big Greenough Pond.

Inland Lakes Whitefish. Also called shad, this whitefish is at the southern limit of its range. It is found in Winnepesaukee, Squam and Wentworth Lakes.

Atlantic Salmon. Along with the American shad and the Sturgeon, the anadromous Atlantic salmon has been virtually eliminated from New Hampshire by dams and pollution of our waterways. Fish ladders and hatchery programs are being employed in an attempt to restore the Atlantic salmon.

Finescale Dace. This bronze-colored minnow is extremely rare in New Hampshire, and is known to exist only in the meadow-spring holes along Indian Stream in Pittsburg, Big and Little Greenough Ponds in Wentworth's Location and from Mud Pond in Dummer. ■

Editor's Note: We believe this article represents a complete listing of the uncommon vertebrates of New Hampshire. However, if you are aware of research which indicates others should be included, please contact the Game Management and Research Division.

List of ENDANGERED Species in N. J.

FISH

SHORTNOSE STURGEON Acipenser brevirostrum *

AMPHIBIANS and REPTILES

BLUE-SPOTTED SALAMANDER Ambystoma laterale
EASTERN TIGER SALAMANDER Ambystoma tigrinum
BOG TURTLE Clemmys muhlenberdi **

BIRDS

BALD EAGLE Haliaeetus leucocephalus
PEREGRINE FALCON Falco peregrinus *
OSPREY Pandion haliaetus
COOPER'S HAWK Accipiter cooperii

MAMMALS

INDIANA BAT Myotis sodalis *

SPECIAL CASE

MARINE MAMMALS

SPERM WHALE Physeter catodon *
BLUE WHALE Balaenoptera musculus *
FINBACK WHALE Balaenoptera physalus *
SEI WHALE Balaenoptera borealis *
HUMPBAC WHALE Megaptera novaeangliae *
RIGHT WHALE Eubalaena spp. *

MARINE REPTILES

ATLANTIC GREEN TURTLE Chelonia mydas
ATLANTIC HAWKSBILL Eretmochelys imbricata
ATLANTIC RIDLEY Lepidochelys kempi
ATLANTIC LEATHERBACK Dermochelys coriacea

* "U. S. List of Endangered Fauna, May 1974"

** Listed as Threatened in "Resource Publication 114, March 1973"

List of THREATENED Species in N. J.

FISH

ATLANTIC TOMCOD Microgadus tomcod

AMPHIBIANS and REPTILES

PINE BARRENS TREEFROG Hyla andersoni **
EASTERN EARTH SNAKE Virginia valeries
TIMBER RATTLESNAKE Crotalus horridus

BIRDS

YELLOW-CROWNED NIGHT HERON Nyctanassa violacea
LEAST BITTERN Ixobrychus exilis
SHORT-EARED OWL Asio flammeus
BARRED OWL Strix varia
RED-SHOULDERED HAWK Buteo lineatus
MARSH HAWK Circus cyaneus
SHARP-SHINNED HAWK Accipiter striatus
MERLIN (PIGEOON HAWK) Falco columbarius
KING RAIL Rallus elegans
BLACK RAIL Laterallus jamaicensis
ROSEATE TERN Sterna dougalli
PIPING PLOVER Charadrius melodus
UPLAND SANDPIPER (PLOVER) Bartramia americana
SHORT-BILLED MARSH WREN Cistothorus platensis
HENSLOW'S SPARROW Passerherbulus henslowii
GRASSHOPPER SPARROW Ammodramus savenarum
VESPER SPARROW Poascetes gramineus
BOBOLINK Dolichonyx oryzivorus

** Listed on Federal Threatened Species List.

List of THREATENED Species in N. J.

BIRDS (Cont.)

IPSWICH SPARROW

Passerculus sandwichensis
princeps **

RED-HEADED WOODPECKER

Melanerpes erythrocephalus

MAMMALS

KEEN'S MYOTIS

Myotis keenii

SMALL-FOOTED MYOTIS

Myotis subulatus

SOUTHERN BOG LEMMING

Synaptomys cooperi

SPECIAL CASE

MARINE MAMMALS

BLAINVILLE'S BEAKED WHALE

Mesoplodon densirostris

GULF STREAM BEAKED WHALE

Mesoplodon gervaisi

TRUE'S BEAKED WHALE

Mesoplodon mirus

GOOSE-BEAKED WHALE

Ziphius cavirostris

PIGMY SPERM WHALE

Kogia breviceps

** Listed on Federal Threatened Species List.

List of PERIPHERAL Species in N. J.

FISH

No listing of marine fish is practical, as many occasionally appear in our coastal waters.

RAINBOW SMELT

Osmerus mordax

AMPHIBIANS AND REPTILES

GROUND SKINK

Leiopodisma laterale

SPECIAL CASE

SEA TURTLES

The Sea Turtles are a group which deserve protection. While not common in our near-shore waters, some do appear each year. These animals have been taken for food and for their shells. They are also preyed upon by sharks, and, as they must come ashore to deposit eggs on the beach, the eggs are taken for food and young turtles are preyed upon by gulls, fish and sharks.

Sea Turtle which may be encountered in New Jersey waters and termed PERIPHERAL includes:

ATLANTIC LOGGERHEAD

Caretta caretta

BIRDS

Migratory birds are not listed, as many appear both spring and fall in New Jersey.

TURKEY

Meleagris gallopavo

MAMMALS

BLACK BEAR

Ursus americanus

FORCUPINE

Erethizon dorsatum

ERMINE

Mustela erminea

WATER SHREW

Sorex palustris

BOBCAT

Lynx rufus

PERIPHERAL MAMMALS

NEW ENGLAND COTTONTAIL

Sylvilagus transitionalis

SNOWSHOE RABBIT

Lepus americanus

DEER MOUSE

Peromyscus maniculatus

EASTERN WOOD RAT

Neotoma floridana

SPECIAL CASE

MARINE MAMMALS

HARP SEAL

Phoca groenlandica

GRAY SEAL

Halichoerus grypus

HOODED SEAL

Cystochora cristata

List of UNDETERMINED Status Species in N. J.

FISH

AMERICAN SHAD	<u>Alosa sapidissima</u>
ATLANTIC STURGEON	<u>Acipenser oxyrinchus</u>
SLIMY SCULPIN	<u>Cottus cognatus</u>
SPOTFIN KILLIFISH	<u>Fundulus luciae</u>

AMPHIBIANS AND REPTILES

GRAY TREEFROG	<u>Hyla chrysoscelis</u>
UPLAND CHORUS FROG	<u>Pseudacris triseriata</u>
CARPENTER FROG	<u>Rana virgatipes</u>
MOUNTAIN SALAMANDER	<u>Desmognathus ochrophaeus</u>
EASTERN RED SALAMANDER	<u>Pseudotriton montanus</u>
JEFFERSON SALAMANDER	<u>Ambystoma jeffersonianum</u>
SILVERY SALAMANDER	<u>Ambystoma platineum</u>
FIVE-LINED SKINK	<u>Eumeces fasciatus</u>
WOOD TURTLE	<u>Clemmys insculpta</u>
RED-BELLIED TURTLE	<u>Chrysemys rubriventris</u>
CORN SNAKE	<u>Elaphe guttata</u>
NORTHERN SCARLET SNAKE	<u>Cemophora coccinea</u>
NORTHERN PINE SNAKE	<u>Pituophis melanoleucus</u>

BIRDS

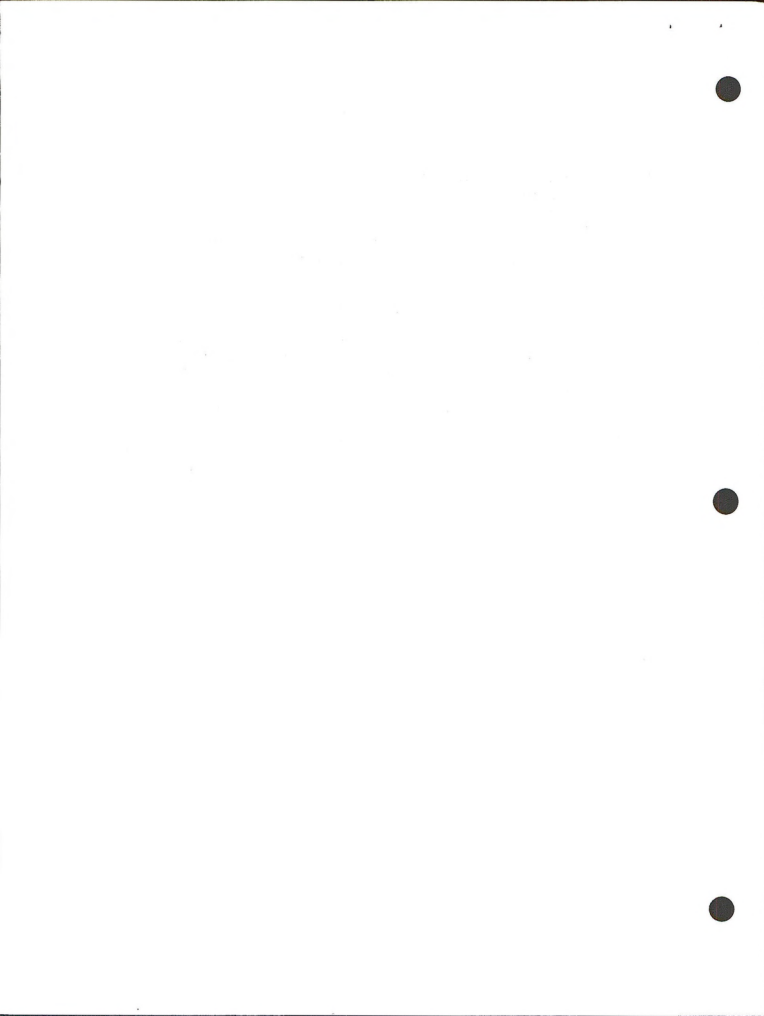
YELLOW RAIL	<u>Coturnicops noveboracensis</u>
ORCHARD ORIOLE	<u>Icterus spurius</u>
LONG-EARED OWL	<u>Asio otus</u>

MAMMALS

RICE RAT	<u>Oryzomys palustris</u>
LONG-TAILED SHREW	<u>Sorex dispar</u>
WOODLAND JUMPING MOUSE	<u>Hesperomys insidius</u>

DEFINITIONS

- ENDANGERED** - A species of native fish or wildlife shall be regarded as threatened with extinction whenever its existence in New Jersey is endangered because its habitat is threatened with destruction, drastic modification, or severe curtailment, or because of overexploitation, disease, predation, or because of other factors, and that its survival requires assistance.
- THREATENED** - May become **ENDANGERED** if conditions surrounding the species begin or continue to deteriorate.
- PENIPHERAL** - A species (usually a mammal, arphibian or reptile) whose occurrence in New Jersey is at the edge of its present natural range and which may be threatened with extinction within New Jersey although not in its range as a whole. Special attention may be necessary to assure retention in the State's fauna.
- STATUS UNDETERMINED** - A species that has been suggested as possibly threatened with extinction, but about which there is not enough information to determine the status. More information is needed.





Peter A. A. Berle,
Commissioner

ENDANGERED, EXTIRPATED AND EXTINCT WILDLIFE OF NEW YORK STATE

RESIDENT ENDANGERED SPECIES

*Indiana bat	<u>Myotis sodalis</u>
**Northern bald eagle	<u>Haliaeetus leucocephalus alascanus</u>
**American osprey	<u>Pandion haliaetus carolinensis</u>
**Bog turtle	<u>Clemmys mhlenbergi</u>
*Shortnose sturgeon	<u>Acipenser brevirostrum</u>
*Blue pike	<u>Stizostedion vitreum gatlucum</u>
*Longjaw cisco	<u>Coregonus alpenae</u>
**Karner blue butterfly	<u>Lycaides melissa samuelis</u>
**Chittenango ovate amber snail	<u>Succinea ovalis chittenangoensis</u>

MIGRANT ENDANGERED SPECIES

*Southern bald eagle	<u>Haliaeetus leucocephalus leucocephalus</u>
*Arctic peregrine falcon	<u>Falco peregrinus tundrius</u>

EXTIRPATED SPECIES

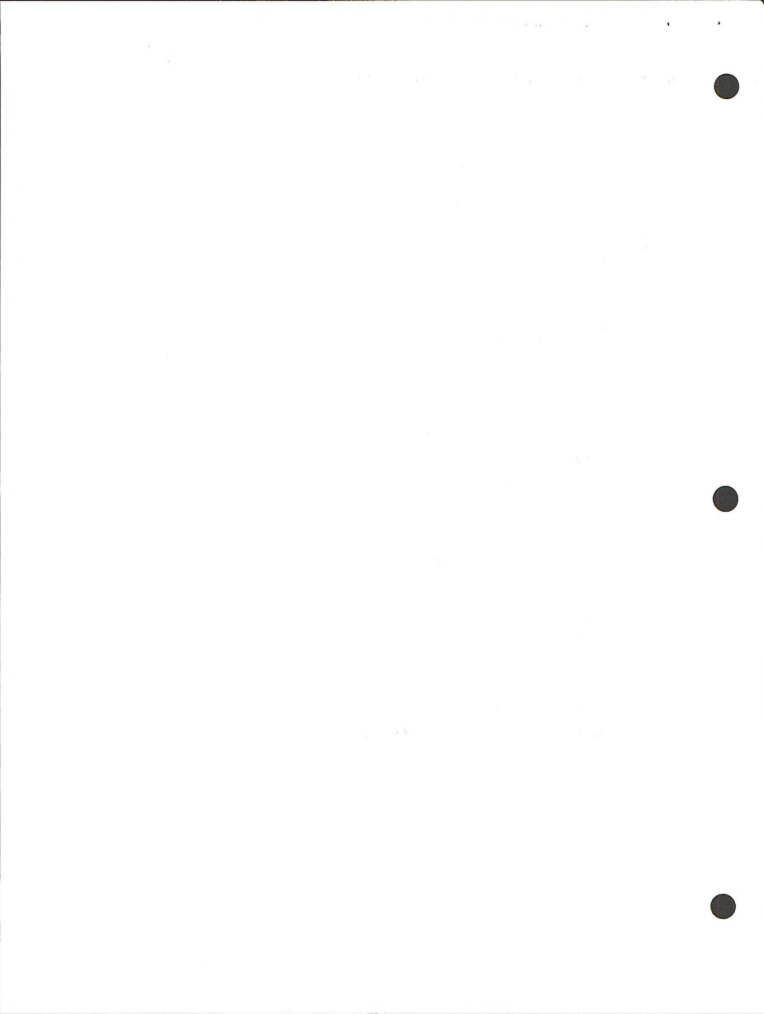
*American peregrine falcon	<u>Falco peregrinus anatum</u>
*Eastern timber wolf	<u>Canis lupus lycon</u>
*Eastern puma or cougar	<u>Felis concolor cougar</u> - possibly extinct subspecies
Elk	<u>Cervus canadensis canadensis</u>
Moose	<u>Alces alces americana</u>
*Eskimo curlew	<u>Numenius borealis</u> - possibly extinct

