

ARIZONA WILDLIFE CONSERVATION

ARIZONA WILDLIFE NOTEBOOK



GARRY ROGERS



Praise for Arizona Wildlife Notebook

"Arizona Wildlife Notebook" by Garry Rogers is a comprehensive checklist of wildlife species existing in the State of Arizona. This notebook provides a brief description for each of eleven (11) groups of wildlife, conservation status of all extant species within that group in Arizona, alphabetical listing of species by common name, scientific names, and room for notes.

"The Notebook is a statewide checklist, intended for use by wildlife watchers all over the state. As various individuals keep track of their personal observations of wildlife in their specific locality, the result will be a more selective checklist specific to that locale. Such information would be vitally useful to the State Wildlife Conservation Department, as well as to other local agencies and private wildlife watching groups.

"This is a very well-documented snapshot of the status of wildlife species – from bugs to bats – in the State of Arizona. Much of it should be relevant to neighboring states, as well, with a bit of fine-tuning to accommodate additions and deletions to the list.

"As a retired Wildlife Biologist, I have to say Rogers' book is perhaps the simplest to understand, yet most comprehensive in terms of factual information, that I have ever had occasion to peruse. This book should become the default checklist for Arizona's various state, federal and local conservation agencies, and the basis for developing accurate local inventories by private enthusiasts as well as public agencies.

"Arizona Wildlife Notebook" provides a superb starting point for neighboring states who may wish to emulate Garry Rogers' excellent handiwork. I wish I'd had access to something as comprehensive, yet simple, many years ago" (**Lee Ashford, Goodreads, Readers' Favorite**).

Arizona Wildlife Notebook: Checklists and Conservation Status

By

Garry Rogers

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Learn more about the species groups in this Notebook at <http://GarryRogers.com/nature>.

Table of Contents

INTRODUCTION.....7

CONSERVATION STATUS SYMBOLS.....9

AMPHIBIANS13

ANTS17

BIRDS21

BUTTERFLIES AND MOTHS51

MOTHS71

DRAGONFLIES AND DAMSELFLIES.....75

FISH85

GRASSHOPPERS AND OTHER SINGING INSECTS93

LIZARDS.....101

MAMMALS107

SNAKES121

TURTLES.....127

APPENDIX A. SIGHTINGS RECORD FOR SPECIAL SPECIES.....130

NAME INDEX131

Cover photograph: With a wingspan up to 5 inches, the majestic *Papilio multicaudata* (Two-tailed Swallowtail) earns its place as Arizona's official state butterfly. Often seen throughout the western United States near streams and sometimes along city streets this butterfly is unmistakable because of its large bright yellow wings and the two black tails on each hindwing. All photographs are by the author.

For my father
John Samuel Rogers
For sharing his love of plants and animals.

Introduction

Arizona's diverse habitats are occupied by a truly rich mixture of animal species. Some of Arizona's animal groups, ants for example, include more species than any other state. This Notebook contains statewide checklists for 11 species groups. Though you will need at least 11 field guides to help with species identifications, you will need only this one book to keep a record of your species sightings.

The Notebook's checklists have both common and scientific names alphabetized by common name. Finding a name in the lists can be tricky, because the common name isn't always what we think. For instance, Arizona's two Robin species are not alphabetized in the bird checklist as Robins. They are alphabetized as "American Robin" and "Rufous-backed Robin." Both species are easier to find in the index where they are listed as "Robin, American" and "Robin, Roufous-backed." Both species are also listed in the index by scientific name.

The checklists include the Arizona Game and Fish Department's conservation-status rank for each species. If the rank is unknown, the status column will be blank, or it will contain a question mark.



Five-day old Mule Deer twins

Conservation-status rank indicates whether or not a species' population or its habitat is declining or is in danger of decline.

I compiled this notebook to have a single place to gather notes from my journal and the margins of my field guides. There is not much writing space, but if you use the notebook for a specific area such as a yard, there is

space to note at least ten dates. I usually record only the first sighting date each year. Appendix A presents a long list of details you can record. Use it for critically imperiled species (conservation rank S1) and endangered species (rank LE and LT).

Species checklists are most useful when they cover small areas. Checklists for valleys, mountains, urban parks, and yards are ideal,

but few are available. The species checklists in this notebook cover the entire State of Arizona. Thus, you can use the notebook to record species sightings anywhere in Arizona.

Species Conservation Status

People are killing off Earth’s wildlife. Wildlife biologists have observed the decline of Arizona species, and their observations have been collected by the Arizona Game and Fish Department (AZGFD). Each of the species checklists has conservation-status symbols in the righthand columns that indicate whether or not the species is declining. The information is from the October 10, 2013 list posted on the Internet by the Arizona Game and Fish Department (AZGFD, <http://azgfd.gov>). The table below shows the numbers of species in each group that AZGFD considers **critically imperiled (S1)**, **imperiled (S2)**, and **vulnerable (S3)**. It also shows Endangered Species Act (ESA) numbers for **threatened (LT)** and **endangered (LE)** species. Definitions of the symbols begin on page nine. The Notebook has butterfly, moth, damselfly, and dragonfly checklists, but those groups are not in this table because the status of most of their species is unknown.

ARIZONA WILDLIFE CONSERVATION STATUS			
Species Group	# Arizona Native Species	AZGFD # S1+S2+S3	ESA # LT,LE
Amphibians	31	18 (58%)	2 (6%)
Birds	451	260 (58%)	9 (2%)
Fish	40	40 (100%)	13 (33%)
Lizards	67	27 (40%)	0 (0%)
Mammals	189	64 (34%)	15 (8%)
Snakes	76	35 (46%)	1 (1%)
Turtles	10	6 (67%)	2 (20%)
TOTAL	864	450 (52%)	42 (9%)

The table shows the number of Arizona native species and the portion of those ranked S1, S2, and S3. For example, there are 31 native amphibians found in Arizona. Fifty-eight percent of them are vulnerable (S3) or worse (S1 or S2). Six percent have been given protection under the ESA.

Conservation Status Symbols

AZGFD and the U. S. Fish and Wildlife Service (FWS) define the conservation status symbols that I used. For more information, visit <http://azgfd.gov> and navigate to “CONSERVATION” (top menu bar), then to: “Arizona’s Natural Heritage Program (HDMS)” (sidebar), and then to “Species Data Lists.”

Symbols used by AZGFD

- **S1 Critically Imperiled:** Extremely rare or some factor(s) is making the species especially vulnerable to extinction. Typically 5 or fewer locations or very few remaining individuals (<1,000).
- **S2 Imperiled:** Rare or some factor(s) is making the species very vulnerable to extirpation. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).
- **S3 Vulnerable:** Rare or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.
- **S4 Apparently Secure:** Uncommon but not rare, and usually widespread. Usually more than 100 occurrences* and more than 10,000 individuals. Possible long-term concern.
- **S5 Secure:** Common, widespread, and abundant. Safe under present conditions. Typically with considerably more than 100 locations and more than 10,000 individuals.
- **? Inexact or Uncertain:** Qualifies the character immediately preceding.
Used alone to indicate there is insufficient information to assign a rank.
- **SA Accidental:** Not native.
- **SE Exotic Origin:** Not native.
- **SER State Exotic Reported:** Not native.
- **SHQ State Historical Report:** Taxonomy in question.
- **SH Possibly Extirpated (Historical):** Historically present, and there is some expectation that the species may be rediscovered.
- **SP State Potential.** Surveys needed to confirm presence.
- **SR State Reported.** Surveys need to confirm presence.
- **SRF State Reported Falsely.** Not present in state.
- **SRFSC State Reported Falsely, State Captive:** Present only in captivity or cultivation.

- **SRX State Reported Extripated or Extinct.**
- **SX Presumed Extinct:** Not located despite intensive searches, and virtually no likelihood that it will be rediscovered.
- **SXS#Q State Extripated or Extinct:** State Rank of # due to re-introduction; taxonomy in question.
- **SNR Unranked:** Status not yet assessed.
- **SU Unrankable:** Lack of information about status or trends.
- **S#S#** Indicates the range of uncertainty about exact status (e.g., S3S4).
- **SNA** Conservation status is not applicable because the species is not a suitable target of conservation activities *for one of the following reasons:*
- **Hybrid** Species represents an interspecific hybrid without conservation value. (Note that hybrids may be ranked if they do have conservation value).
- **E Exotic Origin:** Species is not native to AZ.
- **AN Accidental/Nonregular:** Species is not regularly found in AZ.
- **N Not Confidently Present:** Presence has been reported but the report is unconfirmed.
- **No Definable Occurrences:** Species is native and appears regularly but lacks practical conservation concern in AZ because it is transient or occurs in a dispersed, unpredictable manner.
- **Synonym:** Species reported in AZ, but the state data center does not recognize the taxon; therefore, AZGFD does not assign the species a status.
- **Q Questionable Taxonomy:** Distinctiveness of this entity as a taxon is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon in another taxon, with a lower-priority (numerically higher) conservation status rank.

Breeding Status Qualifiers

- **B Breeding:** Basic rank refers to the breeding population of the Element in the state. May be used in conjunction with an 'N' qualifier, to denote when taxon has both breeding and non-breeding populations in the subnation.
- **N Nonbreeding:** Non-breeding population in the state.
- **M Migrant:** Basic rank refers to the transient/migratory population of the Element in the subnation.

Note: A breeding status subrank is only used for animal species that have distinct breeding and/or non-breeding and/or migrant populations. A rank for any of the population segments may be assigned alone or may be coupled with one or both of the other segment ranks. In the latter case, the ranks are separated by a comma, with the higher priority rank listed first (e.g., S2B,S3N,S5M; S1B,S3N; SHN,S4S5B).

Other Qualifier

- **? Inexact or Uncertain:** Qualifies the character immediately preceding.

Symbols Used for the ESA by FWS

- **LE Listed Endangered:** Imminent jeopardy of extinction.
- **LT Listed Threatened:** Imminent jeopardy of becoming Endangered.
- **PS Partial Status:** Listed Endangered or Threatened in part of range.
- **XN Experimental Nonessential population.**
- **PDL Proposed for delisting.**
- **PD Proposed for Delisting**
- **No (No Status)** Certain populations of this taxon do not have designated status (check with state or regional USFWS office for details about which populations have designated status).
- **SAT Listed Threatened due to Similarity of Appearance.** This happens when a member of a non-listed population occurs within the geographic area of a Distinct Population Segment for a listed species (e.g., a wintering bald eagle within the DPS for listed bald eagles).
- **PE Proposed Endangered**
- **PT Proposed Threatened**
- **C Candidate:** Species for which the USFWS has on file sufficient information on biological vulnerability and threats to support proposals to list as Endangered or Threatened under ESA. Proposed rules for these species are precluded at present by other higher priority listing actions.
- **C*** Species for which FWS made a continued warranted-but-precluded finding on a resubmitted petition.
- **SC Species of Concern:** Describes the entire realm of taxa whose conservation status may be of concern to the US Fish and Wildlife Service, but does not have official federal status.

References

I listed a few references in the introduction to each species group. If an Internet link fails, try going to the root directory and performing a search. For example, the location of the Endangered Species Act on the U. S. Fish and Wildlife Service website might change. To find it, go to <http://fws.gov> and search for Endangered Species Act.

Amphibians



One-eyed Rocky Mountain Toad (Go to garryrogers.com for the toad's story.)

Arizona is home to 35 water-dependent frogs, toads, and salamanders. Many species occur in widely separated populations, and some of these are declining. For example, the Arizona Treefrog (*Hyla wrightorum*), the Arizona state amphibian, is stable over most of its range, but the population in the Huachuca/Canelo Hills in southern AZ is critically imperiled and is a candidate for ESA protection.

Frogs, toads, and salamanders are failing fast worldwide. There are numerous reasons, but four factors are responsible for most of the decline.

1. Essential water habitats are shrinking and becoming polluted.
2. A lethal amphibian disease is spreading across the planet.
3. Damaging short wave solar radiation penetrating the atmosphere is increasing.
4. People are spreading invasive species that overwhelm natives. In Arizona, introduced Bullfrogs and some species from other groups are eliminating native species.

Amphibian Species Numbers

Arizona State Game and Fish Department, reports that 58% of native amphibians are vulnerable (State Status S1-S3) and 74% of natives are of possible long-term concern (State Status S1-S4).

- World: 6400
- U.S.: 230
- Arizona Total: 35
- Arizona Natives: 31
- Arizona Vulnerable (AZ rank S1-S3): 18 (58%)
- Arizona Possible Long-Term Concern (S1-S4): 23 (74%)

- ESA Species Listed Endangered (LE): 1
- ESA Species Listed Threatened (LT): 1
- ESA Candidate Species (C): 1
- ESA Species of Concern (SC): 3

Arizona Amphibian References

The [Naturalist's Bookstore](#) has field guides and other references. <http://bit.ly/RKW2bC>. You will find field guides at the end of the category list.

Amphibiaweb:
<http://amphibiaweb.org/chytrid/chytridiomycosis.html>.

AZGFD (Arizona Game and Fish Department): <http://AZGFD.gov>.

Bishop, S.C. 1962. Handbook of salamanders. Hafner, NY, NY. 555 p.

Brennan, T.C. 2008. Online field guide to reptiles and amphibians of Arizona: <http://reptilesfaz.com>.

Global Amphibian Assessment: <http://globalamphibians.org>.

NBII. U. S. National Biological Information Infrastructure:
<http://nbii.gov>.

Southwest Partners in Amphibian and Reptile Conservation:
<http://sw-parc.org>.

Stebbins, R.C. 1966. A field guide to western reptiles and amphibians. Houghton Mifflin, Boston, MA. 279 p.

U. S. Endangered Species Act. 1973. The act and related laws are discussed at: <http://fws.gov/laws/lawsdigest/ESACT.html>.

U. S. Forest Service. 2007. Regional Forester's list of sensitive animals: http://fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_021328.pdf.

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Arizona Amphibians Checklist

See page 9 for conservation status symbol definitions.

ARIZONA AMPHIBIANS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
African Clawed Frog	<i>Xenopus laevis</i>	SE1	
American Bullfrog	<i>Lithobates catesbeianus</i>	SE5	
Arizona Tiger Salamander	<i>Ambystoma mavortium nebulosum</i>	S5	
Arizona Toad	<i>Anaxyrus microscaphus</i>	S3S4	SC
Arizona Treefrog	<i>Hyla wrightorum</i>	S4	CDPS
Arizona Treefrog (Huachuca/Canelo)	<i>Hyla wrightorum (Huachuca/Canelo)</i>	S1	CDPS
Baja California Treefrog	<i>Pseudacris hypochondriaca</i>	S3,SE	
Barking Frog	<i>Craugastor augusti</i>	S2	
Boreal Chorus Frog	<i>Pseudacris maculata</i>	S5	
Canyon Treefrog	<i>Hyla arenicolor</i>	S5	
Chiricahua Leopard Frog	<i>Lithobates chiricahuensis</i>	S2	LT
Couch's Spadefoot	<i>Scaphiopus couchii</i>	S5	
Great Basin Spadefoot	<i>Spea intermontana</i>	S3	
Great Plains Toad	<i>Anaxyrus cognatus</i>	S5	
Green Toad	<i>Anaxyrus debilis</i>	S3	
Lowland Burrowing Treefrog	<i>Smilisca fodiens</i>	S2	
Lowland Leopard Frog	<i>Lithobates yavapaiensis</i>	S3	SC
Mexican Spadefoot	<i>Spea multiplicata</i>	S5	
Mogollon Rim Treefrog	<i>Hyla wrightorum (Mogollon Rim Pop)</i>	S4	

ARIZONA AMPHIBIANS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Northern Leopard Frog	<i>Lithobates pipiens</i>	S2	
Plains Leopard Frog	<i>Lithobates blairi</i>	S1	
Plains Spadefoot	<i>Spea bombifrons</i>	S4	
Red-spotted Toad	<i>Anaxyrus punctatus</i>	S5	
Relict Leopard Frog	<i>Lithobates onca</i>	S1	C
Rio Grande Leopard Frog	<i>Lithobates berlandieri</i>	SE3SE4	
Rocky Mountain Toad	<i>Anaxyrus woodhousii woodhousii</i>	S4	
Sonoran Desert Toad	<i>Incilius alvarius</i>	S3S4	
Sonoran Green Toad	<i>Anaxyrus retiformis</i>	S3	
Sonoran Tiger Salamander	<i>Ambystoma mavortium stebbinsi</i>	S1	LE
Southwestern Woodhouse's Toad	<i>Anaxyrus woodhousii australis</i>	S4	
Tarahumara Frog	<i>Lithobates tarahumarae</i>	SXS1	SC
Western Barking Frog	<i>Craugastor augusti cactorum</i>	S2	
Western Green Toad	<i>Anaxyrus debilis insidior</i>	S3	
Western Narrow-mouthed Toad	<i>Gastrophryne olivacea</i>	S3	
Woodhouse's Toad	<i>Anaxyrus woodhousii</i>	S5	

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Ants

Arizona has more ant species than any other state. We do not know if Arizona's ants are declining along with the rest of the state's wildlife, but it seems likely. Our lack of ant information is surprising since wildlife scientists argue that ants should be at the center of conservation concerns. As E. O. Wilson points out in the forward to a recent book on ant ecology (Alonso 2010), "We have only begun to explore the full impact of ants on the natural ecosystems of the planet...."

Arizona's 300+ ant species occupy habitats ranging from the lowest desert areas to near the tops of the highest mountains. Harvester Ants (*Pogonomyrmex*, *Messor*, and *Pheidole*) live in most environments, but they are most abundant in warm desert areas. Carpenter (*Camponotus*) and Wood Ants (*Formica*) are more common in cooler uplands.

According to Stefan Cover and Bob Johnson (www.antweb.org/arizona.jsp), 12 of Arizona's ant species are not natives. Fire Ants from South America (*Solenopsis invicta*) have reached Arizona, but wildlife managers eradicated the only known colony. That is good, because Fire Ants are highly destructive. They form large colonies that displace other ants, and alter habitats.

The Ants (Holldobler and Wilson 1990), *Ant Ecology* (Alonso 2010), and the novel, *Ant Hill* (Wilson 2010) offer extensive information about ants. Antweb provides photographs and field guides.

Ant Species Numbers

(Estimates from Wikipedia and AntWeb)

- World: 22,000
- U. S.: 700
- Arizona: 334 (322 natives)*

*I have seen larger numbers cited for Arizona, but the authors did not provide species lists.

Arizona Ant References

Amazon's Naturalist's Bookstore has many books on ants. Go to: <http://bit.ly/RKW2bC>.

Alex Wild’s website has superb ant
photographs: <http://myrmecos.net/north-american-ants>.

Allred, D.M. 1982. Ants of Utah. Great Basin Naturalist 42: 415-511.

Alonso, L.E. 2010. Ant conservation: Current status and a call to action. Chapter 4 in L. Lach, C.L. Parr, and K.L. Abbott. Ant Ecology. Forward by E.O. Wilson. Oxford University Press, New York, NY. 409 p.

Antweb: www.antweb.org/arizona.jsp. Principal authors: Stefan Cover and Bob Johnson.

Arizona-Sonora Desert Museum:
http://www.desertmuseum.org/invaders/invaders_fireant.php

Berenbaum, M. 2003. A Stinging Commentary. American Entomologist 49: 68-69.

Holldobler, B., and E.O. Wilson. 1990. The ants. Belknap Press, New York, NY. 746p.

Johnson, R.A. 1996. Arizona ants. Arizona Wildlife Views, June 1996: 3-5.

Schmidt, J. O. 1990. Hymenoptera venoms: striving toward the ultimate defense against vertebrates, pp. 387–419 in D.L. Evans and J.O. Schmidt, eds., Insect defenses: adaptive mechanisms and strategies of prey and predators. State University of New York Press, Albany, NY. NP

Wilson, E. O. 2010. Ant Hill. Norton, New York, NY. 382 p.

World Wildlife Fund. 2014. Living Planet Report 2014.
<http://panda.org>.

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Arizona Ant Checklist

The checklist includes families and subfamilies with space for the species you identify. The AntWeb website (www.antweb.org) provides a current list with pictures and descriptions. If you wind up on the AntWeb home page, go to “Regions, Nearctic” to find Arizona.

ARIZONA ANTS
Amblyoponinae (According to Barry Bolton on the Antweb site, this is mostly subterranean predator ant group.)
Cerapachyinae (ant predators.)
Dolichoderinae (cone or odorous ant.)
Ecitoninae (“army ant”—all species are nomadic predator ant)
Ectatomminae (<u>Antwiki</u> has a little information on this group.)
Formicinae (mound-building ant, carpenter ant, & honeypot ant.)

ARIZONA ANTS
Myrmicinae (harvester ant, predator ant, and fungus-farmer ant.)
Ponerinae (predatory ant)
Pseudomyrmecinae (arboreal ant)

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Birds

According to the list published by AZGFD, 551 bird species and subspecies occur in Arizona. Four hundred and fifty one of these are regular residents.



Loggerhead Shrike

Audubon Society's Christmas Bird Counts show that since 1967, many U. S. bird species have declined. Some of our most familiar bird species have lost more than half their populations. For example, over the past 50 years, sightings of Loggerhead Shrikes, a common Arizona species, declined by 72 percent. The Loggerhead Shrike in the photograph is the only one I have seen in 17 years of watching at my location.

AZGFD wildlife biologists conclude that 58% of the regulars are imperiled or vulnerable. Another 20% are of possible long-term concern. The U. S. Endangered Species Act (ESA) protects only 1% of Arizona bird species.

Bird Species Numbers

- World: 10,000
- U. S.: 1,000
- Arizona Total: 551
- Arizona birds regularly present: 451
- Arizona regulars of concern (ranked S1 to S3): 260 (58%)
- Arizona regulars of Possible Long-Term Concern: (S4): 95 (21%)
- ESA Arizona regulars Listed Endangered: 6 (1%)
- ESA Arizona regulars Listed Threatened: 1 (<1%)
- ESA Arizona regulars of Concern: 26 (6%)

Arizona Bird References

The Naturalist's Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

Alderfer, J., Ed. 2006. Complete Birds of North America. National Geographic Society, Washington, DC. 696 p.

American Birding Association: <http://www.aba.org>.

American Ornithologists' Union: <http://www.aou.org/>.

ABC. AZ Bird Committee: <http://www.azfo.org>. Checklists
: <http://www.mexicobirding.com/arizona/checklist.html>

Arizona Field Ornithologists: <http://azfo.org>.

Arizona Game and Fish Department: <http://azgfd.gov/>

American Bird Conservancy: www.abcbirds.org.

Audubon Society: <http://birds.audubon.org/common-birds-decline>.

Brandt, F. 2001. Birding the Flagstaff Area. Northern Arizona
Audubon Society. Flagstaff, AZ.

Corman, T.E., and C. Wise-Gervais. 2005. Arizona breeding bird
atlas. University of New Mexico Press, Albuquerque, NM. 636 p.

Gilmore, V. 2003. Birding Sedona and the Verde Valley. Northern
Arizona Audubon Soc. Flagstaff, AZ.

Partners in Flight: www.partnersinflight.org.

Rosenberg, G.H., and D. Stejskal. 2002 (2nd Edition). The Arizona
Bird Committee's field checklist of birds of Arizona. Bird
Committee, Tucson, AZ.

Thayer Birding Software: <http://www.thayerbirding.com/>.

Tomoff, C.S. 2003 (3rd Edition). Birds of Prescott, AZ: Annotated
checklist of the relative abundance and seasonal status of
Prescott-area birds. Carl Tomoff Publications, Prescott, Arizona.

U. S. Geological Survey, Northern Prairie Wildlife Research
Center: [http://www.npwrc.usgs.gov/resource/birds/chekbird/
r2/4.htm](http://www.npwrc.usgs.gov/resource/birds/chekbird/r2/4.htm)

WildBirds: www.WildBirds.com.

Wingert, K. 1996. Birds in and around Prescott and the Verde
Valley. The Left Hand Press, Prescott, AZ. vii + 63 p.

Witzeman, J., S. Demaree and E Radke. 1997. Birds of Phoenix and
Maricopa County. Maricopa Audubon Society, Phoenix, AZ.

Arizona Bird Checklist

See page 9 for conservation status symbol definitions.

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Abert's Towhee	<i>Melospiza aberti</i>	S3	
Acadian Flycatcher	<i>Empidonax virescens</i>	SNA	
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	S5	
Allen's Hummingbird	<i>Selasphorus sasin</i>	S2S3M	
American Avocet	<i>Recurvirostra americana</i>	S2	
American Bittern	<i>Botaurus lentiginosus</i>	S1S2	
American Coot	<i>Fulica americana</i>	S5	
American Crow	<i>Corvus brachyrhynchos</i>	S5	
American Dipper	<i>Cinclus mexicanus</i>	S3	
American Golden-plover	<i>Pluvialis dominica</i>	S1M	
American Goldfinch	<i>Spinus tristis</i>	S1B,S5N	
American Kestrel	<i>Falco sparverius</i>	S5	
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	S4	SC
American Pipit	<i>Anthus rubescens</i>	S2B,S5N	
American Redstart	<i>Setophaga ruticilla</i>	S1	
American Robin	<i>Turdus migratorius</i>	S5	
American Scoter	<i>Melanitta americana</i>	SNA	
Am. Three-toed Woodpecker	<i>Picoides dorsalis</i>	S3	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
American Tree Sparrow	<i>Spizella arborea</i>	S1N	
American White Pelican	<i>Pelecanus erythrorhynchos</i>	S3N	
American Wigeon	<i>Anas americana</i>	S1B,S5N	
Anhinga	<i>Anhinga anhinga</i>	SNA	
Anna's Hummingbird	<i>Calypte anna</i>	S5	
Apache Northern Goshawk	<i>Accipiter gentilis apache</i>	S1S2	SC
Aplomado Falcon	<i>Falco femoralis</i>	SH	No
Arctic Tern	<i>Sterna paradisaea</i>	SNA	
Arizona Bell's Vireo	<i>Vireo bellii arizonae</i>	S4	
Arizona Botteri's Sparrow	<i>Peucaea botterii arizonae</i>	S3?B	
Arizona Grasshopper Sparrow	<i>Ammodramus savannarum ammodramus</i>	S1S2	
Arizona Woodpecker	<i>Picoides arizonae</i>	S3	
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>	S5	
Aztec Thrush	<i>Ridgwayia pinicola</i>	S1S2N	
Azure Bluebird	<i>Sialia sialis fulva</i>	S3	
Baird's Sandpiper	<i>Calidris bairdii</i>	S4M	
Baird's Sparrow	<i>Ammodramus bairdii</i>	S2N	SC
Bald Eagle	<i>Haliaeetus leucocephalus</i>	S2S3B	SC
Sonoran Desert Bald Eagle	<i>Haliaeetus leucocephalus pop 3</i>	S2S3	SC
Winter Population Bald Eagle	<i>Haliaeetus leucocephalus (winter)</i>	S4N	SC

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Baltimore Oriole	<i>Icterus galbula</i>	SNA	
Band-tailed Pigeon	<i>Patagioenas fasciata</i>	S5	
Bank Swallow	<i>Riparia riparia</i>	S4M	
Barn Owl	<i>Tyto alba</i>	S5	
Barn Swallow	<i>Hirundo rustica</i>	S5	
Barrow's Goldeneye	<i>Bucephala islandica</i>	S1N	
Bay-breasted Warbler	<i>Setophaga castanea</i>	SNA	
Bell's Sparrow	<i>Artemisiospiza belli</i>	S4	No
Bell's Vireo	<i>Vireo bellii</i>	S4	No
Belted Kingfisher	<i>Megasceryle alcyon</i>	S2B,S5N	
Bendire's Thrasher	<i>Toxostoma bendirei</i>	S4	
Berylline Hummingbird	<i>Amazilia beryllina</i>	S1	
Bewick's Wren	<i>Thryomanes bewickii</i>	S5	
Black Phoebe	<i>Sayornis nigricans</i>	S5	
Black Rail	<i>Laterallus jamaicensis</i>	S1	SC
Black Rosy-Finch	<i>Leucosticte atrata</i>	SA	
Black Skimmer	<i>Rynchops niger</i>	SNA	
Black Storm-Petrel	<i>Oceanodroma melania</i>	SA	
Black Swift	<i>Cypseloides niger</i>	SNA	
Black Tern	<i>Chlidonias niger</i>	S3S4M	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Black Vulture	<i>Coragyps atratus</i>	S1S2	
Black-and-white Warbler	<i>Mniotilta varia</i>	S1B	
Black-bellied Plover	<i>Pluvialis squatarola</i>	S2M	
Black-bellied Whistling-Duck	<i>Dendrocygna autumnalis</i>	S3	
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	SNA	
Black-billed Magpie	<i>Pica hudsonia</i>	S3	
Blackburnian Warbler	<i>Setophaga fusca</i>	SNA	
Black-capped Chickadee	<i>Poecile atricapillus</i>	S1N	
Black-capped Gnatcatcher	<i>Polioptila nigriceps</i>	S1	
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	S5	
Black-chinned Sparrow	<i>Spizella atrogularis</i>	S5	
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	S3	
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	S5	
Black-legged Kittiwake	<i>Rissa tridactyla</i>	SNA	
Black-necked Stilt	<i>Himantopus mexicanus</i>	S2	
Blackpoll Warbler	<i>Setophaga striata</i>	SNA	
Black-tailed Gnatcatcher	<i>Polioptila melanura</i>	S5	
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	S1M	
Black-throated Gray Warbler	<i>Setophaga nigrescens</i>	S5	
Black-throated Green Warbler	<i>Setophaga virens</i>	SNA	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Black-throated Sparrow	<i>Amphispiza bilineata</i>	S5	
Black-vented Oriole	<i>Icterus wagleri</i>	SNA	
Blue Grosbeak	<i>Passerina caerulea</i>	S5	
Blue Jay	<i>Cyanocitta cristata</i>	SNA	
Blue Mockingbird	<i>Melanotis caerulescens</i>	SNA	
Blue-footed Booby	<i>Sula nebouxii</i>	SNA	
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	S5	
Blue-throated Hummingbird	<i>Lampornis clemenciae</i>	S4	
Blue-winged Teal	<i>Anas discors</i>	S2B,S5N	
Blue-winged Warbler	<i>Vermivora cyanoptera</i>	SNA	
Bobolink	<i>Dolichonyx oryzivorus</i>	S1	
Bohemian Waxwing	<i>Bombycilla garrulus</i>	SNA	
Bonaparte's Gull	<i>Chroicocephalus philadelphia</i>	S3S4M	
Botteri's Sparrow	<i>Peucaea botterii</i>	S4	
Brant	<i>Branta bernicla</i>	SNA	
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	S5	
Brewer's Sparrow	<i>Spizella breweri</i>	S5	
Bridled Titmouse	<i>Baeolophus wollweberi</i>	S4	
Broad-billed Hummingbird	<i>Cynanthus latirostris</i>	S3	
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	S5	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Broad-winged Hawk	<i>Buteo platypterus</i>	S2M	No
Bronzed Cowbird	<i>Molothrus aeneus</i>	S5	
Brown Booby	<i>Sula leucogaster</i>	SNA	
Brown Creeper	<i>Certhia americana</i>	S5	
Brown Pelican	<i>Pelecanus occidentalis</i>	S1N	SC
Brown Thrasher	<i>Toxostoma rufum</i>	S1N	
Brown-crested Flycatcher	<i>Myiarchus tyrannulus</i>	S4	
Brown-headed Cowbird	<i>Molothrus ater</i>	S5	
Buff-breasted Flycatcher	<i>Empidonax fulvifrons</i>	S1	
Buff-collared Nightjar	<i>Antrostomus ridgwayi</i>	S2S3	
Bufflehead	<i>Bucephala albeola</i>	S5N	
Bullock's Oriole	<i>Icterus bullockii</i>	S4BS1N	
Bumblebee Hummingbird	<i>Atthis heloisa</i>	SA	
Burrowing Owl	<i>Athene cunicularia</i>	S3	
Bushtit	<i>Psaltiriparus minimus</i>	S5	
Cackling Goose	<i>Branta hutchinsii</i>	S1N	
Cactus Ferruginous Pygmy-owl	<i>Glaucidium brasilianum cactorum</i>	S1	SC
Cactus Wren	<i>Campylorhynchus brunneicapillus</i>	S5	
California Black Rail	<i>Laterallus jamaicensis coturniculus</i>	S1	SC
California Condor	<i>Gymnogyps californianus</i>	SX,S1	LE,XN

