

U.S. Fish & Wildlife Service

San Bernardino/ Leslie Canyon

National Wildlife Refuges

Watchable Wildlife List



Welcome to San Bernardino and Leslie Canyon National Wildlife Refuges



This blue goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

San Bernardino National Wildlife Refuge (NWR) and Leslie Canyon NWR are internationally significant sanctuaries established to protect and recover a variety of fish, wildlife, and their habitats. These refuges offer oases within the surrounding Chihuahuan Desert, providing resting, breeding, and year-around habitat for a significant number and diversity of animals. At least 314 bird species have been documented on the refuges, including many nesting species. In addition, 65 mammal, 41 reptile, 11 amphibian, 8 fish, and hundreds of invertebrate species have been documented. San Bernardino NWR and Leslie Canyon NWR provide a critical role in maintaining a sanctuary for several federally-listed threatened and endangered species, and both refuges currently provide a protected land base helping in the recovery of several Río Yaqui species. The refuges lie within the Río Yaqui Basin, a large watershed that drains portions of southeastern Arizona and southwestern New Mexico in the United States, and eastern Sonora and western Chihuahua in Mexico. The San Bernardino Ciénega (marshy wetland) was historically the most extensive wetland in the region, and forms an important migratory link between Mexico's Sierra Madre Occidental and the Rocky Mountains to the north.

The extensive and dependable wetlands in this area historically provided habitat for eight species of fish, nearly one-fourth of the species native to Arizona. A great number of unique reptiles and amphibians inhabit these protected areas including many increasingly rare species. The riparian galleries, dominated by Arizona black walnut and Arizona ash trees in Leslie Canyon, and by Fremont cottonwood trees in the San Bernardino Valley, provide important nesting habitat

for a multitude of birds. The refuges are also valuable resting and feeding areas for migrating birds. Mammals from an expansive desert area utilize the refuges for their water sources. The unique mix of high desert canyons, stream-fed riparian corridors, spring-fed wetlands, and desert uplands also provide for a spectacular diversity of invertebrates, some of which are unknown anywhere else in the United States.

San Bernardino NWR and Leslie Canyon NWRs are two of the few refuges administered by the U.S. Fish and Wildlife Service that were established specifically to protect native fish. The goals of the refuges include maintaining populations of native fish and restoring habitat so that the fish will be able to thrive once again. Protection and restoration of the region's springs, ponds, and streams in both the United States and in Mexico by private landowners, conservation organizations, and government agencies will help ensure that the delicate ecological balance that has been in place for centuries will continue to provide quality habitat for all fish, wildlife, and humans dependent upon the Río Yaqui Basin.



Watching wildlife may be fun for all involved!

Mammals

At least 65 species of mammals have been documented on San Bernardino NWR and Leslie Canyon NWR, and still others may occur here. The rugged mountains which surround the San Bernardino Valley are famous for records of jaguars (*Panthera onca*), and ocelots (*Leopardus pardalis*) which have been recorded southeast and northwest of the refuges. This tremendous species richness is largely due to the area's topographical variation and resulting variety of habitats.

Most of the mammals occurring on the refuges are secretive and nocturnal (active at night) or crepuscular (active at dusk and dawn) and are rarely seen. They utilize a variety of habitats on the refuges including wooded riparian areas, mesquite thickets, rocky bluffs, steep canyon walls, grasslands, creosote uplands, and perennial streams and ponds. With the exception of bats, all mammals on the refuges are essentially year-round residents. The San Bernardino Valley provides an important corridor for many migratory species, especially bats, moving back and forth between the United States and Mexico. In addition some mammals, such as bears, move between upper elevations and lower elevations depending upon the season and the availability of food. Taxonomy follows Reid's 2006 *A Field Guide to Mammals of North America*.



Above, Ord's
Kangaroo Rat
Right, Cockrum's
Shrew

Squirrels*Family Sciuridae*

Spotted Ground Squirrel <i>Spermophilus spilosoma</i>	X	
Rock Squirrel <i>Spermophilus variegatus</i>	X	X
Harris's Antelope Squirrel <i>Ammospermophilus harrisi</i>	X	X

Pocket Gophers*Family Geomyidae*

Botta's Pocket Gopher <i>Thomomys bottae</i>	X	X
Southern Pocket Gopher <i>Thomomys umbrinus</i>		X