EXTINCT SPECIES

Gull Island vole	<u>Microtus nesophilus</u>
Labrador duck	<u>Camptorhynchus labradorius</u>
Heath hen	<u>Tympanuchus cupido</u>
Carolina parakeet	<u>Conuropsis carolinensis</u>
Passenger pigeon	<u>Ectopistes migratorius</u>

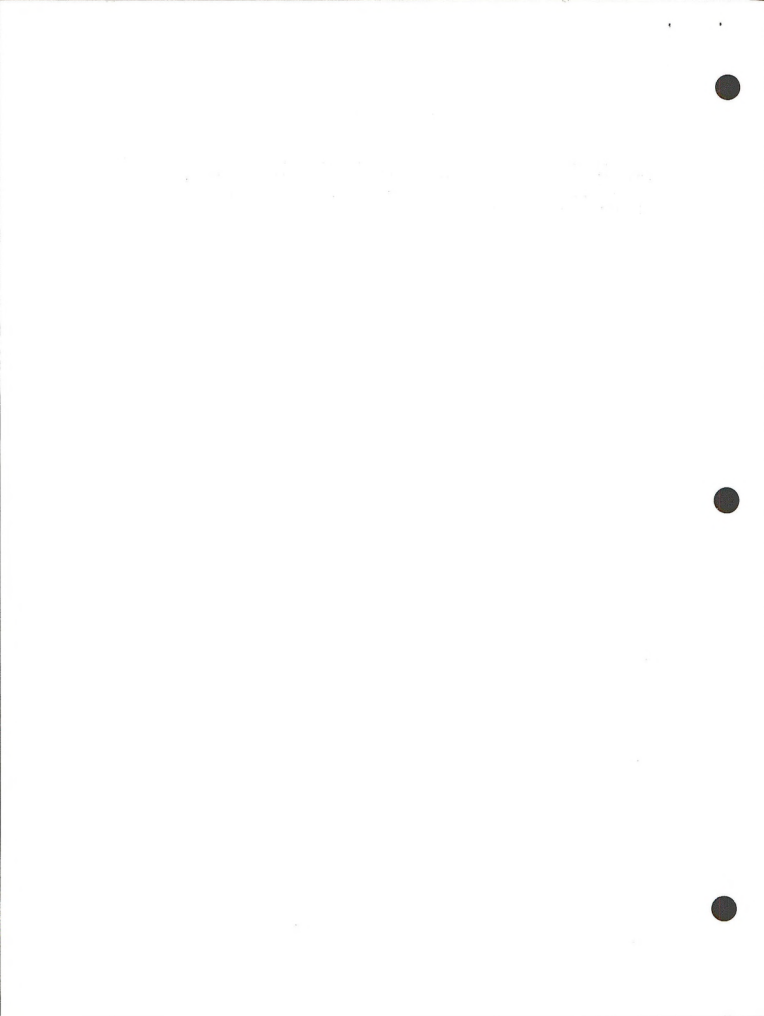
*Indicates that the species is on the Federal and New York State
Endangered Species list.

**Indicates that species is only on New York State Endangered Species
list.



NORTH CAROLINA

North Carolina biologists have identified many species of animals worthy of concern in the state. These species are listed in "Endangered and Threatened Plants and Animals of North Carolina" published by the North Carolina Museum of Natural History.





ENDANGERED WILD ANIMALS IN OHIO

Ohio Revised Code, Section 1531.25, effective January 1, 1974, provides as follows:

"The Chief of the Division of Wildlife, with the approval of the Wildlife Council, shall adopt and may modify and repeal rules, in accordance with Chapter 119. of the Revised Code, restricting the taking or possession of native species of wild animals, or any eggs or offspring thereof, that he finds to be threatened with statewide extinction. The rules shall identify the common and scientific names of each endangered species and shall be modified from time to time to include all species listed on the United States List of Native Endangered Fish and Wildlife pursuant to the Endangered Species Conservation Act of 1969, 83 Stat. 275, 16 U.S.C.A. 668cc-3, as amended, and that are native to this state, or that migrate or are otherwise reasonably likely to occur within the state."

"The rules shall provide for the taking of species threatened with statewide extinction, for zoological, educational, and scientific purposes, and for propagation in captivity to preserve the species, under written permits from the Chief. The rules shall in no way restrict the taking or possession of species listed on such United States list for zoological, educational, or scientific purposes, or for propagation in captivity to preserve the species, under a permit or license from the United States or any instrumentality thereof."

"No person shall violate any rule adopted pursuant to this section."

A public hearing was held April 2, 1976, and the following list of endangered species has been established effective May 1, 1976:

Mammals

River otter, *Lontra c. canadensis*
Bobcat, *Lynx r. rufus*
Indiana bat, *Myotis sodalis*
Wood rat, *Neotoma floridana magister*

Birds

American peregrine falcon, *Falco peregrinus anatum*
Sharp-shinned hawk, *Accipiter striatus velox*
Bald eagle, *Haliaeetus leucocephalus*
King rail, *Rallus e. elegans*
Kirtland's warbler, *Dendroica kirtlandii*
Upland sandpiper, *Bartramia longicauda*
Common tern, *Sterna h. hirundo*

Reptiles

Spotted turtle, *Clemmys guttata*
Northern copperbelly, *Natrix erythrogaster neglecta*
Eastern plains garter snake, *Thamnophis r. radix*

Amphibians

Blue-spotted salamander, *Ambystoma laterale*
Green salamander, *Aneides aeneus*
Cave salamander, *Eurycea lucifuga*
Four-toed salamander, *Hemidactylum scutatum*
Wehrle's salamander, *Plethodon wehrlei*

Fish

Ohio lamprey, *Ichthyomyzon bdellium*
Northern brook lamprey, *Ichthyomyzon fossor*
Allegheny brook lamprey, *Ichthyomyzon greeleyi*
Silver lamprey, *Ichthyomyzon unicuspis*
American brook lamprey, *Lampetra lamottei*
Lake sturgeon, *Acipenser fulvescens*
Paddlefish, *Polyodon spathula*
Spotted gar, *Leptacosteus oculatus*
Shortnose gar, *Leptacosteus platostomus*
Mooneye, *Hiodon tergisus*
Cisco, *Coregonus artedii*
Great Lakes muskellunge, *Esox m. masquinongy*
Rosyside dace, *Clinostomus funduloides*
Tonguetied minnow, *Emoglossum laurae*
Bigmouth shiner, *Notropis borealis*
Pugnose minnow, *Notropis emiliae*
Bigeye shiner, *Notropis boops*
Ghost shiner, *Notropis buchmanii*
Blacknose shiner, *Notropis heterolepis*
Silver chub, *Hybopsis storeriana*
Longnose sucker, *Catostomus catostomus*
Greater redhorse, *Maxostoma valenciennesi*
Blue sucker, *Cypleptus elongatus*
River redhorse, *Maxostoma carinatum*
Lake chubsucker, *Erimyzon sucetta*
Scioto madtom, *Noturus trautmani*
Northern madtom, *Noturus stigmatosus*
Mountain madtom, *Noturus eleutherus*
Pirateperch, *Aphredoderus sayanus*
Burbot, *Lota lota*
Banded killifish, *Fundulus diaphanus*
Iowa darter, *Etheostoma exile*
Longhead darter, *Percina macrocephala*
River darter, *Percina shumardi*
Eastern sand darter, *Ammocrypta pellucida*
Channel darter, *Percina opeelandi*
Blue pike, *Stizostedion vitreum glaucum*
Tippecanoe darter, *Etheostoma tippecanoe*
Slenderhead darter, *Percina phoxocephala*
Spotted darter, *Etheostoma maculatum*

Crustaceans

Allegheny crayfish, *Orconectes obscurus*

Mollusks

Cob shell, *Quadrula cylindrica*
Club shell, *Pleurobema clava*
Fan shell, *Cyprogenia stegaria*

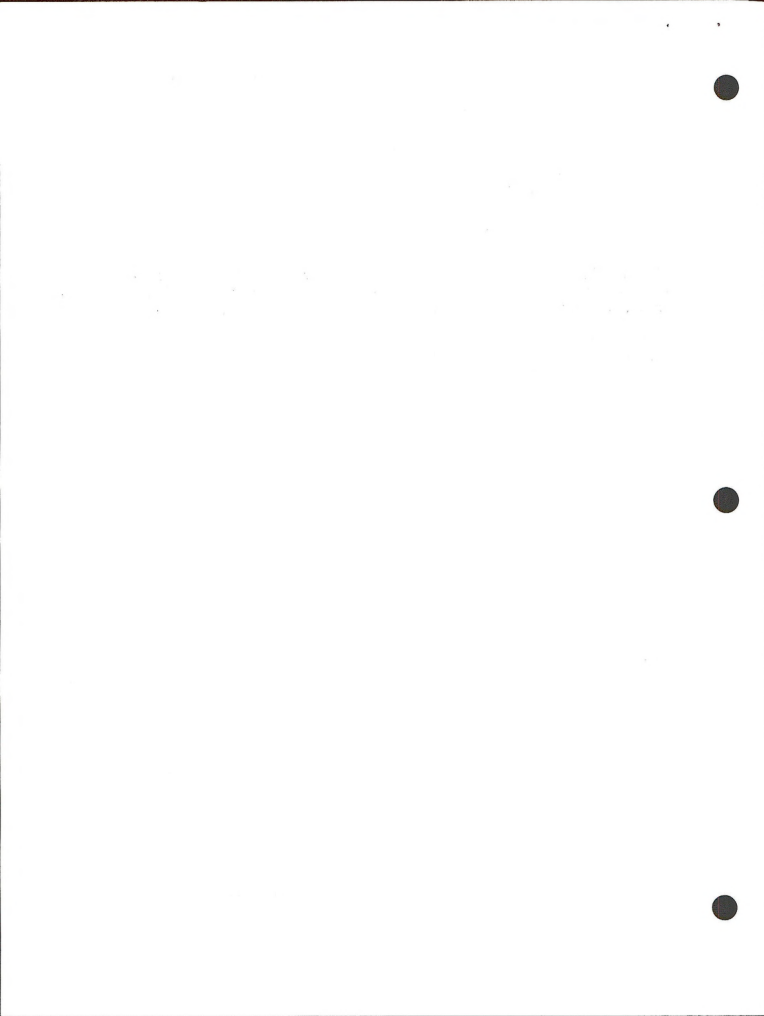
Orb mucket, *Lampsilis orbiculata*
White cat's paw, *Epioblasma sulcata perobliqua*
Northern riffle shell, *Epioblasma torulosa rangiana*
Simpson's shell, *Simpsoniata ambigua*
Ridged pocketbook, *Lampsilis ovata*
Yellow sand shell, *Lampsilis teres*
Fragile heel-splitter, *Potamilus laevisimus*
Nodule shell, *Quadrula nodulata*
Monkeyface, *Quadrula metanevra*
Bullhead, *Plethobasus cyphus*
Butterfly, *Plagiola lineolata*
Long-solid, *Fusconata subrotunda*
Ohio pig-toe, *Pleurobema cordatum*

It is unlawful for any person to import, transport, sell, offer for sale or possess any of the native endangered species of wild animals or hides or parts thereof, without first obtaining permission from the Wildlife Chief.

The Division of Wildlife welcomes factual information which tends to support the addition or removal of endangered status for a species. Such information may be submitted at any time to:

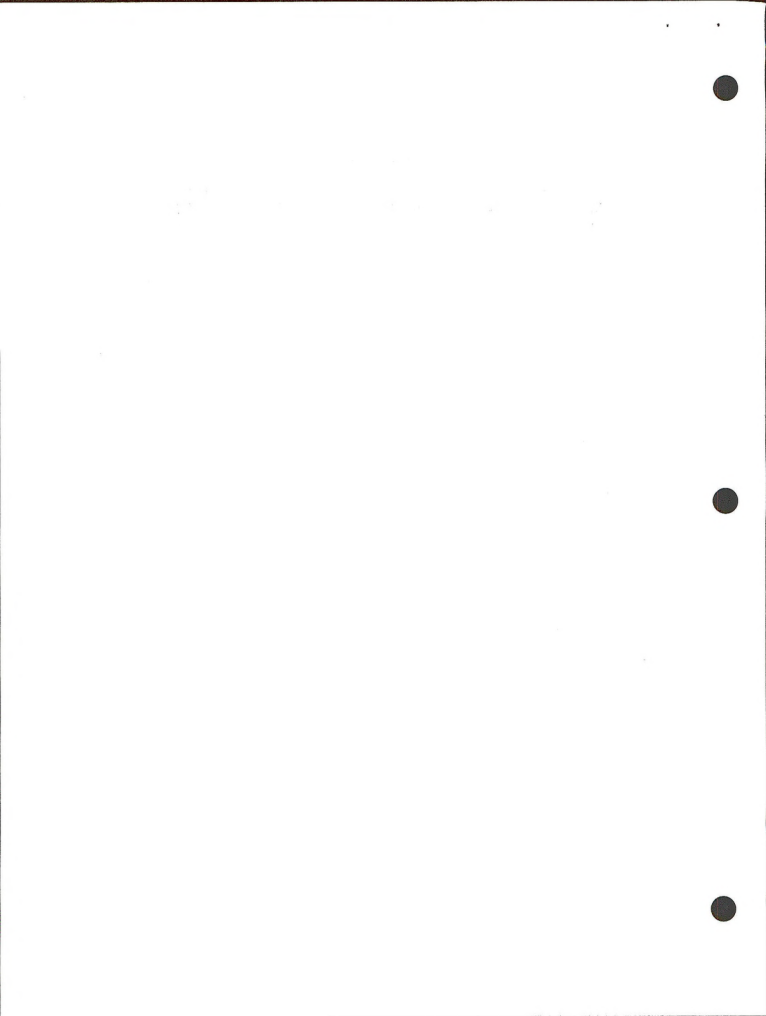
Chief, Division of Wildlife
Fountain Square
Columbus, Ohio 43224

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Fountain Square, Columbus, Ohio 43224



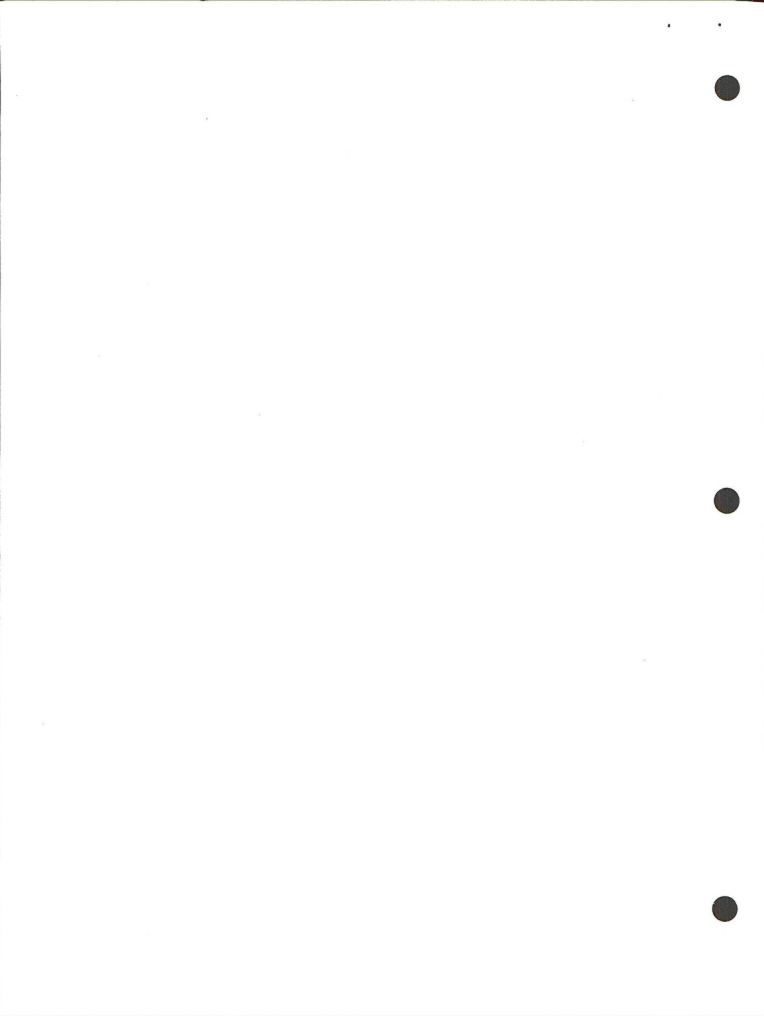
PENNSYLVANIA

Pennsylvania recognizes the Federal list of threatened and endangered species listed in Section II; it does not presently maintain a state list of species.