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
California Gull	<i>Larus californicus</i>	S3N	
Calliope Hummingbird	<i>Selasphorus calliope</i>	S4M	
Canada Warbler	<i>Cardellina canadensis</i>	SNA	
Canvasback	<i>Aythya valisineria</i>	S1B,S4N	
Canyon Towhee	<i>Melospiza fusca</i>	S5	
Canyon Wren	<i>Catherpes mexicanus</i>	S5	
Cape May Warbler	<i>Setophaga tigrina</i>	SNA	
Caspian Tern	<i>Hydroprogne caspia</i>	S1N	
Cassin's Finch	<i>Haemorhous cassinii</i>	S4	
Cassin's Kingbird	<i>Tyrannus vociferans</i>	S5	
Cassin's Sparrow	<i>Peucaea cassinii</i>	S4	
Cassin's Vireo	<i>Vireo cassinii</i>	S3N	
Cattle Egret	<i>Bubulcus ibis</i>	S1B,S4N	
Cave Swallow	<i>Petrochelidon fulva</i>	SAB	
Cedar Waxwing	<i>Bombicilla cedrorum</i>	S3S4N	
Cerulean Warbler	<i>Setophaga cerulea</i>	SNA	
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	S3N	
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	S1N	
Chihuahua Savannah Sparrow	<i>Passerculus sandwichensis rufofuscus</i>	S2S3	
Chihuahuan Raven	<i>Corvus cryptoleucus</i>	S4	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Chimney Swift	<i>Chaetura pelagica</i>	SNA	
Chipping Sparrow	<i>Spizella passerina</i>	S5	
Chukar	<i>Alectoris chukar</i>	SE1SE2	
Cinnamon Hummingbird	<i>Amazilia rutila</i>	SNA	
Cinnamon Teal	<i>Anas cyanoptera</i>	S5	
Clapper Rail	<i>Rallus longirostris</i>	S3	
Clark's Grebe	<i>Aechmophorus clarkii</i>	S3	
Clark's Nutcracker	<i>Nucifraga columbiana</i>	S5	
Clay-colored Sparrow	<i>Spizella pallida</i>	S1N	
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	S5	
Common Black-Hawk	<i>Buteogallus anthracinus</i>	S3	
Common Goldeneye	<i>Bucephala clangula</i>	S5N	
Common Grackle	<i>Quiscalus quiscula</i>	SNA	
Common Ground-Dove	<i>Columbina passerina</i>	S4	
Common Loon	<i>Gavia immer</i>	S2N	
Common Merganser	<i>Mergus merganser</i>	S3S4	
Common Nighthawk	<i>Chordeiles minor</i>	S5	
Common Poorwill	<i>Phalaenoptilus nuttallii</i>	S5	
Common Raven	<i>Corvus corax</i>	S5	
Common Tern	<i>Sterna hirundo</i>	S3M	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Common Yellowthroat	<i>Geothlypis trichas</i>	S4	
Connecticut Warbler	<i>Oporornis agilis</i>	SNA	
Cooper's Hawk	<i>Accipiter cooperii</i>	S4	
Cordilleran Flycatcher	<i>Empidonax occidentalis</i>	S2S3B	
Costa's Hummingbird	<i>Calypte costae</i>	S5	
Crescent-chested Warbler	<i>Oreothlypis superciliosa</i>	SNA	
Crested Caracara	<i>Caracara cheriway</i>	S1S2	No
Crissal Thrasher	<i>Toxostoma crissale</i>	S5	
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	S5	
Dark-eyed Junco	<i>Junco hyemalis</i>	S5	
Desert Purple Martin	<i>Progne subis hesperia</i>	S2S3B	
Dickcissel	<i>Spiza americana</i>	S2M	
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	S5	
Double-crested Cormorant	<i>Phalacrocorax auritus albociliatus</i>	S3	
Downy Woodpecker	<i>Picoides pubescens</i>	S4	
Dunlin	<i>Calidris alpina</i>	S2N	
Dusky Flycatcher	<i>Empidonax oberholseri</i>	S4	
Dusky Grouse	<i>Dendragapus obscurus</i>	S3	
Dusky-capped Flycatcher	<i>Myiarchus tuberculifer</i>	S4	
Eared Grebe	<i>Podiceps nigricollis</i>	S3B,S5N	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Eared Quetzal	<i>Euptilotis neoxenus</i>	SAB,S1N	
Eastern Bluebird	<i>Sialia sialis</i>	S4	
Eastern Bluebird	<i>Sialia sialis sialis</i>	SN	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	S1S2M	
Eastern Meadowlark	<i>Sturnella magna</i>	S5	
Eastern Phoebe	<i>Sayornis phoebe</i>	S1N	
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	SA	
Eastern Wood-Pewee	<i>Contopus virens</i>	SNA	
Elegant Tern	<i>Thalasseus elegans</i>	SNA	
Elegant Trogon	<i>Trogon elegans</i>	S3	
Elf Owl	<i>Micrathene whitneyi</i>	S5	
Eurasian Collard Dove	<i>Streptopelia decaocto</i>	SE5	
European Starling	<i>Sturnus vulgaris</i>	SE5	
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	S3	
Fan-tailed Warbler	<i>Basileuterus lachrymosus</i>	SNA	
Ferruginous Hawk	<i>Buteo regalis</i>	S2B,S4N	SC
Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum</i>	S1	
Field Sparrow	<i>Spizella pusilla</i>	SNA	
Five-striped Sparrow	<i>Amphispiza quinquestriata</i>	S1S2	
Flame-colored Tanager	<i>Piranga bidentata</i>	SAB	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Flammulated Owl	<i>Psiloscoops flammeolus</i>	S4	
Forster's Tern	<i>Sterna forsteri</i>	S2N	
Fox Sparrow	<i>Passerella iliaca</i>	S2N	
Franklin's Gull	<i>Leucophaeus pipixcan</i>	S3S4M	
Fulvous Whistling-Duck	<i>Dendrocygna bicolor</i>	SNA	SC
Gadwall	<i>Anas strepera</i>	S5	
Gambel's Quail	<i>Callipepla gambelii</i>	S5	
Garganey	<i>Anas querquedula</i>	SNA	
Gila Woodpecker	<i>Melanerpes uropygialis</i>	S5	
Gilded Flicker	<i>Colaptes chrysoides</i>	S5	
Glaucous Gull	<i>Larus hyperboreus</i>	SNA	
Glaucous-winged Gull	<i>Larus glaucescens</i>	SNA	
Golden Eagle	<i>Aquila chrysaetos</i>	S4	
Golden-crowned Kinglet	<i>Regulus satrapa</i>	S3	
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	S1S2N	
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	SNA	
Gould's Turkey	<i>Meleagris gallopavo mexicana</i>	S1	
Grace's Warbler	<i>Setophaga graciae</i>	S5	
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	S3	No
Gray Catbird	<i>Dumetella carolinensis</i>	S1	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Gray Flycatcher	<i>Empidonax wrightii</i>	S5	
Gray Hawk	<i>Buteo plagiatus</i>	S3	SC
Gray Jay	<i>Perisoreus canadensis</i>	S2	
Gray Vireo	<i>Vireo vicinior</i>	S4	
Gray-cheeked Thrush	<i>Catharus minimus</i>	SNA	
Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>	SA	
Great Blue Heron	<i>Ardea herodias</i>	S5	
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	SNA	
Great Egret	<i>Ardea alba</i>	S1B,S4N	
Great Horned Owl	<i>Bubo virginianus</i>	S5	
Great Kiskadee	<i>Pitangus sulphuratus</i>	SNA	
Greater Pewee	<i>Contopus pertinax</i>	S4	
Greater Roadrunner	<i>Geococcyx californianus</i>	S5	
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	SR	C*
Greater Scaup	<i>Aythya marila</i>	S1N	
Greater White-fronted Goose	<i>Anser albifrons</i>	S2N	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	S3N	
Great-tailed Grackle	<i>Quiscalus mexicanus</i>	S5	
Green Heron	<i>Butorides virescens</i>	S4	
Green Kingfisher	<i>Chloroceryle americana</i>	S2	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Green-tailed Towhee	<i>Pipilo chlorurus</i>	S3B,S4N	
Green-winged Teal	<i>Anas crecca</i>	S3B,S5N	
Groove-billed Ani	<i>Crotophaga sulcirostris</i>	S1N	
Gull-billed Tern	<i>Gelochelidon nilotica</i>	SNA	
Gunnison Sage-grouse	<i>Centrocercus minimus</i>	SH	PE
Hairy Woodpecker	<i>Picoides villosus</i>	S5	
Hammond's Flycatcher	<i>Empidonax hammondi</i>	S1B	
Harlequin Duck	<i>Histrionicus histrionicus</i>	SNA	SC
Harris's Hawk	<i>Parabuteo unicinctus</i>	S5	
Harris's Sparrow	<i>Zonotrichia querula</i>	S1N	
Heermann's Gull	<i>Larus heermanni</i>	S1M	
Hepatic Tanager	<i>Piranga flava</i>	S4	
Hermit Thrush	<i>Catharus guttatus</i>	S5	
Hermit Warbler	<i>Setophaga occidentalis</i>	S4M	
Herring Gull	<i>Larus argentatus</i>	S2N	
Hooded Merganser	<i>Lophodytes cucullatus</i>	S2N	
Hooded Oriole	<i>Icterus cucullatus</i>	S5	
Hooded Warbler	<i>Setophaga citrina</i>	S2M	
Horned Grebe	<i>Podiceps auritus</i>	S2N	
Horned Lark	<i>Eremophila alpestris</i>	S5	No

ARIZONA BIRDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
House Finch	<i>Haemorhous mexicanus</i>	S5	
House Sparrow	<i>Passer domesticus</i>	SE5	
House Wren	<i>Troglodytes aedon</i>	S5	
Hudsonian Godwit	<i>Limosa haemastica</i>	SNA	
Hutton's Vireo	<i>Vireo huttoni</i>	S5	
Inca Dove	<i>Columbina inca</i>	S5	
Indigo Bunting	<i>Passerina cyanea</i>	S3	
Juniper Titmouse	<i>Baeolophus ridgwayi</i>	S5	
Kentucky Warbler	<i>Geothlypis formosa</i>	S1M	
Killdeer	<i>Charadrius vociferus</i>	S5	
Ladder-backed Woodpecker	<i>Picoides scalaris</i>	S5	
Lapland Longspur	<i>Calcarius lapponicus</i>	S1N	
Large-billed Savannah Sparrow	<i>Passerculus sandwichensis rostratus</i>	SA	SC
Lark Bunting	<i>Calamospiza melanocorys</i>	S1B,S5N	
Lark Sparrow	<i>Chondestes grammacus</i>	S5	
Laughing Gull	<i>Leucophaeus atricilla</i>	SNA	
Lawrence's Goldfinch	<i>Spinus lawrencei</i>	SAB	
Laysan Albatross	<i>Phoebastria immutabilis</i>	SNA	
Lazuli Bunting	<i>Passerina amoena</i>	S4	
Le Conte's Sparrow	<i>Ammodramus leconteii</i>	SNA	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Le Conte's Thrasher	<i>Toxostoma lecontei</i>	S3	
Least Bittern	<i>Ixobrychus exilis</i>	S3	
Least Bittern	<i>Ixobrychus exilis hesperis</i>	S3	SC
Least Flycatcher	<i>Empidonax minimus</i>	SNA	
Least Grebe	<i>Tachybaptus dominicus</i>	SAB	
Least Sandpiper	<i>Calidris minutilla</i>	S5N	
Least Storm-Petrel	<i>Oceanodroma microsoma</i>	SA	
Least Tern	<i>Sternula antillarum</i>	S2M	LE
Lesser Goldfinch	<i>Spinus psaltria</i>	S5	
Lesser Nighthawk	<i>Chordeiles acutipennis</i>	S5	
Lesser Scaup	<i>Aythya affinis</i>	S5N	
Lesser Yellowlegs	<i>Tringa flavipes</i>	S4M	
Lewis's Woodpecker	<i>Melanerpes lewis</i>	S4	
Lincoln's Sparrow	<i>Melospiza lincolni</i>	S3B	
Little Blue Heron	<i>Egretta caerulea</i>	S1S2N	
Loggerhead Shrike	<i>Lanius ludovicianus</i>	S4	SC
Long-billed Curlew	<i>Numenius americanus</i>	S1B	
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>	S3S4N	
Long-eared Owl	<i>Asio otus</i>	S2B,S4N	
Long-tailed Duck	<i>Clangula hyemalis</i>	S1N	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>	SNA	
Louisiana Waterthrush	<i>Parkesia motacilla</i>	S1N	
Lucifer Hummingbird	<i>Calothorax lucifer</i>	S2	
Lucy's Warbler	<i>Oreothlypis luciae</i>	S5	
MacGillivray's Warbler	<i>Geothlypis tolmiei</i>	S4	
Magnificent Frigatebird	<i>Fregata magnificens</i>	SNA	
Magnificent Hummingbird	<i>Eugenes fulgens</i>	S4	
Magnolia Warbler	<i>Setophaga magnolia</i>	SNA	
Mallard	<i>Anas platyrhynchos</i>	S5	
Marbled Godwit	<i>Limosa fedoa</i>	S3M	
Marsh Wren	<i>Cistothorus palustris</i>	S2B,S3	
Masked Bobwhite	<i>Colinus virginianus ridgwayi</i>	S1	LE
McCown's Longspur	<i>Rhynchophanes mccownii</i>	S2N	
Merlin	<i>Falco columbarius</i>	S4N	
Mew Gull	<i>Larus canus</i>	SNA	
Mexican Chickadee	<i>Poecile sclateri</i>	S3	
Mexican Duck	<i>Anas platyrhynchos diazi</i>	S4	
Mexican Jay	<i>Aphelocoma wollweberi</i>	S5	
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	S3S4	LT
Mississippi Kite	<i>Ictinia mississippiensis</i>	S3	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Montezuma Quail	<i>Cyrtonyx montezumae</i>	S4	
Mountain Bluebird	<i>Sialia currucoides</i>	S5	
Mountain Chickadee	<i>Poecile gambeli</i>	S5	
Mountain Plover	<i>Charadrius montanus</i>	S1B,S2N	SC
Mountain Pygmy-Owl	<i>Glaucidium gnoma californicum</i>	S3	
Mourning Dove	<i>Zenaida macroura</i>	S5	
Mourning Warbler	<i>Geothlypis philadelphia</i>	SNA	
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	S4S5M	
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>	S1N	
North Buff-breasted Flycatcher	<i>Empidonax fulvifrons pygmaeus</i>	S1	SC
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	SH	LE,XN
Northern Beardless-Tyrannulet	<i>Camptostoma imberbe</i>	S4	
Northern Bobwhite	<i>Colinus virginianus</i>	S1	PS
Northern Cardinal	<i>Cardinalis cardinalis</i>	S5	
Northern Flicker	<i>Colaptes auratus</i>	S5	
Northern Goshawk	<i>Accipiter gentilis</i>	S3B	SC
Northern Goshawk	<i>Accipiter gentilis atricapillus</i>	S3	SC
Northern Harrier	<i>Circus cyaneus</i>	S1S2B	
Northern Jacana	<i>Jacana spinosa</i>	SNA	
Northern Mockingbird	<i>Mimus polyglottos</i>	S5	

ARIZONA BIRDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Northern Parula	<i>Setophaga americana</i>	S2N	
Northern Pintail	<i>Anas acuta</i>	S2B,S5N	
Northern Pygmy-Owl	<i>Glaucidium gnoma</i>	S4	
Northern Pygmy-Owl	<i>Glaucidium gnoma gnoma</i>	S4	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	S5	
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	S4	
Northern Shoveler	<i>Anas clypeata</i>	S1B,S5N	
Northern Shrike	<i>Lanius excubitor</i>	S2N	
Northern Waterthrush	<i>Parkesia noveboracensis</i>	S2S3M	
Nutting's Flycatcher	<i>Myiarchus nuttingi</i>	SNA	
Olive Warbler	<i>Peucedramus taeniatus</i>	S4	
Olive-sided Flycatcher	<i>Contopus cooperi</i>	S4	SC
Orange-crowned Warbler	<i>Oreothlypis celata</i>	S3B,S5N	
Orchard Oriole	<i>Icterus spurius</i>	SNA	
Osprey	<i>Pandion haliaetus</i>	S2B,S4N	
Ovenbird	<i>Seiurus aurocapilla</i>	S2M	
Pacific Loon	<i>Gavia pacifica</i>	S1N	
Pacific Wren	<i>Troglodytes pacificus</i>	S1B,S2N	
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	S4M	
Painted Bunting	<i>Passerina ciris</i>	S2S3M	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Painted Redstart	<i>Myioborus pictus</i>	S4	
Palm Warbler	<i>Setophaga palmarum</i>	S1M	
Parasitic Jaeger	<i>Stercorarius parasiticus</i>	SNA	
Pectoral Sandpiper	<i>Calidris melanotos</i>	S3M	
Peregrine Falcon	<i>Falco peregrinus</i>	S4	SC
Phainopepla	<i>Phainopepla nitens</i>	S5	
Philadelphia Vireo	<i>Vireo philadelphicus</i>	SNA	
Pied-billed Grebe	<i>Podilymbus podiceps</i>	S5	
Pine Grosbeak	<i>Pinicola enucleator</i>	S1	
Pine Siskin	<i>Spinus pinus</i>	S5	
Pine Warbler	<i>Setophaga pinus</i>	SNA	
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	S5	
Plain-capped Starthroat	<i>Helimaster constantii</i>	SN	
Plumbeus Vireo	<i>Vireo plumbeus</i>	S5	
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	SNA	
Prairie Falcon	<i>Falco mexicanus</i>	S4	
Prairie Warbler	<i>Setophaga discolor</i>	SNA	
Prothonotary Warbler	<i>Protonotaria citrea</i>	S1M	
Purple Finch	<i>Haemorhous purpureus</i>	S1S2N	
Purple Gallinule	<i>Porphyrio martinicus</i>	SNA	

ARIZONA BIRDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Purple Martin	<i>Progne subis</i>	S2S3B	
Pygmy Nuthatch	<i>Sitta pygmaea</i>	S5	
Pyrrhuloxia	<i>Cardinalis sinuatus</i>	S5	
Red Crossbill	<i>Loxia curvirostra</i>	S4	
Red Knot	<i>Calidris canutus</i>	SNA	
Red Phalarope	<i>Phalaropus fulicarius</i>	S1S2M	
Red-billed Tropicbird	<i>Phaethon aethereus</i>	SNA	
Red-breasted Merganser	<i>Mergus serrator</i>	S3N	
Red-breasted Nuthatch	<i>Sitta canadensis</i>	S4	
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	S1N	
Reddish Egret	<i>Egretta rufescens</i>	S1N	SC
Red-eyed Vireo	<i>Vireo olivaceus</i>	S1M	
Red-faced Warbler	<i>Cardellina rubrifrons</i>	S4	
Redhead	<i>Aythya americana</i>	S4	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	SNA	
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	S4	
Red-necked Grebe	<i>Podiceps grisegena</i>	SNA	
Red-necked Phalarope	<i>Phalaropus lobatus</i>	S4S5M	
Red-shouldered Hawk	<i>Buteo lineatus</i>	SA	
Red-tailed Hawk	<i>Buteo jamaicensis</i>	S5	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Red-throated Loon	<i>Gavia stellata</i>	SNA	
Red-throated Pipit	<i>Anthus cervinus</i>	SNA	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S5	
Ring-billed Gull	<i>Larus delawarensis</i>	S5N	
Ring-necked Duck	<i>Aythya collaris</i>	S5	
Ring-necked Pheasant	<i>Phasianus colchicus</i>	SE3	
Rock Pigeon	<i>Columba livia</i>	SE5	
Rock Wren	<i>Salpinctes obsoletus</i>	S5	
Roseate Spoonbill	<i>Platalea ajaja</i>	SNA	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	S3N	
Rose-throated Becard	<i>Pachyramphus aglaiae</i>	S1	
Ross's Goose	<i>Chen rossii</i>	S2N	
Rough-legged Hawk	<i>Buteo lagopus</i>	SN	
Ruby-crowned Kinglet	<i>Regulus calendula</i>	S5	
Ruddy Duck	<i>Oxyura jamaicensis</i>	S5	
Ruddy Ground-Dove	<i>Columbina talpacoti</i>	S1B,S2N	
Ruddy Turnstone	<i>Arenaria interpres</i>	SNA	
Ruff	<i>Calidris pugnax</i>	SNA	
Rufous Hummingbird	<i>Selasphorus rufus</i>	S5M	
Rufous-backed Robin	<i>Turdus rufopalliatu</i>	S1S2N	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Rufous-capped Warbler	<i>Basileuterus rufifrons</i>	SAB	
Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>	S4	
Rufous-winged Sparrow	<i>Peucaea carpalis</i>	S3	
Rusty Blackbird	<i>Euphagus carolinus</i>	SNA	
Sabine's Gull	<i>Xema sabini</i>	S2M	
Sage Thrasher	<i>Oreoscoptes montanus</i>	S5	
Sanderling	<i>Calidris alba</i>	S2M	
Sandhill Crane	<i>Grus canadensis</i>	S3N	No
Savannah Sparrow	<i>Passerculus sandwichensis</i>	S5	
Say's Phoebe	<i>Sayornis saya</i>	S5	
Scaled Quail	<i>Callipepla squamata</i>	S5	
Scarlet Tanager	<i>Piranga olivacea</i>	SNA	
Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>	SAB	
Scott's Oriole	<i>Icterus parisorum</i>	S5	
Semipalmated Plover	<i>Charadrius semipalmatus</i>	S4M	
Semipalmated Sandpiper	<i>Calidris pusilla</i>	S2M	
Sharp-shinned Hawk	<i>Accipiter striatus</i>	S4	No
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	SNA	
Short-billed Dowitcher	<i>Limnodromus griseus</i>	S3M	
Short-eared Owl	<i>Asio flammeus</i>	SN	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Slate-throated Redstart	<i>Myioborus miniatus</i>	SNA	
Smith's Longspur	<i>Calcarius pictus</i>	SNA	
Snow Goose	<i>Chen caerulescens</i>	S3N	
Snowy Egret	<i>Egretta thula</i>	S1B,S4N	
Snowy Plover	<i>Charadrius nivosus</i>	S2	No
Solitary Sandpiper	<i>Tringa solitaria</i>	S3M	
Song Sparrow	<i>Melospiza melodia</i>	S5	
Sooty Shearwater	<i>Puffinus griseus</i>	SNA	
Sora	<i>Porzana carolina</i>	S4	
Southwest Willow Flycatcher	<i>Empidonax traillii extimus</i>	S1	LE
Spotted Owl	<i>Strix occidentalis</i>	S3S4	
Spotted Sandpiper	<i>Actitis macularius</i>	S3S4	
Spotted Towhee	<i>Pipilo maculatus</i>	S5	
Sprague's Pipit	<i>Anthus spragueii</i>	S2N	C*
Steller's Jay	<i>Cyanocitta stelleri</i>	S5	
Stilt Sandpiper	<i>Calidris himantopus</i>	S3M	
Streak-backed Oriole	<i>Icterus pustulatus</i>	SAB,S1N	
Sulphur-bellied Flycatcher	<i>Myiodynastes luteiventris</i>	S3	
Summer Tanager	<i>Piranga rubra</i>	S4	
Surf Scoter	<i>Melanitta perspicillata</i>	S1N	

ARIZONA BIRDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Swainson's Hawk	<i>Buteo swainsoni</i>	S3	
Swainson's Thrush	<i>Catharus ustulatus</i>	S1	
Swainson's Warbler	<i>Limnethlypis swainsonii</i>	SNA	
Swallow-tailed Kite	<i>Elanoides forficatus</i>	SA	
Swamp Sparrow	<i>Melospiza georgiana</i>	S2S3N	
Tennessee Warbler	<i>Oreothlypis peregrina</i>	S1M	
Thayer's Gull	<i>Larus thayeri</i>	SNA	
Thick-billed Kingbird	<i>Tyrannus crassirostris</i>	S2	
Thick-billed Parrot	<i>Rhynchopsitta pachyrhyncha</i>	SH	
Townsend's Solitaire	<i>Myadestes townsendi</i>	S5	
Townsend's Warbler	<i>Setophaga townsendi</i>	S4M	
Tree Swallow	<i>Tachycineta bicolor</i>	S3	
Tricolored Heron	<i>Egretta tricolor</i>	S2N	
Tropical Kingbird	<i>Tyrannus melancholicus</i>	S3	
Tropical Parula	<i>Setophaga pitiaiyumi</i>	SNA	
Trumpeter Swan	<i>Cygnus buccinator</i>	S1N	
Tufted Duck	<i>Aythya fuligula</i>	SNA	
Tundra Swan	<i>Cygnus columbianus</i>	S1N	
Turkey Vulture	<i>Cathartes aura</i>	S5	
Upland Sandpiper	<i>Bartramia longicauda</i>	SA	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Varied Bunting	<i>Passerina versicolor</i>	S3	
Varied Thrush	<i>Ixoreus naevius</i>	S1N	
Vaux's Swift	<i>Chaetura vauxi</i>	S4M	
Veery	<i>Catharus fuscescens</i>	S1	
Verdin	<i>Auriparus flaviceps</i>	S5	
Vermilion Flycatcher	<i>Pyrocephalus rubinus</i>	S5	
Vesper Sparrow	<i>Pooecetes gramineus</i>	S5	
Violet-crowned Hummingbird	<i>Amazilia violiceps</i>	S3	
Violet-green Swallow	<i>Tachycineta thalassina</i>	S5	
Virginia Rail	<i>Rallus limicola</i>	S4	
Virginia's Warbler	<i>Oreothlypis virginiae</i>	S5	
Wandering Tattler	<i>Tringa incana</i>	SNA	
Warbling Vireo	<i>Vireo gilvus</i>	S5	
Western Bluebird	<i>Sialia mexicana</i>	S5	
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	S3	SC
Western Grasshopper Sparrow	<i>Ammodramus savannarum perpallidus</i>	S1	
Western Grebe	<i>Aechmophorus occidentalis</i>	S3	
Western Gull	<i>Larus occidentalis</i>	SNA	
Western Kingbird	<i>Tyrannus verticalis</i>	S5	
Western Meadowlark	<i>Sturnella neglecta</i>	S5	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Western Sandpiper	<i>Calidris mauri</i>	S1N	
Western Screech-Owl	<i>Megascops kennicottii</i>	S5	
Western Scrub-Jay	<i>Aphelocoma californica</i>	S5	
Western Snowy Plover	<i>Charadrius nivosus nivosus</i>	S1	No
Western Tanager	<i>Piranga ludoviciana</i>	S5	
Western Wood-Pewee	<i>Contopus sordidulus</i>	S5	
Whimbrel	<i>Numenius phaeopus</i>	S2M	
Whiskered Screech-Owl	<i>Megascops trichopsis</i>	S3	
White Ibis	<i>Eudocimus albus</i>	SNA	
White Wagtail	<i>Motacilla alba</i>	SA	
White-breasted Nuthatch	<i>Sitta carolinensis</i>	S5	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	S1B,S5N	
White-eared Hummingbird	<i>Hylocharis leucotis</i>	S1S2	
White-eyed Vireo	<i>Vireo griseus</i>	SNA	
White-faced Ibis	<i>Plegadis chihi</i>	S2-S3N	SC
White-rumped Sandpiper	<i>Calidris fuscicollis</i>	SNA	
White-tailed Hawk	<i>Buteo albicaudatus</i>	SA	
White-tailed Kite	<i>Elanus leucurus</i>	S2B	
White-tailed Tropicbird	<i>Phaethon lepturus</i>	SNA	
White-throated Sparrow	<i>Zonotrichia albicollis</i>	S2S3N	

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
White-throated Swift	<i>Aeronautes saxatalis</i>	S5	
White-winged Dove	<i>Zenaida asiatica</i>	S5	
White-winged Scoter	<i>Melanitta fusca</i>	S1N	
Wild Turkey	<i>Meleagris gallopavo</i>	S5	
Willet	<i>Tringa semipalmata</i>	S4M	
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>	S4	
Willow Flycatcher	<i>Empidonax traillii</i>	S1	PS
Wilson's Phalarope	<i>Phalaropus tricolor</i>	S1B,S5N	
Wilson's Snipe	<i>Gallinago delicata</i>	S1B,S4N	
Wilson's Warbler	<i>Cardellina pusilla</i>	S5M	
Winter Wren	<i>Troglodytes hiemalis</i>	S1B,S2N	
Wood Duck	<i>Aix sponsa</i>	S2B,S3N	
Wood Stork	<i>Mycteria americana</i>	S1N	No
Wood Thrush	<i>Hylocichla mustelina</i>	SNA	
Worm-eating Warbler	<i>Helmitheros vermivorus</i>	SNA	
Yellow Grosbeak	<i>Pheucticus chrysopheplus</i>	SN	
Yellow Warbler	<i>Setophaga petechia</i>	S4	
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	SNA	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	S1N	
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	S3	PS:PT

ARIZONA BIRDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	S3	C
Yellow-billed Loon	<i>Gavia adamsii</i>	SNA	
Yellow-breasted Chat	<i>Icteria virens</i>	S4	
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	SNA	
Yellow-eyed Junco	<i>Junco phaeonotus</i>	S3	
Yellow-footed Gull	<i>Larus livens</i>	SA	
Yellow-green Vireo	<i>Vireo flavoviridis</i>	SNA	
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	S5	
Yellow-rumped Warbler	<i>Setophaga coronata</i>	S5	
Yellow-throated Vireo	<i>Vireo flavifrons</i>	SNA	
Yellow-throated Warbler	<i>Setophaga dominica</i>	SNA	
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>	S3	LE
Yuma Rufous-crowned Sparrow	<i>Aimophila ruficeps rupicola</i>	S2S3	
Zone-tailed Hawk	<i>Buteo albonotatus</i>	S4	

Notes

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Butterflies and Moths



Mourning Cloak Butterfly

Butterflies and moths are important as pollinators and as food for other species. They are declining rapidly because of habitat loss and increased pesticide use on farms, roadsides, and yards. The conservation status of most species is unknown.

Photograph: Mourning Cloak Butterflies (*Nymphalis antiopa*) are common around my home beside the Agua Fria River in central Arizona.

Butterflies and moths are more socially independent than ants, but they do interact beyond their feeding and mating behavior. I've watched two Monarchs perched side-by-side patiently taking turns at a nectar source and we've all seen butterflies swirling around in aerial dances with members of their own and other species.

Butterfly and Moth Species Numbers

- World: 20,000
- U. S.: 750
- Arizona: 399 (2 exotics)
- Arizona species with uncertain status: 345 (87%)
- Arizona Butterflies at risk (S1-S4): 41 (79% of those classified)
- Arizona Butterflies presumed extinct: 2
- ESA Arizona Butterflies of concern: 5
- Moth species Worldwide: 160,000
- Moth species in the U. S.: 11,000
- Arizona Moths: 4,000 (rough estimate)
- Arizona Moths recorded by AZGFD: 59 (<2% of estimated total)
- Arizona Moths of uncertain status: 51 (86% of recorded)
- Arizona Moths of presumed extinct: 3 (5% of recorded)

Butterfly and Moth References

The Butterflies and Moths of North America (BAMONA) website includes photos and detailed information. It does not include subspecies information or Arizona status. It is odd that pesticide companies advertise on the BAMONA site.

The Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

BAMONA. 2013. (Butterflies and moths of North America): <http://www.butterfliesandmoths.org/>.

Beyond Pesticides: <http://beyondpesticides.org/>.

Gardens With Wings: <http://www.gardenswithwings.com/index.html>.

Glassberg, J. 2001. Butterflies through binoculars: The West. Oxford University Press, New York, NY. 374 p.

International Lepidoptera Society: <http://tils-ttr.org>.

NABA (N. Am. Butterfly Association): <http://www.naba.org/>.

Pesticide Action Network: <http://panna.org>.

Scoble, M.J. 1995. The Lepidoptera: Form, function, and diversity. Oxford University Press, Oxford. 416 p.

Arizona Butterflies Checklist

See page 9 for conservation status symbol definitions. The moth checklist table follows butterflies.