Pocket Mice and Kangaroo Rats*Family Heteromyidae*

Bailey's Pocket Mouse <i>Chaetodipus baileyi</i>	X	X
Hispid Pocket Mouse <i>Chaetodipus hispidus</i>	X	X
Desert Pocket Mouse <i>Chaetodipus penicillatus</i>	X	X
Silky Pocket Mouse <i>Perognathus flavus</i>	X	X
Ord's Kangaroo Rat <i>Dipodomys ordii</i>	X	X
Banner-tailed Kangaroo Rat <i>Dipodomys spectabilis</i>	X	X
Merriam's Kangaroo Rat <i>Dipodomys merriami</i>	X	X

Rats and Mice*Family Muridae*

Cactus Mouse <i>Peromyscus eremicus</i>		X
Deer Mouse <i>Peromyscus maniculatus</i>	X	X
White-footed Mouse <i>Peromyscus leucopus</i>	X	X
Brush Mouse <i>Peromyscus boylii</i>		X
Rock Mouse <i>Peromyscus difficilis</i>		X
Northern Grasshopper Mouse <i>Onychomys leucogaster</i>	X	X
Southern Grasshopper Mouse <i>Onychomys torridus</i>	X	X
Western Harvest Mouse <i>Reithrodontomys megalotis</i>	X	X
Fulvous Harvest Mouse <i>Reithrodontomys fulvescens</i>	X	X
Northern Pygmy Mouse <i>Baiomys taylori</i>		X
White-throated Woodrat <i>Neotoma albigula</i>	X	X
Mexican Woodrat <i>Neotoma mexicana</i>	X	X
Hispid Cotton Rat <i>Sigmodon hispidus</i>	X	
Arizona Cotton Rat <i>Sigmodon arizonae</i>	X	X
Tawny-bellied Cotton Rat <i>Sigmodon fulviventer</i>		X
Yellow-nosed Cotton Rat <i>Sigmodon ochrognathus</i>	X	X
House Mouse <i>Mus musculus</i>	X	

	SB	LC
Porcupines		
<i>Family Erethizontidae</i>		
Porcupine <i>Erethizon dorsatum</i>	X	X
Rabbits and Hares		
<i>Family Leporidae</i>		
Desert Cottontail <i>Sylvilagus audubonii</i>	X	X
Black-tailed Jackrabbit <i>Lepus californicus</i>	X	X
Shrews		
<i>Family Soricidae</i>		
Desert Shrew <i>Notiosorex crawfordi</i>	X	X
Cockrum's Shrew <i>Notiosorex cockrumi</i>		X
Leaf-nose Bats		
<i>Family Phyllostomidae</i>		
Lesser Long-nosed Bat <i>Leptonycteris curasoae yerbabuena</i>	X	X
Plain-nosed Bats		
<i>Family Vespertilionidae</i>		
California Myotis <i>Myotis californicus</i>	X	X
Cave Myotis <i>Myotis velifer</i>	X	X
Long-legged Myotis <i>Myotis volans</i>	X	
Southwestern Myotis <i>Myotis auriculus</i>	X	
Fringed Myotis <i>Myotis thysanodes</i>	X	X
Western Pipistrelle <i>Pipistrellus hesperus</i>	X	X
Big Brown Bat <i>Eptesicus fuscus</i>	X	X
Western Yellow Bat <i>Lasiurus xanthinus</i>	X	
Western Red Bat <i>Lasiurus blossevillii</i>	X	X
Hoary Bat <i>Lasiurus cinereus</i>	X	X
Townsend's Big-eared Bat <i>Plecotus townsendii</i>	X	
Pallid Bat <i>Antrozous pallidus</i>	X	
Free-tailed Bats		
<i>Family Molossidae</i>		
Brazilian Free-tailed Bat <i>Tadarida brasiliensis</i>	X	
Big Free-tailed Bat <i>Nyctinomops macrotis</i>	X	
Cats		
<i>Family Felidae</i>		
Mountain Lion <i>Puma concolor</i>	X	X
Bobcat <i>Lynx rufus</i>	X	X
Coyotes and Foxes		
<i>Family Canidae</i>		
Coyote <i>Canis latrans</i>	X	X
Gray Fox <i>Urocyon cinereoargenteus</i>	X	X