Rhode Island

Rhode Island does not maintain a separate list of rare or endangered species. It recognizes the Federally listed species given for this state in Section II.



Endangered Species
in
South Carolina

Birds

- American Peregrine Falcon This bird formerly nested all along the Eastern seaboard south to Georgia. Present status unknown. Once nested in S. C. mountains. Evidence points to DDT as main reason for decline
Falco peregrinus anatum
- Arctic Peregrine Falcon is an infrequent coastal migrant, breeding in the northern part of the country
Falco peregrinus tundrius
- Bachman's Warbler Located in the river and swamp forests of the lower coastal plain, habitat destruction thought to be main reason for decline of this obscure bird
Vermivora bachmanii
- Eastern Brown Pelican a coastal bird nesting on small islands and sand banks. DDT thought to be cause of decline. Population increasing following ban on DDT
Pelecanus occidentalis carolinensis
- Eskimo Curlew an incidental migrant along the coast, this bird is very rare and seen only occasionally
Numenius borealis
- Ivory billed Woodpecker coastal plain habitat is old growth flood plain, forest. . Status unknown but thought very close to extinction due to habitat destruction
Campyphilus principalis
- Kirtland's Warbler an incidental migrant through S. C. , passes through state on its way from the Great Lakes Region to the Bahamas
Dendroica kirtlandii
- Red-cockaded Woodpecker Nests in old growth pines in the piedmont and the coastal plain, vulnerable because of specific nesting requirements
Dendrocopus borealis
- Southern Bald Eagle Found predominantly within the lower coastal plain. Also inland along rivers and lakes. Decrease in numbers due to loss of habitat, nest disturbance, illegal shooting and DDT
Haliaeetus l. leucocephalus

Fish

- Shortnose Sturgeon Lives in both salt and fresh waters, is found in the lower coastal plain. Overfishing and pollution major factors in decrease in numbers
Acipenser brevirostrum

Herptiles

- American Alligator Found within the lower coastal plain region throughout the lower coastal southeast and along Mississippi River drainage to Oklahoma. Jeopardized by heavy poaching this reptile is recovering thanks to strict laws and protection
Alligator mississippiensis
- Atlantic Leatherback Turtle Found in open waters off the coast and in bays and estuaries. This turtle is an incidental visitor to S. C.
Dermochelys c. coriacea
- Atlantic Loggerhead Turtle Can be seen seasonally on barrier beaches and off-shore in open ocean waters, utilizes barrier beaches for nesting
Caretta caretta
- Atlantic Ridley Turtle This turtle is rarely seen, found in open ocean, bays and estuaries, may nest on barrier beaches
Lepidechelys kempii
- Gopher Tortoise Found on the sand ridges in the lower coastal plain
Gopherus polyphemus
- Pine Barren Tree Frog Uncommon but can be found in spagnum bogs within the coastal plain. Loss of habitat major reason for decline
Hyla andersoni
- Zig Zag Salamander Found in damp forests of Savannah River drainage system
Plethodon dorsalis

Mammals

- Atlantic Right Whale a migratory visitor to our coastal waters, this large whale
Eubalaena glacialis keeps basically to the open ocean except during certain times
of the year when it comes closer to shore in Antarctic waters
- Blue Whale this largest of all mammals is found only occasionally in open
Balaenoptera musculus waters off the coast
- Bowhead Whale keeps mostly to cold northern waters but may be seen in
Balaena mysticetus open ocean off coast
- Eastern Cougar Status unknown, but reports of sightings are statewide
Felis concolor cougar
- Finback Whale Found in open water off the coast all along the Atlantic
Balaenoptera physalus
- Florida Manatee an aquatic coastal mammal, the manatee may be seen in
Trichechus panatus S. C. during summer migrations
- Humpback Whale Cosmopolitan; the "singing whale" can be found in open
Magaptera novaeangliae waters off the Atlantic coast
- Indiana Bat Small, colonial bat, may be found in caves in our mountainous
Myotis sodalis regions, cave disturbance being the major cause of decline
- Sei Whale This whale looks like a miniature blue whale and was hunted
Balaenoptera borealis after the decline of the blue. Found occasionally in open
waters off coast
- Sperm Whale Only large toothed whale, can be found in deep water off
Physeter catodon Atlantic coast



TENNESSEE HERITAGE PROGRAM-TENNESSEE DEPARTMENT OF CONSERVATION

Status			Element Number	Element	Common Name
FED	ST	THP	HC.001	<u>1</u> <i>Anculosa subulobosa</i> form <i>umbilicata</i>	(Umbilicate River Snail)
*T	F	E	HE.022	<u>Anculospira picta</u> Clapp 1920	(Land Snail)
*T	F	E	HC.A64	<i>Athernia anthoni</i>	(Anthony's River Snail)
*T	T	T	HC.A65	<i>Athernia crassa</i>	(Crass River Snail)
E	F	E	HA.017	<i>Conradilla caelata</i>	Conrad 1834 (Birdwing Pearly Mussel)
		S	HA.018	<i>Cumberlandia monodonta</i>	Say 1829 (Spectical Case Pearly Mussel)
E	E	E	HA.021	<i>Dromus dromas</i>	Lea 1834 (Dromedary Pearly Mussel)
		S	HA.891	<i>Epioblasma arcaeformis</i>	Lea
		S	HA.022	<u>2</u> <i>Epioblasma dimarginata</i>	Lea 1857 (Pearly Mussel)
		S	HA.892	<i>Epioblasma brevidens</i>	Lea
E	F	F	HA.023	<i>Epioblasma f. florentina</i>	(Yellow-blossom Pearly Mussel)
		S	HA.023	<i>Epioblasma florentina walkeri</i>	(Walkers Pearly Mussel)
		S	HA.893	<i>Epioblasma haysiana</i>	Lea
		S	HA.024	<i>Epioblasma tenior</i>	Lea 1843 (Pearly Mussel)
		S	HA.025	<i>Epioblasma lewisi</i>	Walker 1910 (Pearly Mussel)
		S	HA.888	<i>Epioblasma sulcata</i>	Lea
E	F	F	HA.026	<i>Epioblasma torulosa</i>	(Tuberled-blossom Pearly Mussel)
E	E	E	HA.026	<i>Epioblasma torulosa</i> form <i>gubernaculum</i>	(Green-blossom Pearly Mussel)
E	E	E	HA.027	<i>Epioblasma turgidula</i>	Lea 1858 (Turgid-blossom Pearly Mussel)
E	E	E	HA.A63	<i>Epioblasma walkeri</i>	(Tan riffle-shell Mussel)
E	F	F	HA.032	<i>Fusconata cuneolus</i>	Lea 1840 (Fine-rayed Pigtoe Pearly Mussel)
E	F	F	HA.033	<i>Fusconata edoartana</i>	Lea 1840 (Shiny Pigtoe Pearly Mussel)
		S	HE.034	<i>Helicodiscus</i> sp.	(Land Snail)
		S	HE.035	<i>Helicodiscus hexodon</i>	Hubricht (Land Snail)
		S	HE.036	<i>Helicodiscus notius</i>	specus Hubricht (Land Snail)
*T	T	T	HC.039	<i>Io armigera</i> form <i>duttoniana</i>	Lea 1841 (Duck River Snail)
*E	F	F	HC.039	<i>Io armigera</i> form <i>javana</i>	Lea 1841 (Jays River Snail)
*E	F	F	HC.040	<i>Io fluviatilis</i>	(Spiney River Snail)
*T	T	T	HC.041	<i>Io genticulata</i>	(Haldeman 1840) (River Snail)
*T	T	T	HC.041	<i>Io genticulata</i> form <i>fuliginosa</i>	Lea 1841 (Fulginate River Snail)
*E	F	F	HC.041	<i>Io genticulata</i> form <i>pinguis</i>	Lea 1852 (Plain Lithasia River Snail)
*E	F	F	HC.042	<i>Io salebrosa</i>	Conrad 1834 (River Snail)
*E	F	F	HC.043	<i>Io verrucosa</i>	Rafinesque 1820 (River Snail)
*E	F	F	HC.043	<i>Io verrucosa</i> form <i>lima</i>	Conrad 1834 (River Snail)
E	F	F	HA.044	<i>Lampsilis orbiculata</i>	Hildreth 1828 (Pick Mucket Pearly Mussel)
E	F	F	HA.894	<i>Lampsilis virescens</i>	Lea (Alabama Lamp Pearly Mussel)
		S	HA.045	<i>Lastena lata</i>	Rafinesque 1820 (Cracking Pearly Mussel)
*E	E	E	HC.046	<i>*Leptoxis praerosa</i>	Say 1824 (River Snail)
		S	HA.047	<i>Lexingtonia dolabelloides</i>	Lea 1840 (Slab-sided Pearly Mussel)
		S	HE.048	<i>Mesodon archeri</i>	Pilsbry (Goforth Creek Snail)
*E	F	F	HE.049	<i>Mesodon jonesianus</i>	(Jones' Middle-toothed Land Snail)
		S	HA.875	<i>Obovaria retusa</i>	(Lam'k)
		S	HE.054	<i>Paravitrea ciampi</i>	Pilsbry (Land Snail)
		S	HA.057	<i>Pegasis fabula</i>	Lea 1836 (Little-winged Pearly Mussel)
		S	HE.059	<i>Pilsbryna aurea</i>	H.B. Baker (Land Snail)
E	E	E	HA.060	<i>Plethobasus cicatricosus</i>	(White warty-back Pearly Mussel)
E	F	F	HA.061	<i>Plethobasus cooperianus</i>	Lea 1834 (Orange-footed Pimpleback Pearly Mussel)
		S	HA.062	<i>Pleurobema cordatum</i>	Lea (Pigtoe Pearly Mussel)
E	F	F	HA.859	<i>Pleurobema plenus</i>	(Rough Pigtoe Pearly Mussel)
		S	HA.063	<i>Ptychobranchus subtentum</i>	Say 1825 (Fluted Kidney Shell Pearly Mussel)
		S	HA.882	<i>Potamilus capax</i>	(Fat Pocketbook Pearly Mussel)
		S	HA.064	<i>Quadrula cylindrica</i>	strigillata (Rough Rabbits Foot Freshwater Mussel)
E	F	F	HA.065	<i>Quadrula intermedia</i>	Conrad 1836 (Cumberland Monkey Face Pearly Mussel)
E	F	F	HA.066	<i>Quadrula sparsa</i>	Lea (Appalachian Monkey Face Pearly Mussel)

TENNESSEE HERITAGE PROGRAM

Status			Element Number	Element	Common Name
FED	ST	THP			
E	E	E	HA.013	<u>Toxolasma cylindrella</u>	(Pale Lilliput Pearly Mussel)
		S	HA.071	<u>Villosa fabalis</u>	Conrad 1834 (Pearly Mussel)
E		E	HA.895	<u>Villosa trabalis</u>	Conrad 1834 (Cumberland Bean Pearly Mussel)

- (1) Anculosa is considered synonymous with Leptoxis by some workers.
- (2) Epiblasma = Dysnomia
- (3) Toxolasma = Carunculina
- (4) (=Troostii Lea) (=perpurpureus Lea)

OTHER INVERTEBRATES

Status			Element Number	Element	Common Name
FED	ST	THP			
		T	KF.003	<u>Apocranonyx nortoni</u>	(Norton's Cave Scud)
		S	JC.005	<u>Brachycentrus</u>	(Trichopteran)
*T		T	KG.A66	<u>Cambarus bouchardi</u>	(Big South Fork Crayfish)
		S	KG.012	<u>Cambarus crinipis</u>	(Bouchard's Crayfish)
*T		T	KG.A67	<u>Cambarus extraneus</u>	(Chickamauga Crayfish)
*T		T	KG.A68	<u>Cambarus obeyensis</u>	(Obey Crayfish)
		S	KG.010	<u>Cambarus</u> sp.	(Emory River Crayfish)
		S	KD.019	<u>Cyclops clandestinus</u>	(Copepod)
*E		E	KG.A69	<u>Orconectes shoupi</u>	(Nashville Crayfish)