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Acacia Skipper	<i>Cogia hippalus</i>	S?	
Acastus Checkerspot	<i>Chlosyne acastus</i>	S5	SC
Acmon Blue	<i>Plebejus acmon</i>	S?	
Afranius Dusky Wing	<i>Erynnis afranius</i>	S?	
Alamosa Satyr	<i>Cercyonis meadii alamosa</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Alberta Arctic	<i>Oeneis alberta</i>	S?	
Alberta Arctic	<i>Oeneis alberta daura</i>	S?	
Alexandra's Sulphur	<i>Colias alexandra</i>	S?	
Alfalfa Sulphur	<i>Colias eurytheme</i>	S?	
Alkali Skipper	<i>Pseudocopaeodes eunus eunus</i>	SRF	SC
American Painted Lady	<i>Vanessa virginiensis</i>	S?	
Anachisiades Swallowtail	<i>Papilio anchisiades</i>	S?	
Angled Leafwing	<i>Memphis glycerium</i>	S?	
Anicia Checkerspot	<i>Euphydryas anicia</i>	S4	
Anise Swallowtail	<i>Papilio zelicaon</i>	S?	
Apache Skipper	<i>Hesperia woodgatei</i>	S?	
Aphrodite Fritillary	<i>Speyeria aphrodite</i>	S?	
Arachne Checkerspot	<i>Poladryas arachne</i>	S?	
Araxes Skipper	<i>Apyrrothrix araxes</i>	S?	
Arctic Blue	<i>Plebejus glandon</i>	S?	
Arctic Blue	<i>Plebejus glandon punctatus</i>	S?	
Ares Metalmark	<i>Emesis ares</i>	S2?	
Arizona Copper	<i>Lycaena ferrisi</i>	S3	
Arizona Giant Skipper	<i>Agathymus aryxna</i>	S5	
Arizona Hairstreak	<i>Erora quaderna</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Arizona Metalmark	<i>Calephelis arizonensis</i>	S2	
Arizona Powdered Skipper	<i>Systasea zampa</i>	S?	
Arizona Skipper	<i>Codatractus arizonensis</i>	S?	
Arota Copper	<i>Lycaena arota</i>	S?	
Arrowhead Blue	<i>Glaucopsyche piasus</i>	S?	
Atronis Fritillary	<i>Speyeria mormonia luski</i>	S1	
Baird's Swallowtail	<i>Papilio machaon bairdii</i>	S?	
Barred Yellow	<i>Eurema daira</i>	S?	
Bauer's Blue	<i>Euphilotes baueri</i>	S?	
Becker's White	<i>Pontia beckerii</i>	S?	
Behr's Hairstreak	<i>Satyrrium behrii</i>	S?	
Bernadino Blue	<i>Euphilotes bernardino</i>	S?	
Bosduval's Hairstreak	<i>Habrodais grunus</i>	S?	
Black Swallowtail	<i>Papilio polyxenes</i>	S?	
Blackened Bluewing	<i>Myscelia cyananthe</i>	S?	
Blue Copper	<i>Lycaena heteronea</i>	S?	
Blue Silverspot Butterfly	<i>Speyeria nokomis coerulescens</i>	SH	SC
Boisduval's Blue	<i>Plebejus icarioides</i>	S?	
Boisduval's Yellow	<i>Eurema boisduvaliana</i>	S?	
Bordered Patch	<i>Chlosyne lacinia</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Brazilian Skipper	<i>Calpododes ethlius</i>	S?	
Broad-banded Swallowtail	<i>Papilio astyalus</i>	S?	
Bronze Roadside Skipper	<i>Amblyscirtes aenus</i>	S?	
Brown Elfin	<i>Callophrys augustinus</i>	S?	
Brown Longtail	<i>Urbanus procne</i>	SA	
Brown-banded Skipper	<i>Timochares ruptifasciata</i>	S?	
Buckeye	<i>Junonia coenia</i>	S?	
Cabbage Butterfly	<i>Pieris rapae</i>	SE	
Caicus Skipper	<i>Cogia caicus</i>	S?	
California Patch	<i>Chlosyne californica</i>	S?	
California Tortoise Shell	<i>Nymphalis californica</i>	S?	
California White	<i>Pontia sisymbrii</i>	S?	
Canyon Crescent	<i>Phyciodes batesii anasazi</i>	SH	
Carus Skipper	<i>Polites carus</i>	S?	
Cassus Roadside Skipper	<i>Amblyscirtes cassus</i>	S?	
Ceos Skipper	<i>Staphylus ceos</i>	S?	
Ceraunus Blue	<i>Hemiargus ceraunus</i>	S?	
Cestus Skipper	<i>Atrytonopsis cestus</i>	S2	
Checkered Skipper	<i>Pyrgus communis</i>	S?	
Checkered White	<i>Pontia protodice</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Chiricahua Pine White	<i>Neophasia terlooii</i>	S4	
Clouded Skipper	<i>Lerema accius</i>	S?	
Clouded Sulphur	<i>Colias philodice</i>	S?	
Cloudless Sulphur	<i>Phoebis sennae</i>	S?	
Colorado Hairstreak	<i>Hypaurotis crysalus</i>	S?	
Colorado Hairstreak	<i>Hypaurotis crysalus intermedia</i>	S?	
Common Branded Skipper	<i>Hesperia colorado</i>	S?	
Common Ringlet	<i>Coenonympha tullia</i>	S?	
Common Roadside-Skipper	<i>Amblyscirtes vialis</i>	S?	
Common Sooty Wing	<i>Pholisora catullus</i>	S?	
Common Wood Nymph	<i>Cercyonis pegala</i>	S?	
Comstock's Hairstreak	<i>Callophrys comstocki</i>	S1S2	
Coral Hairstreak	<i>Satyrium titus</i>	S?	
Coronis Fritillary	<i>Speyeria coronis</i>	S?	
Coyote Skipper	<i>Achalarus toxeus</i>	S?	
Crescent Metalmark	<i>Apodemia phycioidoides</i>	SH	
Cyna Blue	<i>Zizula cyna</i>	S1	
Cyneas Checkerspot	<i>Chlosyne cyneas</i>	S2	
Dainty Sulphur	<i>Nathalis iole</i>	S?	
Dark Peacock	<i>Junonia genoveva nigrosuffusa</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Dark Wood Nymph	<i>Cercyonis oetus</i>	S?	
Definite Patch	<i>Chlosyne definita</i>	S?	
Delaware Skipper	<i>Anatrytone logan</i>	SR	
Desert Hoary Edge	<i>Achalarus casica</i>	S?	
Desert Orangetip	<i>Anthocharis cethura</i>	S4	
Deva Skipper	<i>Atrytonopsis deva</i>	S3	
Dina Yellow	<i>Pyrisitia dina</i>	S?	
Dingy Purple Wing	<i>Eunica monima</i>	S?	
Dorantes Skipper	<i>Urbanus dorantes</i>	S?	
Dotted Blue	<i>Euphilotes enoptes</i>	S?	
Dotted Checkerspot	<i>Poladryas minuta</i>	S?	
Draco Skipper	<i>Polites draco</i>	S?	
Dreamy Dusky Wing	<i>Erynnis icelus</i>	S?	
Drusius Cloudywing	<i>Thorybes drusius</i>	S?	
Dun Skipper	<i>Euphyes vestris</i>	S?	
Dusky Emperor	<i>Asterocampa idyja</i>	S?	
Dymas Checkerspot	<i>Dymasia dymas</i>	S?	
Edwards' Skipperling	<i>Oarisma edwardsii</i>	S?	
Eight-spotted Polythrix	<i>Polythrix octomaculata</i>	SA	
Elada Checkerspot	<i>Texola elada</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Elf	<i>Microtia elva</i>	S?	
Elissa Roadside-Skipper	<i>Amblyscirtes elissa</i>	S?	
Ellis' Blue	<i>Euphilotes ellisi</i>	S?	
Emmel's Blue	<i>Euphilotes rita emmeli</i>	S?	
Emorsus Skipper	<i>Antigonus emorsa</i>	SA	
Empress Leilia	<i>Asterocampa leilia</i>	S?	
Eos Roadside Skipper	<i>Amblyscirtes eos</i>	S?	
Erichson's White-Skipper	<i>Heliopyrgus domicella</i>	S?	
Eufala Skipper	<i>Lerodea eufala</i>	S?	
Eunus Skipper	<i>Pseudocopaeodes eunus</i>	SRF	
Faceted Skipper	<i>Synapte syracas</i>	SA	
False Duskywing	<i>Gesta invisus</i>	S?	
Fatal Metalmark	<i>Calephelis nemesis</i>	S?	
Fawn-spotted Skipper	<i>Cymaenes trebius</i>	S?	
Field Crescent	<i>Phyciodes pulchella</i>	S?	
Fiery Skipper	<i>Hylephila phyleus</i>	S?	
Freeman's Agave Borer	<i>Agathymus baueri freemani</i>	S?	
Fritzgaertner's Flat	<i>Celaenorrhinus fritzgaertneri</i>	SA	
Fulvia Checkerspot	<i>Chlosyne fulvia</i>	S?	
Funereal Dusky Wing	<i>Erynnis funeralis</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Garita Skipperling	<i>Oarisma garita</i>	S?	
Genoveva	<i>Junonia genoveva</i>	S?	
Gentry's Giant-Skipper	<i>Agathymus gentryi</i>	S?	
Giant Swallowtail	<i>Papilio cresphontes</i>	S?	
Goatweed Butterfly	<i>Anaea andria</i>	S?	
Golden-banded Skipper	<i>Autochton cellus</i>	S?	
Gold-spot Aguna	<i>Aguna asander</i>	SA	
Gray Hairstreak	<i>Strymon melinus</i>	S?	
Great Basin Wood Nymph	<i>Cercyonis sthenele</i>	S?	
Great Purple Hairstreak	<i>Atlides halesus</i>	S?	
Great Southern White	<i>Ascia monuste</i>	S?	
Green Comma	<i>Polygonia faunus</i>	S?	
Green Skipper	<i>Hesperia viridis</i>	S?	
Greenish Blue	<i>Plebejus saepiolus</i>	S?	
Gulf Fritillary	<i>Agraulis vanillae</i>	S?	
Hackberry Butterfly	<i>Asterocampa celtis</i>	S?	
Hammock Skipper	<i>Polygonus leo</i>	S?	
Hedgerow Hairstreak	<i>Satyrium saepium</i>	S?	
Hedgerow Hairstreak	<i>Satyrium saepium latalinea</i>	S?	
Henshaw's Brown	<i>Cyllopsis pyracmon henshawi</i>	S2	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Hermit Skipper	<i>Grais stigmaticus</i>	SA	
Hesperia	<i>Hesperia colorado susanae</i>	S?	
Hoary Comma	<i>Polygonia gracilis</i>	S?	
Horace's Dusky Wing	<i>Erynnis horatius</i>	S?	
Howarth's Giant White	<i>Ganyra howarthi</i>	S1	
Huachuca Giant-Skipper	<i>Agathymus evansi</i>	S3	
Ilavia Hairstreak	<i>Satyrium ilavia</i>	S?	
Indra Swallowtail	<i>Papilio indra</i>	S2	
Isabella's Heliconian	<i>Eueides isabella</i>	S?	
Jade-blue Hairstreak	<i>Arawacus jada</i>	SA	
Jalapus Cloudywing	<i>Thessia jalapus</i>	S?	
Juba Skipper	<i>Hesperia juba</i>	S?	
Julia's Skipper	<i>Nastra julia</i>	S1	
Juniper Hairstreak	<i>Callophrys gryneus</i>	S?	
Juniper Hairstreak	<i>Callophrys gryneus siva</i>	S?	
Juvenal's Dusky Wing	<i>Erynnis juvenalis</i>	S?	
Large Marble	<i>Euchloe ausonides</i>	S?	
Large Orange Sulphur	<i>Phoebis agarithe</i>	S?	
Large Roadside Skipper	<i>Amblyscirtes exoteria</i>	S?	
Large White Skipper	<i>Heliopetes ericetorum</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Laviana Skipper	<i>Heliopetes laviana</i>	S?	
Leanira Checkerspot	<i>Chlosyne leanira</i>	S?	
Least Skipper	<i>Ancyloxypha numitor</i>	S?	
Leda Hairstreak	<i>Ministrymon leda</i>	S?	
Lindsey's Skipper	<i>Hesperia lindseyi</i>	S?	
Little Yellow	<i>Pyrisitia lisa</i>	S?	
Long Dash	<i>Polites mystic</i>	S1	
Long-tailed Skipper	<i>Urbanus proteus</i>	S?	
Lunus Skipper	<i>Atrytonopsis lunus</i>	S?	
Lupine Blue	<i>Plebejus lupini</i>	S?	
Lyside Sulphur	<i>Kricogonia lyside</i>	S?	
Maciara Skipper	<i>Heliopetes macaira</i>	S?	
Malachite	<i>Siproeta stelenes</i>	S?	
Mallow Scrub-Hairstreak	<i>Strymon istapa</i>	S?	
Many-banded Daggerwing	<i>Marpesia chiron</i>	S?	
Many-spotted Skipperling	<i>Piruna aea</i>	S?	
Margined White	<i>Pieris marginalis</i>	S?	
Maria's Metalmark	<i>Lasaia maria</i>	S?	
Marine Blue	<i>Leptotes marina</i>	S?	
Mazans Scallopwing	<i>Staphylus mazans</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Mead's Wood Nymph	<i>Cercyonis meadii</i>	S?	
Melissa Blue	<i>Plebejus melissa</i>	S?	
Meridian Dusky Wing	<i>Erynnis meridianus</i>	S?	
Mexican Cloudywing	<i>Thorybes mexicana</i>	S?	
Mexican Fritillary	<i>Euptoieta hegesia</i>	S?	
Mexican Gray Hairstreak	<i>Strymon bebrycia</i>	S?	
Mexican Polythrix	<i>Polythrix mexicana</i>	SA	
Mexican Sootywing	<i>Pholisora mejicanus</i>	S?	
Mexican Yellow	<i>Eurema mexicana</i>	S?	
Milbert's Tortoiseshell	<i>Aglais milberti</i>	S?	
Mimosa Yellow	<i>Pyrisitia nise</i>	S?	
Mohave Sootywing	<i>Hesperopsis libya</i>	S?	
Mojave Blue	<i>Euphilotes mojave</i>	S1	
Mojave Blue	<i>Euphilotes mojave virginensis</i>	S1	
Mojave Giant Skipper	<i>Agathymus alliae</i>	S4	
Monarch	<i>Danaus plexippus</i>	SN?	
Mormon Fritillary	<i>Speyeria mormonia</i>	S?	
Mormon Metalmark	<i>Apodemia mormo</i>	S?	
Morrison's Skipper	<i>Stinga morrisoni</i>	S?	
Mottled Bolla	<i>Bolla clytius</i>	SA	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Mountain Silverspot	<i>Speyeria nokomis nitocris</i>	S3	
Mournful Dusky Wing	<i>Erynnis tristis</i>	S?	
Mourning Cloak	<i>Nymphalis antiopa</i>	S?	
Mylitta Crescent	<i>Phyciodes mylitta</i>	S?	
Nais Metalmark	<i>Apodemia nais</i>	S?	
Neamathla Skipper	<i>Nastra neamathla</i>	S?	
Neumogen's Giant Skipper	<i>Agathymus neumogeni</i>	S3	
Nevada Skipper	<i>Hesperia nevada</i>	S?	
Nokomis Fritillary	<i>Speyeria nokomis</i>	S3	
Northern Cloudywing	<i>Thorybes pylades</i>	S?	
Northern Crescent	<i>Phyciodes cocyta</i>	S?	
Northwestern Fritillary	<i>Speyeria hesperis</i>	S3	
Nyctelius Skipper	<i>Nyctelius nyctelius</i>	SA	
Nysa Roadside Skipper	<i>Amblyscirtes nysa</i>	S?	
Obsolete Viceroy Butterfly	<i>Limenitis archippus obsoleta</i>	S4	
Ocola Skipper	<i>Panoquina ocola</i>	S?	
Old World Swallowtail	<i>Papilio machaon</i>	S?	
Orange Skipperling	<i>Copaeodes aurantiaca</i>	S?	
Orange-barred Sulphur	<i>Phoebis philea</i>	S?	
Orange-edged Roadside Skipper	<i>Amblyscirtes fimbriata</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Ornythion Swallowtail	<i>Papilio ornythion</i>	S?	
Oslar's Roadside Skipper	<i>Amblyscirtes oslari</i>	S?	
Pacuvius Dusky Wing	<i>Erynnis pacuvius</i>	S?	
Pahaska Skipper	<i>Hesperia pahaska</i>	S?	
Painted Crescent	<i>Phyciodes picta</i>	S?	
Painted Crescent	<i>Phyciodes picta canace</i>	S?	
Painted Lady	<i>Vanessa cardui</i>	S?	
Pale Crescent	<i>Phyciodes pallida</i>	S?	
Pallid Blue	<i>Euphilotes pallescens</i>	S?	
Palmer's Metalmark	<i>Apodemia palmerii</i>	S?	
Pearl Crescent	<i>Phyciodes tharos</i>	S?	
Pearly Marble	<i>Euchloe lotta</i>	S?	
Peck's Skipper	<i>Polites peckius</i>	S?	
Persius Dusky Wing	<i>Erynnis persius</i>	S?	
Phaon Crescent	<i>Phyciodes phaon</i>	S?	
Philetas Checkered Skipper	<i>Pyrgus philetas</i>	S?	
Phylace Roadside Skipper	<i>Amblyscirtes phylace</i>	S?	
Pine Satyr	<i>Paramacera allyni</i>	S?	
Pine White	<i>Neophasia menapia</i>	S5	
Pipevine Swallowtail	<i>Battus philenor</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Pirus Skipperling	<i>Piruna pirus</i>	S?	
Pittacus Skipper	<i>Atrytonopsis pittacus</i>	S?	
Poling's Giant Skipper	<i>Agathymus polingi</i>	S2	
Polydamus Swallowtail	<i>Battus polydamas</i>	S?	
Potrillo Skipper	<i>Cabares potrillo</i>	SA	
Purple-washed Skipper	<i>Panoquina lucas</i>	SA	
Purplish Copper	<i>Lycaena helloides</i>	S?	
Pyracmon Brown	<i>Cyllopsis pyracmon</i>	S?	
Python Skipper	<i>Atrytonopsis python</i>	S?	
Queen	<i>Danaus gilippus</i>	S?	
Question Mark	<i>Polygonia interrogationis</i>	S?	
Rawson's Metalwork	<i>Calephelis rawsoni</i>	S?	
Reakirt's Blue	<i>Echinargus isola</i>	S?	
Red Admiral	<i>Vanessa atalanta</i>	S?	
Red Satyr	<i>Megisto rubricata</i>	S?	
Red-bordered Brown	<i>Gyrocheilus patrobas</i>	S?	
Rhesus Skipper	<i>Polites rhesus</i>	S?	
Riding's Satyr	<i>Neominois ridingsii</i>	S?	
Rita Blue	<i>Euphilotes rita</i>	S?	
Rocky Mountain Dusky Wing	<i>Erynnis telemachus</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Rosita Patch	<i>Chlosyne rosita</i>	S?	
Ruddy Dagger Wing	<i>Marpesia petreus</i>	S?	
Rustic Blue	<i>Plebejus glandon rusticus</i>	S?	
Sachem	<i>Atalopedes campestris</i>	S?	
Saltbush Sootywing	<i>Hesperopsis alpheus</i>	S?	
Sandhill Skipper	<i>Polites sabuleti</i>	S?	
Satyr Anglewing	<i>Polygonia satyrus</i>	S?	
Scudder's Dusky Wing	<i>Erynnis scudderi</i>	S1S2	
Shasta Blue	<i>Plebejus shasta</i>	S?	
Sheep Skipper	<i>Atrytonopsis edwardsi</i>	S?	
Sheridan's Green Hairstreak	<i>Callophrys sheridanii</i>	S?	
Short-tailed Arizona Skipper	<i>Zestusa dorus</i>	S?	
Short-tailed Black Swallowtail	<i>Papilio indra kaibabensis</i>	S2	
Silver Emperor	<i>Doxocopa laure</i>	S?	
Silver-spotted Skipper	<i>Epargyreus clarus</i>	S?	
Silvery Blue	<i>Glaucopsyche lygdamus</i>	S?	
Silvery Blue	<i>Glaucopsyche lygdamus minipunctum</i>	S?	
Silvery Checkerspot	<i>Chlosyne nycteis</i>	S?	
Simaethis Hairstreak	<i>Chlorostrymon simaethis</i>	S?	
Simius Roadside Skipper	<i>Amblyscirtes simius</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Skinner's Dusky Wing	<i>Achalarus albociliatus</i>	SA	
Slaty Roadside Skipper	<i>Amblyscirtes nereus</i>	S?	
Sleepy Dusky Wing	<i>Erynnis brizo</i>	S?	
Sleepy Orange	<i>Abaeis nicippe</i>	S?	
Small Blue	<i>Philotiella speciosa</i>	S?	
Small Checkered Skipper	<i>Pyrgus scriptura</i>	S?	
Snow's Skipper	<i>Paratrytone snowi</i>	S?	
Soapberry Hairstreak	<i>Phaeostrymon alcestis</i>	S?	
Soldier	<i>Danaus eresimus</i>	S?	
Sonora Skipper	<i>Polites sonora</i>	S?	
Sonoran Banded-Skipper	<i>Autochton pseudocellus</i>	SX	
Sonoran Hairstreak	<i>Hypostrymon critola</i>	S2	
Sonoran Marble	<i>Euchloe guaymasensis</i>	S?	
Sonoran Metalmark	<i>Apodemia mejicanus</i>	S?	
Sonoran Orangetip	<i>Anthocharis thoosa</i>	S5	
Southern Checkered Skipper	<i>Pyrgus xanthus</i>	S?	
Southern Dogface	<i>Zerene cesonia</i>	S?	
Southern Skipperling	<i>Copaeodes minima</i>	S?	
Spalding's Blue	<i>Euphilotes spaldingi</i>	S?	
Square-spotted Blue	<i>Euphilotes battoides</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Streaky Skipper	<i>Celotes nesus</i>	S?	
Strecker's Giant Skipper	<i>Megathymus streckeri</i>	S?	
Sunrise Skipper	<i>Adopaeoides prittwitzi</i>	S2	
Sylvan Hairstreak	<i>Satyrium sylvinus</i>	S?	
Tailed Orange	<i>Pyrisitia proterpia</i>	S1S2B	
Tailed Sulphur	<i>Phoebis neocypris</i>	S?	
Tailless Scrub-Hairstreak	<i>Strymon cestri</i>	S?	
Tawny Crescent	<i>Phyciodes batesii</i>	SH	
Tawny Emperor	<i>Asterocampa clyton</i>	S?	
Tawny-edged Skipper	<i>Polites themistocles</i>	S?	
Taxiles Skipper	<i>Poanes taxiles</i>	S?	
Texan Crescent	<i>Anthanassa texana</i>	S?	
Texas Blue	<i>Plebejus lupini texanus</i>	S?	
Texas Powdered-Skipper	<i>Systasea pulverulenta</i>	S?	
Texas Roadside Skipper	<i>Amblyscirtes texanae</i>	S?	
Theona Checkerspot	<i>Chlosyne theona</i>	S?	
Thicket Hairstreak	<i>Callophrys spinetorum</i>	S?	
Three-tailed Swallowtail	<i>Papilio pilumnus</i>	S?	
Toltec Roadside-Skipper	<i>Amblyscirtes tolteca</i>	S?	
Tropical Checkered Skipper	<i>Pyrgus oileus</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Tropical Leafwing	<i>Anaea aidea</i>	S?	
Tropical Least Skipper	<i>Ancyloxypha arene</i>	S?	
Tropical Snout	<i>Libytheana carinenta</i>	S?	
Tropical White	<i>Appias drusilla</i>	S?	
Tulcis Crescent	<i>Anthanassa tulcis</i>	S?	
Two-tailed Swallowtail	<i>Papilio multicaudata</i>	S?	
Umber Skipper	<i>Poanes melane</i>	S1S2	
Uncas Skipper	<i>Hesperia uncas</i>	S?	
Ursine Giant Skipper	<i>Megathymus ursus</i>	S3	
Ursine Giant Skipper	<i>Megathymus ursus ursus</i>	S3	
Valeriana Skipper	<i>Codatractus valeriana</i>	S2	
Variegated Fritillary	<i>Euptoietia claudia</i>	S?	
Vesta Crescent	<i>Phyciodes graphica</i>	S?	
Viceroy	<i>Limnitis archippus</i>	S4	
Viereck's Skipper	<i>Atrytonopsis vierecki</i>	S?	
Violet-clouded Skipper	<i>Lerodea arabus</i>	S?	
Vitelline Skipper	<i>Poanes melane vitellina</i>	S1S2	
Warm Brown	<i>Cyllopsis pertepida</i>	S?	
Weidemeyer's Admiral	<i>Limnitis weidemeyerii</i>	S?	
West Coast Lady	<i>Vanessa annabella</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Western Checkered Skipper	<i>Pyrgus albescens</i>	S?	
Western Green Hairstreak	<i>Callophrys affinis</i>	S?	
Western Pine Elfin	<i>Callophrys eryphon</i>	S?	
Western Pygmy-Blue	<i>Brephidium exilis</i>	S?	
Western Tiger Swallowtail	<i>Papilio rutulus</i>	S?	
Western White	<i>Pontia occidentalis</i>	S?	
White Admiral	<i>Limenitis arthemis</i>	S?	
White Angled Sulphur	<i>Anteos clorinde</i>	S?	
White Morpho	<i>Morpho polyphemus</i>	S?	
White-dotted Cattleheart	<i>Parides alopis</i>	S?	
White-patched Skipper	<i>Chiomara georgina</i>	S?	
White-striped Longtail	<i>Chioides albofasciatus</i>	SA	
Wind's Skipper	<i>Windia windi</i>	SA	
Woodland Skipper	<i>Ochlodes sylvanoides</i>	S?	
Wright's Metalmark	<i>Calephelis wrighti</i>	S?	
Xami Hairstreak	<i>Callophrys xami</i>	S2?	
Yavapai Giant Skipper	<i>Agathymus baueri</i>	S?	
Yellow Brimstone	<i>Anteos maerula</i>	S?	
Yucca Giant-Skipper	<i>Megathymus yuccae</i>	S?	
Yuma Skipper	<i>Ochlodes yuma</i>	S?	

ARIZONA BUTTERFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Zela Metalmark	<i>Emesis zela</i>	S1	
Zephyr	<i>Polygonia gracilis zephyrus</i>	S?	
Zilpa Longtail	<i>Chioides zilpa</i>	S?	

Moths

See page 9 for conservation status symbol definitions.

ARIZONA MOTHS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Asella Sphinx	<i>Sphinx asella</i>	S?	
Benjamin's Underwing	<i>Catocala benjamini</i>	S?	
Bride	<i>Catocala neogama</i>	S?	
Buckmoth	<i>Hemileuca grotei</i>	S?	
Buckmoth	<i>Hemileuca grotei diana</i>	S?	
Griffin's Sheepmoth	<i>Hemileuca griffini</i>	S2?	
Grote's Underwing	<i>Catocala grotiana</i>	S?	
Hartweg's Sphinx	<i>Dolbogone hartwegii</i>	S?	
Hera Sheepmoth	<i>Hemileuca hera</i>	S?	
Hera Sheepmoth	<i>Hemileuca hera magnifica</i>	S?	
Hualpai Buckmoth	<i>Hemileuca hualapai</i>	S?	

ARIZONA MOTHS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Ilia Underwing	<i>Catocala ilia</i>	S?	
Incense Cedar Sphinx	<i>Sphinx libocedrus</i>	S?	
Jessica Underwing	<i>Catocala jessica</i>	S?	
Joined Underwing	<i>Catocala junctura</i>	S?	
Notodontid Moth	<i>Astylis biedermani</i>	S1	
Notodontid Moth	<i>Astylis sp. 1</i>	S?	
Notodontid Moth	<i>Dasylophia seriata</i>	S?	
Notodontid Moth	<i>Euhyparpax rosea</i>	S?	
Notodontid Moth	<i>Heterocampa amanda</i>	S2S3	
Notodontid Moth	<i>Heterocampa averna</i>	S?	
Notodontid Moth	<i>Heterocampa ditta</i>	SH	
Notodontid Moth	<i>Heterocampa incongrua</i>	S?	
Notodontid Moth	<i>Heterocampa ruficornis</i>	S?	
Notodontid Moth	<i>Heterocampa sp.</i>	S?	
Notodontid Moth	<i>Hippia packardii</i>	S?	
Notodontid Moth	<i>Litodonta aonides</i>	S?	
Notodontid Moth	<i>Litodonta contrasta</i>	S?	
Notodontid Moth	<i>Litodonta sp. 1 nr. alpina</i>	S?	

ARIZONA MOTHS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Notodontid Moth	<i>Oligocentria alpica</i>	S?	
Notodontid Moth	<i>Oligocentria delicata</i>	S?	
Notodontid Moth	<i>Oligocentria paradisi</i>	SH	
Notodontid Moth	<i>Oligocentria pinalensis</i>	SH	
Notodontid Moth	<i>Oligocentria sp. 1</i>	S?	
Notodontid Moth	<i>Schizura biedermani</i>	S?	
Notodontid Moth	<i>Symmerista zacualpana</i>	S?	
Patagonia Eyed Silkmoth	<i>Automeris patagoniensis</i>	S?	
Penitent	<i>Catocala piatrix</i>	S?	
Royal Moth	<i>Sphingicampa raspa</i>	S1	
Semirelict Underwing	<i>Catocala semirelecta</i>	S?	
Slender Sylph	<i>Macrothemis inacuta</i>	S?	
Sphinx Moth	<i>Sphinx smithi</i>	S?	
Stone's Buckmoth	<i>Hemileuca stonei</i>	S?	
Sweetheart Underwing	<i>Catocala amatrix</i>	S?	
Terloo's Sphinx	<i>Proserpinus terlooii</i>	S1	
Tricolor Buckmoth	<i>Hemileuca tricolor</i>	S?	
Underwing Moth	<i>Catocala aholibah</i>	S?	

ARIZONA MOTHS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Underwing Moth	<i>Catocala caesia</i>	S?	
Underwing Moth	<i>Catocala chelidonia</i>	S?	
Underwing Moth	<i>Catocala desdemona</i>	S?	
Underwing Moth	<i>Catocala electilis</i>	S?	
Underwing Moth	<i>Catocala frederici</i>	S?	
Underwing Moth	<i>Catocala hermia</i>	S?	
Underwing Moth	<i>Catocala ophelia</i>	S?	
Underwing Moth	<i>Catocala verrilliana</i>	S?	
Underwing Moth	<i>Catocala violenta</i>	S?	
Vega Sphinx	<i>Proserpinus vega</i>	S?	
Weist's Sphinx	<i>Euproserpinus wiesti</i>	S?	
White Underwing	<i>Catocala relict</i>	S?	

Notes

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Dragonflies and Damselflies

Dragonflies and damselflies belong to the order Odonata (“toothed ones”). They are carnivorous predators that first appear in Pennsylvanian sediments deposited about 325 million years ago. Compare that to mammal predators, most of which have been around for less than 50 million years.

Like mammals, Odonata capture their prey by anticipating its movements. Both damselflies and dragonflies are found near water, but damselflies are often seen hunting in lawns and fields. Both lay their eggs in water and their nymphs develop there. So much of their life is spent in water that water quality influences their success. In summer, the absence of dragonflies around a spring or pond can indicate the water is poisonous.

Damselfly and Dragonfly Species Numbers*

- World: 5,500
- U. S.: 500
- Arizona: 137*
- Status Unknown: 107 (78%)
- AZGFD Imperiled (S1-S4): 26 (87% of those of known status)
- ESA Species of Concern: 1

*I added 30 species on the Odonata Central list to the Arizona Game and Fish Department (AZGFD) October, 2013 list. Other sources list slightly different numbers of species. The main reason for this is that some lists contain subspecies not included in others.

Arizona Damselfly and Dragonfly References

The Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

Arizona Odonata website. <http://azodes.org>.

The online Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

Arizona Dragonflies (Damselflies and Dragonflies): www.azdragonfly.net.

Behrstock, R.A. 2008. Dragonflies and damselflies of the Southwest. Rio Nuevo Publishers, Tucson, AZ, 96 p.

Corbet, P, 1999. Dragonflies — Behavior and Ecology of Odonata. Comstock Pub. Assoc., New York. 829 p.

Dragonflies of the Southwest: <http://southwestdragonflies.net>.

Dunkle, S.W. 2000. Dragnoflies through binoculars: A field guide to dragonflies of North America. Oxford Univ Press, NY, NY. 266 p.

Odanata Central: <http://odonatacentral.org>.

Paulson, D. 2009. Dragonflies and damselflies of the West. Princeton Press. Princeton, NJ. 536 p.

Arizona Damselfly and Dragonfly Checklist

See page 9 for conservation status symbol definitions.

ARIZONA DAMESELFIES AND DRAGONFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
--	<i>Amphiagrion intermediate</i>	*	
--	<i>Argia harknessi</i>	*	
American Rubyspot	<i>Hetaerina americana</i>	*	
Amethyst Dancer	<i>Argia pallens</i>	S?	
Apache Dancer	<i>Argia munda</i>	S?	
Apache Spiketail	<i>Cordulegaster diadema</i>	S3	
Arizona Snaketail	<i>Ophiogomphus arizonicus</i>	S3S4	
Arroyo Bluet	<i>Enallagma praevarum</i>	S?	
Arroyo Darner	<i>Rhionaeschna dugesi</i>	S1	
Autumn Meadowhawk	<i>Sympetrum vicinum</i>	*	
Aztec Dancer	<i>Argia nahuana</i>	S?	