Bears*Family Ursidae*Black Bear *Ursus americanus* X X**Raccoon and Ringtail***Family Procyonidae*Ringtail *Bassariscus astutus* X XNorthern Raccoon *Procyon lotor* X XWhite-nosed Coati *Nasua narica* X X**Skunks***Family Mephitidae*Western Spotted Skunk *Spilogale gracilis* X XStriped Skunk *Mephitis mephitis* X XHooded Skunk *Mephitis macroura* XWhite-backed Hog-nosed Skunk *Conepatus leuconotus*
X X**Badger***Family Mustelidae*American Badger *Taxidea taxus* X X**Javelina***Family Tayassuidae*Collared Peccary *Pecari tajacu* X X**Deer***Family Cervidae*White-tailed Deer *Odocoileus virginianus* X XMule Deer *Odocoileus hemionus* X X*Lesser Long-nosed Bat*

Birds

Welcome to Birding at San Bernardino and Leslie Canyon National Wildlife Refuges

The Chihuahuan Desert is primarily a shrub dominated desert lying mostly above an elevation of 3,500 feet. In Arizona, this desert is represented by small and sometimes isolated areas in Cochise County, including both refuges. Here, desert and grassland vegetation are found in complex mixtures that are often determined by changes in soil conditions. The invasion by desert scrub, now dominating much of San Bernardino NWR, appears to be a more recent response to environmental change. Cactus species are poorly represented compared to other parts of Arizona. Each refuge is bisected by deciduous riparian woodlands occurring along perennial or seasonal streams. This conspicuous wetland/gallery forest supports a unique community of plants and animals which would not otherwise be represented in the desert. This portion of Arizona is also characterized by a bi-seasonal climate pattern represented by winter precipitation, spring drought, summer precipitation, and autumn drought, with a total annual precipitation averaging 14 inches.

Birds are well adapted to these patterns, and their activity continues year-round on the refuges, offering outstanding opportunities for bird watchers. The refuges' riparian corridors serve as hot spots for migrating warblers and flycatchers, especially during April and September. During summer, they are important nesting areas for gray hawks, Bell's vireos, and yellow-billed cuckoos. July rains make the desert grassland come alive with nesting sparrows, and the wetland margins attract various flycatchers, buntings, and phainopeplas. Fall brings Swainson's hawk and passerine migrations, followed by winter concentrations of various raptors and sparrows. Because of their proximity to the highlands of northern Mexico, both refuges occasionally attract rare species from south of the border.

Seasonal records are necessarily somewhat arbitrary. Birds absent in March, for instance, may be quite numerous in May. Notations for abundance tend to be weighted toward a species' peak presence. Variation from year to year is to be expected in phenomena such as migration route and duration, and the timing of breeding and renesting. Breeding is indicated in the column for summer, while recognizing that most species start in spring, and a few extend into early fall.

**Bird List
Introduction and
Key**

This list contains a total of 314 species that have been recorded on the refuges through July 2009. The list includes bird records for the John H. Slaughter Ranch—a National Historic Landmark that abuts the southwestern corner of San Bernardino NWR. Checklist order follows the 7th edition of the AOU Checklist (1998) and the 48th Supplement to the AOU Checklist (July 2007). Most birds are migratory. Seasonal occurrence is coded as follows:

Seasons

Spring	March–May
Summer	June–July
Fall	August–November
Winter	December–February
*	Nests locally

Abundance

- A** Abundant; a common species that is very numerous.
- C** Common; usually visible in suitable habitat; should not be missed during appropriate season.
- U** Uncommon; present, but never in large numbers; not seen on every visit during a season.
- O** Occasional; includes migrants that are seen only a few times per season; for permanent, summer, and winter residents, the lowest level of abundance; also includes those species which do not occur each year but in some years may be fairly common.
- R** Rare; species seldom on the refuge.
- X** Accidental; a species outside of its normal geographic range that is not to be expected.

For every species, notations occurring to the left of the slash mark / refer to records from San Bernardino NWR, while those to the right pertain to records from Leslie Canyon NWR.