TENNESSEE HERITAGE PROGRAM

MAMMALS

Status			Element	Element	Common Name
FED	ST	THP	Number		
	D	S	FB.474	<u>Condylura cristata</u>	(Star-nosed Mole)
	D	S	FG.477	<u>Glaucomys sabrinus</u>	(Northern Flying Squirrel)
	T	T	FS.485	<u>Lutra canadensis</u>	(River Otter)
		S	FS.492	<u>Mustela nivalis</u>	(Least Weasel)
E	E	E	FD.494	<u>Myotis grisescens</u>	(Gray Bat)
E	E	E	FD.498	<u>Myotis sodalis</u>	(Indiana Bat)
	D	S	FD.496	<u>Myotis leibii</u>	(Small-footed Bat)
	D	S	FM.499	<u>Hapaeozapus insionis</u>	(Hoodland Jumping Mouse)
	D	S	FL.500	<u>Neotoma floridana</u>	(Eastern Hoodrat)
	D	S	FB.501	<u>Parascalops breweri</u>	(Hairy-tailed Mole)
	D	S	FD.506	<u>Plecotus rafinesquei</u>	(Eastern Big-eared Bat)
	D	S	FA.512	<u>Sorex cinereus</u>	(Masked Shrew)
	D	S	FA.515	<u>Sorex longirostris</u>	(Southeastern Shrew)
	D	S	FA.516	<u>Sorex palustris punctulatus</u>	(Northern Water Shrew)
	D	S	FA.514	<u>Sorex fumeus</u>	(Smoky Shrew)
	D	S	FA.513	<u>Sorex dispar</u>	(Long-tailed Shrew)
		S	FS.517	<u>Spilogale putorius</u>	(Eastern Spotted Skunk)
		S	FF.519	<u>Sylvilagus transiinnalis</u>	(New England Cottontail)
		S	FF.518	<u>Sylvilagus aquaticus</u>	(Swamp Rabbit)
	D	S	FL.520	<u>Synantomys cooperi</u>	(Southern Bog Lemming)
	D	S	FM.525	<u>Zapus hudsonius</u>	(Meadow Jumping Mouse)
F	E	E	FT.476	<u>Felis concolor</u>	(Eastern Cougar)

REPTILES

	D	S	CK.309	<u>Anolis c. carolinensis</u>	(Green Anole)
	D	S	CD.314	<u>Chrysemys scripta troosti</u>	(Cumberland Turtle)
	D	S	CD.315	<u>Clemmys mhlenberoi</u>	(Bog Turtle)
	D	S	CL.316	<u>Cnemidophorus s. sexlineatus</u>	(Six-lined Racerunner)
	D	S	CB.339	<u>Macrochelys temmincki</u>	(Alligator Snapping Turtle)
	D	S	CQ.345	<u>Natrix cyclopton cyclopton</u>	(Green Water Snake)
		S	CQ.665	<u>Natrix erythrogaster neglecta</u>	(Northern Copperbelly Water Snake)
	D	S	CH.351	<u>Onhisaurus attenuatus longicaudus</u>	(East Slender Glass Lizard)
	T	T	CQ.352	<u>Pituophis melanoleucus</u>	(Northern Pine Snake)
	T	T	CS.355	<u>Sistrurus miliarius streckeri</u>	(Western Pigmy Rattlesnake)

AMPHIBIANS

	D	S	BF.271	<u>Ambrystoma talpoideum</u>	(Mole Salamander)
	D	S	BG.276	<u>Cryptobranchus a. alleghaniensis</u>	(Hellbender)
	D	S	BL.279	<u>Desmognatus walteri</u>	(Black Mountain Dusky Salamander)
	T	T	BL.284	<u>Gyrinophilus palliucus</u>	(Tennessee Cave Salamander)
	D	S	BL.286	<u>Hemidactylum scutatum</u>	(Four-toed Salamander)
	D	S	BD.290	<u>Hyla gratiosa</u>	(Barking Tree Frog)
	D	T	BL.A70	<u>Eurycea aquatica</u>	(Brown-beaked salamander)

TENNESSEE HERITAGE PROGRAM

BIRDS

Status	Element Number	Element	Common Name
	FED	ST	THP
		T	E
		R	E
		R	E
		F	F
		T	T
		D	R
		D	T
		E	T
			E
		S	S
		D	S
	E	E	P
		D	R
		D	S
		D	S
		T	S
		D	S
		E	E
		R	R
	E	E	P
			R
	E	E	E
		R	R
		T	T
	E	D	T
		E	E
		E	E
		D	T
		E	S
		D	S
		R	R
		T	T
		D	T
		E	T
		K	K
		R	R
		D	S
	E	E	E
		R	R
		D	R
		T	T
		E	E
		R	R
		D	R
		E	E
		R	R
		T	T
		D	F
	F	C	P
			S
			S

DF.361	<i>Accipiter cooperii</i> (Cooper's Hawk)
DF.362	<i>Accipiter striatus</i> (Sharp-shinned Hawk)
DQ.896	<i>Actitis macularia</i> (Spotted Sandpiper)
DV.363	<i>Aegolius acadicus</i> (Saw-whet Owl)
EP.364	<i>Amphispiza aestivalis</i> (Bachman's Sparrow)
EP.365	<i>Ammodramus savannarum</i> (Grasshopper Sparrow)
DC.369	<i>Anhinga anhinga</i> (Anhinga)
DJ.371	<i>Ardea herodias</i> (Great Blue Heron)
DF.370	<i>Aquila chrysaetos</i> (Golden Eagle)
DJ.373	<i>Botaurus lentiginosus</i> (American Bittern)
DJ.897	<i>Bubulcus ibis</i> (Cattle Egret)
DF.375	<i>Buteo lineatus</i> (Red-shouldered Hawk)
DY.378	<i>Campephilus principalis</i> (Ivory-billed Woodpecker)
DJ.380	<i>Casmerodius albus</i> (Great Egret)
DE.381	<i>Cathartes aura</i> (Turkey Vulture)
EP.487	<i>Chondestes grammacus</i> (Lark Sparrow)
DF.388	<i>Circus cyaneus hudsonius</i> (Marsh Hawk)
DE.391	<i>Coragyps atratus</i> (Black Vulture)
EC.392	<i>Corvus corax</i> (Common Raven)
EC.898	<i>Corvus ossifragus</i> (Fish Crow)
EM.396	<i>Dendroica kirtlandii</i> (Kirtland's Warbler)
DJ.401	<i>Egretta thula</i> (Snowy Egret)
DG.408	<i>Falco peregrinus</i> (Peregrine Falcon)
DJ.410	<i>Florida caerulea</i> (Little Blue Heron)
DM.899	<i>Fulica americana</i> (American Coot)
DM.411	<i>Gallinula chloropus</i> (Common Gallinule)
DL.414	<i>Grus canadensis</i> (Sandhill Crane)
DF.416	<i>Haliaeetus leucocephalus</i> (Bald Eagle)
DF.421	<i>Ictinia mississippiensis</i> (Mississippi Kite)
DJ.422	<i>Ixobrychus exilis</i> (Least Bittern)
DM.426	<i>Laterallus jamaicensis</i> (Black Rail)
EM.417	<i>Lymothlypis swainsonii</i> (Swainson's Warbler)
DY.428	<i>Melanerpes erythrocephalus</i> (Red-headed Woodpecker)
EA.432	<i>Nuttallornis borealis</i> (Olive-sided Flycatcher)
DJ.433	<i>Nyctanassa violacea</i> (Yellow-crowned Night Heron)
DJ.434	<i>Nycticorax nycticorax</i> (Black-crowned Night Heron)
DF.435	<i>Pandion haliaetus</i> (Osprey)
EP.438	<i>Passerculus sandwichensis</i> (Savannah Sparrow)
EP.900	<i>Passerina ciris</i> (Painted Bunting)
DC.442	<i>Phalacrocorax auritus</i> (Double-crested Cormorant)
DY.394	<i>Picoides borealis</i> (Red-cockaded Woodpecker)
DB.648	<i>Podilymbus podiceps</i> (Pied-billed Grebe)
EP.445	<i>Poocetes gramineus</i> (Vesper Sparrow)
DM.446	<i>Porphyrala martinica</i> (Purple Gallinule)
DM.449	<i>Rallus elegans</i> (King Rail)
DM.450	<i>Rallus limicola</i> (Virginia Rail)
EB.901	<i>Riparia riparia</i> (Bank Swallow)
EE.902	<i>Sitta pusilla</i> (Bronze-headed Nuthatch)
DY.456	<i>Sonyrapicus varius</i> (Yellow-bellied Sapsucker)
DS.459	<i>Sterna albifrons</i> (Least Tern)
EH.703	<i>Sturnella neglecta</i> (Western Meadowlark)
EG.463	<i>Thryomanes bewickii</i> (Bewick's Wren)
DV.466	<i>Tyto alba</i> (Barn Owl)
EM.467	<i>Vermivora bachmanii</i> (Bachman's Warbler)
EL.468	<i>Vireo bellii</i> (Bell's Vireo)
EL.469	<i>Vireo gilvus</i> (Warbling Vireo)

Status			Element	Element	FISH	Common Name
FED	ST	THP	Number			
	E	E	AB.073	<i>Acipenser fulvescens</i>	(Lake Sturgeon)	
	D	P	AD.075	<i>Alosa alabamae</i>	(Alabama Shad)	
	D	P	AT.077	<i>Ammocrypta asprella</i>	(Crystal Darter)	
	D	S	AT.078	<i>Ammocrypta beanii</i>	(Naked Sand Darter)	
	D	S	AT.079	<i>Ammocrypta clara</i>	(Western Sand Darter)	
	D	S	AT.080	<i>Ammocrypta vivax</i>	(Scaly Sand Darter)	
	D	S	AC.081	<i>Anquilla rostrata</i>	(American Eel)	
	D	S	AH.084	<i>Carpiodes velifer</i>	(Highfin Carpsucker)	
	T	E	AH.092	<i>Cycentrus elongatus</i>	(Blue Sucker)	
	T	S	AG.097	<i>Ericymba buccata</i>	(Silverjaw Hinnow)	
	F	E	AD.098	<i>Esox masquinongy ohioensis</i>	(Ohio River Muskellunge)	
	D	S	AT.101	<i>Etheostoma</i> sp.	(Dirty Darter)	
	D	S	AT.102	<i>Etheostoma</i> sp.	(Duck River Barcheek Darter)	
	T	T	AT.104	<i>Etheostoma</i>	(Catonotus) sp. (Duskytail Darter)	
	D	S	AT.105	<i>Etheostoma</i>	(Doration) sp. (Darter)	
	D	S	AT.106	<i>Etheostoma</i>	(Ulocentra) sp. (Darter pyrrogaster ms)	
	T	T	AT.107	<i>Etheostoma</i> sp.	(cf <i>E. maculatum</i>) (Coppercheek Darter)	
	T	P	AT.109	<i>Etheostoma acuticeps</i>	(Sharphead Darter)	
	D	S	AT.111	<i>Etheostoma barbouri</i>	(Teardrop Darter)	
	D	S	AT.112	<i>Etheostoma bellum</i>	(Orangefin Darter)	
	D	S	AT.114	<i>Etheostoma blennioides gutselli</i>	(Tuckasegee Darter)	
T	T	S	AT.115	<i>Etheostoma boschungii</i>	(Slackwater Darter)	
	D	S	AT.116	<i>Etheostoma cinereum</i>	(Ashy Darter)	
	T	S	AT.118	<i>Etheostoma ditrema</i>	(Coldwater Darter)	
	D	S	AT.127	<i>Etheostoma luteovinctum</i>	(Redband Darter)	
	D	S	AT.130	<i>Etheostoma microlepium</i>	(Finescale Darter)	
	D	S	AT.136	<i>Etheostoma sagitta</i>	(Arrow Darter)	
	D	S	AT.139	<i>Etheostoma splendidum</i>	(Splendid Darter)	
	D	S	AT.141	<i>Etheostoma tippecanoe</i>	(Tippecanoe Darter)	
	T	T	AT.142	<i>Etheostoma trisella</i>	(Trispot Darter)	
	D	T	AT.143	<i>Etheostoma tuscumbia</i>	(Tuscumbia Darter)	
	F	E	AM.148	<i>Fundulus</i> sp.	(cf <i>F. albolineatus</i>) (Barren's Topminnow)	
	D	S	AM.151	<i>Fundulus chrysotus</i>	(Golden Topminnow)	
	D	S	AG.155	<i>Hemitemra flamma</i>	(Flame Chub)	
	D	S	AG.158	<i>Hybognathus placitus</i>	(Plains Minnow)	
T	T	T	AG.160	<i>Hybopsis cahnii</i>	(Slender Chub)	
	D	S	AG.162	<i>Hybopsis gelida</i>	(Sturgeon Chub)	
	D	S	AG.164	<i>Hybopsis linea-punctata</i>	(Lined Chub)	
	D	S	AG.165	<i>Hybopsis meeki</i>	(Sicklefin Chub)	
T	F	T	AG.166	<i>Hybopsis monacha</i>	(Spotfin Chub)	
	D	S	AA.172	<i>Ichthyomyzon gagei</i>	(Southern Brook Lamprey)	
	D	S	AA.174	<i>Ichthyomyzon unicuspis</i>	(Silver Lamprey)	
	D	S	AH.175	<i>Lagochila lacera</i>	(Harelip Sucker)	
	D	P	AB.178	<i>Lepisosteus spatula</i>	(Alligator Gar)	
	D	S	AH.185	<i>Moxostoma atripinne</i>	(Blackfin Sucker)	
	D	S	AG.192	<i>Notronis</i> sp.	(Palezone Shiner)	
	D	S	AG.207	<i>Notronis dorsalis</i>	(Bifmouth Shiner)	
	D	S	AG.209	<i>Notronis heterolepis</i>	(Blacknose Shiner)	
	D	S	AG.213	<i>Notronis rubellus</i>	(Rosyface Shiner)	
	D	T	AJ.220	<i>Noturus</i>	(Rabida) sp. (Madtom)	
	D	S	AJ.221	<i>Noturus bailevi</i>	(Smokey Madtom)	
T	E	E	AJ.225	<i>Noturus flavipinnis</i>	(Yellowfin Madtom)	
	T			<i>Noturus</i> sp.	(cf. <i>N. hilderbrandi</i>)	

Status			Element Number	Element	Common Name
FED	ST	THP			
	T	E			
			AJ.230	<u>Noturus munitus</u> (Frecklebelly Madtom)	
			AJ.231	<u>Noturus stigmosus</u> (Northern Madtom)	
	D	S	AT.233	<u>Percina</u> (<u>Odontophilus</u>) sp. (Darter)	
	T	T	AT.234	<u>Percina</u> sp. (cf <u>P. carprodes</u>) (Reticulate Logperch)	
	T	T	AT.238	<u>Percina antesella</u> (Amber Darter)	
	D	S	AT.239	<u>Percina aurantiaca</u> (Tangerine Darter)	
	D	S	AT.241	<u>Percina burtoni</u> (Blotchside Logperch)	
	T	S	AT.245	<u>Percina macrocephala</u> (Longhead Darter)	
	D	S	AT.248	<u>Percina phoxocephala</u> (Slenderhead Darter)	
E	E	E	AT.252	<u>Percina tanasi</u> (Snail Darter)	
	D	S	AG.257	<u>Phoxinus</u> sp. (cf. <u>P. oyeas</u>) (Dace)	
		S	AF.261	<u>Salvelinus fontinalis</u> (Eastern Brook Trout)	
	D	S	AB.263	<u>Scaphirhynchus albus</u> (Pallid Sturgeon)	
	D	S	AK.270	<u>Typhlichthys subterraneus</u> (Southern Cavefish)	

Status Symbols

P = Possibly Extirpated
 E = Endangered
 T = Threatened
 S = Special Concern
 I = Inactive
 R = Same as Special Concern

Determination of Status

F = Federal
 S = State
 THP = Tennessee Heritage Program

STATE OF VERMONT

ENDANGERED SPECIES LIST

PURPOSE It is the purpose of these regulations to carry out the mandate of the Vermont General Assembly to protect endangered species of fish, bird, quadruped, reptile, plant, flower, tree or shrub, and to prohibit the taking thereof, pursuant to the authority granted to the Secretary of Environmental Conservation by Section 3652 of Title 13, Vermont Statutes Annotated.