ARIZONA DAMESELFLIES AND DRAGONFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Baja Bluet	<i>Enallagma eiseni</i>	*	
Band-winged Meadowhawk	<i>Sympetrum semicinctum</i>	S2	
Black Meadowhawk	<i>Sympetrum danae</i>	*	
Black Saddlebags	<i>Tramea lacerata</i>	S?	
Black Setwing	<i>Dythemis nigrescens</i>	S3	
Black-and-white Damself	<i>Apanisagrion lais</i>	S?	
Black-fronted Forktail	<i>Ischnura denticollis</i>	S?	
Black-winged Dragonlet	<i>Erythrodiplax funerea</i>	S?	
Bleached Skimmer	<i>Libellula composita</i>	S1	
Blue Dasher	<i>Pachydiplax longipennis</i>	S?	
Blue-eyed Darner	<i>Rhionaeschna multicolor</i>	S5	
Blue-faced Darner	<i>Coryphaeschna adnexa</i>	*	
Blue-fronted Dancer	<i>Argia apicalis</i>	*	
Blue-ringed Dancer	<i>Argia sedula</i>	S?	
Boreal Bluet	<i>Enallagma boreale</i>	*	
Brimstone Clubtail	<i>Stylurus intricatus</i>	S1	
California Dancer	<i>Argia agrioides</i>	S?	
California Darner	<i>Rhionaeschna californica</i>	*	
California Spreadwing	<i>Archilestes californicus</i>	S?	
Canyon Rubyspot	<i>Hetaerina vulnerata</i>	*	

ARIZONA DAMESELFIES AND DRAGONFLIES

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Cardinal Meadowhawk	<i>Sympetrum illotum</i>	*	
Carmine Skimmer	<i>Orthemis discolor</i>	*	
Chalky Spreadwing	<i>Lestes sigma</i>	*	
Checkered Setwing	<i>Dythemis fugax</i>	S2	
Citrine Forktail	<i>Ischnura hastata</i>	S?	
Claw-tipped Bluet	<i>Enallagma semicirculare</i>	S?	
Comanche Skimmer	<i>Libellula comanche</i>	S3S4	
Common Green Darner	<i>Anax junius</i>	S?	
Common Whitetail	<i>Plathemis lydia</i>	S?	
Desert Firetail	<i>Telebasis salva</i>	S?	
Desert Forktail	<i>Ischnura barberi</i>	S?	
Desert Shadowdamsel	<i>Palaemnema domina</i>	S1	
Desert Whitetail	<i>Plathemis subornata</i>	S?	
Double-striped Bluet	<i>Enallagma basidens</i>	S?	
Dusky Dancer	<i>Argia translata</i>	S?	
Eastern Amberwing	<i>Perithemis tenera</i>	S?	
Eastern Pondhawk	<i>Erythemis simplicicollis</i>	S?	
Eastern Ringtail	<i>Erpetogomphus designatus</i>	S?	
Eastern Tailed-Blue	<i>Cupido (Everes) comyntas</i>	S?	
Eight-spotted Skimmer	<i>Libellula forensis</i>	S3	

ARIZONA DAMESELFIES AND DRAGONFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Emerald Spreadwing	<i>Lestes dryas</i>	S?	
Familiar Bluet	<i>Enallagma civile</i>	S?	
Fiery-eyed Dancer	<i>Argia oenea</i>	S?	
Filigree Skimmer	<i>Pseudoleon superbus</i>	S?	
Flame Skimmer	<i>Libellula saturata</i>	S5	
Four-spotted Pennant	<i>Brachymesia gravida</i>	*	
Four-spotted Skimmer	<i>Libellula quadrimaculata</i>	S4	
Giant Green Darner	<i>Anax walsinghami</i>	S?	
Gray Sanddragon	<i>Progomphus borealis</i>	S?	
Great Pondhawk	<i>Erythemis vesiculosa</i>	S?	
Great Spreadwing	<i>Archilestes grandis</i>	S?	
Halloween Pennant	<i>Celithemis eponina</i>	*	
Hoary Skimmer	<i>Libellula nodisticta</i>	S3	
Kiowa Dancer	<i>Argia immunda</i>	S?	
Lavender Dancer	<i>Argia hinei</i>	S?	
Malachite Darner	<i>Remartinia luteipennis</i>	S2	
Marl Pennant	<i>Macrodiplax balteata</i>	S?	
Masked Clubskimmer	<i>Brechmorhoga pertinax</i>	S1	
Mayan Setwing	<i>Dythemis maya</i>	*	
Mexican Amberwing	<i>Perithemis intensa</i>	S?	

ARIZONA DAMESELFIES AND DRAGONFLIES

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Mexican Forktail	<i>Ischnura demorsa</i>	S?	
Narrow-striped Forceptail	<i>Aphylla protracta</i>	*	
Neon Skimmer	<i>Libellula croceipennis</i>	S5	
Neotropical Bluet	<i>Enallagma novaehispaniae</i>	*	
Northern Bluet	<i>Enallagma annexum</i>	S?	
Northern Spreadwing	<i>Lestes disjunctus</i>	S?	
Pacific Forktail	<i>Ischnura cervula</i>	S?	
Pacific Spiketail	<i>Cordulegaster dorsalis</i>	*	
Paddle-tailed Darner	<i>Aeshna palmata</i>	S?	
Painted Damsel	<i>Hesperagrion heterodoxum</i>	S?	
Paiute Dancer	<i>Argia alberta</i>	S?	
Pale-faced Clubskimmer	<i>Brechmorhoga mendax</i>	S4	
Persephone's Darner	<i>Aeshna persephone</i>	S?	
Pima Dancer	<i>Argia pima</i>	S1	
Plains Forktail	<i>Ischnura damula</i>	S?	
Plateau Dragonlet	<i>Erythrodiplax basifusca</i>	*	
Plateau Dragonlet	<i>Erythrodiplax connata</i>	S?	
Plateau Spreadwing	<i>Lestes alacer</i>	S?	
Powdered Dancer	<i>Argia moesta</i>	S?	
Rambur's Forktail	<i>Ischnura ramburii</i>	S?	

ARIZONA DAMESELFLIES AND DRAGONFLIES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Red Rock Skimmer	<i>Paltothermis lineatipes</i>	S?	
Red Saddlebags	<i>Tramea onusta</i>	S?	
Red-tailed Pennant	<i>Brachymesia furcata</i>	*	
Riffle Darner	<i>Oplonaeschna armata</i>	S?	
River Bluet	<i>Enallagma anna</i>	S?	
Roseate Skimmer	<i>Orthemis ferruginea</i>	*	
Russet-tipped Clubtail	<i>Stylurus plagiatu</i> s	S3	
Sabino Canyon Dancer	<i>Argia sabino</i>	S2	SC
Serpent Ringtail	<i>Erpetogomphus lampropeltis</i>	S?	
Sierra Madre Dancer	<i>Argia lacrimans</i>	S?	
Slender Sylph	<i>Macrothemis inacuta</i>	S?	
Slough Amberwing	<i>Perithemis domitia</i>	S?	
Smoky Rubyspot	<i>Hetaerina titia</i>	*	
Sooty Dancer	<i>Argia lugens</i>	S?	
Sooty Saddlebags	<i>Tramea binotata</i>	*	
Spine-tipped Dancer	<i>Argia extranea</i>	S?	
Spotted Spreadwing	<i>Lestes congener</i>	S?	
Spot-winged Glider	<i>Pantala hymenaea</i>	S?	
Spot-winged Meadowhawk	<i>Sympetrum signiferum</i>	S2	
Springwater Dancer	<i>Argia plana</i>	S?	

ARIZONA DAMESELFIES AND DRAGONFLIES

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Straight-tipped Ringtail	<i>Erpetogomphus elaps</i>	*	
Striped Meadowhawk	<i>Sympetrum pallipes</i>	S4	
Striped Saddlebags	<i>Tramea calverti</i>	*	
Swift Setwing	<i>Dythemis velox</i>	S1	
Taiga Bluet	<i>Coenagrion resolutum</i>	S1	
Tarascan Dancer	<i>Argia tarascana</i>	S1	
Tezpi Dancer	<i>Argia tezpi</i>	S?	
Tonto Dancer	<i>Argia tonto</i>	S?	
Tule Bluet	<i>Enallagma carunculatum</i>	S?	
Turquoise-tipped Darner	<i>Rhionaeschna psilus</i>	S3	
Twelve-spotted Skimmer	<i>Libellula pulchella</i>	S5	
Variable Dancer	<i>Argia fumipennis</i>	*	
Variable Darner	<i>Aeshna interrupta</i>	S?	
Variegated Meadowhawk	<i>Sympetrum corruptum</i>	S5	
Vivid Dancer	<i>Argia vivida</i>	S?	
Wandering Glider	<i>Pantala flavescens</i>	S?	
Western Forktail	<i>Ischnura perparva</i>	S?	
Western Pondhawk	<i>Erythemis collocata</i>	S?	
Western Red Damsel	<i>Amphiagrion abbreviatum</i>	S?	
Western River Cruiser	<i>Macromia magnifica</i>	S?	

Fish

The continued growth of the human population creates a hopeless future for fish. According to Stephen J. Walsh, Howard L. Jelks, and Noel M. Burkhead of the U. S. Geological Survey, almost half of North American species are imperiled and the percentage is growing (2009 article online at [Actionbioscience](http://Actionbioscience.org)). As shown below, all of Arizona's native species are ranked vulnerable (S3) or worse (S1, S2).

Fish Species Numbers

The October 10, 2013 report by the Arizona Game and Fish Department (AZGFD) includes 42 surviving native Arizona fish species. Two native species are extinct, and AZGFD considers all the others vulnerable. The numbers below are from the North American Native Fishes Association (NANFA), U. S. Fish and Wildlife Service, and the Arizona Game and Fish Department (AZGFD). I only included percentages for Arizona's native species, but the introduced species are declining along with the natives.

- World (saltwater, freshwater, and anadromous): 32,000
- U. S.: 1,154
- Arizona native fish species: 42
- Arizona native fish extinct: 2 (5%)
- Arizona native fish vulnerable: 40 (100%)
- Arizona introduced exotic fish species: 68
- ESA Arizona fish Listed Endangered: 6 (15%)
- ESA Arizona fish Listed Threatened: 6 (15%)
- ESA Arizona fish of Concern: 2 (5%)

Arizona Fish References

- AZGFD, Arizona Game and Fish Department: <http://www.azgfd.gov>.
- ASIH, Am Society of Ichthyologists & Herpetologists: <http://asih.org>.
- Burkhead, N. M. 2012. Extinction rates in North American freshwater fishes, 1900-2010. *BioScience*, 62: 798 – 808
- Miller, R. R., and C.H. Lowe. 1964. *Fishes of Arizona*. Pages 133-151 **in** Lowe, C.H., Ed. *The vertebrates of Arizona*. University of AZ Press, Tucson. 270 p.

Nelson J.S., E.J. Crossman, H. Espinosa-Pérez, L.T. Findley, C.R. Gilbert, R.N. Lea, and J.D. Williams. 2004. Common and scientific names of fishes from the United States, Canada, and Mexico, 6th ed. American Fisheries Society, Bethesda, MD. 386 p.

NANFA, N. Am. Native Fishes Association: <http://www.nanfa.org>.

Smithsonian National Museum of Natural History. Department of Vertebrate Zoology, Division of Fishes: <http://vertebrates.si.edu/fishes/>

Turner, D.S. and M.D. List. 2007. Habitat mapping and conservation analysis to identify critical streams for Arizona’s native fish. Aquatic Conservation 17: 737-748.

U. S. Fish and Wildlife Service: <http://www.fws.gov>.

Arizona Fish Checklist

See page 9 for conservation status symbol definitions.

ARIZONA FISH			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
American Eel	<i>Anguilla rostrata</i>	SEH	
Apache Trout	<i>Oncorhynchus apache</i>	S3	LT
Arctic Grayling	<i>Thymallus arcticus</i>	SE1	No
Bairdiella	<i>Bairdiella icistia</i>	SEH	
Beautiful Shiner	<i>Cyprinella formosa</i>	S1	LT
Bigmouth Buffalo	<i>Ictiobus cyprinellus</i>	SE1	
Black Buffalo	<i>Ictiobus niger</i>	SE1	
Black Bullhead	<i>Ameiurus melas</i>	SE5	
Black Crappie	<i>Pomoxis nigromaculatus</i>	SE5	
Blue Catfish	<i>Ictalurus furcatus</i>	SE1	

ARIZONA FISH

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Blue Tilapia	<i>Oreochromis aureus</i>	SE5	
Bluegill	<i>Lepomis macrochirus</i>	SE5	
Bluehead Sucker	<i>Catostomus discobolus</i>	S3	PS
Bluehead Sucker	<i>Catostomus discobolus discobolus</i>	S3	
Bonytail	<i>Gila elegans</i>	S1	LE
Brook Trout	<i>Salvelinus fontinalis</i>	SE5	
Brown Bullhead	<i>Ameiurus nebulosus</i>	SE1	
Brown Trout	<i>Salmo trutta</i>	SE5	
Channel Catfish	<i>Ictalurus punctatus</i>	SE5	
Coho Salmon	<i>Oncorhynchus kisutch</i>	SE2	
Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	S1	LE,XN
Common Carp	<i>Cyprinus carpio</i>	SE5	
Convict Cichlid	<i>Cichlasoma nigrofasciatum</i>	SE	
Cutthroat Trout	<i>Oncorhynchus clarkii</i>	SE3	No
Desert Pupfish	<i>Cyprinodon macularius</i>	S1	LE
Desert Sucker	<i>Catostomus clarkii</i>	S3S4	SC
Fathead Minnow	<i>Pimephales promelas</i>	SE5	
Flannelmouth Sucker	<i>Catostomus latipinnis</i>	S2	SC
Flathead Catfish	<i>Pylodictis olivaris</i>	SE4	
Gila Chub	<i>Gila intermedia</i>	S2	LE

ARIZONA FISH

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Gila Longfin Dace	<i>Agosia chrysogaster chrysogaster</i>	S3S4	SC
Gila Topminnow	<i>Poeciliopsis occidentalis occidentalis</i>	S1S2	LE
Gila Trout	<i>Oncorhynchus gilae</i>	S1	LT
Golden Shiner	<i>Notemigonus crysoleucas</i>	SE4	
Golden Trout	<i>Oncorhynchus mykiss aguabonita</i>	SE1	
Goldfish	<i>Carassius auratus</i>	SE4	
Grass Carp	<i>Ctenopharyngodon idella</i>	SE2	
Green Sunfish	<i>Lepomis cyanellus</i>	SE5	
Green Swordtail	<i>Xiphophorus hellerii</i>	SE1	
Guppy	<i>Poecilia reticulata</i>	SE1	
Headwater Chub	<i>Gila nigra</i>	S2	C
Humpback Chub	<i>Gila cypha</i>	S1	LE
Largemouth Bass	<i>Micropterus salmoides</i>	SE5	
Little Colorado Spinedace	<i>Lepidomeda vittata</i>	S1S2	LT
Little Colorado Sucker	<i>Catostomus sp. 3</i>	S2	SC
Loach Minnow	<i>Tiaroga cobitis</i>	S1	LE
Longfin Dace	<i>Agosia chrysogaster</i>	S3S4	SC
Longjaw Mudsucker	<i>Gillichthys mirabilis</i>	SE2	
Machete	<i>Elops affinis</i>	SA	
Mexican Stoneroller	<i>Campostoma ornatum</i>	S1	SC

ARIZONA FISH			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Mexican Tetra	<i>Astyanax mexicanus</i>	SEH	
Mosquitofish	<i>Gambusia affinis</i>	SE5	
Mottled Sculpin	<i>Cottus bairdii</i>	SE1	
Mozambique Tilapia	<i>Oreochromis mossambicus</i>	SE4	
Northern Pike	<i>Esox lucius</i>	SE3	
Orangemouth Corvina	<i>Cynoscion xanthalmus</i>	SEH	
Plains Killifish	<i>Fundulus zebrinus</i>	SE1	
Pumpkinseed	<i>Lepomis gibbosus</i>	SE2	
Quitobaquito Pupfish	<i>Cyprinodon eremus</i>	S1	LE
Rainbow Trout	<i>Oncorhynchus mykiss</i>	SE5	
Razorback Sucker	<i>Xyrauchen texanus</i>	S1	LE
Red Shiner	<i>Notropis lutrensis</i>	SE5	
Redbelly Tilapia	<i>Tilapia zillii</i>	SE1	
Redear Sunfish	<i>Lepomis microlophus</i>	SE4	
Redside Shiner	<i>Richardsonius balteatus</i>	SE2	
Rio Grande Sucker	<i>Catostomus plebeius</i>	SER	
Rock Bass	<i>Ambloplites rupestris</i>	SEH	
Roundtail Chub	<i>Gila robusta</i>	S2	C*
Sacramento Perch	<i>Archoplites interruptus</i>	SEH	
Sailfin Molly	<i>Poecilia latipinna</i>	SE3	

ARIZONA FISH			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Sand Shiner	<i>Notropis stramineus</i>	SEH	
Santa Cruz Pupfish	<i>Cyprinodon arcuatus</i>	SX	
Sargo	<i>Anisotremus davidsonii</i>	SE1	
	<i>Poeciliopsis occidentalis</i>	S2	LE
Shortfin Molly	<i>Poecilia mexicana</i>	SE1	
Smallmouth Bass	<i>Micropterus dolomieu</i>	SE5	
Smallmouth Buffalo	<i>Ictiobus bubalus</i>	SE1	
Sockeye Salmon	<i>Oncorhynchus nerka</i>	SE1	
Sonora Chub	<i>Gila ditaenia</i>	S1	LT
Sonora Sucker	<i>Catostomus insignis</i>	S3	SC
Speckled Dace	<i>Rhinichthys osculus</i>	S3S4	SC
Spikedace	<i>Meda fulgida</i>	S1	LE
Spottail Shiner	<i>Notropis venustus</i>	SEH	
Spotted Bass	<i>Micropterus punctulatus</i>	SEH	
Spotted Sleeper	<i>Eleotris picta</i>	SA	
Striped Bass	<i>Morone saxatilis</i>	SE4	
Striped Mullet	<i>Mugil cephalus</i>	S1	
Threadfin Shad	<i>Dorosoma petenense</i>	SE5	
Utah Chub	<i>Gila atraria</i>	SE1	
Utah Sucker	<i>Catostomus ardens</i>	SEH	

ARIZONA FISH

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Variable Platyfish	<i>Xiphophorus variatus</i>	SE1	
Virgin River Chub	<i>Gila seminuda</i>	S1	LE
Virgin Spinedace	<i>Lepidomeda mollispinis</i>	S1	No
Virgin Spinedace	<i>Lepidomeda mollispinis mollispinis</i>	S1	SC
Walking Catfish	<i>Clarias batrachus</i>	SER	
Walleye	<i>Sander vitreus</i>	SE4	
Warmouth	<i>Lepomis gulosus</i>	SE3	
White Bass	<i>Morone chrysops</i>	SE2	
White Crappie	<i>Pomoxis annularis</i>	SE1	
White Sturgeon	<i>Acipenser transmontanus</i>	SHE	No
Woundfin	<i>Plagopterus argentissimus</i>	S1	LE,XN
Yaqui Catfish	<i>Ictalurus pricei</i>	S1	LT
Yaqui Chub	<i>Gila purpurea</i>	S1	LE
Yaqui Longfin Dace	<i>Agosia chrysogaster ssp. 1</i>	S1	SC
Yaqui Sucker	<i>Catostomus bernardini</i>	SX	
Yaqui Topminnow	<i>Poeciliopsis occidentalis sonoriensis</i>	S1	LE
Yellow Bass	<i>Morone mississippiensis</i>	SE2	
Yellow Bullhead	<i>Ameiurus natalis</i>	SE2	
Yellow Perch	<i>Perca flavescens</i>	SE2	
Zuni Bluehead Sucker	<i>Catostomus discobolus yarrowi</i>	S1	PE

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Grasshoppers and other Singing Insects

Grasshoppers are members of the Orthoptera, one of the most familiar insect orders. Orthoptera includes two suborders: Caelifera (Grasshoppers and relatives) and Ensifera (crickets, katydids, and gryllacridoids). Distribution and conservation status for these groups is limited. I included some information to provide a starting place for recording sightings.

Many of the 400 Grasshopper species known to occur in the western U. S. may be present in Arizona, but I verified only 59 species from the USDA fact sheets (USDA and Pfadt 2002) and 35 from the Arizona Game and Fish Department (AZGFD–October 2013) website.

The USDA fact sheets include maps, photographs, and the natural history of each species. The Bug Guide (see references) has more information.

Crickets

The website, [Singing Insects of North America](#) by Thomas J. Walker (crickets and katydids) and Thomas E. Moore (cicadas) provides a visual key to the nine families and subfamilies of North American Crickets north of Mexico. It provides information on 130 species.

Katydid



Greater Anglewing Katydid

Specialists report 350 species of Katydids in two families and six subfamilies in North America north of Mexico. Two species of the *Microcentrum* genus occur near my home in central Arizona. It would be possible to use the range maps on the [Singing Insects of North America](#) website to compile a rough checklist for Arizona—perhaps for the next Notebook edition.

Singing Insects References and Notes

The [Naturalist’s Bookstore](#) has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

Arnett, R.H. 2000. American insects: A handbook of the insects of America north of Mexico. 2nd Edition. CRC Press. 1024 p.

Bug Guide. www.bugguide.net.

Capinera, J.L, R.D. Scott, and T. J. Walker. 2004. Field guide to Grasshoppers, katydids, and crickets of the United States. Cornell University Press, Ithaca, NY 249 p.

Orthopterists’ Society. <http://140.247.119.225/OrthSoc>.

Pfadt, R.E. 2002. Field guide to common western Grasshoppers: Third edition. Bulletin 912. Wyoming Agricultural Experiment Station, University of Wyoming, Laramie, WY. 288 p.

Pfadt, R.E. n.d. Grasshopper species fact sheets. Bulletin 912. Wyoming Agricultural Experiment Station, University of Wyoming, Laramie, WY.

Singing Insects of North America.
<http://entnemdept.ufl.edu/walker/buzz/index.htm>

USDA. [http://www.sidney.ars.usda.gov/Grasshopper/ID Tools/F Sheets/index.htm](http://www.sidney.ars.usda.gov/Grasshopper/ID%20Tools/F%20Sheets/index.htm).

Walker, T.J., and T.E. Moore. [Singing Insects of North America](#).

Arizona Grasshopper Checklist

See page 9 for conservation status symbol definitions.

ARIZONA GRASSHOPPERS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Admirable Grasshopper	<i>Syrbula admirabilis</i>	S?	
Atascosa Gem Grasshopper	<i>Aztecacris gloriosus</i>	S1	
Ball's Monkey Grasshopper	<i>Eumorsea balli</i>	S1	

ARIZONA GRASSHOPPERS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Bigheaded Grasshopper	<i>Aulocara ellioti</i>	S?	
Bluelegged Grasshopper	<i>Metator pardalinus</i>	S?	
Broad-legged Pygmy Grasshopper	<i>Paratettix schochi</i>	S?	
Brownspeckled Grasshopper	<i>Psoloessa delicatula</i>	S?	
Bruner slantfaced Grasshopper	<i>Bruneria brunnea</i>	S?	
Bruner spurthroated Grasshopper	<i>Melanoplus bruneri</i>	S?	
Carolina Grasshopper	<i>Dissosteira Carolina</i>	S?	
Clearwinged Grasshopper	<i>Camnula pellucid</i>	S?	
Clubhorned Grasshopper	<i>Aeropedellus clavatus</i>	S?	
Contrast Spur-throat Grasshopper	<i>Melanoplus discolor</i>	S?	
Crenulatewinged Grasshopper	<i>Cordillacris crenulata</i>	S?	
Dawson Grasshopper	<i>Melanoplus dawsoni</i>	S?	
Devastating Grasshopper	<i>Melanoplus devastator</i>	S?	
Differential Grasshopper	<i>Melanoplus differentialis</i>	S?	
Dusky Grasshopper	<i>Encoptolophus costalis</i>	S?	
Ebony Grasshopper	<i>Boopedon nubilum</i>	S?	
Flabellate Grasshopper	<i>Melanoplus occidentalis</i>	S?	
Fourspeckled Grasshopper	<i>Phlibostroma quadrimaculatum</i>	S?	
Fuzzy olive-green Grasshopper	<i>Campylacantha olivacea</i>	S?	
Gladston Grasshopper	<i>Melanoplus gladstoni</i>	S?	

ARIZONA GRASSHOPPERS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Grasshopper	<i>Aeoloplides chenopodii</i>	S?	
Grasshopper	<i>Ageneotettix saluator</i>	S?	
Grasshopper	<i>Clematodes vanduzeei</i>	S?	
Grasshopper	<i>Conalcaea cantralli</i>	S?	
Grasshopper	<i>Opeia atascosa</i>	S?	
Grasshopper	<i>Trimerotropis arizonensis</i>	S?	
Grasshopper	<i>Melanoplus sp. 21</i>	S?	
Grasshopper	<i>Melanoplus sp. 52</i>	S?	
Green fool Grasshopper	<i>Acrolophitus hirtipes</i>	S?	
Greenstriped Grasshopper	<i>Chortophaga viridifasciata</i>	S?	
Hayden Grasshopper	<i>Derotmema haydeni</i>	S?	
Huachuca Grasshopper	<i>Conalcaea huachucana</i>	S?	
Humphrey's Grasshopper	<i>Barytettix humphreysi</i>	S?	
Keeler Grasshopper	<i>Melanoplus keeleri</i>	S?	
Kiowa Grasshopper	<i>Trachyrhachys kiowa</i>	S?	
Lakin Grasshopper	<i>Melanoplus lakinus</i>	S?	
Largeheaded Grasshopper	<i>Phoetaliotes nebrascensis</i>	S?	
Lichen Grasshopper	<i>Leuronotina ritensis</i>	S1	
Little Spurthroated Grasshopper	<i>Melanoplus infantilis</i>	S?	
Meadow Grasshopper	<i>Chorthippus curtipennis</i>	S?	

ARIZONA GRASSHOPPERS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Migratory Grasshopper	<i>Melanoplus sanguinipes</i>	S?	
Monkey Grasshopper	<i>Morsea dumicola</i>	S?	
Monkey Grasshopper	<i>Morsea kaibabensis</i>	S?	
Mottled sand Grasshopper	<i>Spharagemon collare</i>	S?	
Narrowwinged sand Grasshopper	<i>Melanoplus angustipennis</i>	S?	
Navajo Jerusalem Cricket	<i>Stenopelmatus navajo</i>	S1S3	SC
NV Point-headed Grasshopper	<i>Acrolophitus nevadensis</i>	S?	
Nevada sage Grasshopper	<i>Melanoplus rugglesi</i>	S?	
Oak Leaf Grasshopper	<i>Tomonotus ferruginosus</i>	S?	
Obscure Grasshopper	<i>Opeia obscura</i>	S?	
Orangelegged Grasshopper	<i>Spharagemon equale</i>	S?	
Packard Grasshopper	<i>Melanoplus packardii</i>	S?	
Painted Grasshopper	<i>Dactylotum bicolor</i>	S?	
Pallidwinged Grasshopper	<i>Trimerotropis pallidipennis</i>	S?	
Panther-spotted Grasshopper	<i>Poecilottetix pantherinus</i>	S?	
Pasture Grasshopper	<i>Melanoplus confuses</i>	S?	
Pictured Spur-throat Grasshopper	<i>Melanoplus pictus</i>	S?	
Pinaleno Monkey Grasshopper	<i>Eumorsea pinaleno</i>	S1S3	SC
Pinaleno Short-wing Grasshopper	<i>Melanoplus pinaleno</i>	S1	
Plains lubber Grasshopper	<i>Brachystola magna</i>	S?	

ARIZONA GRASSHOPPERS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Red Whiskers Grasshopper	<i>Melanoplus desultorius</i>	S?	
Redlegged Grasshopper	<i>Melanoplus femurrubrum</i>	S?	
Redshanked Grasshopper	<i>Xanthippus corallipes</i>	S?	
Redwinged Grasshopper	<i>Arphia pseudonietana</i>	S?	
Rocky Mountain Grasshopper	<i>Melanoplus spretus</i>	S?	
Rufous Grasshopper	<i>Heliaula rufa</i>	S?	
Sagebrush Grasshopper	<i>Melanoplus bowditchi</i>	S?	
Snakeweed Grasshopper	<i>Hesperotettix viridis</i>	S?	
Snow's Toothpick Grasshopper	<i>Prorocorypha snowi</i>	S1	
Specklewinged Grasshopper	<i>Arphia conspersa</i>	S?	
Spottedwinged Grasshopper	<i>Cordillacris occipitalis</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus chiricahuae</i>	S1	
Spur-throat Grasshopper	<i>Melanoplus femurnigrum</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus franciscanus</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus magdalenae</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus snowii</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus splendidus</i>	S?	
Spur-throat Grasshopper	<i>Melanoplus truncatus</i>	S?	
Striped Grasshopper	<i>Amphitornus coloradus</i>	S?	
Striped Sand Grasshopper	<i>Melanoplus foedus</i>	S?	

Lizards

More than half of the lizard species found in the U. S. are present in Arizona. Lizards are the principal regulators of ants, termites, and other insects. With one exception, the Gila Monster, Arizona lizards are harmless. Field guides are available online (Arizona Herpetological Association, Brennan, 2008), and in print (Jones and Lovich, 2009, and Stebbins, 1966).



Plateau Fence Lizard

The photograph shows a Plateau Fence Lizard. These lizards like fences, but they will sit on any convenient object that gives them an elevated view. They live throughout central and northern Arizona.

Lizard Species Numbers

(Numbers from Gibbons et al. (2000) and AZGFD (2013). The Arizona numbers include subspecies and sub populations).

- World: 5,000
- U.S.: 100
- Arizona total lizard species: 69
- Arizona native lizards species: 67
- Arizona natives imperiled, vulnerable, or of possible long-term concern: 39 (58%)
- ESA Arizona Lizards of Concern: 11 (16%)

Arizona Lizard Conservation

Arizona's lizard species are declining in response to human developments. Roads, houses, pesticides, invasive species, wildfire, and energy development and transmission are eroding their numbers. Lizards have almost no ability to survive their encounters with people. Easily captured, they often become specimens confined to cages or jars.

Further information on conservation is available on the Internet sites listed in the references. The PARC (Partners in Amphibian and Reptile Conservation) website provides access to special reports and

newsletters about lizards. Jones and Lovich (2009) give a good discussion of lizard conservation.

Arizona Lizard References

The Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

AZGF (Arizona Game and Fish Department) <http://www.azgfd.gov>.

Arizona Herpetological Association: <http://www.azreptiles.com>.

Brennan, T.C. 2008. Online field guide to reptiles and amphibians of Arizona: <http://www.reptilesfaz.com/>.

Gibbons, J.W., D.E. Scott, T.J. Ryan, K.A. Buhlmann, T.D. Tuberville, B.S. Metts, J.L. Greene, T. Mills, Y. Leiden, S. Poppy, and C.T. Winne. 2000. The global decline of reptiles, déjà vu amphibians. *BioScience* 50: 653-666.

International Reptile Conservation Fund: <http://www.ircf.org/>.

Jones, L.L.C., and R.E. Lovich, eds. 2009. *Lizards of the American Southwest: A photographic field guide*. Rio Nuevo Publishers, Tucson, AZ. 567 p.

PARC (Partners in Amphibian and Reptile Conservation): <http://www.parcplace.org/>.

Stebbins, R.C. 1966. *A field guide to western reptiles and amphibians*. Houghton Mifflin, Boston, MA. 279 p.

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Arizona Lizards Checklist

See page 9 for conservation status symbol definitions.