	Sp	S	F	W
Ducks, Geese, and Swans				
Black-bellied Whistling-Duck	R/	R/		
Fulvous Whistling-Duck		X/		
Greater White-fronted Goose			R/	R/
Snow Goose			R/	R/
Canada Goose			R/	R/
Tundra Swan			X/	X/
Wood Duck			R/	R/
Gadwall	U/R		U/	C/
Eurasian Wigeon	X/			
American Wigeon	C/		C/	C/
Mallard (Typical green-headed)			O/	O/
Mallard ("Mexican Duck")	U/O	U*/O*	U/O	U/O
Blue-winged Teal	O/	R/	O/	R/
Cinnamon Teal	U/	R/	U/	O/
Northern Shoveler	U/		U/	U/
Northern Pintail		R/	R/	R/
Green-winged Teal	O/R		O/	O/
Canvasback	O/		O/	O/
Redhead	O/		O/	O/
Ring-necked Duck	C/	R/	C/	C/
Lesser Scaup	O/		O/	O/
Bufflehead	R/	R/		R/
Common Goldeneye				R/
Hooded Merganser	R/		R/	R/
Common Merganser			R/	R/
Ruddy Duck	O/	R*/	O/	U/
Turkeys				
Wild Turkey	O/	O*/	O/	O/
New World Quail				
Scaled Quail	O/U	O*/U	O/U	O/U
Gambel's Quail	A/C	A*/C*	A/C	A/C
Montezuma Quail	O/R	O*/O*	O/	O/
Loons				
Common Loon			X/	
Grebes				
Pied-billed Grebe	U/	U*/	U/	U/
Eared Grebe		R/	R/	
Western Grebe		R/	R/	
Pelicans				
Brown Pelican		X/	X/	X/
Cormorants				
Neotropic Cormorant	R/			R/
Double-crested Cormorant		R/	R/	R/

	Sp	S	F	W
Hérons, Bitterns, and Allies				
American Bittern			R/	R/
Least Bittern		R/	R/	
Great Blue Heron	U/R	O/	U/R	U/
Great Egret	O/	R/	O/	R/
Snowy Egret	R/		R/	R/
Little Blue Heron	X/		X/	
Cattle Egret	R/	R/	R/	R/
Green Heron	U/	O*/	U/	R/
Black-crowned Night-Heron	R/R		R/	R/
Yellow-crowned Night-Heron		X/	X/	
Ibises				
White Ibis	X/			
White-faced Ibis	O/	O/	O/	R/
Storks				
Wood Stork			X/	
New World Vultures				
Black Vulture	O/	O/	O/	R/
Turkey Vulture	C/U	C/C	A/U	
Hawks, Kites, and Eagles				
Osprey	R/		R/	
White-tailed Kite	R/	R*/	R/	R/
Bald Eagle				R/
Northern Harrier	C/C	O*/O	C/C	C/C
Sharp-shinned Hawk	U/O		U/O	U/U
Cooper's Hawk	U/U	O*/U*	U/U	U/U
Northern Goshawk	/R			
Common Black-Hawk	R/	R/R	R/	
Harris's Hawk	R/	R/	R/	R/
Broad-winged Hawk	X/			
Gray Hawk	U/R	U*/R	U/R	R/
Swainson's Hawk	U/O	U*/O*	U/O	
Zone-tailed Hawk	R/	/R	R/	
Red-tailed Hawk	C/C	C*/C*	C/C	C/C
Ferruginous Hawk	R/		R/	R/
Rough-legged Hawk				R/
Golden Eagle	O/	O/	O/R	O/R
Caracaras and Falcons				
Crested Caracara			R/	R/
American Kestrel	O/O	O*/O*	O/O	O/O
Merlin	O/R		O/	O/
Peregrine Falcon	O/	R/	O/	
Prairie Falcon	O/O	O/	O/	O/
Rails, Gallinules, and Coots				
Virginia Rail	U/U	O*/	U/	U/
Sora	U/	R/	U/	U/
Common Moorhen	R/	R*/	R/	R/
American Coot	C/	U*/	C/	C/
Cranes				
Sandhill Crane			R/R	R/