13-79.1 The following species of animal life are designated as endangered species, the taking of which (as defined by Section 3651(3)(A) of Title 13, Vermont Statutes Annotated) is prohibited.

A. Fish:

Lake Sturgeon - (*Acipenser fulvescens*)

B. Birds:

Southern Bald Eagle - (*Haliaeetus l. leucocephalus*)

American Osprey - (*Pandion haliaetus carolinensis*)

American Peregrine Falcon - (*Falco peregrinus anatum*)

C. Mammals:

Indiana Bat - (*Myotis sodalis*)

Pine Marten - (*Martes americana*)

Eastern Cougar - (*Felis concolor cougar*)

Canada Lynx - (*Lynx canadensis*)

13-79.2 The following species of plant life are designated as endangered species, the taking of which (as defined by Section 3651(3)(B) of Title 13, Vermont Statutes Annotated) is prohibited, except by a person upon lands owned and occupied by him; or from lands owned or occupied by another, or from public lands, under a signed permit from the owner or lawful occupier thereof. Such taking is limited to not more than a single up-rooted specimen or two cuttings of each of the following plants, and then for scientific purposes only.

Adder's mouth - (*Malaxis*)

Green-alder - (*Alnus crispa*)

Trailing-arbutus - (*Epigaea repens*)

Alpine-mountain ash - (*Pyrus decora*)

Mountain-astragalus - (*Astragalus blakei*)

Bog-bilberry - (*Vaccinium uliginosum*)

Dwarf-bilberry - (*Vaccinium cespitosum*)

Butter-wort - (*Pinguicula vulgaris*)

Calypso - (*Calypso*)

Three-toothed cinquefoil - (*Potentilla tridentata*)

Slender cliffbrake - (*Cryptogramma stelleri*)

Northern-comandra - (*Gedcaulon lividum*)

Coral-root - (*Corallorhiza*)

Cow-berry - (*Vaccinium vitisidaea*)

Few-flowered cranberry tree - (*Viburnum edule*)

Black-crowberry - (*Empetrum nigrum*)

Lapland diapensia - (*Diapensia lapponica*)

Braun's holly fern - (*Polystichum brunii*)

Fragrant fern - (*Dryopteris fragrans*, Schöot var. *remostinuscula*)

Northern-gentiana - (Amarella)
Hoary or twisted-whitlow grass - (Draba incana)
Alpine-goldenrod - (Solidago calcicola)
Hedysarum - (Hedysarum alpinum, L. var. americanum)
Bastard-helleborine - (Epipactis)
Ladies' tresses - (Spiranthes)
Chatelain lady's slipper; moccasin flower - (Cypripedium)
Great-laurel - (Rhododendron maximum)
Club-moss - (Lycopodium selago)
Orchid - (Orchis)
Cranefly-orchid - (Tipularia)
Rein orchid; fringed orchid - (Habenaria)
Pale painted-cup - (Castilleja septentrionalis)
Jack-pine, or gray-pine - (Pinus banksiana)
Grass-pink - (Calopogon)
Wild-pink - (Arethusa)
Pinxter-flower - (Rhododendron nudiflorum)
Rattlesnake-plantain - (Goodyera)
Pogonia - (Pogonia)
Three-lobed pogonia - (Triphora)
Verticillate-pogonia - (Isotria)
Dwarf canadian-primrose or Pale magenta-pink-(Primula mistassinica)
Putty-root - (Apelctrum)
Greenland-sandwort - (Arenaria greenlandica)
Vernal-sandwort - (Arenaria rubella)
Alpine-saxifrage - (Saxifraga aizoon)
Mountain-saxifrage - (Saxifraga oppositifolia)
Yellow-mountain saxifrage - (Saxifraga aizoides)
Mountain-shadbush - (Amelanchier bartramiana)
Spleenwort - (Asplenium cryptolepsis)
Green-spleenwort - (Asplenium viride)
Twayblade - (Liparis)
Lister's twayblade - (Listera)
Alpine-willow - (Salix planifolia)
Alpine-willow - (Salix uva-ursi)
Lesser-wintergreen - (Pyrola minor)
Alpine-woodsia - (Woodsia alpina)
Smooth- woodsia - (Woodsia glabella)

BY AUTHORITY

§ Martin L. Johnson

Martin L. Johnson, Secretary
Environmental Conservation

FILED AT THE OFFICE OF
THE SECRETARY OF STATE:

§ M. E. Willey

Comments on status and reasons for listing:

FISH

Lake Sturgeon

The reasons for the decline in Lake Champlain sturgeon populations are not fully known, but it is thought that barrier dams across major spawning tributaries, as well as increased siltation and general decline in habitat in river stretches available to them, are the principal combination of factors involved.

BIRDS

Southern Bald Eagle

Listed as endangered in the Federal Register. Numerically stable migrant populations in Vermont, no known nesting.

Osprey

Status still undetermined. Reports of sightings indicate the population to be less than common in its usual habitats. No known nesting.

American Peregrine Falcon

Listed as endangered in Federal Register. Very few ever reported in spring and fall migration flights. A restocking program began in Vermont in 1977.

MAMMALS

Indiana Bat

Listed as endangered in Federal Register. Extremely limited in its distribution in Vermont, known to occur only from one or two caves in west-central portion of state.

Eastern Cougar

No authentic record since latter part of last century. Considered by many professional wildlife biologists to be extinct in the north-east. However, there is enough divergence of opinion about this animal in Vermont, coupled with sporadic reports of sightings by reliable observers and woodsmen, that the animal deserves to be on the list.

Canada Lynx

Believed to be so few in number that special attention and protection should be directed to this animal.

Pine Marten

No authentic record for many years, perhaps already extinct in Vermont. If it occurs at all, it would most likely be found in the spruce forests in the northeastern corner of the state.

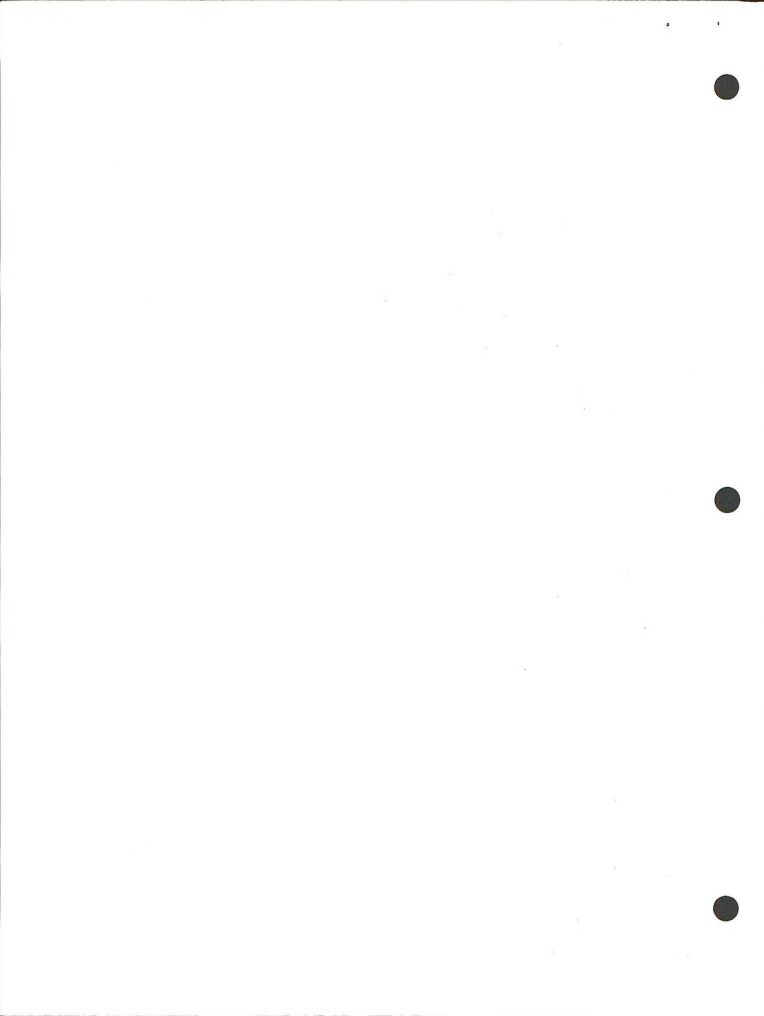


OFFICIAL VIRGINIA ENDANGERED LIST
VERTEBRATES AND MOLLUSKS

APRIL - 1978

BUREAU OF LAND MANAGEMENT
EASTERN STATES OFFICE
RECEIVED
1978 MAY - 1 A 8:52
SILVER SPRING, MD.

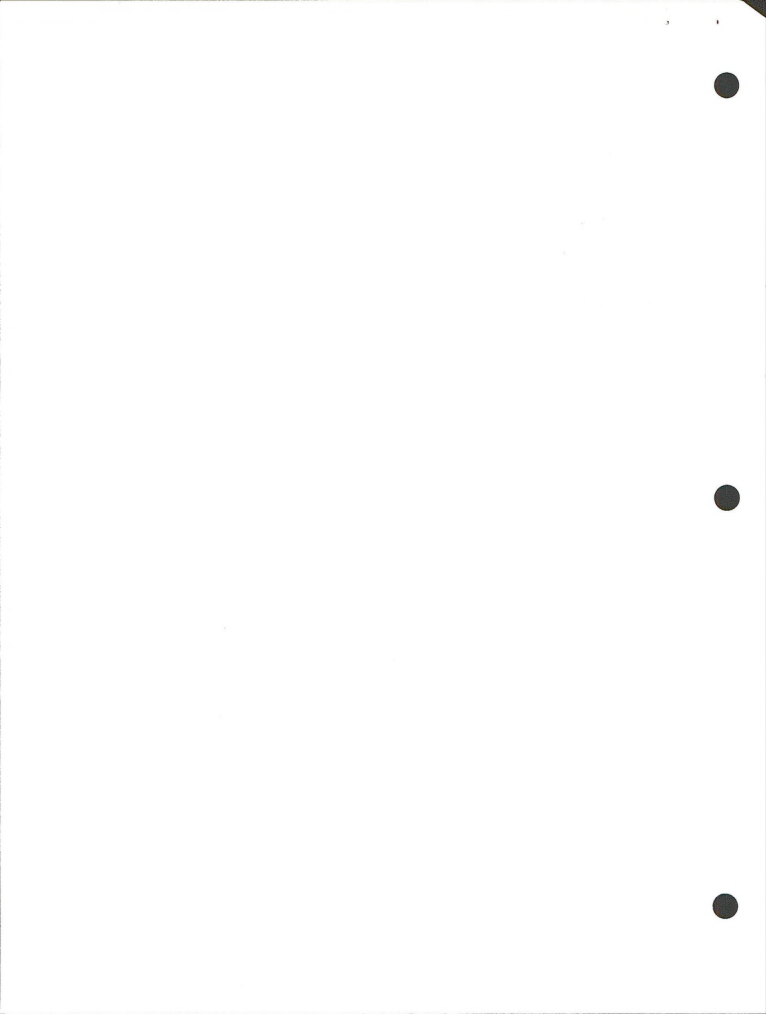
<u>Species</u>	<u>Scientific Name</u>	<u>Status</u>
<u>Birds:</u>		
Brown pelican	(<u>Pelecanus occidentalis</u>)	Casual transient
Southern bald eagle	(<u>Haliaeetus leucocephalus</u>)	Resident, coastal
Peregrine falcon	(<u>Falco peregrinus</u>)	Migrant transient
Red-cockaded woodpecker	(<u>Dendrocopos borealis</u>)	Resident-S.E. Virginia
Bachman's warbler	(<u>Vermivora bachmannii</u>)	Transient-N. Va.
<u>Mammals:</u>		
Gray bat	(<u>Myotis grisescens</u>)	Western Va.
Indiana bat	(<u>Myotis sodalis</u>)	Doubtful, S.W.Va.
Delmarva fox squirrel	(<u>Sciurus niger cinereus</u>)	Eastern Shore
Eastern cougar	(<u>Felis concolor cougar</u>)	Doubtful
<u>Reptiles:</u>		
Atlantic ridley sea turtle	(<u>Lepidochelys kempie</u>)	Atlantic Coast
Hawksbill sea turtle	(<u>Eretmochelys imbricata</u>)	Atlantic Coast
Leatherback sea turtle	(<u>Dermodochelys coriacea</u>)	Atlantic Coast
<u>Fish:</u>		
Shortnose sturgeon	(<u>Acipenser brevirostrum</u>)	Atlantic Coast
<u>Threatened:</u>		
Yellowfin madtom	(<u>Noturus flavipinnis</u>)	S. W. Virginia
Spotfin chub	(<u>Hybopsis monacha</u>)	S. W. Virginia
<u>Mollusks:</u>		
Tan riffle shell mussel	(<u>Epioblasma walkeri</u>)	Middle Fork Holston River
Appalachian monkeyface pearly mussel	(<u>Quadrula sparsa</u>)	S. W. Virginia
Birdwing pearly mussel	(<u>Conradilla caelata</u>)	S. W. Virginia
Cumberland monkeyface pearly mussel	(<u>Quadrula intermedia</u>)	S. W. Virginia
Dromedary pearly mussel	(<u>Dromus dromas</u>)	S. W. Virginia
Fine rayed pigtoe pearly mussel	(<u>Fusconaia cuneolus</u>)	S. W. Virginia
Greenblossom pearly mussel	(<u>Epioblasma torulosa gubernaculum</u>)	S. W. Virginia
Rough pigtoe pearly mussel	(<u>Pleurobema plenum</u>)	S. W. Virginia
Shiny pigtoe pearly mussel	(<u>Fusconaia edgariana</u>)	S. W. Virginia



West Virginia

West Virginia has no state list. It recognizes the following Federally listed species:

Eastern cougar	(<i>Felis concolor cougar</i>)
Indiana bat	(<i>Myotis sodalis</i>)
Virginia big-eared bat	(<i>Pleocotus townsendii virginianus</i>)
Peregrine falcon	(<i>Falco peregrinus</i>)
Bald eagle	(<i>Haliaeetus leucocephalus</i>)
Kirtland's warbler	(<i>Dendroica Kirtlandii</i>)
Tuberculed-blossom pearly mussel	(<i>Epioblasma torulosa</i>)
Pink mucket pearly mussel	(<i>Lampsilis orbiculata</i>)



DEPARTMENT OF NATURAL RESOURCES
Box 7921
Madison, Wisconsin 53707

October 1975
(Rev. May 1978)*

ENDANGERED ANIMALS IN WISCONSIN

(With Supplementary Lists of Threatened Animals,
Animals with Watch Status and Extirpated Animals)

Although many species are holding their own and can adapt at least for the time being to environmental change, there are an increasing number of species that are being short-changed by a deteriorating environment and by the mounting impact of human disturbance. The rate of change is faster and far more drastic than in years past -- far outstripping nature's ability to create new species.