ARIZONA LIZARDS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Arizona Alligator Lizard	<i>Elgaria kingii nobilis</i>	S5	
Arizona Chuckwalla	<i>Sauromalus ater</i> (Arizona Pop)	S4	SC
Arizona Night Lizard	<i>Xantusia arizonae</i>	S1	
Arizona Striped Whiptail	<i>Aspidoscelis arizonae</i>	S1S2	
Banded Gila Monster	<i>Heloderma suspectum cinctum</i>	S4	SC
Bezy's Night Lizard	<i>Xantusia bezyi</i>	S2	
Chihuahuan Greater Earless	<i>Cophosaurus texanus scitulus</i>	S5	
Chihuahuan Spotted Whiptail	<i>Aspidoscelis exsanguis</i>	S2	
Clark's Spiny Lizard	<i>Sceloporus clarkii</i>	S5	
Common Checkered Whiptail	<i>Aspidoscelis tessellata</i>	S?	
Common Chuckwalla	<i>Sauromalus ater</i>	S4	SC
Common Lesser Earless Lizard	<i>Holbrookia maculata</i>	S5	
Common Sagebrush Lizard	<i>Sceloporus graciosus</i>	S3S4	
Common Side-blotched Lizard	<i>Uta stansburiana</i>	S5	
Desert Banded Gecko	<i>Coleonyx variegatus variegatus</i>	S?	
Desert Grassland Whiptail	<i>Aspidoscelis uniparens</i>	S5	
Desert Horned Lizard	<i>Phrynosoma platyrhinos</i>	S5	
Desert Iguana	<i>Dipsosaurus dorsalis</i>	S5	

ARIZONA LIZARDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Desert Night Lizard	<i>Xantusia vigilis</i>	S4	
Desert Spiny Lizard	<i>Sceloporus magister</i>	S5	
Eastern Collared Lizard	<i>Crotaphytus collaris</i>	S5	
Fence/Prairie/Plateau Lizard	<i>Sceloporus undulatus</i>	SRF	
Flat-tailed Horned Lizard	<i>Phrynosoma mcallii</i>	S2	SC
Giant Spotted Whiptail	<i>Aspidoscelis stictogramma</i>	S2	SC
Gila Monster	<i>Heloderma suspectum</i>	S4	
Gila Spotted Whiptail	<i>Aspidoscelis flagellicauda</i>	S4	
Gilbert's Skink	<i>Plestiodon "gilberti"</i>	S3S4	
Glen Canyon Chuckwalla	<i>Sauromalus ater (Glen Canyon Pop)</i>	S2?	SC
Goode's Horned Lizard	<i>Phrynosoma goodei</i>	S3S4	
Great Basin Collared Lizard	<i>Crotaphytus bicinctores</i>	S4	
Great Plains Skink	<i>Plestiodon obsoletus</i>	S5	
Greater Earless Lizard	<i>Cophosaurus texanus</i>	S5	
Greater Short-Horned Lizard	<i>Phrynosoma hernandesi</i>	S4	
Little Striped Whiptail	<i>Aspidoscelis inornata</i>	SRF	
Long-nosed Leopard Lizard	<i>Gambelia wislizenii</i>	S5	
Long-tailed Brush Lizard	<i>Urosaurus graciosus</i>	S5	
Madrean Alligator Lizard	<i>Elgaria kingii</i>	S5	
Many-lined Skink	<i>Plestiodon multivirgatus</i>	S3S4	

ARIZONA LIZARDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Mediterranean Gecko	<i>Hemidactylus turcicus</i>	SE5	
Mohave Fringe-toed Lizard	<i>Uma scoparia</i>	S1	
Mountain Skink	<i>Plestiodon callicephalus</i>	S2	
New Mexico Whiptail	<i>Aspidoscelis neomexicana</i>	S?	
Northern Sagebrush Lizard	<i>Sceloporus graciosus graciosus</i>	S3S4	SC
Ornate Tree Lizard	<i>Urosaurus ornatus</i>	S5	
Pai Striped Whiptail	<i>Aspidoscelis pai</i>	S1	
Plateau Striped Whiptail	<i>Aspidoscelis velox</i>	S5	
Redback Whiptail	<i>Aspidoscelis xanthonota</i>	S2	SC
Regal Horned Lizard	<i>Phrynosoma solare</i>	S5	
Reticulate Gila Monster	<i>Heloderma suspectum suspectum</i>	S4	
Round-tailed Horned Lizard	<i>Phrynosoma modestum</i>	S3	
See: <i>Uma rufopunctata</i>	<i>Uma notata</i>	SRF	
Slevin's Bunchgrass Lizard	<i>Sceloporus slevini</i>	S2	
Sonoran Collared Lizard	<i>Crotaphytus nebrius</i>	S3S4	
Sonoran Spotted Whiptail	<i>Aspidoscelis sonorae</i>	S5	
Southern Desert Horned Lizard	<i>Phrynosoma platyrhinos calidiarum</i>	S5	
Striped Plateau Lizard	<i>Sceloporus virgatus</i>	S3	
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	S3S4	SC
Tiger Whiptail	<i>Aspidoscelis tigris</i>	S5	

ARIZONA LIZARDS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Tucson Banded Gecko	<i>Coleonyx variegatus bogerti</i>	S?	
Variable Skink	<i>Plestiodon multivirgatus epipleurotus</i>	S3S4	
Western Banded Gecko	<i>Coleonyx variegatus</i>	S5	
Western Chuckwalla	<i>Sauromalus ater (Western Pop)</i>	S4	SC
Western Red-tailed Skink	<i>Plestiodon "gilberti" rubricaudatus</i>	S3S4	
Western Side-blotched Lizard	<i>Uta stansburiana elegans</i>	S3	
Western Skink	<i>Plestiodon skiltonianus</i>	S1	
Western Spiny-tailed Iguana	<i>Ctenosaura pectinata</i>	SE	
Yarrow's Spiny Lizard	<i>Sceloporus jarrovii</i>	S5	
Yuman Desert Fringe-toed Lizard	<i>Uma rufopunctata</i>	S2	SC
Zebra-tailed Lizard	<i>Callisaurus draconoides</i>	S5	

[illegible]

Mammals



Rock Squirrel

Numerous mammal field guides and websites are available (e.g., Kays and Wilson, 2002, National Wildlife Federation, AZGDF). You can assemble and download an excellent field guide to Arizona's mammals from the North American Mammals page of the Smithsonian Institution's National Museum of Natural History web site (see the References). The downloaded field guide will have a

page for each species with a picture, distribution map, and description.

Arizona Mammal Conservation

The recent (2014) WWF report states that more than half the Earth's vertebrates have disappeared since 1970. Wildlife specialists conclude that more than half (51%) of the 203 native Arizona mammals are vulnerable or are recently extinct. Adding in the species the Arizona Game and Fish Department (AZGFD) considers possible future risks, the number extinct or in danger rises to 67%.

Mammal Species Numbers

- World: 1200
- U. S.: 400
- Arizona Mammals: 214
- Arizona Natives: 203
- Arizona Natives at risk of extinction (S1-S4): 123
- ESA Arizona Mammals Listed Endangered: 8
- ESA Arizona Mammals Listed Threatened: 2
- ESA Arizona Mammals Endangered or Threatened: 3
- ESA Arizona Mammals of Concern: 31

Bat Species Numbers

When I moved to Coldwater Farm 17 years ago, bats were a common evening sight. I began seeing them less often, and 10 years ago, I erected a bat house using plans from the Tuttle and Hensley (2000)

book. Bats were slow to use the house. Five years after I put it up, the house held only eleven bats. Now there are none, and I no longer see bats in the evenings. I don't know why.

Bat numbers are included in the mammal numbers above. According to the October 10, 2013 report by the Arizona Game and Fish Department (AZGFD), there are 33 Arizona species. All but two are of concern.

- World: 1200+
- U. S.: 45
- Arizona: 33
- Arizona species of concern (ranked S1 to S3): 28 (85%)
- ESA Arizona bats listed endangered: 1 (and one partial)
- ESA Arizona bats of concern: 15

References for Arizona Mammals

The Naturalist's Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

American Society of Mammalogists:
<http://www.mammalsociety.org>,

Arizona Bat Resource Group. Facebook
Page: <http://on.fb.me/150L4FQ>.

Arizona Game and Fish Department (AZGFD). List of "nongame" species includes bats: <http://bit.ly/Y0a6og>. AZGFD has a bat conservation plan, but the plan needs to be updated.

Bat Conservation International: <http://www.batcon.org/>.

Bats. Kunz Bat Lab: <http://www.bu.edu/cecb/BATS/>.

Carson, R. 1962. Silent spring. Houghton Mifflin, New York. 400 p.

Defenders of Wildlife:
<http://www.defenders.org>. News: www.defendersblog.org.

Genoways, T. August 30, 2011. The Man Who Loved Bats. On Earth News.

Halfpenny, J.C., and T. Telander. 2000. Scats and tracks of the desert southwest: A field guide to the signs of 70 wildlife species. The Globe Pequot Press, Guilford, CN. 144 p.

Hinman, K.E., and T.K. Snow. 2003. Arizona Bat Conservation Strategic Plan. Nongame Branch, Wildlife Management Division, Region 5, Field Operations Division, Arizona Game and Fish Department. 173 p. (Available online at: <http://bit.ly/ZjDvTV>).

Hoffa, R.L., and W. Anderson. 1996. Coexisting with urban wildlife: A guide to the central Arizona uplands. Sharlot Hall Museum Press, Prescott, AZ. 123 p.

Kays, R.W., and D.E. Wilson. 2009. Mammals of North America (second edition). Princeton Univ Press, Princeton, NJ. 248 p.

National Wildlife Federation: www.nwf.org.

Organization for Bat Conservation:
<http://www.batconservation.org/>

Pesticide Action Network, North America: <http://www.panna.org>.

Smithsonian National Museum of Natural History: www.mnh.si.edu and for conservation status: http://www.mnh.si.edu/mna/search_status.cfm

Tuttle, M.D., and D. L. Hensley. 2000. The bat house builder's handbook. Bat Conservation International, Austin, TX. 36 p.

U. S. Endangered Species Act. 1973. The act and related laws are discusse at: <http://www.fws.gov/laws/lawsdigest/ESACT.html>.

U. S. Fish and Wildlife Service: <http://www.fws.gov>.

U. S. Forest Service. 2007. Regional Forester's list of sensitive animals: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fs_bdev3_021328.pdf.

Western Bat Working Group: <http://www.wbwg.org>.

WhiteNoseSyndrome.org.

World Conservation Union: www.iucn.org.

World Wildlife Fund (<http://panda.org>).

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Arizona Mammal Checklist

See page 9 for conservation status symbol definitions.

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Abert's Chuska Squirrel	<i>Sciurus aberti chuscensis</i>	S3	
Abert's Squirrel	<i>Sciurus aberti</i>	S5	
Allen's Lappet-browed Bat	<i>Idionycteris phyllotis</i>	S2S3	SC
America Pronghorn Antelope	<i>Antilocapra americana americana</i>	S5	
American Badger	<i>Taxidea taxus</i>	S3S4	
American Beaver	<i>Castor canadensis</i>	S4	
American Bison	<i>Bos bison</i>	SRFSC	No
American Black Bear	<i>Ursus americanus</i>	S5	No
American Pika	<i>Ochotona princeps</i>	SRF	
American Water Shrew	<i>Sorex palustris</i>	S1	
Antelope Jackrabbitt	<i>Lepus alleni</i>	S3	
Apache Pocket Mouse	<i>Perognathus flavescens caryi</i>	S1	
Apache Pocket Mouse	<i>Perognathus flavescens melanotis</i>	SH	
Arizona Cotton Rat	<i>Sigmodon arizonae</i>	S4	
Arizona Gray Squirrel	<i>Sciurus arizonensis</i>	S4	
Arizona Montane Vole	<i>Microtus montanus arizonensis</i>	S4	
Arizona Myotis	<i>Myotis occultus</i>	S3	SC
Arizona Pocket Mouse	<i>Perognathus amplus</i>	S5	
Arizona Shrew	<i>Sorex arizonae</i>	S2	SC
Bailey's Pocket Mouse	<i>Chaetodipus baileyi</i>	S5	

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Banner-tailed Kangaroo Rat	<i>Dipodomys spectabilis</i>	S5	
Barbary Sheep or Aoudad	<i>Ammotragus lervia</i>	SER	
Big Brown Bat	<i>Eptesicus fuscus</i>	S4S5	
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	S3	SC
Black or House Rat	<i>Rattus rattus</i>	SE1	
Black-eared Mouse	<i>Peromyscus melanotis</i>	SRF	
Black-footed Ferret	<i>Mustela nigripes</i>	SXS1	LEXN
Black-tailed Jackrabbit	<i>Lepus californicus</i>	S5	
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>	SXS1	SC
Bobcat	<i>Lynx rufus</i>	S5	No
Botta's Pocket Gopher	<i>Thomomys bottae</i>	S5	
Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>	S3S4	
Brush Mouse	<i>Peromyscus boylii</i>	S5	
Bushy-tailed Woodrat (Packrat)	<i>Neotoma cinerea</i>	S5	
Cactus Mouse	<i>Peromyscus eremicus</i>	S5	
California Leaf-nosed Bat	<i>Macrotus californicus</i>	S3	SC
California Myotis	<i>Myotis californicus</i>	S4	
Camp Verde Cotton Rat	<i>Sigmodon arizonae arizonae</i>	SH	
Canada Lynx	<i>Lynx canadensis</i>	SRX	LT
Canyon Bat	<i>Parastrellus hesperus</i>	S5	
Canyon Mouse	<i>Peromyscus crinitus</i>	S4	

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Cave Myotis	<i>Myotis velifer</i>	S3S4	SC
Chihuahuan Pronghorn Antelope	<i>Antilocapra americana mexicana</i>	SXS2Q	
Chiricahua Fox Squirrel	<i>Sciurus nayaritensis chiricahuae</i>	S2	SC
Chisel-toothed Kangaroo Rat	<i>Dipodomys microps</i>	S3	
Chisel-toothed Kangaroo Rat	<i>Dipodomys microps celsus</i>	S2	
Cliff Chipmunk	<i>Neotamias dorsalis</i>	S5	
Cockrum's Desert Shrew	<i>Notiosorex cockrumi</i>	S1	
Collared Peccary Javelina	<i>Pecari tajacu</i>	S5	
Colorado Chipmunk	<i>Neotamias quadrivittatus</i>	S4	
Colorado River Cotton Rat	<i>Sigmodon arizonae plenus</i>	S2S3	
Common Gray Fox	<i>Urocyon cinereoargenteus</i>	S5	
Common Muskrat	<i>Ondatra zibethicus</i>	S4	
Coyote	<i>Canis latrans</i>	S5	
Crawford's Desert Shrew	<i>Notiosorex crawfordi</i>	S4S5	
Deer Mouse	<i>Peromyscus maniculatus</i>	S5	
Desert Bighorn Sheep	<i>Ovis canadensis nelsoni</i>	S3	
Desert Cottontail	<i>Sylvilagus audubonii</i>	S5	
Desert Kangaroo Rat	<i>Dipodomys deserti</i>	S5	
Desert Woodrat (Packrat)	<i>Neotoma lepida</i>	S5	
Dusky Shrew	<i>Sorex monticolus</i>	S4	
Dwarf Shrew	<i>Sorex nanus</i>	S1	

ARIZONA MAMMALS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Eastern Cottontail	<i>Sylvilagus floridanus</i>	S5	
Ermine or Short-tailed Weasel	<i>Mustela erminea</i>	S1	
European Ferret	<i>Mustela putorius</i>	SER	
Feral Ass (Donkey)	<i>Equus asinus</i>	SE5	
Feral Horse	<i>Equus caballus</i>	SE4	
Feral Pig or Wild Boar	<i>Sus scrofa</i>	SE2	
Fringed Myotis	<i>Myotis thysanodes</i>	S3S4	SC
Fulvous Harvest Mouse	<i>Reithrodontomys fulvescens</i>	S4	
Ghost-faced Bat	<i>Mormoops megalophylla</i>	SA	
Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>	S5	
Gray Wolf	<i>Canis lupus</i>	SXS1	PD
Gray-collared Chipmunk	<i>Neotamias cinereicollis</i>	S4	
Great Basin Pocket Mouse	<i>Perognathus parvus</i>	S4	
Greater Western Bonneted Bat	<i>Eumops perotis californicus</i>	S3	SC
Grizzly Bear	<i>Ursus arctos horribilis</i>	SX	LT
Grizzly or Brown Bear	<i>Ursus arctos</i>	SX	
Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>	S4	PS
Harquahala S. Pocket Gopher	<i>Thomomys bottae subsimilis</i>	SH	SC
Harris' Antelope Squirrel	<i>Ammospermophilus harrisi</i>	S5	
Hispid Cotton Rat	<i>Sigmodon hispidus</i>	S5	
Hispid Pocket Mouse	<i>Chaetodipus hispidus</i>	S5	

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Hoary Bat	<i>Lasiurus cinereus</i>	S4	No
Hog-nosed Skunk	<i>Conepatus leuconotus leuconotus</i>	S3	
Hooded Skunk	<i>Mephitis macroura</i>	S4	
Hopi Chipmunk	<i>Neotamias rufus</i>	S1	
House Mouse	<i>Mus musculus</i>	SE5	
Houserock Valley Kangaroo Rat	<i>Dipodomys microps leucotis</i>	S2	SC
Hualapai Mexican Vole	<i>Microtus mexicanus hualpaiensis</i>	S1	LE
Jaguar	<i>Panthera onca</i>	S1	LE
Jaguarundi	<i>Herpailurus yaguarondi</i>	SRF	
Jaguarundi	<i>Herpailurus yaguarondi tolteca</i>	SRF	LE
Kaibab Squirrel	<i>Sciurus aberti kaibabensis</i>	S2S3	
Kit Fox	<i>Vulpes macrotis</i>	S3S4	No
Least Chipmunk	<i>Neotamias minimus</i>	S4	
Lesser Long-nosed Bat	<i>Leptonycteris curasoae yerbabuenae</i>	S2S3	LE
Little Pocket Mouse	<i>Perognathus longimembris</i>	S5	No
Long-eared Myotis	<i>Myotis evotis</i>	S3	SC
Long-legged Myotis	<i>Myotis volans</i>	S3S4	SC
Long-tailed Pocket Mouse	<i>Chaetodipus formosus</i>	S5	
Long-tailed Vole	<i>Microtus longicaudus</i>	S4	
Long-tailed Weasel	<i>Mustela frenata</i>	S4	
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	S2	No

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Meadow Vole	<i>Microtus pennsylvanicus</i>	SP	No
Mearns' Grasshopper Mouse	<i>Onychomys arenicola</i>	SP	
Mearns' Southern Pocket Gopher	<i>Thomomys bottae mearnsi</i>	S5	SC
Merriam's Deermouse	<i>Peromyscus merriami</i>	S2	
Merriam's Elk	<i>Cervus elaphus merriami</i>	SX	
Merriam's Kangaroo Rat	<i>Dipodomys merriami</i>	S5	No
Merriam's Shrew	<i>Sorex merriami</i>	S3	
Mexican Fox Squirrel	<i>Sciurus nayaritensis</i>	S2	
Mexican Gray Wolf	<i>Canis lupus baileyi</i>	SXS1	PEXN
Mexican Long-nosed Bat	<i>Leptonycteris nivalis</i>	SP	
Mexican Long-tongued Bat	<i>Choeronycteris mexicana</i>	S3	SC
Mexican Opossum	<i>Didelphis virginiana californica</i>	S3	
Mexican Woodrat	<i>Neotoma mexicana mexicana</i>	S5	
Mexican Woodrat (Packrat)	<i>Neotoma mexicana</i>	S5	
Mogollon Vole	<i>Microtus mogollonensis</i>	S5	
Montane Vole	<i>Microtus montanus</i>	S4	
Mountain Cottontail	<i>Sylvilagus nuttallii</i>	S3	
Mountain Lion or Puma	<i>Puma concolor</i>	S4	
Mountain or Bighorn Sheep	<i>Ovis canadensis</i>	S3S4	No
Mt Graham Red Squirrel	<i>Tamiasciurus hudsonicus grahamensis</i>	S1	LE
Mule or Black-tailed Deer	<i>Odocoileus hemionus</i>	S5	No

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Navajo Mexican Vole	<i>Microtus mexicanus navaho</i>	S1	SC
New Mexico Banner-tail Kangaroo Rat	<i>Dipodomys spectabilis baileyi</i>	S3	
New Mex. Meadow Jumping Mouse	<i>Zapus hudsonius luteus</i>	S1	PE
North American Porcupine	<i>Erethizon dorsatum</i>	S4S5	
North Kaibab Mountain Cottontail	<i>Sylvilagus nuttallii grangeri</i>	S1?	
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	SP	No
Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>	S5	
Northern Pocket Gopher	<i>Thomomys talpoides</i>	S4	
Northern Pygmy Mouse	<i>Baiomys taylori</i>	S3	
Northern Raccoon	<i>Procyon lotor</i>	S4	
Northern River Otter	<i>Lontra canadensis</i>	S1	
Northern Rock Mouse	<i>Peromyscus nasutus</i>	S3	
Norway or Brown Rat	<i>Rattus norvegicus</i>	SE1	
Nutria or Coypu	<i>Myocastor coypus</i>	SER	
Ocelot	<i>Leopardus pardalis</i>	S1	LE
Ord's Kangaroo Rat	<i>Dipodomys ordii</i>	S5	
Osgood's Mouse	<i>Peromyscus gratus</i>	SP	
Pale Townsend's Big-eared Bat	<i>Corynorhinus townsendii pallescens</i>	S3S4	SC
Pallid Bat	<i>Antrozous pallidus</i>	S4	
Pinon Mouse	<i>Peromyscus truei</i>	S5	
Plains Harvest Mouse	<i>Reithrodontomys montanus</i>	S3	

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Plains Pocket Mouse	<i>Perognathus flavescens</i>	S4	
Pocket Gopher	<i>Thomomys bottae desertorum</i>	S5	
Pocketed Free-tailed Bat	<i>Nyctinomops femorosaccus</i>	S3	
Pronghorn (Antelope)	<i>Antilocapra americana</i>	S5	
Prospect Valley Antelope Squirrel	<i>Ammospermophilus leucurus tersus</i>	SHQ	
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	SP	No
Red Fox	<i>Vulpes vulpes</i>	S3	
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	S5	PS
Ringtail	<i>Bassariscus astutus</i>	S5	
Rock Pocket Mouse	<i>Chaetodipus intermedius</i>	S5	
Rock Pocket Mouse	<i>Chaetodipus intermedius intermedius</i>	S5	
Rock Squirrel	<i>Spermophilus variegatus</i>	S5	
Rocky Mountain Bighorn Sheep	<i>Ovis canadensis canadensis</i>	S3	
Round-tailed Ground Squirrel	<i>Spermophilus tereticaudus</i>	S5	No
See: Peromyscus eremicus	<i>Peromyscus eremicus eremicus</i>	S5	
Silky Pocket Mouse	<i>Perognathus flavus</i>	S5	
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	S3S4	
Sonoran Desert Pocket Mouse	<i>Chaetodipus penicillatus</i>	S5	
Sonoran Pronghorn (Antelope)	<i>Antilocapra americana sonoriensis</i>	S1	LE
Southeastern River Otter	<i>Lontra canadensis lataxina</i>	SE1	
Southern Grasshopper Mouse	<i>Onychomys torridus</i>	S5	

ARIZONA MAMMALS			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Southern Long-nosed Bat	<i>Leptonycteris curasoae</i>	S2	PS
Southern Plains Woodrat (Packrat)	<i>Neotoma micropus</i>	SP	
Southern Pocket Gopher	<i>Thomomys umbrinus</i>	S4	
Southern Pocket Gopher	<i>Thomomys umbrinus intermedius</i>	S3	
Southern Red-backed Vole	<i>Myodes gapperi</i>	S3	
Southwestern Cottontail	<i>Sylvilagus nuttallii pinetis</i>	S3	
Southwestern Myotis	<i>Myotis auriculus</i>	S3	
Southwestern River Otter	<i>Lontra canadensis sonora</i>	SH	SC
Spiny Pocket Mouse	<i>Chaetodipus spinatus</i>	SR	
Spotted Bat	<i>Euderma maculatum</i>	S2S3	SC
Spotted Ground Squirrel	<i>Spermophilus spilosoma</i>	S4	
Springerville Pocket Mouse	<i>Perognathus flavus goodpasteri</i>	S2	SC
Stephen's Woodrat (Packrat)	<i>Neotoma stephensi</i>	S5	
Striped Skunk	<i>Mephitis mephitis</i>	S5	
Tawny-bellied Cotton Rat	<i>Sigmodon fulviventer</i>	S4	
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>	S3	
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	S3S4	No
Uinta Chipmunk	<i>Neotamias umbrinus</i>	S4	
Underwood's Bonneted Bat	<i>Eumops underwoodi</i>	S1	SC
Velvety Fruit-eating Bat	<i>Enchisthenes hartii</i>	SA	
Virginia Opossum	<i>Didelphis virginiana</i>	S3	

ARIZONA MAMMALS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Virginia Opossum	<i>Didelphis virginiana virginiana</i>	SE	
Western Bonneted Bat	<i>Eumops perotis</i>	S3	
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	S5	
Western Jumping Mouse	<i>Zapus princeps</i>	SRF	
Western Red Bat	<i>Lasiurus blossevillii</i>	S3	
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>	S3S4	SC
Western Spotted Skunk	<i>Spilogale gracilis</i>	S5	
Western White-throated Woodrat	<i>Neotoma albigula</i>	S5	
Western Yellow Bat	<i>Lasiurus xanthinus</i>	S2S3	
White Mountains Ground Squirrel	<i>Spermophilus tridecemlineatus monticola</i>	S1S2	
White-ankled Mouse	<i>Peromyscus pectoralis</i>	SRF	
White-backed Hog-nosed Skunk	<i>Conepatus leuconotus</i>	S3	
White-bellied Long-tailed Vole	<i>Microtus longicaudus leucophaeus</i>	S2	
White-footed Mouse	<i>Peromyscus leucopus</i>	S5	
White-nosed Coati	<i>Nasua narica</i>	S4	
White-sided Jackrabbit	<i>Lepus callotis</i>	SP	
White-tailed Antelope Squirrel	<i>Ammospermophilus leucurus</i>	S5	
White-tailed Deer	<i>Odocoileus virginianus</i>	S5	
White-tailed Jackrabbit	<i>Lepus townsendii</i>	SP	
Wolverine	<i>Gulo gulo</i>	SRF	
Wupatki Arizona Pocket Mouse	<i>Perognathus amplus cineris</i>	S2S3	SC

ARIZONA MAMMALS

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Yavapai Arizona Pocket Mouse	<i>Perognathus amplus amplus</i>	S5	SC
Yavapai Cotton Rat	<i>Sigmodon arizonae jacksoni</i>	SH	SC
Yellow-nosed Cotton Rat	<i>Sigmodon ochrognathus</i>	S4	SC
Yuma Hispid Cotton Rat	<i>Sigmodon hispidus eremicus</i>	S2	SC
Yuma Myotis	<i>Myotis yumanensis</i>	S3S4	SC

[illegible]

Snakes



Kingsnake

Snakes help control rodent and amphibian populations while serving as food for larger carnivores. Arizona Game and Fish Department (AZGFD) lists 76 Arizona snake species and subspecies. Range maps show that many of Arizona's snake species are present in central Arizona where I live, but the only ones I see are garter snakes (*Thamnophis*

spp.), Gophersnakes (*Pituophis catenifer*), and California Kingsnakes (*Lampropeltis getula*) like the one in the photograph. It is odd that over the past 50 years, no one has reported seeing a rattlesnake on my farm. They are probably here, but most rattlesnakes are shy and do not advertize their presence. The references include field guides in print (Stebbins 1966) and online (Arizona Herpetological Association (AHA, Brennan, 2008). AHA and HerpDigest present herpetology news.

Snake Conservation

Rodent, snake, and carnivore populations are declining because of human activities ranging from habitat destruction for roads and buildings, to recreational killing and pet collection.

In 2011, the Center for Snake Conservation (CSA) began sponsoring snake counts, a citizen-science program for gathering snake information. Go to <http://www.snakecount.org/> for more information. AZGFD says 21 species are critically imperiled, and 50 are of immediate or possible long-term concern.

Snake Species Numbers

- World: 3,000
- U. S.: 300
- Arizona: 76
- AZGFD species imperiled: 50 (66%)

- ESA species listed endangered: 0
- ESA species listed threatened: 3

Arizona Snake References

Amazon Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to:
to: <http://bit.ly/RKW2bC>.

Arizona Herpetological Association). <http://www.azreptiles.com/>
[AZGFD \(Arizona Game and Fish Department\)](http://www.azgfd.gov). <http://azgfd.gov>.

Brennan, T.C. 2008. [Online field guide to reptiles and amphibians of Arizona](http://www.reptilesfaz.com). <http://www.reptilesfaz.com>.

Center for Snake Conservation: <http://www.snakeconservation.org/>

Fowlie, J.A. 1965. The Snakes of Arizona. McGraw Hill, New York. 164 p.

[Partners in Amphibian and Reptile Conservation](http://www.parcplace.org/).
<http://www.parcplace.org/>

Stebbins, R.C. 1966. A field guide to western reptiles and amphibians. Houghton Mifflin, Boston, MA. 279 p.

Arizona Snake Checklist

See page 9 for conservation status symbol definitions.

ARIZONA SNAKES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Arizona Black Rattlesnake	<i>Crotalus cerberus</i>	S5	
Arizona Mountain Kingsnake	<i>Lampropeltis pyromelana pyromelana</i>	S2S3	
Arizona Ridge-nosed Rattlesnake	<i>Crotalus willardi willardi</i>	S1S2	
Banded Rock Rattlesnake	<i>Crotalus lepidus klauberi</i>	S3	
Big Bend Patch-nosed Snake	<i>Salvadora hexalepis deserticola</i>	S3S4	
Black-necked Gartersnake	<i>Thamnophis cyrtopsis</i>	S5	

ARIZONA SNAKES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Black-tailed Rattlesnake	<i>Crotalus molossus</i>	S5	
Brown Vinesnake	<i>Oxybelis aeneus</i>	S1	
California Kingsnake	<i>Lampropeltis californiae</i>	S5	
Checkered Gartersnake	<i>Thamnophis marcianus</i>	S5	
Chihuahuan Black-headed Snake	<i>Tantilla wilcoxi</i>	S1	
Chihuahuan Hook-nosed Snake	<i>Gyalopion canum</i>	S3	
Coachwhip	<i>Coluber flagellum</i>	S5	
Colorado Desert Sidewinder	<i>Crotalus cerastes laterorepens</i>	S5	
Common Kingsnake	<i>Lampropeltis getula</i>	SNA	
Desert Kingsnake	<i>Lampropeltis splendida</i>	S4	
Desert Massasauga (Rattlesnake)	<i>Sistrurus catenatus edwardsii</i>	S1	
Eastern Patch-nosed Snake	<i>Salvadora grahamiae</i>	S4	
Eastern Yellowbelly Racer	<i>Coluber constrictor flaviventris</i>	S1	
Glossy Snake	<i>Arizona elegans</i>	S5	
Gophersnake	<i>Pituophis catenifer</i>	S5	
Grand Canyon Rattlesnake	<i>Crotalus oreganus abyssus</i>	S4	
Great Basin Rattlesnake	<i>Crotalus oreganus lutosus</i>	S4	
Green Ratsnake	<i>Senticolis triaspis</i>	S3	
Hooded Nightsnake	<i>Hypsiglena sp. nov.</i>	S4	
Lined Coachwhip	<i>Coluber flagellum lineatulus</i>	S2	

ARIZONA SNAKES

COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Long-nosed Snake	<i>Rhinocheilus lecontei</i>	S5	
Massasauga (Rattlesnake)	<i>Sistrurus catenatus</i>	S1	No
Mesa Verde Nightsnake	<i>Hypsiglena chlorophaea loreala</i>	S1	
Mexican Gartersnake	<i>Thamnophis eques</i>	S1	SC
Mexican Hog-nosed Snake	<i>Heterodon kennerlyi</i>	S3	
Milksnake	<i>Lampropeltis triangulum</i>	S2	
Mohave Desert Sidewinder	<i>Crotalus cerastes cerastes</i>	S3S4	
Mohave Rattlesnake	<i>Crotalus scutulatus</i>	S5	
Narrow-headed Gartersnake	<i>Thamnophis rufipunctatus</i>	S1	PT
New Mexico Milksnake	<i>Lampropeltis triangulum celanops</i>	S1	
New Mexico Ridge-nosed Rattlesnake	<i>Crotalus willardi obscurus</i>	S1	LT
Northern Green Ratsnake	<i>Senticolis triaspis intermedia</i>	S3	
Northern Mexican Gartersnake	<i>Thamnophis eques megalops</i>	S1	PT
Organ Pipe Shovel-nosed Snake	<i>Chionactis palarostris organica</i>	S1	
Plains Black-headed Snake	<i>Tantilla nigriceps</i>	S2	
Prairie Rattlesnake	<i>Crotalus viridis</i>	S1	
Racer	<i>Coluber constrictor</i>	S1	
Red Racer	<i>Coluber flagellum piceus</i>	S5	
Ridge-nosed Rattlesnake	<i>Crotalus willardi</i>	S2	PS
Ring-necked Snake	<i>Diadophis punctatus</i>	S4	

ARIZONA SNAKES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Rock Rattlesnake	<i>Crotalus lepidus</i>	S3	
Rosy Boa	<i>Lichanura trivirgata</i>	S1S2	SC
Saddled Leaf-nosed Snake	<i>Phyllorhynchus browni</i>	S5	
Sidewinder (Rattlesnake)	<i>Crotalus cerastes</i>	S5	
Smith's Black-headed Snake	<i>Tantilla hobartsmithi</i>	S5	
Sonoran Coachwhip	<i>Coluber flagellum cingulum</i>	S4	
Sonoran Coralsnake	<i>Micruroides euryxanthus</i>	S5	
Sonoran Mountain Kingsnake	<i>Lampropeltis pyromelana</i>	S3	
Sonoran Shovel-nosed Snake	<i>Chionactis palarostris</i>	S1	
Sonoran Sidewinder (Rattlesnake)	<i>Crotalus cerastes cercobombus</i>	S5	
Sonoran Whipsnake	<i>Coluber bilineatus</i>	S5	
Speckled Rattlesnake	<i>Crotalus mitchellii</i>	S5	
Spotted Leaf-nosed Snake	<i>Phyllorhynchus decurtatus</i>	S5	
Striped Whipsnake	<i>Coluber taeniatus</i>	S4	
Terrestrial Gartersnake	<i>Thamnophis elegans</i>	S5	
Thornscrub Hook-nosed Snake	<i>Gyalopion quadrangulare</i>	S1	
Tiger Rattlesnake	<i>Crotalus tigris</i>	S5	
Tucson Shovel-nosed Snake	<i>Chionactis occipitalis klauberi</i>	S1	C*
Twin-spotted Rattlesnake	<i>Crotalus pricei</i>	S2	
Utah Milksnake	<i>Lampropeltis triangulum taylori</i>	S2	

Turtles

I like turtles. Baby turtles float by in my early memories of the little creek that runs through our place, and I recall many encounters with Terrapins in the woods along the creek. I still see those cautious eyes peering through the slit in the closed shell door. These days, I often get a look at the Spiny Softshell, two Sonora Mud Turtles, and two Pond Sliders that live in my ponds. They are safe in the water and always sound the dive alarm when I approach.