	Sp	S	F	W
Plovers				
Killdeer	U/R	U*/R	U/	U/
Stilts and Avocets				
Black-necked Stilt	R/		R/	
American Avocet	R/		R/	
Sandpipers, Phalaropes, and Allies				
Spotted Sandpiper	U/R		O/	
Solitary Sandpiper	R/		R/	
Greater Yellowlegs	R/		R/	
Willet	R/		R/	
Lesser Yellowlegs	R/		R/	
Long-billed Curlew	R/		R/	
Semipalmated Sandpiper	X/		X/	
Western Sandpiper	R/		R/	
Least Sandpiper	R/		R/	
Baird's Sandpiper	R/		R/	
Long-billed Dowitcher	R/		R/	
Wilson's Snipe	O/R		O/	O/
Wilson's Phalarope	R/			
Gulls and Terns				
Bonaparte's Gull	R/			
Ring-billed Gull	R/		R/	
Black Tern	R/		R/	
Forster's Tern	R/		R/	
Pigeons and Doves				
Band-tailed Pigeon	R/R	R/R	/R	
Eurasian Collared-Dove	O/	O/R	O/	
White-winged Dove	C/C	C*/C*	U/C	
Mourning Dove	A/O	A*/U*	A/O	C/O
Inca Dove	O/	O/	O/	O/
Common Ground-Dove	C/O	C*/O*	U/O	O/
Ruddy Ground-Dove	R/		R/	R/
Cuckoos, Roadrunners, and Allies				
Yellow-billed Cuckoo	R/	U*/O	R/	
Greater Roadrunner	C/U	C*/U*	C/U	C/U
Barn Owls				
Barn Owl	C/	C*/	C/	C/
Typical Owls				
Western Screech Owl	C/	C*/	C/O	C/
Great Horned Owl	C/U	C*/U*	C/U	C/U
Elf Owl	U/R	R/R	U/R	
Burrowing Owl	R/R	R/	R/	R/
Short-eared Owl	/R			R/
Long-eared Owl	O/	O*/	O/	O/
Goatsuckers				
Lesser Nighthawk	C/C	C*/C	C/C	
Common Nighthawk	/C	/C		
Common Poorwill	C/C	C*/C*	C/C	
Swifts				
Vaux's Swift	R/			
White-throated Swift	O/U	O/U	O/U	O/R

	Sp	S	F	W
Hummingbirds				
Broad-billed Hummingbird	O/	O*/U*	/R	
Violet-crowned Hummingbird		/O	/O	R/
Blue-throated Hummingbird	R/	/R		R/
Magnificent Hummingbird	R/		R/R	
Lucifer Hummingbird		/R		
Black-chinned Hummingbird	C/U	C*/C*	U/U	
Anna's Hummingbird			R/	
Costa's Hummingbird	R/O	R/R	/R	
Calliope Hummingbird	/R	/R	R/R	
Broad-tailed Hummingbird	U/C	/R	R/R	
Rufous Hummingbird	R/	/O	U/U	
Allen's Hummingbird			/R	
Trogons				
Elegant Trogon	/R			
Kingfishers				
Belted Kingfisher	O/R		O/R	O/
Green Kingfisher	R/	R/R	R/	R/R
Woodpeckers and Allies				
Lewis's Woodpecker			R/	
Gila Woodpecker	C/C	C*/U*	C/C	C/C
Red-naped Sapsucker	O/		U/O	O/R
Ladder-backed Woodpecker	C/C	C*/C*	C/C	C/C
Northern Flicker	C/C		C/C	C/C
Gilded Flicker		R/		
Tyrant Flycatchers				
Northern Beardless-Tyrannulet	C/	C*/	U/	
Olive-sided Flycatcher	U/O	/R	O/O	
Greater Pewee	R/		/R	
Western Wood-Pewee	C/U	/U*	C/U	
Willow Flycatcher	R/	/O	U/R	
Hammond's Flycatcher	U/O		U/O	R/R
Gray Flycatcher	U/U		U/U	U/
Dusky Flycatcher	O/O		O/O	R/R
Pacific-slope Flycatcher	O/	/R	/U	
Cordilleran Flycatcher	/U	/U	/U	
Black Phoebe	C/C	U*/C*	C/C	C/C
Eastern Phoebe	R/		R/	R/
Say's Phoebe	C/U	U*/U*	C/U	C/U
Vermilion Flycatcher	A/O	A*/O*	C/O	O/O
Dusky-capped Flycatcher	/R	R/	/R	
Ash-throated Flycatcher	C/C	C*/C*	U/C	R/
Brown-crested Flycatcher	C/U	C*/C*	O/U	
Sulphur-bellied Flycatcher		R/R		
Tropical Kingbird	O/	O*/	O/	
Cassin's Kingbird	C/C	C*/C*	A/C	
Thick-billed Kingbird			R/	
Western Kingbird	C/O	C*/O	A/O	
Rose-throated Becard		R/		
Shrikes				
Loggerhead Shrike	U/U	O*/U	C/U	C/U