Presently there are 623 endangered and threatened species in the world -- 206 of these are in the United States. There are 18 endangered animals in Wisconsin.

These are distressing figures, for if wild creatures are disappearing, it is time to consider whether man too may be endangered. The survival of fish and wildlife and the survival of man are cut from the same fabric. Wild things are biological indicators of the health of our environment -- barometers of the future of all life.

What is really at stake is the well-being of the total community of nature of which man is a part. We are concerned here with a remarkably interrelated whole, where each species has its place. If we eliminate one, we may lose another. Or we may cause the malfunctioning of the entire ecosystem. We don't know the complete role of many animals in the outdoor community. Until we do we cannot afford to lose any species.

The passage of the Endangered Species Act in 1972 (Chap. 29.415, Wis. Stats.) provided for the protection of those species designated as endangered in Wisconsin as well as throughout the U.S. and in foreign countries. A list of Wisconsin endangered animals was prepared by the Department of Natural Resources. In addition, three other supplementary lists have been prepared: extirpated animals, threatened animals, and animals with watch status.

The endangered species program is involved with continued determination of the status and distribution of endangered and other nongame species, restoration and management of habitat, reintroduction of native species, and preservation of natural areas.

Prepared by the DNR Endangered Species Committee
Dr. Ruth L. Hine, Chairman
Ronald F. Nicotera, Coordinator
Lyle M. Christenson
Clifford E. Germain
James B. Hale
Harold E. Hettrick
James T. Addis
Lewis A. Posekany

ENDANGERED ANIMALS

(Species or subspecies that are in trouble. Their continued existence as a part of the state's wild fauna is in jeopardy, and without help they may become extirpated. Officially protected by Wisconsin law -- Chap. 29.415, Wis. Stats.)

Mammals

PINE MARTEN *Martes americana*

Probably occurred originally in most wooded areas, and were not uncommon in spruce and pine forests until the mid-1800's. Few martens were recorded after the season was closed in 1921, with the last recorded specimen taken in Douglas County in 1925. High value of the fur, ease of trapping and destruction of habitat were responsible for the decline.

*This report is being re-issued at this time with only slight revision. All lists are in process of review and annotated summaries with additions and changes will be published later in 1978.

Martens were reintroduced on Stockton Island (Ashland County) in 1953, and an observation during the winter of 1971-72 confirmed that martens are still present on the island. They were also reintroduced into the Nicolet National Forest (Forest County) in the late winter of 1975 and 1976. Protected.

CANADA LYNX Lynx canadensis

Although never very common, lynx probably occurred throughout the entire state in large, mature forest areas with swamps. Have become very uncommon and erratic in distribution. There are records from 1946 to the present in several northern and west central counties. Lynx have been protected since 1957 when the season was closed and bounties removed, but are accidentally shot when hunters are bobcat hunting.

EASTERN TIMBER WOLF Canis lupus lycaon

Formerly found throughout the state, especially in heavily timbered areas. Heavy trapping, bounties and encroachment on wilderness areas caused the steady decline of wolves, and by the late 1950's the breeding population was believed to be gone. Wanderers from Minnesota and Michigan have been reported, and over 70 records accumulated since 1968. The eastern timber wolf is on the federal list of endangered species, and because of the threats to the survival of the wolves that use Wisconsin as a part of their range, this species was placed on the Wisconsin list in 1975.

Birds

DOUBLE-CRESTED CORMORANT Phalacrocorax auritus

Up to the late 1950's cormorants appeared to be common migrants and relatively common breeding birds in Wisconsin. Since the late 1950's both migrating and breeding cormorants have declined greatly in number, with only a few of the traditional rookeries still holding small numbers of birds (1966). Decline apparently associated with spring cormorant shoots, habitat loss and deterioration (pesticide contamination and fewer nesting trees) and human disturbance. There are 6 known nesting colonies in Wisconsin.

BALD EAGLE Haliaeetus leucocephalus

By early 1900's eagles had been driven from their former nesting haunts in southern Wisconsin by summer resorts; at that time they were present mainly as spring and fall migrants around inland lakes, and still nested in the northern part of the state in less settled regions. Have declined as a result of insecticides, encroachment on nesting areas, and illegal shooting. Now observed as a migrant along the Mississippi and Wisconsin Rivers and in scattered areas throughout the state. Reproductive success has been abnormally low along shores of Lake Superior in recent years, and there are no pairs nesting now on the shores of Lake Michigan. The productivity of eagles nesting along inland lake shores has increased the last two years.

OSPREY Pandion haliaetus

Although never common, ospreys bred in all suitable localities in the state in former years. They have suffered a drastic decline, but productivity has increased markedly for the last two years. Loss of habitat, direct human disturbances and predation cannot account for the widespread nest failures and reduced productivity. Most likely cause of reproductive failure has been environmental pollutants such as DDT.

PEREGRINE FALCON Falco peregrinus

The Appalachian peregrine, Falco peregrinus anatum is on the verge of extinction. It is gone as a breeding bird in the bulk of its range east of the Mississippi River. The main breeding sites in Wisconsin in the 1940's and 1950's were along the Mississippi and Wisconsin Rivers (13), Niagara Escarpment (3), and one each in the northwest and central Wisconsin. A steady decline in breeding became noticeable in 1956, eyries were abandoned and the last breeding adult was seen in 1964. Chlorinated hydrocarbon insecticides have led to persisting widespread reproductive failures and extirpation over wide regions in both Europe and North America since the late 1940's.

The tundra peregrine, Falco peregrinus tundrius, is holding up better although it too carries pesticide residues. It still passes through Wisconsin on migration. Sightings are not uncommon, especially along the southeast shore of Lake Michigan. Efforts are being made to reintroduce peregrines, and reintroduction attempts were made in Wisconsin during 1976 and 1977. The status of both subspecies in the U.S. is endangered, and because of the continuing threat to their survival, they were classed as endangered in Wisconsin in 1975.

Reptiles

ORNIATE BOX TURTLE Terrapene ornata

This turtle has always been limited in its distribution in Wisconsin to the open sandy country of the southwest. Now threatened by habitat loss through irrigation, cultivation and forest plantings, and by collecting for sales as pets.

QUEEN SNAKE Natrix septemvittata

Uncommon in the extreme southeastern corner of the state. Now threatened by wetland drainage, cultivation and water pollution.

MASSASAUGA (Sistrurus catenatus)

Formerly common in the marshes and swamps of western and southern Wisconsin. Has declined drastically until now populations are found in only 6 locations in the state.

WOOD TURTLE (Clemmys insculpta)

Found originally throughout the state except in southwest. Although broad range similar now, it is disrupted and the species is in very low density. Nest predation, commercial harvesting and public sale have contributed to the decline.

Fish

SHORTJAW CISCO Coregonus zenithicus (Jordan & Evermann)

LONGJAW CISCO C. alpena (Koelz)

SHORTHOSE CISCO C. reighardi (Koelz)

KIVI C. kivi (Koelz)

The four species formerly common in deep water of Lakes Michigan and Superior (below 90 feet). Stocks drastically decreased by the early 1960's, due to overfishing, competition from alewives, and decimation by lampreys. Now very rare. C. alpena believed to be extinct.

OZARK MINNOW Dionda nubila (Forbes)

More commonly found south of Wisconsin, this small minnow prefers clear, gentle, medium-sized streams, with clean gravel bottoms. Collected recently from only five streams in the south central, southwest and northwestern part of Wisconsin. Appearing only in small, isolated populations, in this state, the Ozark minnow seems very intolerant to turbidity and resulting siltation, making it particularly susceptible to decimation, since all the streams it is found in run through regions of heavy agricultural use.

PUGNOSE SHINER Notropis anogenus (Forbes)

Formerly locally common in northwest and south central Wisconsin, but very few records recently. Has limited range in Lake States and is extirpated or dwindling over much of it. Extremely intolerant of turbid and polluted water. Records obtained in 1974 from 3 lakes in 2 south-east counties.

GREATER REDHORSE Moxostoma valenciennesi (Jordan)

Formerly widely distributed and locally common. Recent records show small numbers caught in a few scattered locations in Wisconsin including Whitefish Lake (Sawyer Co.), Lake Poygan (Winnebago Co.), Turtle Creek (Rock Co.) and Red Cedar River (Barron Co.). This species is among the first fish to succumb to pollution with continuously turbid water.

THREATENED ANIMALS

(Any species or subspecies which appears likely, within the foreseeable future, to become endangered. Threatened animals will be officially designated, now that new enabling legislation has been passed in the state, and afforded varying degrees of protection as necessary. This list is tentative and subject to change.)

Birds

COOPER'S HAWK Accipiter cooperii

Formerly a common summer resident, and now apparently far less numerous than they were 15-20 years ago both in migration and breeding season. Low density nesting reported in 1977.

RED-SHOULDERED HAWK *Buteo lineatus*

Considered a common species in the early days. By the early 1900's it was by no means common, and rare any distance from Lake Michigan. Currently it is not reported in the numbers that were occurring 15-20 years ago. It occupies a specialized habitat (river bottom woods), and stream straightening, impoundments and water pollution, as well as pesticides, threaten its existence.

PRAIRIE CHICKEN *Tympanuchus cupido pinnatus*

With the settlement of Wisconsin, new habitat was created for prairie chickens, and they increased until from 1875 to 1920 they were found all over the state. More intensive farming in the south and fire protection, forest regrowth and reforestation in the north gradually destroyed their open grassland habitat. Their range shrank to the central sand plain area of the state. Main population now located on the Buena Vista Marsh in Portage County. Scattered grassland reserves totaling over 10,000 acres have been purchased in this area, and habitat is being managed intensively for chickens. Increasing drainage and irrigation of the farm land within the Buena Vista Marsh could pose threats to the future of the chicken population. Protected.

YELLOW RAIL *Coturnicops noveboracensis*

Although not common, yellow rails were formerly recorded from several areas in southern Wisconsin, breeding as far north as Brown County. Now apparently decreased; not found in the Peshtigo area (Dconto County) where they had occurred regularly.

PIPING PLOVER *Charadrius melodus*

Originally bred sparingly on Lake Michigan and around Lake Koshkonong and other favorable lakes, but by 1900 became rare. It has now apparently completely disappeared from Lake Michigan as a breeding bird; only known breeding locations are the Long Island-Chequamegon Point area of Lake Superior and the Superior harbor.

COMMON TERN *Sterna hirundo*

Formerly a common migrant, and nested along shores of Great Lakes. Very greatly diminished in numbers. Few if any have nested along Lake Superior shore in recent years, and nesting colonies in Green Bay are also drastically reduced.

FORSTER'S TERN *Sterna forsteri*

Formerly a common migrant and nester in small inland lakes. Only three nesting areas now known.

Reptiles

GLASS LIZARD *Ophisaurus attenuatus*

Found in dry sandy oak-savannahs, but evidence indicates they are on the decline. Habitat encroachment and pesticides are suspected.

Amphibians

PICKEREL FROG *Rana palustris*

Habitat of cold springs is threatened by pollution and siltations.

BURNS LEOPARD FROG *Rana pipiens burnsii*

Found only in a block of sandy counties in northwestern Wisconsin and southeastern Minnesota. Threatened by overcollection.

Fish

PADDLEFISH *Polyodon spathula* (Walbaum)

Formerly found in Mississippi River and larger tributaries from Minneapolis south; abundant in Lake Pepin. Greatly decreased due to Keokuk Dam, wasteful methods of fishing and pollution of Mississippi. Recorded recently in Chippewa River, Wisconsin River and Mississippi River. Protected.

BLUE SUCKER *Cyctepus elongatus* (Lesueur)

Formerly common in the Mississippi River; now uncommon. Recent records from Wisconsin, Chippewa, Red Cedar and Black Rivers.

RIVER REDHORSE *Moxostoma carinatum* (Cope)

A southern species, collected only from Lake St. Croix (36 specimens in 1966), and the Sugar River in Rock Co. (1974).

SLENDER MADTOM *Noturus exilis* (Nelson)

Recorded only in 3 streams in southeastern Wisconsin. A rare stream species in Wisconsin -- a disjunct population at the northern limit of its range. May be considered endangered.

LONGEAR SUNFISH *Lepomis megalotis* (Rafinesque)

Formerly recorded in 10 counties in southeast and east central parts of state; recently from only 4 in the southeast.

LEAST DARTER *Etheostoma microperca* (Jordan & Gilbert)

Formerly found in widely separated areas throughout the state; abundant in the southeast. Collected infrequently in recent years from scattered areas, with fewer records in the southeast. Has decreased and is now uncommon.

GILT DARTER *Percina evides* (Jordan & Copeland)

Uncommon, past and present. An isolated population in northwestern Wisconsin, with early records from the Black and St. Croix Rivers; the only recent collection made in 1968 in the St. Croix River. Overall range restricted and appears to be shrinking.

GOLDEYE *Hiodon alosoides* (Rafinesque)

Formerly common on the Mississippi as far north as Lake Pepin, it has become very rare in recent years and was last reported, as part of a commercial catch, near Lansing, Iowa in 1968. General deterioration of water quality in the upper Mississippi River believed responsible for demise. Inhabits most frequently the quiet, turbid waters of large rivers. May be considered endangered.

GRAVEL CHUB *Hybopsis x-punctata* (Hubbs and Crowe)

Considered extinct in state until 1970 when a couple specimens were taken on the Rock River at the Wisconsin-Illinois border. Small isolated populations were also found in 1974, 1975 on the lower Turtle and Sugar Rivers in the south central part of the state. Inhabiting only clean gravel riffles, with swift current, in large streams, the gravel chub seems especially susceptible to the encroachment of turbidity and siltation which are increasing with agricultural expansion in its remaining Wisconsin range. May be considered endangered.

PALLID SHINER *Notropis amnis* (Hubbs & Greene)

A small fragile, silvery shiner, nearly entirely lacking in dark pigmentation. The last time it was collected was in the early 1960's at a few stations and in few numbers from the lower Wisconsin and Mississippi Rivers. In the mid-forties it had been taken at many locations on the Mississippi River. May be considered endangered.

WEED SHINER Notropis texanus (Girard)

Formerly occurred mainly along Mississippi River and its tributaries, and the south central and southeastern parts of state. Recent collections from only the lower Wisconsin and the Mississippi Rivers and lower portions of tributaries, and Rock County.