Turtles have exceptional regenerative powers. Dr. Justin Congdon, a classmate from long ago, managed a study of turtles in the E. S. George Reserve in Michigan for more than 40 years. In the 1980's Justin made a startling discovery: As they aged, Blanding's turtles produced more eggs and offspring. This reversal of the usual decline in reproductive success with age drew global attention from scientists and others interested in longevity and life extension.

Another interesting turtle trait is resistance to toxic materials. Arizona fish, frogs, and mollusks develop various forms of cancer in response to toxic chemicals in agricultural and urban runoff, and treated wastewater. Turtles do not.



Pond Slider

Despite their marvelous tolerance, Arizona turtles are at risk of extinction. Human habitat destruction and collection for the pet industry are the chief reasons. The pond slider (*Trachemys scripta*) in the photograph shares one of my ponds with two other turtles. Pond sliders are not Arizona natives. This one probably came from the roadside vendor who sells turtles at a highway intersection upstream from my ponds. If humans do not

empty my ponds with their incessant population growth and groundwater pumping, the pond slider might be living here at Coldwater Farm long after I am gone.

(Turtles sometimes leave the water to explore. Just after I wrote the above, a visitor harvesting weeds for his sheep, backed his truck over the pond slider in the photograph, killing it instantly.)

Turtle Species Numbers

(From AZGFD, and Reptile and Amphibian Ecology International)

- World: 300
- U. S.: 59
- Arizona turtles: 15
- Arizona natives: 10
- Arizona turtles at risk of extinction (S1-S4): 15
- ESA Arizona turtles listed threatened (none endangered): 2

Arizona Turtles References

The Naturalist’s Bookstore has field guides (at the end of the category list) and other references. Go to: <http://bit.ly/RKW2bC>.

AZGFD (Arizona Game and Fish Department).

Arizona Herpetological Association.

Brennan, T.C. 2008. Online field guide to reptiles and amphibians of Arizona.

Partners in Amphibian and Reptile Conservation.

Stebbins, R.C. 1966. A field guide to western reptiles and amphibians. Houghton Mifflin, Boston, MA. 279 p.

Arizona Turtle Checklist

See page 9 for conservation status symbol definitions.

ARIZONA TURTLES			
COMMON NAME	SCIENTIFIC NAME	AZ	ESA
Arizona Mud Turtle	<i>Kinosternon arizonense</i>	S2	
Desert Box Turtle	<i>Terrapene ornata luteola</i>	S2S3	
Desert Mud Turtle	<i>Kinosternon sonoriense sonoriense</i>	S4	
Desert Tortoise	<i>Gopherus agassizii</i>	S4	LT
Mohave Desert Tortoise	<i>Gopherus agassizii</i>	S2	LT

Appendix A. Sightings Record for Special Species

Use for any species, but especially those marked with S1, E, or T in the checklists. Enter as much of the information as possible. Attach photographs. Send the information to Garry Rogers (PO Box 1011, Humboldt, AZ 86329 or grogers@sigmaxi.net). I will forward it to federal and state agencies. At present, the U. S. Fish and Wildlife Service (<http://www.fws.gov/endangered>) would be best, but this might change. This is a long list, but record as much as you can.

1. Species name:
2. Observer name:
3. Observer email address:
4. Observation date (m/d/y): Time:
5. Duration of observation:
6. Other observers:
7. Location: (include county, distance to nearest town, road, etc.):
8. Thorough description of what you saw:
9. Plumage/skin/fur patterns and colors:
10. Sex and age:
11. Size and shape:
12. Bird bill shape, length, color:
13. Voice (song and/or calls):
14. Behavior:
15. Association with other species:
16. Other characters (eye color, length & color of legs, etc.):
17. Description of habitat:
18. References and sources consulted in identification:
19. Please attach photographs, sketches, and notes.

Notes:

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Ammotragus lervia	111	predator.....	20
Amphiagrion abbreviatum	82	predators.....	19
Amphiagrion intermediate	76	predatory.....	20
Amphispiza bilineata.....	27	subterranean predator	19
Amphispiza quinquestriata	32	Antelope	117
Amphitornus coloradus	98	Chihuahuan	112
An Underwing Moth	74	Sonoran	117
Anaea aidea	69	Anteos clorinde.....	70
Anaea andria	59	Anteos maerula.....	70
Anas acuta	40	Anthanassa texana.....	68
Anas americana	24	Anthanassa tulcis	69
Anas clypeata.....	40	Anthocharis cethura	57
Anas crecca	35	Anthocharis thoosa.....	67
Anas cyanoptera	30	Anthus cervinus	43
Anas discors	27	Anthus rubescens	23
Anas platyrhynchos.....	38	Anthus spragueii	45
Anas platyrhynchos diazi	38	Antigonus emorsa	58
Anas querquedula.....	33	Antilocapra americana.....	110, 112, 117
Anas strepera.....	33	Antilocapra americana americana	110
Anatrytone logan	57	Antilocapra americana mexicana.....	112
Anax junius	78	Antilocapra americana sonoriensis.....	117
Anax walsinghami	79	Antrostomus ridgwayi.....	28
Anaxyrus cognatus.....	15	Antrostomus vociferus.....	32
Anaxyrus debilis	15, 16	Antrozous pallidus	116
Anaxyrus debilis insidiosus	16	Apache Pocket Mouse	110
Anaxyrus microscaphus	15	Apalone spinifera	129
Anaxyrus punctatus	16	Apanisagrion lais	77
Anaxyrus retiformis	16	Aphelocoma californica	48
Anaxyrus woodhousii.....	16	Aphelocoma wollweberi	38
Anaxyrus woodhousii australis	16	Aphylla protracta	80
Anaxyrus woodhousii woodhousii	16	Apodemia mejicanus	67
Ancyloxypha arene	69	Apodemia mormo	62
Ancyloxypha numitor.....	61	Apodemia nais	63
Anglewing		Apodemia palmerii.....	64
Satyr	66	Apodemia phycioides	56
Anguilla rostrata	86	Appias drusilla.....	69
Anhinga.....	24	Apyrrothrix araxes	53
Anhinga anhinga	24	Aquila chrysaetos.....	33
Ani		Arawacus jada.....	60
Grove-billed	35	Archilestes californicus	77
Anisotremus davidsonii	90	Archilestes grandis	79
Anser albifrons.....	34	Archilochus alexandri.....	26
ant		Archoplites interruptus.....	89
arboreal	20	Arctic	
army	19	Alberta	53
carpenter	19	Arctic Blue.....	53
cone or odorous	19	Ardea alba.....	34
fungus-farmer.....	20	Ardea herodias.....	34
harvester	20	Arenaria interpres.....	43
honeypot	19	Argia agrioides	77
mound-building	19	Argia alberta	80
nomadic predator.....	19	Argia apicalis.....	77

Argia carlcooki.....	83	Athene cunicularia hypugaea.....	47
Argia extranea.....	81	Atlides halesus.....	59
Argia fumipennis.....	82	Atrytonopsis cestus.....	55
Argia harknessi.....	76	Atrytonopsis deva.....	57
Argia hinei.....	79	Atrytonopsis edwardsi.....	66
Argia immunda.....	79	Atrytonopsis lunus.....	61
Argia lacrimans.....	81	Atrytonopsis pittacus.....	65
Argia lugens.....	81	Atrytonopsis python.....	65
Argia moesta.....	80	Atrytonopsis vierecki.....	69
Argia munda.....	76	Atthis heloisa.....	28
Argia nahuana.....	76	Aulocara ellioti.....	95
Argia oenea.....	79	Aulocara femoratum.....	99
Argia pallens.....	76	Auriparus flaviceps.....	47
Argia pima.....	80	Autochton cellus.....	59
Argia plana.....	81	Autochton pseudocellus.....	67
Argia sabino.....	81	Automeris patagoniensis.....	73
Argia sedula.....	77	Avocet	
Argia tarascan.....	82	American.....	23
Argia tezpi.....	82	Aythya affinis.....	37
Argia tonto.....	82	Aythya americana.....	42
Argia translata.....	78	Aythya collaris.....	43
Argia vivida.....	82	Aythya fuligula.....	46
Arizona elegans.....	123	Aythya marila.....	34
Arphia conspersa.....	98	Aythya valisineria.....	29
Arphia pseudonietana.....	98	Aztecacris gloriosus.....	94
Artemisiospiza belli.....	25	Badger	
Ascia monuste.....	59	American.....	110
Asio flammeus.....	44	Baeolophus ridgwayi.....	36
Asio otus.....	37	Baeolophus wollweberi.....	27
Aspidoscelis arizonae.....	103	Baiomys taylori.....	116
Aspidoscelis exsanguis.....	103	Bairdiella.....	86
Aspidoscelis flagellicauda.....	104	Bairdiella icistia.....	86
Aspidoscelis inornata.....	104	Bartramia longicauda.....	46
Aspidoscelis neomexicana.....	105	Barytettix humphreysi.....	96
Aspidoscelis pai.....	105	Basileuterus lachrymosus.....	32
Aspidoscelis sonorae.....	105	Basileuterus rufifrons.....	44
Aspidoscelis stictogramma.....	104	Bass	
Aspidoscelis tessellata.....	103	Largemouth.....	88
Aspidoscelis tigris.....	105	Rock.....	89
Aspidoscelis uniparens.....	103	Smallmouth.....	90
Aspidoscelis velox.....	105	Spotted.....	90
Aspidoscelis xanthonota.....	105	Striped.....	90
Ass, Feral.....	113	White.....	91
Asterocampa celtis.....	59	Yellow.....	91
Asterocampa clyton.....	68	Bassariscus astutus.....	117
Asterocampa idyja.....	57	Bat	
Asterocampa leilia.....	58	Allen's Lappet-browed.....	110
Astyanax mexicanus.....	89	Big Brown.....	111
Astyris biedermani.....	72	Big Free-tailed.....	111
Astyris sp. 1.....	72	Brazilian Free-tailed.....	111
Atalopedes campestris.....	66	California Leaf-nosed.....	111
Athene cunicularia.....	28, 47	Canyon.....	111

Ghost-faced 113

Greater Western Bonneted 113

Hoary 114

Lesser Long-nosed 114

Mexican Long-nosed..... 115

Mexican Long-tongued 115

Pale Townsend's Big-eared..... 116

Pallid 116

Pocketed Free-tailed 117

Silver-haired 117

Southern Long-nosed 118

Spotted 118

Townsend's Big-eared 118

Underwood's Bonneted..... 118

Velvety Fruit-eating 118

Western Bonneted 119

Western Red 119

Western Yellow 119

Battus philenor 64

Battus polydamas 65

Bear

 American Black 110

 Grizzly 113

 Grizzly or Brown 113

Beaver, American..... 110

Becard, Rose-throated..... 43

Bison, American 110

Bittern..... 23

 American 23

 Least 37

Blackbird

 Brewer's..... 27

 Red-winged..... 43

 Rusty..... 44

 Yellow-headed..... 50

Black-vented Oriole 27

Blue

 Acmon 52

 Arctic 53

 Arrowhead..... 54

 Bauer's..... 54

 Bernadino 54

 Boisduval's..... 54

 Ceraunus..... 55

 Cyna 56

 Dotted 57

 Eastern Tailed 78

 Ellis'..... 58

 Emmel's 58

 Greenish 59

 Lupine 61

 Marine 61

 Melissa..... 62

 Mojave..... 62

 Pallid 64

 Reakirt's 65

 Rita 65

 Rustic 66

 Shasta 66

 Silvery 66

 Small 67

 Spalding's..... 67

 Square-spotted 67

 Texas..... 68

 Western Pygmy 70

 Western Tailed 83

Bluebird

 Azure 24

 Eastern..... 32

 Mountain..... 39

 Western 47

Bluegill 87

Bluet

 Arroyo..... 76

 Baja 77

 Boreal 77

 Claw-tipped 78

 Double-striped..... 78

 Familiar 79

 Neotropical 80

 Northern 80

 River..... 81

 Taiga 82

 Tule..... 82

Bluewing

 Blackened 54

Boa, Rosy 125

Boar, Wild 113

Bobcat..... 111

Bobolink..... 27

Bobwhite

 Masked 38

 Northern 39

Bolla, Mottled 62

Bolla clytius 62

Bombycilla cedrorum..... 29

Bombycilla garrulus 27

Bonytail..... 87

Booby

 Blue-footed..... 27

 Brown 28

Boopedon nubilum 95

Bos bison..... 110

Botaurus lentiginosus 23

Brachylagus idahoensis	117	Buteo lineatus	42
Brachymesia furcata	81	Buteo plagiatus	34
Brachymesia gravis	79	Buteo platypterus	28
Brachystola magna	97	Buteo regalis	32
Brant	27	Buteo swainsoni	46
Branta bernicla	27	Buteogallus anthracinus	30
Branta hutchinsii	28	Butorides virescens	34
Brazilian Skipper	55	Butterfly	
Brechmorhoga mendax	80	Blue Silverspot	54
Brechmorhoga pertinax	79	Goatweed	59
Brephidium exilis	70	Hackberry	59
Bride	71	Cabares potrillo	65
Brimstone, Yellow	70	Cabbage Butterfly	55
Brown		Calamospiza melanocorys	36
Henshaw's	59	Calcarius lapponicus	36
Pyracmon	65	Calcarius ornatus	29
Red-bordered	65	Calcarius pictus	45
Warm	69	Calephelis arizonensis	54
Bruneria brunnea	95	Calephelis nemesi	58
Brush Lizard, Long-tailed	104	Calephelis rawsoni	65
Bubo virginianus	34	Calephelis wrighti	70
Bubulcus ibis	29	Calidris acuminata	44
Bucephala albeola	28	Calidris alba	44
Bucephala clangula	30	Calidris alpina	31
Bucephala islandica	25	Calidris bairdii	24
Buckeye	55	Calidris canutus	42
Buckmoth	71	Calidris fuscicollis	48
Hualpai	71	Calidris himantopus	45
Stone's	73	Calidris mauri	48
Tricolor	73	Calidris melanotos	41
Buffalo		Calidris minutilla	37
Bigmouth	86	Calidris pugnax	43
Black	86	Calidris pusilla	44
Smallmouth	90	Callipepla gambelii	33
Bufflehead	28	Callipepla squamata	44
Bullfrog, American	15	Callisaurus draconoides	106
Bullhead		Callophrys affinis	70
Black	86	Callophrys augustinus	55
Brown	87	Callophrys comstocki	56
Yellow	91	Callophrys eryphon	70
Bunchgrass Lizard, Slevin's	105	Callophrys gryneus	60
Bunting		Callophrys gryneus siva	60
Indigo	36	Callophrys sheridanii	66
Lark	36	Callophrys spinetorum	68
Lazuli	36	Callophrys xami	70
Painted	40	Calothorax lucifer	38
Varied	47	Calpodes ethlius	55
Bushtit	28	Calypte anna	24
Buteo albicaudatus	48	Calypte costae	31
Buteo albonotatus	50	Camnula pellucid	95
Buteo jamaicensis	42	Campostoma ornatum	88
Buteo lagopus	43	Camptostoma imberbe	39

Campylacantha olivacea	95	Catostomus ardens	90
Campylorhynchus brunneicapillus.....	28	Catostomus bernardini	91
Canis latrans	112	Catostomus clarkii.....	87
Canis lupus.....	113, 115	Catostomus discobolus	87, 91
Canis lupus baileyi	115	Catostomus discobolus discobolus	87
Canvasback	29	Catostomus discobolus yarrowi	91
Caracara, Crested.....	31	Catostomus insignis	90
Caracara cheriway	31	Catostomus latipinnis	87
Carassius auratus	88	Catostomus plebeius	89
Cardellina canadensis	29	Catostomus sp. 3	88
Cardellina pusilla.....	49	Cattleheart, White-dotted	70
Cardellina rubrifrons.....	42	Celaenorrhinus fritzgaertneri.....	58
Cardinal, Northern	39	Celithemis eponina	79
Cardinalis cardinalis	39	Celotes nessus	68
Cardinalis sinuatus	42	Centrocercus minimus	35
Carp		Centrocercus urophasianus	34
Common.....	87	Cerapachyinae	19
Grass.....	88	Cercyonis meadii.....	52, 62
Castor canadensis	110	Cercyonis meadii alamosa	52
Catbird, Gray	33	Cercyonis oetus.....	57
Catfish		Cercyonis pegala	56
Blue.....	86	Cercyonis sthenele	59
Channel.....	87	Certhia americana.....	28
Flathead.....	87	Cervus elaphus merriami	115
Walking.....	91	Chaetodipus baileyi.....	110
Yaqui.....	91	Chaetodipus formosus	114
Cathartes aura	46	Chaetodipus hispidus.....	113
Catharus fuscescens	47	Chaetodipus intermedius.....	117
Catharus guttatus	35	Chaetodipus intermedius intermedius ..	117
Catharus minimus	34	Chaetodipus penicillatus.....	117
Catharus ustulatus	46	Chaetodipus spinatus.....	118
Catherpes mexicanus.....	29	Chaetura pelagica	30
Catocala aholibah	73	Chaetura vauxi	47
Catocala amatrix.....	73	Charadrius montanus.....	39
Catocala benjamini	71	Charadrius nivosus.....	45, 48
Catocala caesia	74	Charadrius nivosus nivosus	48
Catocala chelidonia.....	74	Charadrius semipalmatus	44
Catocala desdemona	74	Charadrius vociferus	36
Catocala electilis	74	Chat, Yellow-breasted.....	50
Catocala frederici.....	74	Checkerspot	
Catocala grotiana.....	71	Acastus	52
Catocala hermia	74	Anicia	53
Catocala ilia.....	72	Arachne	53
Catocala jessica.....	72	Cyneas	56
Catocala junctura.....	72	Dotted.....	57
Catocala neogama	71	Dymas	57
Catocala ophelia	74	Elada	57
Catocala piatrix	73	Fulvia	58
Catocala relictæ	74	Leanira	61
Catocala semirelictæ.....	73	Silvery	66
Catocala verrilliana	74	Theona.....	68
Catocala violenta	74	Chelydra serpentina.....	129

Chen caerulescens.....	45	Yaqui	91
Chen rossii.....	43	Chuckwalla	
Chickadee		Arizona	103
Black-capped.....	26	Common	103
Mexican	38	Glen Canyon.....	104
Mountain	39	Western	106
Chilomeniscus stramineus.....	126	Chukar	30
Chioides albofasciatus.....	70	Cichlasoma nigrofasciatum	87
Chioides zilpa	71	Cichlid, Convict	87
Chiomara georgina	70	Cinclus mexicanus	23
Chionactis occipitalis	125, 126	Circus cyaneus.....	39
Chionactis occipitalis klauberi	125	Cistothorus palustris	38
Chionactis pararostris	124, 125	Clangula hyemalis.....	37
Chionactis pararostris organica	124	Clarias batrachus	91
Chipmunk		Clematodes vanduzeei	96
Cliff.....	112	Cloak, Mourning.....	63
Colorado	112	Cloudywing	
Gray-collared	113	Drusius	57
Hopi	114	Jalapus	60
Least.....	114	Mexican.....	62
Uinta	118	Northern	63
Chlidonias niger.....	25	Clubsiskimmer	
Chloroceryle americana	34	Masked	79
Chlorostyrmom simaethis	66	Pale-faced	80
Chlosyne acastus.....	52	Clubtail	
Chlosyne californica	55	Brimstone.....	77
Chlosyne cyneas	56	Russet-tipped	81
Chlosyne definita	57	Coachwhip.....	123
Chlosyne fulvia	58	Lined	123
Chlosyne lacinia.....	54	Sonoran.....	125
Chlosyne leanira.....	61	Coati, White-nosed	119
Chlosyne nycteis.....	66	Coccythraustes vespertinus	32
Chlosyne rosita.....	66	Coccyzus americanus	49, 50
Chlosyne theona	68	Coccyzus americanus occidentalis.....	50
Choeronycteris mexicana	115	Coccyzus erythrophthalmus.....	26
Chondestes grammacus	36	Codatractus arizonensis	54
Chordeiles acutipennis.....	37	Codatractus valeriana	69
Chordeiles minor.....	30	Coenagrion resolutum.....	82
Chorthippus curtipennis.....	96	Coenonympha tullia	56
Chortophaga viridifasciata	96	Cogia caicus	55
Chorus Frog, Boreal.....	15	Cogia hippalus	52
Chroicocephalus philadelphia	27	Colaptes auratus	39
Chrysemys picta	129	Colaptes chrysoides.....	33
Chrysemys picta bellii.....	129	Coleonyx variegatus	103, 106
Chub		Coleonyx variegatus bogerti.....	106
Gila	87	Coleonyx variegatus variegatus.....	103
Headwater	88	Colias alexandra	53
Humpback.....	88	Colias eurytheme	53
Roundtail.....	89	Colias philodice	56
Sonora.....	90	Colinus virginianus	38, 39
Utah	90	Colinus virginianus ridgwayi.....	38
Virgin River.....	91	Collared Lizard	

Eastern..... 104

Great Basin 104

Sonoran 105

Coluber bilineatus..... 125

Coluber constrictor 123, 124

Coluber constrictor flaviventris 123

Coluber flagellum..... 123, 124, 125

Coluber flagellum cingulum..... 125

Coluber flagellum lineatulus 123

Coluber flagellum piceus 124

Coluber taeniatus 125

Columba livia 43

Columbina inca 36

Columbina passerina 30

Columbina talpacoti..... 43

Comma

 Green..... 59

 Hoary..... 60

Common Kingsnake 121

Conalcaea cantralli..... 96

Conalcaea huachucana 96

Condor, California 28

Conepatus leuconotus 114, 119

Conepatus leuconotus leuconotus 114

Contopus cooperi 40

Contopus pertinax 34

Contopus sordidulus 48

Contopus virens 32

Coot, American 23

Copaeodes aurantiaca 63

Copaeodes minima 67

Cophosaurus texanus..... 103, 104

Cophosaurus texanus scitulus..... 103

Copper

 Arizona 53

 Arota..... 54

 Blue..... 54

 Purplish..... 65

Coragyps atratus..... 26

Coralsnake, Sonoran 125

Cordillacris crenulata 95

Cordillacris occipitalis 98

Cordulegaster diadema..... 76

Cordulegaster dorsalis 80

Cormorant

 Double-crested 31

 Neotropic..... 39

Corvina, Orangemouth 89

Corvus brachyrhynchos 23

Corvus corax 30

Corvus cryptoleucus 29

Corynorhinus townsendii..... 116, 118

Corynorhinus townsendii pallescens 116

Coryphaeschna adnexa 77

Cottontail

 Desert 112

 Eastern..... 113

 Mountain 115

 North Kaibab Mountain 116

 Southwestern 118

Cottus bairdii..... 89

Cowbird

 Bronzed 28

 Brown-headed 28

Coyote..... 112

Crane, Sandhill 44

Crappie

 Black 86

 White 91

Craugastor augusti 15, 16

Craugastor augusti cactorum..... 16

Creeper, Brown 28

Crescent

 Canyon..... 55

 Field 58

 Mylitta 63

 Northern 63

 Painted 64

 Pale 64

 Pearl..... 64

 Phaon..... 64

 Tawny 68

 Texan 68

 Tulcis..... 69

 Vesta 69

Cricket, Navajo Jerusalem 97

Crossbill, Red 42

Crotalus atrox 126

Crotalus cerastes..... 123, 124, 125

Crotalus cerastes cerastes 124

Crotalus cerastes cercobombus 125

Crotalus cerastes laterorepens 123

Crotalus cerberus..... 122

Crotalus lepidus 122, 125

Crotalus lepidus klauberi 122

Crotalus mitchellii 125

Crotalus molossus 123

Crotalus oreganus abyssus..... 123

Crotalus oreganus lutosus..... 123

Crotalus pricei 125

Crotalus scutulatus 124

Crotalus tigris 125

Crotalus viridis 124

Crotalus willardi 122, 124

Crotalus willardi obscurus	124	Amethyst.....	76
Crotalus willardi willardi.....	122	Apache	76
Crotaphytus bicinctores	104	Aztec	76
Crotaphytus collaris	104	Blue-fronted.....	77
Crotaphytus nebris.....	105	Blue-ringed.....	77
Crotophaga sulcirostris	35	California.....	77
Crow, American.....	23	Dusky	78
Cruiser, Western River	82	Fiery-eyed	79
Ctenopharyngodon idella.....	88	Kiowa	79
Ctenosaura pectinata	106	Lavender	79
Cuckoo		Paiute	80
Black-billed.....	26	Pima	80
Yellow-billed	49	Powdered.....	80
Cupido (Everes) amyntula	83	Sabino Canyon	81
Cupido (Everes) comyntas.....	78	Sierra Madre	81
Curlew, Long-billed	37	Sooty	81
Cyanocitta cristata	27	Spine-tipped.....	81
Cyanocitta stelleri	45	Springwater.....	81
Cygnus buccinator.....	46	Taraskan.....	82
Cygnus columbianus	46	Tezpi.....	82
Cyllopsis pertepida.....	69	Tonto.....	82
Cyllopsis pyracmon	59, 65	Variable.....	82
Cyllopsis pyracmon henshawi	59	Vivid	82
Cymaenes trebius.....	58	Yaqui	83
Cyna Blue	56	Darner	
Cynanthus latirostris	27	Arroyo	76
Cynomys gunnisoni	113	Blue-eyed	77
Cynomys ludovicianus.....	111	Blue-faced	77
Cynoscion xanthulus	89	California.....	77
Cyprinella formosa	86	Common Green.....	78
Cyprinodon arcuatus.....	90	Giant Green.....	79
Cyprinodon eremus.....	89	Malachite	79
Cyprinodon macularius	87	Paddle-tailed.....	80
Cyprinus carpio	87	Persephone's.....	80
Cypseloides niger	25	Riffle.....	81
Cyrtonyx montezumae.....	39	Turquoise-tipped	82
Dace		Variable.....	82
Gila Longfin	88	Dash, Long.....	61
Longfin	88	Dasher, Blue	77
Speckled.....	90	Dasylophia seriata	72
Yaqui Longfin	91	Deer	
Dactylosum bicolor.....	97	Mule.....	115
Dagger Wing, Ruddy.....	66	White-tailed	119
Daggerwing, Many-banded	61	Deermouse, Merriam's	115
Damsel		Dendragapus obscurus.....	31
Black-and-white	77	Dendrocygna autumnalis	26
Painted.....	80	Dendrocygna bicolor	33
Western Red	82	Derotmema haydeni	96
Danaus eresimus	67	Desert Purple Martin.....	31
Danaus gilippus	65	Diadophis punctatus	124
Danaus plexippus	62	Dickcissel	31
Dancer		Didelphis virginiana	115, 118, 119

Didelphis virginiana californica	115	Meridian	62
Didelphis virginiana virginiana	119	Mournful.....	63
Dipodomys deserti	112	Pacuvius.....	64
Dipodomys merriami	115	Persius	64
Dipodomys microps	112, 114	Rocky Mountain.....	65
Dipodomys microps celsus	112	Scudder's	66
Dipodomys microps leucotis.....	114	Skinner's	67
Dipodomys ordii.....	116	Sleepy	67
Dipodomys spectabilis	111, 116	Duskywing, False.....	58
Dipodomys spectabilis baileyi	116	Dymasia dymas	57
Dipper, American	23	Dythemis fugax	78
Dipsosaurus dorsalis	103	Dythemis maya	79
Dissosteira Carolina	95	Dythemis nigrescens	77
Dogface, Southern	67	Dythemis velox	82
Dolbogene hartwegii	71	Eagle	
Dolichoderinae	19	Bald.....	24
Dolichonyx oryzivorus.....	27	Golden	33
Donkey.....	113	Sonoran Desert Bald	24
Dorosoma petenense	90	Winter Population Bald	24
Dove		Earless Lizard	
Common Ground	30	Chihuahuan Greater	103
Eurasian Collard.....	32	Common Lesser	103
Inca	36	Greater	104
Mourning.....	39	Eastern Ringtail	78
Ruddy-Ground	43	Echinargus isola	65
White-winged	49	Ecitoninae	19
Dowitcher		Ectatomminae.....	19
Long-billed	37	Eel, American	86
Short-billed	44	Egret	
Doxocopa laure.....	66	Cattle	29
Dragonlet		Great.....	34
Black-winged	77	Reddish	42
Plateau.....	80	Snowy	45
Duck		Egretta caerulea.....	37
Black-bellied Whistling	26	Egretta rufescens	42
Fulvous Whistling-	33	Egretta thula	45
Harlequin	35	Egretta tricolor.....	46
Long-tailed.....	37	Elanoides forficatus	46
Mexican	38	Elanus leucurus	48
Ring-necked	43	Eleotris picta	90
Ruddy	43	Elf 32, 58	
Tufted	46	Elfin	
Whistling.....	26	Brown	55
Wood.....	49	Western Pine	70
Dumetella carolinensis	33	Elgaria kingii.....	103, 104
Dunlin	31	Elgaria kingii nobilis.....	103
Dusky Wing		Elk, Merriam's	115
Afranius	52	Elops affinis.....	88
Dreamy.....	57	Emesis ares	53
Funereal.....	58	Emesis zela.....	71
Horace's.....	60	Emperor	
Juvenal's	60	Dusky	57

Silver	66	Erythemis simplicicollis	78
Tawny.....	68	Erythemis vesiculosa	79
Empidonax difficilis	40	Erythrodiplax basifusca	80
Empidonax flaviventris.....	49	Erythrodiplax connata	80
Empidonax fulvifrons	28, 39	Erythrodiplax funerea	77
Empidonax fulvifrons pygmaeus	39	Esox lucius	89
Empidonax hammondii	35	Euchloe ausonides.....	60
Empidonax minimus.....	37	Euchloe guaymasensis.....	67
Empidonax oberholseri	31	Euchloe lotta	64
Empidonax occidentalis	31	Euderma maculatum	118
Empidonax traillii	45, 49	Eudocimus albus	48
Empidonax traillii extimus.....	45	Eueides isabella	60
Empidonax virescens.....	23	Eugenēs fulgens	38
Empidonax wrightii	34	Euhyparpax rosea	72
Enallagma anna	81	Eumops perotis	113, 119
Enallagma annexum	80	Eumops perotis californicus	113
Enallagma basidens.....	78	Eumops underwoodi	118
Enallagma boreale.....	77	Eumorsea balli.....	94
Enallagma carunculatum.....	82	Eumorsea pinaleno	97
Enallagma civile.....	79	Eunica monima	57
Enallagma eiseni.....	77	Euphagus carolinus	44
Enallagma novaehispaniae.....	80	Euphagus cyanocephalus	27
Enallagma praevarum	76	Euphilotes battoides	67
Enallagma semicirculare	78	Euphilotes baueri	54
Enchisthenes hartii.....	118	Euphilotes bernardino	54
Encoptolophus costalis.....	95	Euphilotes ellisi	58
Epargyreus clarus	66	Euphilotes enoptes.....	57
Eptesicus fuscus	111	Euphilotes mojave.....	62
Equus asinus.....	113	Euphilotes mojave virginensis.....	62
Equus caballus.....	113	Euphilotes pallescens.....	64
Eremophila alpestris	35	Euphilotes rita	58, 65
Erethizon dorsatum.....	116	Euphilotes rita emmeli	58
Eritettix simplex	99	Euphilotes spaldingi	67
Erora quaderna	53	Euphydryas anicia.....	53
Erpetogomphus compositus	83	Euphyes vestris.....	57
Erpetogomphus crotalinus	83	Euproserpinus wiesti	74
Erpetogomphus designatus.....	78	Euptilotis neoxenus	32
Erpetogomphus elaps	82	Euptoieta claudia.....	69
Erpetogomphus lampropeltis.....	81	Euptoieta hegesia.....	62
Erynnis afranius.....	52	Eurasian Collard Dove	32
Erynnis brizo.....	67	Eurema boisduvaliana	54
Erynnis funeralis.....	58	Eurema daira	54
Erynnis horatius	60	Eurema mexicana.....	62
Erynnis icelus.....	57	Falco columbarius	38
Erynnis juvenalis.....	60	Falco femoralis	24, 39
Erynnis meridianus.....	62	Falco femoralis septentrionalis	39
Erynnis pacuvius.....	64	Falco mexicanus	41
Erynnis persius	64	Falco peregrinus.....	23, 41
Erynnis scudderi	66	Falco peregrinus anatum.....	23
Erynnis telemachus	65	Falco sparverius.....	23
Erynnis tristis.....	63	Falcon	
Erythemis collocata.....	82	Applomado.....	24