	Sp	S	F	W
Vireos				
Bell's Vireo	A/C	A*/C*	U/U	
Yellow-throated Vireo	X/			
Plumbeous Vireo	O/R	/O	O/R	R/
Cassin's Vireo	U/R		O/O	
Hutton's Vireo	R/R	/R	R/R	/R
Warbling Vireo	C/O	/O	C/O	
Crows and Jays				
Steller's Jay	/R		R/R	
Western Scrub Jay	/O	/R	R/R	R/R
Mexican Jay		/R	/R	
Pinyon Jay			/R	
Chihuahuan Raven	O/C	O*/C*	O/C	O/C
Common Raven	U/O	U*/O	U/	U/R
Larks				
Horned Lark			O/	O/
Swallows				
Purple Martin	R/	R/	R/	
Tree Swallow	U/		U/	
Violet-green Swallow	C/	O/	U/R	
Northern Rough-winged Swallow	C/	U*/	O/	
Bank Swallow	O/		O/	
Cliff Swallow	O/	R/	O/	
Barn Swallow	U/R	U*/O	C/O	
Titmice				
Bridled Titmouse	/O		R/R	R/R
Verdins				
Verdin	C/C	C*/C*	C/C	C/C
Bushtits				
Bushtit	/U	/U	/U	R/
Nuthatches				
Red-breasted Nuthatch			R/	
White-breasted Nuthatch	R/		/R	R/R
Creepers				
Brown Creeper	R/			
Wrens				
Cactus Wren	U/U	U*/U*	U/U	U/U
Rock Wren	O/C	O*/C*	U/C	O/C
Canyon Wren	/C	/C*	/C	/C
Bewick's Wren	A/C	A*/C*	A/C	C/C
House Wren	U/O		U/O	O/O
Marsh Wren	U/R	U/	U/	U/
Kinglets				
Ruby-crowned Kinglet	C/C		C/C	U/C
Gnatcatchers				
Blue-gray Gnatcatcher	O/	R/R	O/	
Black-tailed Gnatcatcher	U/U	U*/U	U/U	U/U
Black-capped Gnatcatcher	/O	/O*	/O	/O

	Sp	S	F	W
Thrushes				
Eastern Bluebird			R/R	R/
Western Bluebird	/O		/O	R/
Mountain Bluebird				R/
Townsend's Solitaire	/R		/O	
Swainson's Thrush	R/O		/O	
Hermit Thrush	O/U		O/U	O/O
American Robin	R/O		R/O	R/O
Mockingbirds and Thrashers				
Gray Catbird	R/	/R	R/	
Northern Mockingbird	C/C	C*/C*	U/C	O/C
Blue Mockingbird	X/			X/
Sage Thrasher			R/R	R/
Brown Thrasher	R/		R/	R/
Bendire's Thrasher		R/	R/	R/
Curve-billed Thrasher	O/O	O*/O	O/O	O/O
Crissal Thrasher	C/	C*/O	C/O	C/O
Starlings				
European Starling	O/R	O*/	O/	O/
Pipits				
American Pipit	U/		U/	U/
Sprague's Pipit				R/
Waxwings				
Cedar Waxwing	O/O		O/O	O/O
Silky Flycatchers				
Phainopepla	C/O	U*/O	O/U	O/U
Wood-Warblers				
Tennessee Warbler	X/			
Orange-crowned Warbler	C/O	/O	C/C	R/
Nashville Warbler			O/C	
Virginia's Warbler	O/		R/R	
Lucy's Warbler	A/U	A*/U*	U/U	
Northern Parula	X/	X/	X/	
Crescent-chested Warbler	X/			
Yellow Warbler	A/U	A*/U*	C/U	
Black-throated Blue Warbler			X/	
Yellow-rumped Warbler	A/C	/O	A/C	U/U
Black-throated Gray Warbler	U/R	R/R	U/U	
Townsend's Warbler	R/R	/R	U/U	
Hermit Warbler	R/		R/O	
Blackburnian Warbler			X/	
Grace's Warbler	R/		R/R	
Palm Warbler	X/			
Black-and-white Warbler			X/	
American Redstart	R/	/R	R/	
Prothonotary Warbler	X/		X/	
Northern Waterthrush	R/R	/R	R/	
Louisiana Waterthrush			/X	
Kentucky Warbler			X/	
MacGillivray's Warbler	U/U	R/R	C/U	
Common Yellowthroat	C/R	C*/O*	C/U	O/