REDFIN SHINER Notropis umbratilis (Girard)

Formerly occurred quite generally in southern half of state. Now located only in southeast quarter.

STRIPED SHINER Notropis crysocephalus (Rafinesque)

Old records indicate wider range across southern Wisconsin. Recent records restricted to Green Bay and the Milwaukee River.

CRYSTAL DARTER Ammocrypta asprella (Jordan)

This rare darter inhabits large rivers, and has been taken in the Mississippi River and lower Chippewa, Wisconsin and Trumpealeau Rivers. Habitat critical to the species--sandy, gravelly areas--threatened by siltation.

MUD DARTER Etheostoma asprigene (Forbes)

Rare in the sloughs of the lower Wisconsin River, the Mississippi River, and in the lower reaches of their tributaries; north as far as St. Croix County. Absent from the Lake Michigan drainage.

STARHEAD TOPMINNOW Fundulus notti (Agassiz)

Early records from Walworth and Waukesha Counties. More recently collected from sloughs of the Wisconsin River (Iowa County) and from three creeks in Rock County.

ANIMALS WITH WATCH STATUS

(Species or subspecies that may or may not be holding their own at the present time. They will be under special observation to identify conditions that could cause further decline or factors that could help to insure their survival in the state. This list is subject to change.)

Mammals

BOBCAT

Found throughout the state in the mid-1800's in brushy forested areas, broken with large conifer swamps. Now occurs in the northern quarter of the state, and western counties along Mississippi River. Recent records include Sauk, Dane and Walworth Counties. A 1974 survey indicates that although bobcats are not common, the population appeared stable.

MOOSE Alces alces

Formerly occurred over most of the state, wandering in woodland even to the southern boundary. Last native moose known to have been killed in Wisconsin at Superior in 1921. Moose have been regularly sighted in northwestern counties. Apparently they are spreading naturally into Wisconsin from Minnesota. Protected.

WHITE-TAILED JACKRABBIT

Present population in Wisconsin probably originated from both natural spread from the west and introduction. Although widely distributed in pockets of open space habitat, these remnant populations appear to be declining in numbers. Twenty-two jackrabbits were stocked in Clark County in the winter of 1974-75 in an attempt to learn more about this species and whether stocking can result in self-sustaining rabbit population.

FISHER *Martes pennanti*

Until about 1850, fisher probably occurred over most of the state in favorable wooded habitats. Were depleted by logging of heavy timber and fur trapping. Few records since closing of season in 1921, with the last specimen found in 1932.

About 86 animals were stocked in the Nicolet National Forest between 1956 and 1963, and 60 in the Chequamegon National Forest in 1966 and early 1967. They are now reported from many areas across the north, and the outlook is encouraging. Fisher are occasionally taken in traps set for fox and coyote which are bountied in some counties. Protected.

Birds

MIGRANT SHRIKE *Lanius ludovicianus*

A common bird in open regions, along roadsides and borders of fields; not as common north of the central part of the state as south of it, except in the northwest. Now very uncommon and decreasing. Eggs show pesticide residues.

HARRIER *Circus cyaneus*

Formerly one of the commonest hawks of Wisconsin in marshy or prairie areas. From 1960-68, harriers decreased drastically in the Buena Vista Marsh in Portage County, in both number of migrants, and nests, eggs and young fledged.

Now recorded as common in some areas of the state. There are reports also that the breeding population is down in the marshes along Lake Superior and Michigan, Horicon Marsh, many parts of central Wisconsin, and in the southern third of the state.

SHARP-TAILED GROUSE *Pediacetes phasianellus campestris*

Once found all over the state, the sharptail has declined drastically until now only scattered populations are found mainly in the northwest on special management areas, the farm fringe or bogs. The decline has been due to loss of habitat from the regrowth of forests into solid tracts without grassy openings -- the result of artificial forest plantings and natural forest succession.

UPLAND SANDPIPER *Bartramia longicauda*

Very common during latter part of 1800's, then apparently declined rapidly. Slowly increased during the 1920's and 1930's. Has been threatened in recent years by the drainage of wet prairies and overpasturing. Presently found in many counties, particularly in the eastern half of the state, and seems to be holding its own.

BARN OWL *Tyto alba*

Although on the northern edge of its range and never common in Wisconsin, barn owls have been consistently reported in the southern part of the state and as far north as Green Bay (both sight and breeding records). Records seem to have diminished in the past five years.

BEWICK'S WREN *Thryomanes bewicki*

This birds was the first recorded for the state in 1922, and there have been many subsequent sight and breeding records. Although never a common resident of Wisconsin, it is apparently now being found less frequently than it was ten years ago.

Reptiles

SIX-LINED RACERUNNER *Cnemidophorus sexlineatus*

Locally common on sandy areas in western part of state along the Wisconsin and Mississippi Rivers. Also present on some rocky outcrops and bluffs, but generally uncommon there. Threatened by irrigation, cultivation and forest plantings, and by collecting for sale as pets.

FIVE-LINED SKINK *Eumeces fasciatus*

Scattered populations exist in northeastern and north central Wisconsin. Skinks have disappeared from many habitat areas within their range.

BLANDINGS TURTLE Emydoidea blandingi

Population is down in some areas of its wet marsh habitat. Marsh drainage and overcollecting are potential threats.

TIMBER RATTLESNAKE Crotalus horridus

Although still easily found in some areas of west central Wisconsin, in others it is becoming considerably less in number.

EASTERN and WESTERN RIBBON SNAKES Thamnophis sauritus and T. proximus

These species are at the northern extension of their range. Very rare. Have disappeared from some areas previously inhabited.

BUTLER'S GARTER SNAKE Thamnophis butleri

Limited to the southeastern quarter of the state. Their open field-prairie type habitat is fragile, potentially threatened by urban sprawl. This species has a spotty distribution over the country, and the Wisconsin population forms an isolated disjunct community since the retreat of the glaciers. Recent evidence indicates that there is a high density in Milwaukee and Waukesha counties, and the species was removed from the endangered list in 1975.

Amphibians

BULLFROG Rana catesbeiana

This large frog was greatly reduced in numbers by "frog-farming" in the 1920's, but appeared to be increasing in numbers as of the mid-1960's. Now fairly stable local populations can be found scattered throughout the state in undisturbed ponds and lakes with large dense beds of aquatic plants.

CRICKET FROG Acris crepitans

Formerly very abundant, but has suddenly become much lower in density throughout its Wisconsin range.

TREMBLAY'S SALAMANDER Ambystoma tremblayi

A very rare and unique all-female species of the northern forest which reproduces parthenogenically. It is a hybrid which resulted from interbreeding between two salamander species after the retreat of the glacier. The ranges of these no longer overlap.

Fish

AMERICAN EEL Anguilla rostrata (Lesueur)

Formerly fairly common in Mississippi River and tributaries. Decreased in Wisconsin waters due to dam construction. Scattered records throughout state.

LAKE HERRING Coregonus artedii (Lesueur)

Formerly common throughout the state in deeper inland lakes and the Great Lakes. Declining, especially in inland lakes in the south, due to habitat deterioration (eutrophication), and in Lakes Michigan and Superior due to competition from other species.

BLOATER Coregonus hoyi (Gill)

Increased in size and numbers, as the populations of other chubs declined. By 1960-61 bloaters made up about 95% of the chubs taken. Population collapsed in the late 1960's. Now low but apparently stable, with a better age structure.

REDSIDE DACE Clinostomus elongatus (Kirtland)

Uncommon in small to medium-size streams in widely scattered basins of southern, central and east central Wisconsin.

SPECKLED CHUB Hybopsis aestivalis (Girard)

Generally uncommon over shallow sand flats in lower Wisconsin and Mississippi Rivers and lower portions of their larger tributaries.

PUGNOSE MINNOW Opsopoeodus emiliae (Hay)

Uncommon in slow-water and sloughs of the Wisconsin River upstream to DuBay and in the Mississippi River. In Great Lakes drainage taken only from Lake Poygan, Lake Mendota and Horicon Marsh.

RED SHINER Notropis iutrensis (Baird and Girard)

A 1969 record from Grant County places this species in Wisconsin.

LAKE CHUBSUCKER Erimyzon sucetta (Lacepede)

Rare to uncommon locally in the larger rivers and the lower portions of tributaries to them in the southern half of Wisconsin.

BLACK BUFFALO Ictiobus niger (Rafinesque)

Rare on the lower Wisconsin River and uncommon on the Mississippi River.

PIRATE PERCH Aphredoderus sayanus (Gilliams)

Uncommon to rare in sloughs of the Mississippi River and in the Wisconsin River up to central Wisconsin. Uncommon in Des Plaines River in Kenosha County.

WESTERN SAND DARTER Ammocrypta clara (Jordan and Meek)
(in Lake Michigan basin)

Although common locally in the Mississippi River drainage, this darter has only recently been taken in the Waupaca River in the Lake Michigan basin.

SLENDERHEAD DARTER Percina phoxocephala (Nelson)

Uncommon in the lower Wisconsin River, the Mississippi and the larger streams tributary to them. Records also from scattered southern and east central streams and Lake Winnebago.

EXTIRPATED ANIMALS

(Animals that have disappeared from the state since 1800)

Mammals

WOLVERINE Gulo luscus

Occurred uncommonly throughout state in forests, sometimes wandering into more open country. Scattered records exist through 1883, with one more recent record of an animal trapped in Sawyer County in 1922. Wolverine pelts were highly prized locally.

COUGAR Felis concolor

Before 1870, probably occurred not infrequently throughout most of the state in favorable habitats, particularly in the valleys of the Mississippi River and its tributaries and of the Fox River in forests and forest borders in hilly, rocky terrain. Records of animals shot or seen extend through 1909.

ELK Cervus canadensis

Formerly occurred throughout the state in favorable habitats, perhaps more abundantly in the southern and western two-thirds of the state, preferring woodlands, forest borders and edges of grasslands and prairies. May not have become extirpated in Wisconsin until 1868. Restockings from 1930-1950 were not successful.

WOODLAND CARIBOU Rangifer caribou

Formerly confined to the northern part of the state, probably mostly in the vicinity of Lake Superior in wooded swamps, bogs and muskegs. Never common in Wisconsin, a few records exist for the northwest in the 1830's and 1840, and possibly 1910.

BUFFALO Bison bison

The original range of the buffalo followed the old Wisconsin prairies, extending over most all of southern and western Wisconsin. There were probably thousands of them in the state, but they were killed and pursued systematically even before 1800 and by 1830 very few were left in the state. The last record of any wild buffalo east of the Mississippi River was in 1833, when the last animals were killed on the Wisconsin side of the St. Croix River.

Birds

PASSENGER PIGEON Ectopistes migratorius

An abundant migrant and summer resident in many parts of the state until 1870-1883. Last large catch by netters was in 1882. Small flocks, pairs and solitary individuals reported from various parts of the state nearly every year since. The last acceptable record is the bird shot at Babcock in September, 1899.

ESKIMO CURLEW Numenius borealis

Was an exceedingly rare migrant in Wisconsin; last record for this state is 1903. Now thought to be extinct.

WHOOPIING CRANE Grus americana

Formerly of regular occurrence in the southern and western part of the state during migrations; breeding status still uncertain. Became very rare and the last known specimen was taken in Wisconsin in 1878.

TRUMPETER SWAN Olor buccinator

Although never common, trumpeters nested in southern Wisconsin in the early 1840's.

Fish

SKIPJACK HERRING Alosa chrysochloris (Rafinesque)

Formerly found throughout Wisconsin portion of Mississippi River and in St. Croix River; abundant in Lake Pepin. Cut off in its upriver migration with closing of the gates at Keokuk, Iowa, in 1913.

BLACKFIN CISCO Coregonus nigripinnis (Gill)

DEEPWATER CISCO Coregonus johanna (Wagner)

The largest species of cisco in Lakes Michigan and Superior formerly supported the earliest fishery. Increased fishing pressure and depredations by the sea lamprey caused their collapse, and none have been taken since the early to mid-1950's.

GHOST SHINER Notropis buchanani (Meek)

Southern species whose range touched southwestern Wisconsin in the Mississippi River. Few records. Believed to be extirpated above Pool 14.

CREEK CHUBSUCKER Erimyzon oblongus (Mitchill)

Two old records (1920's) from southeast corner of state. Probably extirpated.

BLACK REDHORSE Moxostoma duquesnei (Lesueur)

Taken only once from Black Earth Creek in early 1920's, with no later records. Questionable whether viable population existed.

BLUE CATFISH Ictalurus furcatus (Lesueur)

Formerly occurred from Minneapolis south in Mississippi River. No specimens in recent years. Now is rare above the mouth of the Missouri River.

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IV. What Information is Available

There are, of course, innumerable sources of information - books, newspaper articles, scientific papers, etc. - on endangered species. Given here is just a minute sample of various types of sources. The ones followed by an asterix are reference copies available in the Eastern States Office.

Arkansas Natural Area Plan - discusses species of special concern; can be acquired from Natural Heritage Commission, Suite 500, Continental Building, Little Rock, Arkansas, 72201

Barbour, R.W., W.H. Davis, and M.D. Hassell. Bats of America. Lexington, Kentucky: University Press, 1964.

Brolley, Myrtle Jeanne. Eagle Man, New York: Pellegrini and Cudahy, 1952.

Brown, Leslie. Eagles. New York: The World of Animals Area Publishing Co., Inc. London: Arthur Barker Ltd., 1970.

Bull, John. Birds of New York State. Doubleday Natural History Press, 1974.

Dirig, Robert, "The Endangered Karner Blue," The Conservationist October-November 1973, pp. 6 and 47.

Dowhan and Craig, 1976 Rare and Endangered Species of Connecticut and Their Habitats - excellent report on rare and endangered plants and animals in the State*

Engelhart, Steven, and Katherine Hazard. "Wolves in the Adirondacks," The Conservationist, October-November 1975, pp. 9-11.

Greenhall, Arthur M. "Indiana Bat a Cave-dweller in Trouble," National Parks and Conservation Magazine, Vol. 47, No. 8 (August 1973), pp. 14-17.

Jolly, John. "In Defense of *Canis lupus*," The Conservationist, October-November 1975, p. 7.

Kaufman, John and Heinz Meng. Falcons Return. New York: William Marrow and Company 1975.