Northern Aplomado 39

Peregrine 41

Prairie 41

Ferret

 Black-footed 111

 European 113

Finch

 Black Rosy 25

 Cassin's 29

 Gray-crowned Rosy- 34

 House 36

 Purple 41

Firetail, Desert 78

Flat, Fritzgaertner's 58

Flicker

 Gilded 33

 Northern 39

Flycatcher

 Acadian 23

 Ash-throated 24

 Brown-crested 28

 Buff-breasted 28

 Cordilleran 31

 Dusky 31

 Dusky-capped 31

 Flycatcher 35

 Gray 34

 Great Crested 34

 Least 37

 North Buff-breasted 39

 Nutting's 40

 Olive-sided 40

 Pacific-slope 40

 Scissor-tailed 44

 Southwest Willow 45

 Sulphur-bellied 45

 Vermilion 47

 Willow 49

 Yellow-bellied 49

Forceptail, Narrow-striped 80

Forktail

 Black-fronted 77

 Citrine 78

 Desert 78

 Mexican 80

 Pacific 80

 Plains 80

 Rambur's 80

 Western 82

Formicinae 19

Fox

 Common Gray 112

Kit 114

 Red 117

Fregata magnificens 38

Frigatebird, Magnificent 38

Fringe-toed Lizard

 Mohave 105

 Yuman Desert 106

Fritillary

 Aphrodite 53

 Atronis 54

 Coronis 56

 Fritillary 63

 Gulf 59

 Mexican 62

 Mormon 62

 Nokomis 63

 Variegated 69

Frog

 African Clawed 15

 Barking 15

 Chiricahua Leopard 15

 Lowland Leopard 15

 Northern Leopard 16

 Plains Leopard 16

 Tarahumara 16

 Western Barking 16

Fulica americana 23

Fundulus zebrinus 89

Gadwall 33

Gallinago delicata 49

Gallinule, Purple 41

Gambelia wislizenii 104

Gambusia affinis 89

Ganyra howarthi 60

Garganey 33

Gartersnake

 Black-necked 122

 Checkered 123

 Mexican 124

 Narrow-headed 124

 Northern Mexican 124

 Terrestrial 125

 Wandering 126

Gastrophryne olivacea 16

Gavia adamsii 50

Gavia immer 30

Gavia pacifica 40

Gavia stellata 43

Gecko

 Desert Banded 103

 Mediterranean 105

 Tucson Banded 106

Western Banded	106	Greater White-fronted	34
Gelochelidon nilotica	35	Ross's	43
Genoveva	59	Snow	45
Geococcyx californianus	34	Gopher	
Geothlypis formosa	36	Botta's Pocket	111
Geothlypis philadelphia	39	Harquahala Southern Pocket	113
Geothlypis tolmiei	38	Mearns' Southern Pocket	115
Geothlypis trichas	31	Northern Pocket	116
Gesta invisus	58	Southern Pocket	118
Gila atraria	90	Gophersnake	123
Gila cypha	88	Gopherus agassizii	128
Gila ditaenia	90	Gopherus morafkai	129
Gila elegans	87	Goshawk	
Gila intermedia	87	Apache Northern	24
Gila Monster	101, 104	Northern	39
Banded	103	Grackle	
Reticulate	105	Common	30
Gila nigra	88	Great-tailed	34
Gila purpurea	91	Grais stigmaticus	60
Gila robusta	89	Grasshopper	93, 94
Gila seminuda	91	Grayling, Arctic	86
Gillichthys mirabilis	88	Grebe	
Glaucidium brasilianum	28, 32	Clark's	30
Glaucidium brasilianum cactorum	28	Eared	31
Glaucidium gnoma	39, 40	Horned	35
Glaucidium gnoma californicum	39	Least	37
Glaucidium gnoma gnoma	40	Pied-billed	41
Glaucmys sabrinus	116	Red-necked	42
Glaucopsyche lygdamus	66	Western	47
Glaucopsyche lygdamus minim punctum	66	Grosbeak	
Glaucopsyche piasus	54	Black-headed	26
Glider		Blue	27
Spot-winged	81	Evening	32
Wandering	82	Pine	41
Gnatcatcher		Rose-breasted	43
Black-capped	26	Yellow	49
Black-tailed	26	Groundsnake, Western	126
Blue-gray	27	grouse	
Godwit		Greater Sage-	34
Hudsonian	36	Gunnison Sage-	35
Marbled	38	Grouse, Dusky	31
Gopher, Pocket	117	Grus canadensis	44
Goldeneye		Gull	
Barrow	25	Bonaparte's	27
Common	30	California	29
Goldfinch		Franklin's	33
American	23	Glaucous	33
Lawrence's	36	Glaucous-winged	33
Lesser	37	Heermann's	35
Goldfish	88	Herring	35
Goose		Laughing	36
Cackling	28	Mew	38

Ring-billed.....43

Sabine's44

Thayer's46

Western47

Yellow-footed50

Gulo gulo..... 119

Guppy88

Gyalopion canum..... 123

Gyalopion quadrangulare 125

Gymnogyps californianus..... 28

Gymnorhinus cyanocephalus..... 41

Gyrocheilus patrobas65

Habrodais grunus..... 54

Hadrotettix trifasciatus 99

Haemorrhous cassinii..... 29

Haemorrhous mexicanus 36

Haemorrhous purpureus..... 41

Hairstreak

 Arizona 53

 Behr's..... 54

 Biosduval's..... 54

 Colorado 56

 Comstock's 56

 Coral 56

 Gray 59

 Great Purple 59

 Ilavia 60

 Jade-blue 60

 Juniper 60

 Leda 61

 Mallow Scrub-..... 61

 Mexican Gray- 62

 Sheridan's Green 66

 Simaethis 66

 Soapberry 67

 Sonoran 67

 Sylvan 68

 Tailless Scrub 68

 Thicket 68

 Western Green 70

 Xami..... 70

Haliaeetus leucocephalus 24

Haliaeetus leucocephalus (winter) 24

Haliaeetus leucocephalus pop. 3 24

Harrier, Northern..... 39

Harvester Ants 17

Hawk

 Broad-winged 28

 Common Black..... 30

 Cooper's..... 31

 Ferruginous 32

 Gray 34

Harris's..... 35

Red-shouldered42

Red-tailed42

Rough-legged..... 43

Sharp-shinned..... 44

Swainson's46

White-tailed..... 48

Zone-tailed50

Hedgerow Hairstreak 59

Heliaula rufa..... 98

Heliconian, Isabella's..... 60

Heliomaster constantii..... 41

Heliopetes ericetorum 60

Heliopetes laviana..... 61

Heliopetes macaira 61

Heliopyrgus domicella..... 58

Helmitheros vermivorus 49

Heloderma suspectum..... 103, 104, 105

Heloderma suspectum cinctum 103

Heloderma suspectum suspectum..... 105

Hemiargus ceraunus 55

Hemidactylus turcicus..... 105

Hemileuca griffini..... 71

Hemileuca grotei..... 71

Hemileuca grotei diana 71

Hemileuca hera 71

Hemileuca hera magnifica 71

Hemileuca hualapai 71

Hemileuca stonei 73

Hemileuca tricolor 73

Heron

 Black-crowned Night 26

 Great Blue..... 34

 Green 34

 Little Blue..... 37

 Tricolored 46

 Yellow-crowned Night- 50

Herpailurus yaguarondi 114

Herpailurus yaguarondi tolteca 114

Hesperagrion heterodoxum..... 80

Hesperia 60

Hesperia colorado..... 56, 60

Hesperia colorado susanae..... 60

Hesperia juba 60

Hesperia lindseyi..... 61

Hesperia nevada 63

Hesperia pahaska 64

Hesperia uncas..... 69

Hesperia viridis 59

Hesperia woodgatei 53

Hesperopsis alpheus 66

Hesperopsis libya 62

Hesperotettix viridis	98	Hylocharis leucotis	48
Hetaerina americana	76	Hylocichla mustelina	49
Hetaerina titia	81	Hypaurotis crysalus	56
Hetaerina vulnerata	77	Hypaurotis crysalus intermedia	56
Heterocampa amanda	72	Hypostrymon critola	67
Heterocampa averna	72	Hypsiglena chlorophaea loreala	124
Heterocampa ditta	72	Hypsiglena sp. nov.	123
Heterocampa incongrua	72	Ibis	
Heterocampa ruficornis	72	White	48
Heterocampa sp. 1 nr. amanda	72	White-faced	48
Heterodon kennerlyi	124	Ictalurus furcatus	86
Himantopus mexicanus	26	Ictalurus pricei	91
Hippia packardii	72	Ictalurus punctatus	87
Hirundo rustica	25	Icteria virens	50
Histrionicus histrionicus	35	Icterus bullockii	28
Hoary Edge, Desert	57	Icterus cucullatus	35
Holbrookia maculata	103	Icterus galbula	25
Hook-nosed Snake, Chihuahuan	123	Icterus parisorum	44
Horned Lizard		Icterus pustulatus	45
Desert	103	Icterus spurius	40
Flat-tailed	104	Icterus wagleri	27
Goode's	104	Ictinia mississippiensis	38
Greater Short-	104	Ictiobus bubalus	90
Regal	105	Ictiobus cyprinellus	86
Round-tailed	105	Ictiobus niger	86
Southern Desert	105	Idionycteris phyllotis	110
Texas	105	Iguana	
Horse, Feral	113	Deseret	103
Hummingbird		Western Spiny-tailed	106
Allen's	23	Incilius alvarius	16
Anna's	24	Ischnura barberi	78
Berylline	25	Ischnura cervula	80
Black-chinned	26	Ischnura damula	80
Blue-throated	27	Ischnura demorsa	80
Broad-billed	27	Ischnura denticollis	77
Broad-tailed	27	Ischnura hastata	78
Bumblebee	28	Ischnura perparva	82
Calliope	29	Ischnura ramburii	80
Cinnamon	30	Ixobrychus exilis	37
Costa's	31	Ixobrychus exilis hesperis	37
Lucifer	38	Ixoreus naevius	47
Magnificent	38	Jacana, Northern	39
Rufous	43	Jacana spinosa	39
Violet-crowned	47	Jackrabbit	
White-eared	48	Antelope	110
Hydroprogne caspia	29	Black-tailed	111
Hyla arenicolor	15	White-sided	119
Hyla wrightorum	15	White-tailed	119
Hyla wrightorum (Huachuca/Canelo Hills		Jaeger	
Pop)	15	Long-tailed	38
Hyla wrightorum (Mogollon Rim Pop.)	15	Parasitic	41
Hylephila phyleus	58	Pomarine	41

Jaguar.....	114	Kinosternon sonoriense longifemorale..	129
Jaguarundi	114	Kinosternon sonoriense sonoriense	128
Javelina	112	Kiskadee, Great	34
Jay		Kite	
Blue.....	27	Mississippi	38
Gray	34	Swallow-tailed	46
Mexican	38	White-tailed.....	48
Pinyon.....	41	Kittiwake, Black-legged	26
Steller's	45	Knot, Red	42
Western Scrub-.....	48	Kricogonia lyside	61
Junco		Lady	
Dark-eyed	31	Painted	64
Yellow-eyed	50	West Coast.....	69
Junco hyemalis.....	31	Lampornis clemenciae	27
Junco phaeonotus.....	50	Lampropeltis californiae	123
Junonia coenia	55	Lampropeltis getula	121, 123, 126
Junonia genoveva	56, 59	Lampropeltis getula nigrita	126
Junonia genoveva nigrosuffusa.....	56	Lampropeltis pyromelana	122, 125, 126
Kangaroo Rat		Lampropeltis pyromelana infralabialis...	126
Banner-tailed.....	111	Lampropeltis pyromelana pyromelana..	122
Chisel-toothed	112	Lampropeltis splendida.....	123
Desert	112	Lampropeltis triangulum.....	124, 125
Houserock Valley Chisel-toothed	114	Lampropeltis triangulum celanops	124
New Mexico Banner-tailed	116	Lampropeltis triangulum taylori	125
Ord's	116	Lanius excubitor.....	40
Katyids	93	Lanius ludovicianus	37
Kestrel, American.....	23	Lark, Horned	35
Killdeer.....	36	Larus argentatus	35
Killifish, Plains	89	Larus californicus	29
Kingbird		Larus canus	38
Cassin's	29	Larus delawarensis.....	43
Eastern.....	32	Larus glaucescens	33
Thick-billed	46	Larus heermanni	35
Tropical.....	46	Larus hyperboreus	33
Western.....	47	Larus livens	50
Kingfisher		Larus occidentalis.....	47
Belted	25	Larus thayeri	46
Green.....	34	Lasaia maria	61
Kinglet		Lasionycteris noctivagans	117
Golden-crowned.....	33	Lasiurus blossevillii.....	119
Ruby-crowned	43	Lasiurus cinereus	114
Kingsnake		Lasiurus xanthinus	119
Arizona Mountain.....	122	Laterallus jamaicensis	25, 28
California	123	Laterallus jamaicensis coturniculus	28
Common.....	123	Leafwing	
Desert	123	Angled.....	53
Sonoran Mountain.....	125	Tropical.....	69
Utah Mountain	126	Leilia, Empress	58
Western Black.....	126	Leopard Frog	
Kinosternon arizonense	128	Relict.....	16
Kinosternon flavescens	129	Rio Grande.....	16
Kinosternon sonoriense	128, 129	Leopard Lizard	

Long-nosed	104	Lion, Mountain	115
Leopardus pardalis	116	Lithobates berlandieri	16
Lepidomeda mollispinis.....	91	Lithobates blairi.....	16
Lepidomeda mollispinis mollispinis.....	91	Lithobates catesbeianus.....	15
Lepidomeda vittata	88	Lithobates chiricahuensis	15
Lepomis cyanellus	88	Lithobates onca	16
Lepomis gibbosus.....	89	Lithobates pipiens	16
Lepomis gulosus.....	91	Lithobates tarahumarae.....	16
Lepomis macrochirus	87	Lithobates yavapaiensis	15
Lepomis microlophus	89	Litodonta aonides.....	72
Leptonycteris curasoae	114, 118	Litodonta contrasta.....	72
Leptonycteris curasoae yerbabuenae	114	Litodonta sp. 1 nr. alpina.....	72
Leptonycteris nivalis.....	115	Lizard, Zebra-tailed.....	106
Leptotes marina	61	Loggerhead Shrike.....	21
Lepus alleni	110	Longspur	
Lepus californicus.....	111	Chestnut-collard.....	29
Lepus callotis	119	Lapland.....	36
Lepus townsendii	119	McCown's.....	38
Lerema accius.....	56	Smith's	45
Lerodea arabus.....	69	Longtail	
Lerodea eufala	58	Brown.....	55
Lestes alacer.....	80	White-striped	70
Lestes congener	81	Zilpa	71
Lestes disjunctus	80	Lontra canadensis	116, 117, 118
Lestes dryas.....	79	Lontra canadensis lataxina	117
Lestes sigma	78	Lontra canadensis sonora	118
Leucophaeus atricilla.....	36	Loon	
Leucophaeus pipixcan	33	Common	30
Leucosticte atrata	25	Pacific.....	40
Leucosticte tephrocotis.....	34	Red-throated.....	43
Leuronotina ritensis	96	Yellow-billed	50
Libellula comanche.....	78	Lophodytes cucullatus.....	35
Libellula composita	77	Loxia curvirostra.....	42
Libellula croceipennis.....	80	Lycaena arota	54
Libellula forensis	78	Lycaena ferrisi	53
Libellula luctuosa.....	83	Lycaena helloides	65
Libellula nodisticta	79	Lycaena heteronea.....	54
Libellula pulchella.....	82	Lynx	
Libellula quadrimaculata	79	Canada	111
Libellula saturata	79	Lynx canadensis.....	111
Libytheana carinenta.....	69	Lynx rufus	111
Lichanura trivirgata	125	Machete	88
Limenitis archippus	63, 69	Macrodiplax balteata	79
Limenitis archippus obsoleta	63	Macromia magnifica.....	82
Limenitis arthemis.....	70	Macrothemis inacuta	73, 81
Limenitis weidemeyerii	69	Macrothemis pseudimitans.....	83
Limnodromus griseus	44	Macrotes californicus.....	111
Limnodromus scolopaceus.....	37	Magpie, Black-billed	26
Limnodynastes swainsonii	46	Malachite	61
Limosa fedoa	38	Mallard	38
Limosa haemastica	36	Marble	
Lined Coachwhip	123	Large	60

Pearly..... 64

Sonoran 67

Mark, Question 65

Marpesia chiron..... 61

Marpesia petreus..... 66

Martin

 Desert Purple..... 31

 Purple 42

Masked Bobwhite 38

Meadowhawk

 Autumn..... 76

 Band-winged..... 77

 Black 77

 Cardinal 78

 Spot-winged 81

 Striped 82

 Variegated 82

Meadowlark

 Eastern..... 32

 Western..... 47

Meda fulgida..... 90

Megaceryle alcyon..... 25

Megascops kennicottii 48

Megascops trichopsis..... 48

Megathymus streckeri 68

Megathymus ursus 69

Megathymus ursus ursus..... 69

Megathymus yuccae..... 70

Megisto rubricata 65

Melanerpes erythrocephalus..... 42

Melanerpes formicivorus..... 23

Melanerpes lewis..... 37

Melanerpes uropygialis 33

Melanitta americana..... 23

Melanitta fusca 49

Melanitta perspicillata..... 45

Melanoplus angustipennis..... 97

Melanoplus bivittatus..... 99

Melanoplus bowditchi 98

Melanoplus bruneri 95

Melanoplus chiricahuae..... 98

Melanoplus confusus..... 97

Melanoplus cuneatus 99

Melanoplus dawsoni..... 95

Melanoplus desultorius 98

Melanoplus devastator 95

Melanoplus differentialis..... 95

Melanoplus discolor 95

Melanoplus femurnigrum..... 98

Melanoplus femurrubrum 98

Melanoplus flavidus..... 99

Melanoplus foedus..... 98

Melanoplus franciscanus 98

Melanoplus gladstoni..... 95

Melanoplus infantilis 96

Melanoplus keeleri 96

Melanoplus lakinus 96

Melanoplus magdalenae..... 98

Melanoplus occidentalis 95

Melanoplus packardii..... 97

Melanoplus pictus..... 97

Melanoplus pinaleno 97

Melanoplus rugglesi..... 97

Melanoplus sanguinipes 97

Melanoplus snowii 98

Melanoplus sp. 21..... 96

Melanoplus sp. 52..... 96

Melanoplus splendidus 98

Melanoplus spretus 98

Melanoplus truncatus..... 98

Melanotis caerulescens 27

Meleagris gallopavo 33, 49

Meleagris gallopavo mexicana..... 33

Melospiza georgiana 46

Melospiza lincolni 37

Melospiza melodia 45

Melozone aberti..... 23

Melozone fusca..... 29

Memphis glycerium 53

Mephitis macroura 114

Mephitis mephitis 118

Merganser

 Common 30

 Hooded..... 35

 Red-breasted 42

Mergus merganser 30

Mergus serrator 42

Merlin 38

Mermiria bivittata..... 99

Metalmark

 Ares..... 53

 Arizona..... 54

 Crescent..... 56

 Fatal..... 58

 Maria's..... 61

 Mormon..... 62

 Nais..... 63

 Palmer's 64

 Sonoran 67

 Wright's 70

 Zela 71

Metalwork, Rawson's..... 65

Metator pardalinus..... 95

Mew Gull..... 38

Mexican Woodrat	115	Brush	111
Micrathene whitneyi	32	Cactus	111
<i>Microcentrum</i>	93	Canyon	111
Micropterus dolomieu	90	Deer	112
Micropterus punctulatus	90	Fulvous Harvest	113
Micropterus salmoides	88	Great Basin Pocket	113
Microtia elva	58	Hispid Pocket	113
Microtus longicaudus	114, 119	House	114
Microtus longicaudus leucophaeus	119	Little Pocket	114
Microtus mexicanus hualpaiensis	114	Long-tailed Pocket	114
Microtus mexicanus navaho	116	Meadow Jumping	114
Microtus mogollonensis	115	Mearns' Grasshopper	115
Microtus montanus	110, 115	New Mexico Meadow Jumping	116
Microtus montanus arizonensis	110	Northern Grasshopper	116
Microtus pennsylvanicus	115	Northern Pygmy	116
Micruroides euryxanthus	125	Northern Rock	116
Milksnake	124	Osgood's	116
New Mexico	124	Pinon	116
Utah	125	Plains Harvest	116
Mimus polyglottos	39	Plains Pocket	117
Ministrymon leda	61	Rock Pocket	117
Minnow		Silky Pocket	117
Fathead	87	Sonoran Desert Pocket	117
Loach	88	Southern Grasshopper	117
Mniotilta varia	26	Spiny Pocket	118
Mockingbird		Springerville Pocket	118
Blue	27	Western Harvest	119
Northern	39	Western Jumping	119
Molly		White-ankled	119
Sailfin	89	White-footed	119
Shortfin	90	Wupatki Arizona Pocket	119
Molothrus aeneus	28	Yavapai Arizona Pocket	120
Molothrus ater	28	Mudsucker, Longjaw	88
Monarch	51, 62	Mugil cephalus	90
Mormoops megalophylla	113	Mullet, Striped	90
Morone chrysops	91	Mus musculus	114
Morone mississippiensis	91	Muskrat, Common	112
Morone saxatilis	90	Mustela erminea	113
Morpho, White	70	Mustela frenata	114
Morpho polyphemus	70	Mustela nigripes	111
Morsea dumicola	97	Mustela putorius	113
Morsea kaibabensis	97	Myadestes townsendi	46
Mosquitofish	89	Mycteria americana	49
Motacilla alba	48	Myiarchus cinerascens	24
Moth		Myiarchus crinitus	34
Notodontid	72	Myiarchus nuttingi	40
Underwing	73	Myiarchus tuberculifer	31
Mouse		Myiarchus tyrannulus	28
Apache Pocket	110	Myioborus miniatus	45
Arizona Pocket	110	Myioborus pictus	41
Bailey's Pocket	110	Myiodynastes luteiventris	45
Black-eared	111	Myocastor coypus	116

Myodes gapperi	118	Mesa Verde	124
Myotis		Notemigonus crysoleucas	88
Arizona	110	Notiosorex cockrumi	112
California	111	Notiosorex crawfordi	112
Cave	112	Notodontid Moth	72, 73
Fringed	113	Notropis lutrensis	89
Long-eared	114	Notropis stramineus	90
Long-legged	114	Notropis venustus	90
Southwestern	118	Nucifraga columbiana	30
Western Small-footed	119	Numenius americanus	37
Yuma	120	Numenius phaeopus	48
Myotis auriculus	118	Nutcracker, Clark's	30
Myotis californicus	111	Nuthatch	
Myotis ciliolabrum	119	Pygmy	42
Myotis evotis	114	Red-breasted	42
Myotis occultus	110	White-breasted	48
Myotis thysanodes	113	Nutria or Coypu	116
Myotis velifer	112	Nyctanassa violacea	50
Myotis volans	114	Nyctelius nyctelius	63
Myotis yumanensis	120	Nycticorax nycticorax	26
Myrmicinae	20	Nyctinomops femorosaccus	117
Myscelia cyananthe	54	Nyctinomops macrotis	111
Nastra julia	60	Nymphalis antiopa	63
Nastra neamathla	63	Nymphalis californica	55
Nasua narica	119	Oarisma edwardsii	57
Nathalis iole	56	Oarisma garita	59
Neominois ridingsii	65	Oceanodroma melania	25
Neophasia menapia	64	Oceanodroma microsoma	37
Neophasia terlooii	56	Ocelot	116
Neotamias cinereicollis	113	Ochloides sylvanoides	70
Neotamias dorsalis	112	Ochloides yuma	70
Neotamias minimus	114	Ochotona princeps	110
Neotamias quadrivittatus	112	Odocoileus hemionus	115
Neotamias rufus	114	Odocoileus virginianus	119
Neotamias umbrinus	118	Oedaleonotus enigma	99
Neotoma albigula	119	Oeneis alberta	53
Neotoma cinerea	111	Oeneis alberta daura	53
Neotoma lepida	112	Oligocentria alpica	73
Neotoma mexicana	115	Oligocentria delicata	73
Neotoma mexicana mexicana	115	Oligocentria paradisi	73
Neotoma micropus	118	Oligocentria pinalensis	73
Neotoma stephensi	118	Oligocentria sp. 1	73
Night Lizard		Oncorhynchus apache	86
Arizona	103	Oncorhynchus clarkii	87
Bezy's	103	Oncorhynchus gilae	88
Desert	104	Oncorhynchus kisutch	87
Nighthawk		Oncorhynchus mykiss	88, 89
Common	30	Oncorhynchus mykiss aguabonita	88
Lesser	37	Oncorhynchus nerka	90
Nightjar, Buff-collard	28	Ondatra zibethicus	112
Nightsnake		Onychomys arenicola	115
Hooded	123	Onychomys leucogaster	116

Onychomys torridus	117	Mexican Spotted	38
Opeia atascosa	96	Mountain Pygmy-.....	39
Opeia obscura	97	Northern Pygmy-.....	40
Ophiogomphus arizonicus.....	76	Northern Saw-whet	40
Oplonaeschna armata	81	Short-eared	44
Oporornis agilis	31	Spotted	45
Opossum		Western Burrowing.....	47
Mexican	115	Western Screech-.....	48
Virginia	118	Whiskered	48
Orange		Oxybelis aeneus	123
Sleepy	67	Oxyura jamaicensis.....	43
Tailed	68	Pachydiplax longipennis	77
Orangetip		Pachyrhamphus aglaiae.....	43
Desert	57	Packrat	
Sonoran.....	67	Bushy-tailed	111
Oreochromis aureus.....	87	Desert.....	112
Oreochromis mossambicus	89	Mexican.....	115
Oreoscoptes montanus	44	Southern Plains	118
Oreothlypis celata	40	Stephen's	118
Oreothlypis luciae	38	Western White-throated	119
Oreothlypis peregrina	46	Painted Lady, American.....	53
Oreothlypis ruficapilla	39	Palaemnema domina	78
Oreothlypis superciliosa.....	31	Paltothemis lineatipes.....	81
Oreothlypis virginiae	47	Pandion haliaetus.....	40
Oriole		Panoquina lucas	65
Baltimore	25	Panoquina ocola.....	63
Black-vented	27	Pantala flavescens	82
Bullock's	28	Pantala hymenaea.....	81
Hooded	35	Panthera onca	114
Orchard	40	Papilio anchisiades	53
Scott's	44	Papilio astyalus	55
Streak-backed	45	Papilio cresphontes	59
Orthemis discolor.....	78	Papilio indra	60, 66
Orthemis ferruginea.....	81	Papilio indra kaibabensis.....	66
Osprey	40	Papilio machaon.....	54, 63
Otter		Papilio machaon bairdii.....	54
Northern River	116	Papilio multicaudata	51, 69
Southeastern River	117	Papilio ornithion	64
Southwestern River.....	118	Papilio pilumnus.....	68
Ovenbird	40	Papilio polyxenes.....	54
Ovis canadensis.....	112, 115, 117	Papilio rutulus	70
Ovis canadensis canadensis	117	Papilio selicaon.....	53
Ovis canadensis nelsoni	112	Parabuteo unicinctus	35
owl, Cactus Ferruginous Pygmy-	28	Paramacera allyni.....	64
Owl		Parastrellus hesperus	111
Barn.....	25	Paratettix schochi.....	95
Burrowing	28	Paratrytone snowi.....	67
Elf 32		Parides alopis	70
Ferruginous Pygmy	32	Parkesia motacilla	38
Flammulated	33	Parkesia noveboracensis	40
Great Horned	34	Paropomala wyomingensis	99
Long-eared.....	37	Parrot, Thick-billed	46

Parula	
Northern.....	40
Tropical.....	46
Passer domesticus	36
Passerculus sandwichensis	29, 36, 44
Passerculus sandwichensis rostratus	36
Passerculus sandwichensis rufofuscus.....	29
Passerella iliaca.....	33
Passerina amoena.....	36
Passerina caerulea	27
Passerina ciris	40
Passerina cyanea	36
Passerina versicolor	47
Patagioenas fasciata	25
Patch	
Bordered.....	54
California	55
Definite.....	57
Rosita.....	66
Patch-nosed Snake, Eastern.....	123
Peacock, Dark	56
Pecari tajacu	112
Peccary, Collared	112
Pelecanus erythrorhynchos	24
Pelecanus occidentalis.....	28
Pelican	
American White.....	24
Brown	28
Penitent	73
Pennant	
Four-spotted.....	79
Halloween.....	79
Marl	79
Red-tailed	81
Perca flavescens.....	91
Perch	
Sacramento	89
Yellow	91
Peregrine Falcon, American.....	23
Perisoreus canadensis.....	34
Perithemis domitia	81
Perithemis intensa	79
Perithemis tenera	78
Perognathus amplus	110, 119, 120
Perognathus amplus amplus.....	120
Perognathus amplus cineris.....	119
Perognathus flavescens	110, 117
Perognathus flavescens caryi.....	110
Perognathus flavescens melanotis	110
Perognathus flavus	117, 118
Perognathus flavus goodpasteri	118
Perognathus longimembris.....	114
Perognathus parvus	113
Peromyscus boylii	111
Peromyscus crinitus	111
Peromyscus eremicus	111, 117
Peromyscus eremicus eremicus.....	117
Peromyscus gratus.....	116
Peromyscus leucopus	119
Peromyscus maniculatus	112
Peromyscus melanotis	111
Peromyscus merriami	115
Peromyscus nasutus	116
Peromyscus pectoralis	119
Peromyscus truei	116
Petrel	
Black Storm.....	25
Least Storm-.....	37
Petrochelidon fulva.....	29
Petrochelidon pyrrhonota	30
Peucaea botterii.....	24, 27
Peucaea botterii arizonae	24
Peucaea carpalis	44
Peucaea cassinii	29
Peucedramus taeniatus	40
Pewee	
Eastern Wood-.....	32
Greater	34
Western Wood	48
Phaeostrymon alcestis.....	67
Phaethon aethereus	42
Phaethon lepturus	48
Phainopepla	41
Phainopepla nitens	41
Phalacrocorax auritus	31
Phalacrocorax auritus albociliatus	31
Phalacrocorax brasilianus	39
Phalaenoptilus nuttallii	30
Phalarope	
Red.....	42
Red-necked	42
Wilson's	49
Phalaropus fulicarius.....	42
Phalaropus lobatus	42
Phalaropus tricolor	49
Phasianus colchicus	43
Pheasant, Ring-necked.....	43
Pheucticus chrysopheplus.....	49
Pheucticus ludovicianus.....	43
Pheucticus melanocephalus.....	26
Philotiella speciosa.....	67
Phlibostroma quadrimaculatum	95
Phoebastria immutabilis	36
Phoebe	

Black.....	25	American.....	23
Eastern.....	32	Red-throated.....	43
Say's.....	44	Sprague's.....	45
Phoebis agarithe.....	60	Piranga bidentata.....	32
Phoebis neocypris.....	68	Piranga flava.....	35
Phoebis philea.....	63	Piranga ludoviciana.....	48
Phoebis sennae.....	56	Piranga olivacea.....	44
Phoetaliotes nebrascensis.....	96	Piranga rubra.....	45
Pholisora catullus.....	56	Piruna aea.....	61
Pholisora mejicanus.....	62	Piruna pirus.....	65
Phrynosoma cornutum.....	105	Pitangus sulphuratus.....	34
Phrynosoma goodei.....	104	Pituophis catenifer.....	121, 123
Phrynosoma hernandesi.....	104	Plagopterus argentissimus.....	91
Phrynosoma mcallii.....	104	Platealea ajaja.....	43
Phrynosoma modestum.....	105	Plateau Lizard	
Phrynosoma platyrhinos.....	103, 105	Fence/Prairie.....	104
Phrynosoma platyrhinos calidiarum.....	105	Striped.....	105
Phrynosoma solare.....	105	Plathemis lydia.....	78
Phyciodes batesii.....	55, 68	Plathemis subornata.....	78
Phyciodes batesii anasazi.....	55	Platyfish, Variable.....	91
Phyciodes cocyta.....	63	Plebejus acmon.....	52
Phyciodes graphica.....	69	Plebejus glandon.....	53, 66
Phyciodes mylitta.....	63	Plebejus glandon punctatus.....	53
Phyciodes pallida.....	64	Plebejus glandon rusticus.....	66
Phyciodes phaon.....	64	Plebejus icarioides.....	54
Phyciodes picta.....	64	Plebejus lupini.....	61, 68
Phyciodes picta canace.....	64	Plebejus lupini texanus.....	68
Phyciodes pulchella.....	58	Plebejus melissa.....	62
Phyciodes tharos.....	64	Plebejus saepiolus.....	59
Phyllorhynchus browni.....	125	Plebejus shasta.....	66
Phyllorhynchus decurtatus.....	125	Plegadis chihi.....	48
Pica hudsonia.....	26	Plestiodon.....	104, 106
Picoides arizonae.....	24	Plestiodon callicephalus.....	105
Picoides dorsalis.....	23	Plestiodon multivirgatus.....	104, 106
Picoides pubescens.....	31	Plestiodon multivirgatus epipleurotus.....	106
Picoides scalaris.....	36	Plestiodon obsoletus.....	104
Picoides villosus.....	35	Plestiodon skiltonianus.....	106
Pieris marginalis.....	61	Plover, American Golden.....	23
Pieris rapae.....	55	Plover	
Pig, Feral.....	113	Black-bellied.....	26
Pigeon		Mountain.....	39
Band-tailed.....	25	Semipalmated.....	44
Rock.....	43	Snowy.....	45
Pika, American.....	110	Western Snowy.....	48
Pike, Northern.....	89	Pluvialis dominica.....	23
Pikeminnow, Colorado.....	87	Pluvialis squatarola.....	26
Pimephales promelas.....	87	Poanes melane.....	69
Pinicola enucleator.....	41	Poanes melane vitellina.....	69
Pintail, Northern.....	40	Poanes taxiles.....	68
Pipilo chlorurus.....	35	Podiceps auritus.....	35
Pipilo maculatus.....	45	Podiceps grisegena.....	42
Pipit		Podiceps nigricollis.....	31