	Sp	S	F	W
Hooded Warbler	X/	X/		
Wilson's Warbler	A/C		C/U	
Red-faced Warbler	X/			
Painted Redstart	R/R	R/	R/O	
Yellow-breasted Chat	C/C	A*/C*	C/C	
Tanagers				
Hepatic Tanager	R/O	/R	R/R	
Summer Tanager	C/U	C*/C*	C/U	
Western Tanager	A/U	O/O	U/U	
Sparrows				
Green-tailed Towhee	C/U	/R	C/	C/
Spotted Towhee	O/O		O/O	O/U
Canyon Towhee	U/C	U*/C*	U/C	U/C
Abert's Towhee	/R			
Rufous-winged Sparrow	R/	/R		R/
Cassin's Sparrow	U/	C*/R	C/	O/
Botteri's Sparrow	O/R	U*/R	O/	
Rufous-crowned Sparrow	O/O	O*/O*	O/O	O/O
Chipping Sparrow	A/U	/R	A/U	C/U
Clay-colored Sparrow	R/		O/	R/
Brewer's Sparrow	A/O		A/O	A/O
Black-chinned Sparrow	/U	/R	/U	/U
Vesper Sparrow	C/		C/	A/U
Lark Sparrow	C/U	O*/O	C/O	R/
Black-throated Sparrow	C/C	C*/C*	C/C	C/C
Sage Sparrow	R/R		R/	R/
Lark Bunting	C/U		C/	U/
Savannah Sparrow	C/		C/	C/
Grasshopper Sparrow	O/		O/	O/
Fox Sparrow	/R			
Song Sparrow	C/O	U*/	C/O	C/O
Lincoln's Sparrow	C/U		C/U	C/
Swamp Sparrow	O/		O/	O/
White-throated Sparrow	O/		O/	O/
Harris's Sparrow	R/			
White-crowned Sparrow	A/U		A/U	A/U
Golden-crowned Sparrow	R/		R/	R/
Dark-eyed Junco	O/C		O/U	R/U
Chestnut-collared Longspur			R/	R/
Cardinals, Grosbeaks, and Buntings				
Northern Cardinal	C/C	C*/C*	C/C	C/C
Pyrrhuloxia	U/O	O/O	U/O	U/O
Yellow Grosbeak	X/	X/		
Rose-breasted Grosbeak	R/R		R/	
Black-headed Grosbeak	C/U	O/U*	C/O	
Blue Grosbeak	C/U	A*/C*	A/U	
Lazuli Bunting	C/O	O/O*	C/O	R/
Indigo Bunting	O/C	R/O*	R/O	R/
Varied Bunting	O/O	U*/O*	R/O	
Painted Bunting		/R	O/R	
Dickcissel	R/		R/	

	Sp	S	F	W
Blackbirds				
Bobolink	R/		R/	
Red-winged Blackbird	C/R	C*/	C/	C/
Eastern Meadowlark	O/O	O*/	O/	O/
Western Meadowlark	O/		O/	O/
Yellow-headed Blackbird	U/	O/	C/	O/
Brewer's Blackbird	U/		U/	O/
Great-tailed Grackle	O/	O*/	O/	R/
Bronzed Cowbird	O/	O*/O		R/
Brown-headed Cowbird	C/C	C*/C*	U/C	R/U
Hooded Oriole	O/O	O*/O*	O/O	
Bullock's Oriole	C/U	U*/U*	U/U	
Baltimore Oriole	X/			
Scott's Oriole	O/R	O/O	O/O	
Finches				
Cassin's Finch			R/	R/
House Finch	A/C	A*/C*	U/C	C/C
Red Crossbill			R/	
Pine Siskin	U/U	O/O	U/U	U/U
Lesser Goldfinch	U/	O*/C*	C/U	C/
Lawrence's Goldfinch	R/R		R/	R/
American Goldfinch	R/		R/R	O/
Old World Sparrows				
House Sparrow	O/	O*/	O/	O/

Below, Cooper's Hawk



*Below, Northern
Beardless Tyrannulet*



*Above, Western Tanager
Right, Varied Bunting*

Reptiles and Amphibians

A total of 52 species of reptiles and amphibians, including 1 species of salamander, 10 species of toads and frogs, 2 species of turtles, 16 species of lizards, and 23 species of snakes have been documented on the refuges. Several additional species have been found in the general area, and may also occur on one or both of the refuges.

The introduction of non-native wildlife into environments where they did not naturally occur typically has devastating effects on native populations. This is the case with the bullfrog, which was first introduced into the San Bernardino Valley in about 1949. Bullfrogs compete indirectly with native fish and wildlife for many of the same foods, and have also been documented to feed directly upon mud turtles, leopard frogs, garter snakes, and many other species. Populations of the Chiricahua leopard frog, lowland leopard frog, and Mexican garter snake have all experienced severe decline or have even been eliminated on San Bernardino NWR as a direct result of bullfrog depredation. Taxonomy follows Brennan and Holycross's 2006 *A Field Guide to Amphibians and Reptiles in Arizona*.