Kentucky's Rare and Endangered Species - report which lists species and occurrence*

- Laycock, George. Autumn of the Eagle. New York: Charles Scribner's Sons, 1973.
- McCollum J., R. Odom, and A. Pass. 1976. Endangered Species, Wildlife and Plants. Outdoors in Georgia. 5(9): 20-23.
- McKay, Alex. "The Panther...Still Roaming?" Adirondack Life, Vol. 5, No. 1 (Winter 1974), pp. 18-21 and 44-47.
- Michigan Department of Natural Resources, 1978. Michigan's Endangered and Threatened Species Program - 1976-1978. General description of the State's program, laws and characteristics of the species.*
- Minnesota Department of Natural Resources, 1975. ...the Uncommon Ones. Discussion of biological status of some of Minnesota animals and plants which merit special consideration and management.*
- Mugford, P., 1976 "Fish and Wildlife Existing in Limited Numbers in Massachusetts" Though Massachusetts has no official list of endangered species in the State, this report lists species of special concern as well as their distribution, estimated numbers and typical habitat.*
- National Wildlife Federation, Endangered and Threatened Animal Species and Subspecies Found Outside U.S.*
- National Wildlife Federation, Endangered and Threatened Animal Species of U.S., Puerto Rico, Virgin Islands, American Samoa, Guam and Trust Territory.*
- National Wildlife Federation. "Special Issues: Endangered Species," National Wildlife Vol. 12, No. 3 (April-May 1974).
- Nemuras, Kenneth T., and James A. Weaver. "The Bog Turtle - Synonym for Extinction?" The Environmental Journal National Parks and Conservation Magazine, June 1974, pp. 17-20.
- Odom, R. 1977. Eastern Indigo Snake. Outdoors in Georgia. 7(5): 6-8.
- Odom, R.R., J. L. McCollum, M.A. Neville, and D.R. Ettman. 1977. Georgia's Protected Wildlife. 51 pp. Available upon request from the Georgia Department of Natural Resources.
- Office of Endangered Species and International Activities, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior. Threatened Wildlife of the United States, Resource Publication 114. Washington, D.C.: Bureau of Sport Fisheries and Wildlife, U.S. Government Printing Office, March 1973, p. 149.

Office of Endangered Species, U.S. Fish and Wildlife Service, U.S. Department of the Interior. Monthly Status Reports on Endangered Species - reports issued by USFWS give status and schedules of recovery teams and plans, status of cooperative agreements, reports on rule-makings and species which have been added or deleted from the Federal list.

Pilsbry, Henry A. Land Mollusca of North American (North of Mexico), Vol. 2, Part 2, Philadelphia: The Academy of Natural Sciences of Philadelphia, 1948, pp. 806-808.

Preliminary List of Rare and Threatened Vertebrates in Mississippi 1975 - Rare and Endangered Species Committee - comprehensive list of species, their range and preferred habitats and reasons they are threatened.*

Rare and Endangered Species of Missouri by Nordstrom, Pflieger, Sadler and Lewis 1977, an excellent publication giving county locations and descriptions of State-recognized animals and plants.*

Resident Endangered Species Investigations on Delmarva fox squirrel, Jefferson Salamander, Bald Eagle, and Eastern Tiger Salamander in Maryland.*

Ricciuti, Edward R. To the Brink of Extinction. New York: Harper and Row, Publisher, 1974.

Rittner, Don, ed. "Kerner's Famous Blue Butterfly," by Robert Dirig, Pine Bush Albany's Last Frontier. Pine Bush Historic Preservation Project, 1976, pp. 197-210.

Robinson, H. 1974. "Threatened Fishes of Arkansas" - scientific paper which describes 37 species of fish threatened due to human disturbance of habitat.

Roosa, D. 1977. Endangered Iowa Mammals, Endangered Iowa Amphibians and Reptiles, Endangered Iowa Fish and Endangered Iowa Birds* - very good series which outlines species, their range, habitat preferences, reasons for decline and recommendations for preservation of animals and their habitat.*

Salber, L. "Hard to Find Natives" - an article which appeared in New Hampshire's Natural Resources magazine which discussed various species which are of special concern in that State*

Singer, Francis J. "Status of the Osprey, Bald Eagle and Golden Eagle in the Adirondacks," New York Fish and Game Journal, Vol. 21, No. 1 (January 1974), pp. 18-31.

Solem, Alan. "Status of Succinea ovalis chittenangoensis Pilsbry, 1908,"
The Nautilus, Vol. 90, No. 3 (June 21, 1976) pp. 107-114.

State Statutes regarding endangered species:

Delaware*

New York*

University of Alabama, 1976. Endangered and Threatened Plants and Animals of Alabama. - comprehensive bulletin with excellent information about crayfishes and shrimps, gastropods, naiad mollusks, fishes, amphibians and reptiles, birds, mammals and plants.*

U.S. Fish and Wildlife Service, Department of the Interior, Endangered Species Technical Bulletin - excellent monthly publication which includes the latest status of rulemaking actions, features on particular species and ongoing state programs.*

Wisconsin Department of Natural Resources, 1978. Endangered Animals in Wisconsin. Good listing of threatened and endangered species including discussions of life histories and distribution.

Yates, H. 1962. "The Brown Pelican," Murchison, 1968. "The '98'" and Shaw, "The Plight of the Brown Pelican." - short articles on the official Louisiana bird.

V. Contacts

Federal Government

The Endangered Species Act of 1973 designated the U.S. Fish and Wildlife Service as the lead agency for coordination of national and international efforts for protection of endangered species. The USFWS Office of Endangered Species is headquartered at 1612 K Street, N.W., Washington, D.C., 20036. The staff there includes:

- John Spinks - Chief, Office of Endangered Species
(202) 343-5687, 5688
- Bob Jacobsen - Chief, Branch of Management Operations
(202) 343-5687, 5688
- John Murphey - Chief, Program Administrative Services
(202) 343-5687, 5688
- Dr. Paul Opler - Chief, Branch of Biological Support
(202) 343-7814, 7815

The following regional offices should be contacted for information about endangered species in Eastern States:

<u>ES Coordinator</u>	<u>Address</u>	<u>States Involved</u>
James M. Engle	Region 3 Fed. Bldg. - Fort Snelling Twin Cities, MN 55111 612-725-3596 FTS - 725-3596	Minn., Wis., Mich., Ill., Ind., Ohio
Alex B. Montgomery	Region 4 17 Executive Park Dr., NE Atlanta, GA 30323 404-526-4678 FTS - 257-4678	Ky., Tenn., NC., SC., GA., Ala., Miss., Ark., La., Fla.
Paul Nickerson	Region 5 McCormack Poe Courthouse Boston, MA 01209 617-223-2989/2978 FTS - 829-9216	ME, NH, VT, Mass., Conn., RI., NY, Pa., NJ, Del., Ma., Va., WV

<u>ES Coordinator</u>	<u>Address</u>	<u>States Involved</u>
John Davis	Region 6 10597 W. Sixth Avenue P.O. Box 25486 Denver Federal Center Denver, Colorado 80215 303-234-4600 FTS - 234-4600	Iowa, Missouri

Other contacts within the Federal Government that are important to Eastern States include:

USFS - William Zeedy
Endangered Species Specialist
Washington, DC 20250
202-235-8015

Army Corps of Engineers - John Bushman, Chief
Endangered Species Branch
Office of Chief of Engr.
Civil Works DAEN-CWP-P
Washington, DC 20314
202-693-7291

Nat. Park Service - Neal Guse, Chief
Division of Natural Resources
Rm. 3110 Interior Building
Washington, DC 20240
202-343-3919

Bureau of Mines - Dr. Thomas Henrie
Assoc. Director Mineral Materials
Research Development
Rm. 1010 Columbia Plaza
2401 E. St., N.W.
Washington, DC 20241
202-634-1310

Geological Survey - Chief, Conservation Division
630 National Center
Reston, Virginia 22092
703-860-6715

State Agencies

The following individuals and agencies may be able to give you more specific information about species in their states:

Program Manager
Non-Game and Endangered Species Program
Maryland Wildlife Administration
Tawes State Office Building
Annapolis, Maryland 21401

Endangered Species Coordinator
Florida Game and Fresh Water Fish Commission
Farris Bryant Building
620 South Meridian Street
Tallahassee, Florida 32304

Chief, Education Division
Virginia Commission of Game Inland Fisheries
4010 West Broad Street
Richmond, Virginia 23230

Department of Natural Resources Game and Fish Division
Non-Game/Endangered Species Program
Route 2, Box 119
Social Circle, Georgia 30279

Assistant Supervisor - Wildlife Planning
Department of Natural Resources
Operations Center
P.O. Box 67
Elkins, West Virginia 26241

Department of Natural Resources
Division of Fish and Wildlife
83 Park Street
Providence, Rhode Island 02903

South Carolina Wildlife and Marine Resources Department
P.O. Box 167
Dutch Plaza, Building D
Columbia, South Carolina 29202

Biologist - Endangered Species Program
Arkansas Game and Fish Commission
Little Rock, Arkansas 72201

Director
Endangered & Nongame Species Project
Department of Environmental Protection
Division of Fish, Game and Shellfisheries
P.O. Box 1809
Trenton, New Jersey 08625

Assistant Director of Conservation
State Game and Fish Commission
P.O. Box 451
Jackson, Mississippi 39205

Interagency Wildlife Coordination Section
Wildlife Resources Commission
Raleigh, North Carolina 27611

Director, Department of Conservation
605 State Office Building
Springfield, Illinois 62706

Conservation Biologist
Endangered Species Unit
State Dept. of Environmental Conservation
Wildlife Resources Center
Delmar, New York 12054

Administrative Coordinator
Tennessee Wildlife Resources Agency
Ellington Agricultural Center
P.O. Box 40747
Nashville, Tennessee 37204

Secretary, Environmental Conservation
Fish and Game Department
Montpelier, Vermont 05602

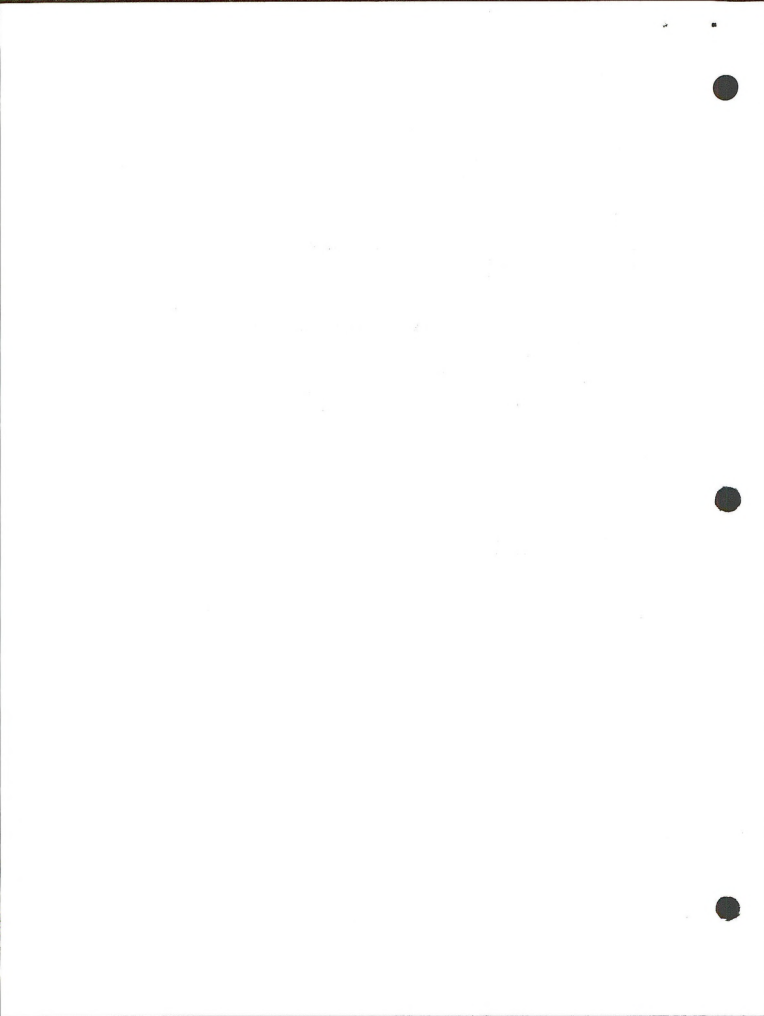
Chief of Refuge Division
Dept. of Wildlife and Fisheries
Wildlife and Fisheries Bldg.
400 Royal Street
New Orleans, Louisiana 70130

State of Indiana Department of Natural Resources
State Office Building
Indianapolis, Indiana 46204

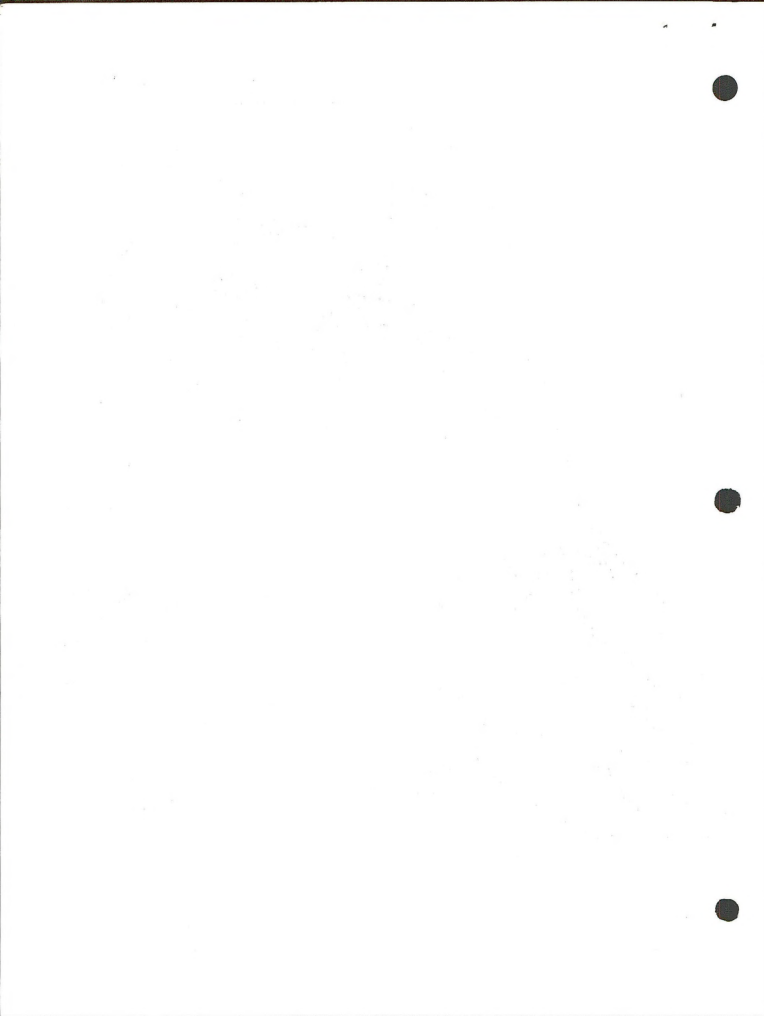
Department of Natural Resources & Environmental Control
Divison of Fish and Wildlife
Edward Tatnall Bldg.
P.O. Box 1401
Dover, Delaware 19901

Department of Natural Resources
Division of Wildlife
Fountain Square
Columbus, Ohio 43224

Game Commission
P.O. Box 1567
Harrisburg, Pennsylvania 17120







Bureau of Land Management
Library
Denver Service Center