Podilymbus podiceps	41	Black-tailed	111
Poecile atricapillus	26	Gunnison's	113
Poecile gambeli	39	Procyon lotor	116
Poecile sclateri	38	Progne subis.....	31, 42
Poecilia latipinna.....	89	Progne subis hesperia	31
Poecilia mexicana	90	Progomphus borealis.....	79
Poecilia reticulata	88	Pronghorn	
Poeciliopsis occidentalis	88, 90, 91	American	110
Poeciliopsis occidentalis occidentalis	88	Chihuahuan	112
Poeciliopsis occidentalis sonoriensis	91	Sonoran	117
Poecilotettix pantherinus	97	Prorocorypha snowi.....	98
Poladryas arachne	53	Proserpinus terlooii.....	73
Poladryas minuta	57	Proserpinus vega.....	74
Polioptila caerulea	27	Protonotaria citrea.....	41
Polioptila melanura.....	26	Psaltiriparus minimus	28
Polioptila nigriceps.....	26	Pseudacris hypochondriaca	15
Polites carus.....	55	Pseudacris maculata	15
Polites draco.....	57	Pseudocopaeodes eunus	53, 58
Polites mystic.....	61	Pseudocopaeodes eunus eunus.....	53
Polites peckius	64	Pseudoleon superbus.....	79
Polites rhesus.....	65	Pseudomyrmecinae	20
Polites sabuleti.....	66	Psiloscops flammeolus.....	33
Polites sonora	67	Psoloessa delicatula	95
Polites themistocles.....	68	Psoloessa texana.....	99
Polygonia faunus.....	59	Ptychocheilus lucius.....	87
Polygonia gracilis	60, 71	Puffinus griseus.....	45
Polygonia gracilis zephyrus	71	Puma, Mountain	115
Polygonia interrogationis.....	65	Puma concolor	115
Polygonia satyrus.....	66	Pumpkinseed	89
Polygonus leo.....	59	Pupfish	
Polythrix		Desert	87
Eight-spotted	57	Quitobaquito	89
Mexican	62	Santa Cruz.....	90
Polythrix mexicana.....	62	Purple Wing, Dingy	57
Polythrix octomaculata.....	57	Pyloodictis olivaris	87
Pomoxis annularis.....	91	Pyrgus albescens.....	70
Pomoxis nigromaculatus.....	86	Pyrgus communis.....	55
Pondhawk		Pyrgus oileus	68
Eastern.....	78	Pyrgus philetas.....	64
Great.....	79	Pyrgus scriptura	67
Western.....	82	Pyrgus xanthus.....	67
Ponerinae.....	20	Pyrisitia dina	57
Pontia beckerii	54	Pyrisitia lisa	61
Pontia occidentalis.....	70	Pyrisitia nise	62
Pontia protodice	55	Pyrisitia proterpia	68
Pontia sisymbrii	55	Pyrocephalus rubinus.....	47
Poecetes gramineus.....	47	Pyrrhuloxia.....	42
Poorwill, Common	30	Quail	
Porcupine, North American	116	Gambel's.....	33
Porphyrio martinicus	41	Montezuma	39
Porzana carolina	45	Scaled	44
Prairie Dog		Queen	65

Quetzal, Eared	32	Twin-spotted	125
Quiscalus mexicanus	34	Western Diamond-backed	126
Quiscalus quiscula	30	Rattus norvegicus	116
Rabbit, Pygmy	117	Rattus rattus	111
Raccoon, Northern	116	Raven	
Racer	124	Chihuahuan	29
Eastern Yellowbelly	123	Common	30
Red	124	Recurvirostra americana	23
Rail		Redhead	42
Black	25	Redstart	
California Black	28	American	23
Clapper	30	Painted	41
Virginia	47	Slate-throated	45
Yuma Clapper	50	Regulus calendula	43
Rallus limicola	47	Regulus satrapa	33
Rallus longirostris	30, 50	Reithrodontomys fulvescens	113
Rallus longirostris yumanensis	50	Reithrodontomys megalotis	119
Rat		Reithrodontomys montanus	116
Arizona Cotton	110	Remartinia luteipennis	79
Campe Verde Cotton	111	Rena humilis	126
Colorado River Cotton	112	Rhinichthys osculus	90
Hispid Cotton	113	Rhinocheilus lecontei	124
House	111	Rhionaeschna californica	77
Merriam's Kangaroo	115	Rhionaeschna dugesi	76
Norway	116	Rhionaeschna multicolor	77
Tawny-bellied Cotton	118	Rhionaeschna psilus	82
Yavapai Cotton	120	Rhynchophanes mccownii	38
Yellow-nosed Cotton	120	Rhynchopsitta pachyrhyncha	46
Yuma Hispid Cotton	120	Richardsonius balteatus	89
Ratsnake		Ridgwayia pinicola	24
Green	123	Ringlet, Common	56
Northern Green	124	Ringtail	117
Rattlesnake		Eastern	78
Arizona Black	122	Serpent	81
Arizona Ridge-nosed	122	Straight-tipped	82
Banded Rock	122	White-belted	83
Black-tailed	123	Yellow-legged	83
Colorado Desert Sidewinder	123	Riparia riparia	25
Desert Massasauga	123	Rissa tridactyla	26
Grand Canyon	123	Roadrunner, Greater	34
Great Basin	123	Robin	
Massasauga	124	American	23
Mohave	124	Rufous-backed	43
Mohave Desert Sidewinder	124	Royal Moth	73
New Mexico Ridge-nosed	124	Rubyspot	
Prairie	124	American	76
Ridge-nosed	124	Canyon	77
Rock	125	Smoky	81
Sidewinder	125	Ruff	43
Sonoran Sidewinder	125	Rynchops niger	25
Speckled	125	Sachem	66
Tiger	125	Saddlebags	

Black 77

Red 81

Sooty..... 81

Striped 82

Sagebrush Lizard

 Common..... 103

 Northern..... 105

Salamander

 Arizona Tiger..... 15

 Sonoran Tiger 16

Salmo trutta..... 87

Salmon

 Coho 87

 Sockeye..... 90

Salpinctes obsoletus 43

Salvadora grahamiae 123

Salvadora hexalepis 122, 126

Salvadora hexalepis deserticola..... 122

Salvelinus fontinalis 87

Sanddragon, Gray 79

Sander vitreus..... 91

Sanderling 44

Sandpiper

 Baird's..... 24

 Least 37

 Pectoral 41

 Semipalmated..... 44

 Sharp-tailed 44

 Solitary..... 45

 Spotted 45

 Stilt 45

 Upland 46

 Western 48

 White-rumped 48

Sandsnake, Variable..... 126

Sapsucker

 Red-breasted 42

 Red-naped 42

 Williamson's 49

 Yellow-bellied 49

Sargo 90

Satyr

 Alamosa..... 52

 Pine..... 64

 Red 65

 Riding's 65

Satyrium behrii 54

Satyrium ilavia 60

Satyrium saepium 59

Satyrium saepium latalinea 59

Satyrium sylvinus 68

Satyrium titus..... 56

Sauromalus ater..... 103, 104, 106

Sauromalus ater (Arizona Pop) 103

Sauromalus ater (Glen Canyon Pop) 104

Sauromalus ater (Western Pop)..... 106

Sayornis nigricans 25

Sayornis phoebe 32

Sayornis saya..... 44

Scallopwing, Mazans..... 61

Scaphiopus couchii..... 15

Scaup

 Greater 34

 Lesser 37

Sceloporus clarkii 103

Sceloporus graciosus..... 103, 105

Sceloporus graciosus graciosus..... 105

Sceloporus jarrovii 106

Sceloporus magister..... 104

Sceloporus slevini 105

Sceloporus undulatus 104

Sceloporus virgatus..... 105

Schizura biedermani 73

Sciurus aberti 110, 114

Sciurus aberti chuscensis 110

Sciurus aberti kaibabensis..... 114

Sciurus arizonensis..... 110

Sciurus nayaritensis 112, 115

Sciurus nayaritensis chiricahuae 112

Scoter

 American 23

 Surf 45

 White-winged 49

Sculpin, Mottled..... 89

See, Peromyscus eremicus..... 117

Seiurus aurocapilla..... 40

Selasphorus calliope 29

Selasphorus platycercus 27

Selasphorus rufus 43

Selasphorus sasin 23

Senticolis triaspis 123, 124

Senticolis triaspis intermedia 124

Setophaga americana 40

Setophaga caerulescens 26

Setophaga castanea 25

Setophaga cerulea 29

Setophaga citrina 35

Setophaga coronata..... 50

Setophaga discolor 41

Setophaga dominica 50

Setophaga fusca..... 26

Setophaga graciae..... 33

Setophaga magnolia 38

Setophaga nigrescens 26

Setophaga occidentalis	35
Setophaga palmarum	41
Setophaga pensylvanica	29
Setophaga petechia.....	49
Setophaga pinus.....	41
Setophaga pitiayumi	46
Setophaga ruticilla	23
Setophaga striata	26
Setophaga tigrina	29
Setophaga townsendi.....	46
Setophaga virens.....	26
Setwing	
Black.....	77
Checkered	78
Mayan	79
Swift	82
Shad, Threadfin	90
Shadowdamsel	
Desert	78
Shearwater, Sooty.....	45
Sheep	
Barbary	111
Bighorn	115
Desert Bighorn	112
Rocky Mountain Bighorn	117
Sheepmoth	
Griffin's	71
Hera	71
Shiner	
Beautiful.....	86
Golden	88
Red	89
Redside	89
Sand	90
Spottail.....	90
Shoveler, Northern.....	40
Shrew	
American Water.....	110
Arizona.....	110
Cockrum's Desert.....	112
Crawford's Desert	112
Dusky	112
Dwarf	112
Merriam's.....	115
Shrike	
Loggerhead	37
Northern	40
Sialia currucoides	39
Sialia mexicana	47
Sialia sialis	24, 32
Sialia sialis fulva.....	24
Sialia sialis sialis.....	32

Side-blotched Lizard	
Common	103
Western	106
Sidewinder	
Colorado Desert.....	123
Mohave Desert	124
Sonoran.....	125
Sigmodon arizonae.....	110, 111, 112, 120
Sigmodon arizonae arizonae	111
Sigmodon arizonae jacksoni	120
Sigmodon arizonae plenus	112
Sigmodon fulviventer	118
Sigmodon hispidus	113, 120
Sigmodon hispidus eremicus.....	120
Sigmodon ochrognathus	120
Silkmoth, Patagonia Eyed	73
Silverspot	
Mountain	63
Silvery Blue.....	66
Siproeta stelenes.....	61
Siskin	
Pine	41
Sistrurus catenatus.....	123, 124
Sistrurus catenatus edwardsii	123
Sitta canadensis.....	42
Sitta carolinensis	48
Sitta pygmaea.....	42
Skimmer	
Black.....	25
Bleached	77
Carmine.....	78
Comanche	78
Eight-spotted	78
Filigree	79
Flame	79
Four-spotted	79
Hoary.....	79
Neon	80
Red Rock	81
Roseate	81
Twelve-spotted	82
Widow.....	83
Skink	
Gilbert's.....	104
Great Plains.....	104
Many-lined	104
Mountain	105
Variable.....	106
Western	106
Western Red-tailed	106
Skipper	
Acacia	52

Alkali	53	Nevada.....	63
Apache.....	53	Nyctelius	63
Araxes.....	53	Nysa Roadside	63
Arizona	54	Ocola.....	63
Arizona Giant	53	Orange-eged Roadside	63
Arizona Powdered	54	Oslar's Roadside	64
Brazilian	55	Pahaska.....	64
Bronze Roadside	55	Peck's.....	64
Brown-banded.....	55	Philetas Checkered	64
Caicus	55	Phylace Roadside.....	64
Cassus Roadside	55	Pittacus.....	65
Ceos	55	Poling's Giant	65
Cestus	55	Potrillo	65
Checkered.....	55	Purple-washed.....	65
Clouded	56	Python	65
Common Branded	56	Rhesus	65
Common Roadside-	56	Sandhill.....	66
Coyote	56	Sheep.....	66
Delaware	57	Short-tailed Arizona.....	66
Deva.....	57	Silver-spotted	66
Dorantes.....	57	Simius Roadside.....	66
Draco	57	Slaty Roadside	67
Dun	57	Small Checkered	67
Elissa Roadside	58	Snow's.....	67
Emorsus.....	58	Sonora	67
Eos Roadside.....	58	Sonoran Banded	67
Erichson's White-.....	58	Southern Checkered	67
Eufala.....	58	Streaky.....	68
Eunus	58	Strecker's Giant	68
Faceted.....	58	Sunrise.....	68
Fawn-spotted	58	Tawny-edged	68
Fiery.....	58	Taxiles.....	68
Gentry's Giant-	59	Texas Powdered	68
Golden-banded.....	59	Texas Roadside	68
Green.....	59	Toltec Roadside-	68
Hammock	59	Tropical Checkered	68
Hermit	60	Tropical Least.....	69
Huachuca Giant	60	Umber.....	69
Juba	60	Uncas	69
Julia's	60	Ursine Giant.....	69
Large Roadside	60	Valeriana.....	69
Large White	60	Viereck's	69
Laviana.....	61	Violet-clouded	69
Least	61	Vitelline.....	69
Lindsey's	61	Western Checkered	70
Long-tailed.....	61	White-patched.....	70
Lunus	61	Wind's.....	70
Maciara.....	61	Woodland	70
Mojave Giant	62	Yavapai Giant	70
Morrison's	62	Yucca Giant-.....	70
Neamathla	63	Yuma.....	70
Neumogen's Giant	63		

Edward's	57	Sorex nanus	112
Garita	59	Sorex palustris	110
Many-spotted	61	Southwest Willow Flycatcher	45
Orange	63	Spadefoot	
Pirus	65	Couch's	15
Southern	67	Great Basin	15
Skunk		Mexican	15
Hog-nosed	114	Plains	16
Hooded	114	Sparrow	
Striped	118	American Tree	24
Western Spotted	119	Arizona Botteri's	24
White-backed Hog-nosed	119	Arizona Grasshopper	24
Sleeper, Spotted	90	Baird's	24
Slider, Pond	129	Bell's	25
Smilisca fodiens	15	Black-chinned	26
Snake		Black-throated	27
Big Bend Patch-nosed	122	Botteri's	27
Chihuahuan Black-headed	123	Brewer's	27
Chihuahuan Hook-nosed	123	Cassin's	29
Eastern Patch-nosed	123	Chihuahua Savannah	29
Glossy	123	Chipping	30
Long-nosed	124	Clay-colored	30
Mexican Hog-nosed	124	Field	32
Organ Pipe Shovel-nosed	124	Five-striped	32
Plains Black-headed	124	Fox	33
Ring-necked	124	Golden-crowned	33
Saddled Leaf-nosed	125	Grasshopper	33
Smith's Black-headed	125	Harris's	35
Sonoran Shovel-nosed	125	House	36
Spotted Leaf-nosed	125	Large-billed Savannah	36
Thornscrub Hook-nosed	125	Lark	36
Tucson Shovel-nosed	125	Le Conte's	36
Western Patch-nosed	126	Lincoln's	37
Western Shovel-nosed	126	Rufous-crowned	44
Snaketail, Arizona	76	Rufous-winged	44
Snipe, Wilson's	49	Savannah	44
Snout, Tropical	69	Song	45
Softshell, Spiny	129	Swamp	46
Soldier	67	Vesper	47
Solitaire, Townsend's	46	Western Grasshopper	47
Sonora semiannulata	126	White-crowned	48
Sonoran Green Toad	16	White-throated	48
Sonoran Pronghorn	117	Yuma Rufous-crowned	50
Sooty Wing, Common	56	Spea bombifrons	16
Sootywing		Spea intermontana	15
Mexican	62	Spea multiplicata	15
Mohave	62	Spermophilus lateralis	113
Saltbush	66	Spermophilus spilosoma	118
Sora	45	Spermophilus tereticaudus	117
Sorex arizonae	110	Spermophilus tridecemlineatus	118, 119
Sorex merriami	115	Spermophilus tridecemlineatus monticola	119
Sorex monticolus	112		

<i>Spermophilus variegatus</i>	117
<i>Speyeria aphrodite</i>	53
<i>Speyeria coronis</i>	56
<i>Speyeria hesperis</i>	63
<i>Speyeria mormonia</i>	54, 62
<i>Speyeria mormonia luski</i>	54
<i>Speyeria nokomis</i>	54, 63
<i>Speyeria nokomis coerulescens</i>	54
<i>Speyeria nokomis nitocris</i>	63
<i>Spharagemon collare</i>	97
<i>Spharagemon equale</i>	97
<i>Sphingicampa raspa</i>	73
Sphinx	
Asella	71
Hartweg's.....	71
Incense Cedar	72
Terloo's	73
Vega.....	74
Weist's	74
<i>Sphinx asella</i>	71
<i>Sphinx libocedrus</i>	72
<i>Sphinx Moth</i>	73
<i>Sphinx smithi</i>	73
<i>Sphyrapicus nuchalis</i>	42
<i>Sphyrapicus ruber</i>	42
<i>Sphyrapicus thyroideus</i>	49
<i>Sphyrapicus varius</i>	49
Spikedace	90
Spiketail	
Apache.....	76
Pacific	80
<i>Spilogale gracilis</i>	119
Spinedace	
Little Colorado	88
Virgin	91
<i>Spinus lawrencei</i>	36
<i>Spinus pinus</i>	41
<i>Spinus psaltria</i>	37
<i>Spinus tristis</i>	23
Spiny Lizard	
Clark's	103
Desert	104
Yarrow's.....	106
<i>Spiza americana</i>	31
<i>Spizella arborea</i>	24
<i>Spizella atrogularis</i>	26
<i>Spizella breweri</i>	27
<i>Spizella pallida</i>	30
<i>Spizella passerina</i>	30
<i>Spizella pusilla</i>	32
Spoonbill, Roseate	43
Spotted Ground Squirrel.....	118
Spreadwing	
California	77
Chalky	78
Emerald	79
Great.....	79
Northern	80
Plateau.....	80
Spotted	81
Squirrel	
Abert's	110
Abert's Chuska	110
Arizona Gray	110
Chiricahua Fox	112
Golden-mantled Ground	113
Harris' Antelope.....	113
Kaibab	114
Mexican Fox.....	115
Mt Graham Red	115
Northern Flying.....	116
Prospect Valley White-tailed Antelope	117
Red.....	117
Rock	117
Round-tailed Ground	117
Thirteen-lined Ground	118
White Mountains Ground	119
White-tailed Antelope	119
<i>Staphylus ceos</i>	55
<i>Staphylus mazans</i>	61
Starling, European.....	32
Starthroat, Plain-capped	41
<i>Stelgidopteryx serripennis</i>	40
<i>Stenopelmatus navajo</i>	97
<i>Stercorarius longicaudus</i>	38
<i>Stercorarius parasiticus</i>	41
<i>Stercorarius pomarinus</i>	41
<i>Sterna forsteri</i>	33
<i>Sterna hirundo</i>	30
<i>Sterna paradisaea</i>	24
<i>Sternula antillarum</i>	37
Stilt, Black-necked.....	26
Stinga morrisoni.....	62
Stoneroller, Mexican.....	88
Stork, Wood	49
<i>Streptopelia decaocto</i>	32
<i>Strix occidentalis</i>	38, 45
<i>Strix occidentalis lucida</i>	38
<i>Strymon bebyrcia</i>	62
<i>Strymon cestri</i>	68
<i>Strymon istapa</i>	61
<i>Strymon melinus</i>	59
Sturgeon, White.....	91

Sturnella magna	32	Polydamus.....	65
Sturnella neglecta	47	Short-tailed Black.....	66
Sturnus vulgaris.....	32	Three-tailed.....	68
Stylurus intricatus	77	Two-tailed	69
Stylurus plagiatu s.....	81	Western Tiger	70
Sucker		Swan	
Bluehead	87	Trumpeter	46
Desert	87	Tundra.....	46
Flannelmouth.....	87	Swift	
Little Colorado	88	Black.....	25
Razorback.....	89	Chimney	30
Rio Grande	89	Vaux's.....	47
Sonora.....	90	White-throated	49
Utah	90	Swordtail, Green	88
Yaqui	91	Sylph	
Zuni Bluehead	91	Slender	73, 81
Sula leucogaster	28	White-tailed	83
Sula nebouxii	27	Sylvilagus audubonii.....	112
Sulphur		Sylvilagus floridanus	113
Alexandra's	53	Sylvilagus nuttallii.....	115, 116, 118
Alfalfa.....	53	Sylvilagus nuttallii grangeri.....	116
Clouded.....	56	Sylvilagus nuttallii pinetis	118
Cloudless.....	56	Symmerista zacualpana.....	73
Dainty.....	56	Sympetrum corruptum.....	82
Large Orange.....	60	Sympetrum danae.....	77
Lyside	61	Sympetrum illotum	78
Orange-barred	63	Sympetrum pallipes	82
Tailed	68	Sympetrum semicinctum	77
White Angled	70	Sympetrum signiferum.....	81
Sunfish		Sympetrum vicinum	76
Green	88	Synapte syra ces.....	58
Redear.....	89	Syrbula admirabilis	94
Sus scrofa	113	Systasea pulverulenta	68
Swallow		Systasea zampa	54
Bank	25	Tachybaptus dominicus.....	37
Barn.....	25	Tachycineta bicolor	46
Cave	29	Tachycineta thalassina	47
Cliff.....	30	Tadarida brasiliensis.....	111
Northern Rough-winged	40	Tamiasciurus hudsonicus	115, 117
Tree.....	46	Tamiasciurus hudsonicus grahamensis ..	115
Violet-green	47	Tanager	
Swallowtail		Flame-colored	32
Anachisiades	53	Hepatic.....	35
Anise	53	Scarlet	44
Baird's	54	Summer.....	45
Black.....	54	Western	48
Broad-banded	55	Tantilla hobartsmithi.....	125
Giant	59	Tantilla nigriceps	124
Indra.....	60	Tantilla wilcoxi.....	123
Old World.....	63	Tattler, Wandering	47
Ornythion.....	64	Taxidea taxus.....	110
Pipevine	64	Teal	

Blue-winged..... 27

Cinnamon 30

Green-winged 35

Telebasis salva 78

Tern

 Arctic 24

 Black 25

 Caspian 29

 Common 30

 Elegant..... 32

 Forster's..... 33

 Gull-billed 35

 Least 37

Terrapene ornata..... 128, 129

Terrapene ornata luteola..... 128

Tetra, Mexican 89

Texola elada..... 57

Thalasseus elegans 32

Thamnophis cyrtopsis 122

Thamnophis elegans 125, 126

Thamnophis elegans vagrans..... 126

Thamnophis eques..... 124

Thamnophis eques megalops 124

Thamnophis marcianus..... 123

Thamnophis rufipunctatus..... 124

Thessia jalapus 60

Thomomys bottae..... 111, 113, 115, 117

Thomomys bottae desertorum..... 117

Thomomys bottae mearnsi..... 115

Thomomys bottae subsimilis 113

Thomomys talpoides 116

Thomomys umbrinus 118

Thomomys umbrinus intermedius..... 118

Thorybes drusius..... 57

Thorybes mexicana..... 62

Thorybes pylades 63

Thrasher

 Bendire's..... 25

 Brown 28

 Crissal 31

 Curve-billed 31

 Le Conte's 37

 Sage 44

Threadsnake, Western..... 126

Thrush

 Aztec..... 24

 Gray-cheeked 34

 Hermit 35

 Swainson's 46

 Varied 47

 Wood..... 49

Thryomanes bewickii 25

Thymallus arcticus 86

Tiaroga cobitis..... 88

Tilapia

 Blue..... 87

 Mozambique..... 89

 Redbelly 89

Tilapia zillii..... 89

Timochares ruftifasciata 55

Titmouse

 Bridled 27

 Juniper 36

Toad

 Arizona..... 15

 Great Plains 15

 Green 15

 Red-spotted 16

 Rocky-Mountain 16

 Sonoran Desert..... 16

 Sonoran Green..... 16

 Southwestern Woodhouse's..... 16

 Western Green 16

 Western Narrow-mouthed 16

 Woodhouse's..... 16

Tomonotus ferruginosus..... 97

Topminnow

 Gila..... 88

 Yaqui 91

Tortoise

 Desert 128

 Mohave Desert 128

 Sonoran Desert..... 129

Tortoise Shell, California 55

Tortoiseshell, Milbert's 62

Towhee

 Abert's 23

 Canyon..... 29

 Green-tailed..... 35

 Spotted 45

Toxostoma bendirei 25

Toxostoma crissale..... 31

Toxostoma curvirostre..... 31

Toxostoma lecontei 37

Toxostoma rufum 28

Trachemys scripta 127, 129

Trachyrhachys kiowa 96

Tramea binotata 81

Tramea calverti 82

Tramea lacerata 77

Tramea onusta 81

Tree Lizard, Ornate 105

Treefrog

 Arizona..... 15

Baja California	15	Uma notata	105
Canyon	15	Uma rufopunctata	106
Lowland Burrowing	15	Uma scoparia	105
Mogollon Rim	15	Underwing	
Trimerotropis arizonensis	96	Benjamin's	71
Trimerotropis pallidipennis	97	Grote's	71
Tringa flavipes	37	Ilia 72	
Tringa incana	47	Jessica	72
Tringa melanoleuca	34	Joined	72
Tringa semipalmata	49	Semirelict	73
Tringa solitaria	45	Sweetheart	73
Troglodytes aedon	36	White	74
Troglodytes hiemalis	49	Urbanus dorantes	57
Troglodytes pacificus	40	Urbanus procne	55
Trogon, Elegant	32	Urbanus proteus	61
Trogon elegans	32	Urocyon cinereoargenteus	112
Tropicbird		Urosaurus graciosus	104
Red-billed	42	Urosaurus ornatus	105
White-tailed	48	Ursus americanus	110
Trout		Ursus arctos	113
Apache	86	Ursus arctos horribilis	113
Brook	87	Uta stansburiana	103, 106
Brown	87	Uta stansburiana elegans	106
Cutthroat	87	Utah Milksnake	125
Gila	88	Vanessa annabella	69
Golden	88	Vanessa atalanta	65
Rainbow	89	Vanessa cardui	64
Turdus migratorius	23	Vanessa virginiensis	53
Turdus rufopalliatus	43	Veery	47
Turkey		Verdin	47
Gould's	33	Vermivora chrysoptera	33
Wild	49	Vermivora cyanoptera	27
Turnstone, Ruddy	43	Viceroy	63, 69
Turtle		Obsolete	63
Arizona Mud	128	Vinesnake, Brown	123
Desert Box	128	Vireo	
Desert Mud	128	Arizona Bell's	24
Ornate Box	129	Bell's	25
Painted	129	Cassin's	29
Snapping	129	Gray	34
Sonoran Mud	129	Hutton's	36
Sonoyta Mud	129	Philadelphia	41
Western Painted	129	Plumbeus	41
Yellow Mud	129	Red-eyed	42
Tyrannulet, Northern Beardless	39	Warbling	47
Tyrannus crassirostris	46	White-eyed	48
Tyrannus forficatus	44	Yellow-green	50
Tyrannus melancholicus	46	Yellow-throated	50
Tyrannus tyrannus	32	Vireo bellii	24, 25
Tyrannus verticalis	47	Vireo bellii arizonae	24
Tyrannus vociferans	29	Vireo cassinii	29
Tyto alba	25	Vireo flavifrons	50

Vireo flavoviridis	50	Orange-crowned	40
Vireo gilvus	47	Palm	41
Vireo griseus	48	Pine	41
Vireo huttoni	36	Prairie	41
Vireo olivaceus	42	Prothonotary	41
Vireo philadelphicus	41	Red-faced	42
Vireo plumbeus	41	Rufous-capped	44
Vireo vicinior	34	Swainson's	46
Vole		Tennessee	46
Arizona Montane	110	Townsend's	46
Hualapai Mexican	114	Virginia's	47
Long-tailed	114	Wilson's	49
Meadow	115	Worm-eating	49
Mogollon	115	Yellow	49
Montane	115	Yellow-rumped	50
Navajo Mexican	116	Yellow-throated	50
Southern Red-backed	118	Warbling Vireo	47
White-bellied Long-tailed	119	Warmouth	91
Vulpes macrotis	114	Waterthrush	
Vulpes vulpes	117	Louisiana	38
Vulture		Northern	40
Black	26	Waxwing	
Turkey	46	Bohemian	27
Wagtail, White	48	Cedar	29
Walleye	91	Weasel	
Warbler		Ermine or Short-tailed	113
Bay-breasted	25	Long-tailed	114
Black-and-white	26	Western Barking Frog	16
Blackburnian	26	Western Green Toad	16
Blackpoll	26	Western Groundsnake	126
Black-throated Blue	26	Western Snowy Plover	48
Black-throated Gray	26	Western Yellow Bat	119
Black-throated Green	26	Whimbrel	48
Blue-winged	27	Whip-poor-will, Eastern	32
Canada	29	Whipsnake	
Cape May	29	Sonoran	125
Cerulean	29	Striped	125
Chestnut-sided	29	Whiptail	
Connecticut	31	Arizona Striped	103
Crescent-crested	31	Chihuahuan Spotted	103
Fan-tailed	32	Common Checkered	103
Golden-winged	33	Desert Grassland	103
Grace's	33	Giant Spotted	104
Hermit	35	Gila Spotted	104
Hooded	35	Little Striped	104
Kentucky	36	New Mexico	105
Lucy's	38	Pai Striped	105
MacGillivray's	38	Plateau Striped	105
Magnolia	38	Redback	105
Mourning	39	Sonoran Spotted	105
Nashville	39	Tiger	105
Olive	40	White	

Becker's.....	54	Bewick's	25
California.....	55	Cactus	28
Checkered	55	Canyon	29
Chiricahua Pine	56	House	36
Great Southern	59	Marsh.....	38
Howarth's Giant	60	Pacific.....	40
Margined	61	Rock	43
Pine	64	Winter	49
Tropical	69	Xanthippus corallipes	98
Western	70	Xanthocephalus xanthocephalus	50
Whitetail		Xantusia arizonae	103
Common	78	Xantusia bezyi	103
Desert	78	Xantusia vigilis.....	104
Wigeon, American.....	24	Xema sabini	44
Willet.....	49	Xenopus laevis.....	15
Windia windi	70	Xiphophorus hellerii	88
Wolf		Xiphophorus variatus	91
Gray	113	Xyrauchen texanus.....	89
Mexican Gray	115	Yellow	
Wolverine.....	119	Barred	54
Wood Nymph		Boisduval's	54
Common	56	Dina	57
Dark.....	57	Little	61
Great Basin.....	59	Mexican.....	62
Mead's	62	Mimosa	62
Woodpecker		Yellowlegs	
Acorn.....	23	Greater.....	34
American Three-toed	23	Lesser	37
Arizona.....	24	Yellowthroat	
Downy.....	31	Common	31
Gila.....	33	Zapus hudsonius.....	114, 116
Hairy.....	35	Zapus hudsonius luteus.....	116
Ladder-backed	36	Zapus princeps	119
Lewis's.....	37	Zenaida asiatica	49
Red-headed.....	42	Zenaida macroura	39
Woodrat		Zephyr	71
Bushy-tailed	111	Zerene cesonia	67
Desert	112	Zestusa dorus	66
Mexican	115	Zizula cyna	56
Southern Plains	118	Zonotrichia albicollis	48
Stephen's	118	Zonotrichia atricapilla.....	33
Western White-throated	119	Zonotrichia leucophrys.....	48
Woundfin	91	Zonotrichia querula	35
Wren			

Notes:

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