Texas Horned Lizard



Sonoran Coralsnake

	SB	LC
Salamanders		
<i>Family Ambystomatidae</i>		
Tiger Salamander <i>Ambystoma tigrinum</i>		X
Spadefoot Toads		
<i>Family Pelobatidae</i>		
Couch's Spadefoot <i>Scaphiopus couchii</i>	X	X
Mexican Spadefoot <i>Spea multiplicata</i>	X	X
Toads		
<i>Family Bufonidae</i>		
Sonoran Desert Toad <i>Bufo alvarius</i>	X	X
Great Plains Toad <i>Bufo cognatus</i>	X	X
Green Toad <i>Bufo debilis</i>	X	X
Red-spotted Toad <i>Bufo punctatus</i>	X	X
Woodhouse's Toad <i>Bufo woodhousii</i>	X	
True Frogs		
<i>Family Ranidae</i>		
Chiricahua Leopard Frog <i>Rana chiricahuensis</i>	X	X
Lowland Leopard Frog <i>Rana yavapaiensis</i>	X	
American Bullfrog <i>Rana catesbeiana</i>	X	
Box Turtles		
<i>Family Emydidae</i>		
Ornate Box Turtle <i>Terrapene ornata</i>	X	X
Mud Turtles		
<i>Family Kinosternidae</i>		
Sonora Mud Turtle <i>Kinosternon sonoriense</i>	X	
Beaded Lizards		
<i>Family Helodermatidae</i>		
Gila Monster <i>Heloderma suspectum</i>	X	X
Whiptail Lizards		
<i>Family Teiidae</i>		
Desert Grassland Whiptail <i>Aspidoscelis uniparens</i>	X	X
Sonoran Spotted Whiptail <i>Aspidoscelis sonorae</i>		X
Alligator Lizards		
<i>Family Anguidae</i>		
Madrean Alligator Lizard <i>Elgaria kingii</i>	X	X
Collared and Leopard Lizards		
<i>Family Crotaphytidae</i>		
Eastern Collared Lizard <i>Crotaphytus collaris</i>	X	X
Long-nosed Leopard Lizard <i>Gambelia wislizenii</i>	X	X

Iguanid Lizards

Family Phrynosomatidae

Common Lesser Earless Lizard <i>Holbrookia maculata</i>	X	X
Greater Earless Lizard <i>Cophosaurus texanus</i>		X
Texas Horned Lizard <i>Phrynosoma cornutum</i>	X	X
Greater Short-horned Lizard <i>Phrynosoma hernandesi</i>		X
Round-tailed Horned Lizard <i>Phrynosoma modestum</i>		X
Regal Horned Lizard <i>Phrynosoma solare</i>	X	
Clark's Spiny Lizard <i>Sceloporus clarkii</i>	X	X
Southwestern Fence Lizard <i>Sceloporus cowlesi</i>	X	
Ornate Tree Lizard <i>Urosaurus ornatus</i>	X	X

Skinks

Family Scincidae

Great Plains Skink <i>Eumeces obsoletus</i>	X	X
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Blind Snakes

Family Leptotyphlopidae

New Mexico Threadsnake <i>Leptotyphlops dissectus</i>		X
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Colubrid Snakes

Family Colubridae

Groundsnake <i>Sonora semiannulata</i>	X	
Nightsnake <i>Hypsiglena torquata</i>	X	X
Ring-necked Snake <i>Diadophis punctatus</i>	X	X
Common Kingsnake <i>Lampropeltis getula</i>	X	
Coachwhip <i>Masticophis flagellum</i>	X	X
Sonoran Whipsnake <i>Masticophis bilineatus</i>		X
Western Patch-nosed Snake <i>Salvadora hexalepis</i>	X	X
Gophersnake <i>Pituophis catenifer</i>	X	X
Glossy Snake <i>Arizona elegans</i>	X	
Long-nosed Snake <i>Rhinocheilus lecontei</i>	X	
Smith's Black-headed Snake <i>Tantilla hobartsmithi</i>	X	X
Yaqui Black-headed Snake <i>Tantilla yaquia</i>		X
Mexican Gartersnake <i>Thamnophis eques</i>	X	
Checkered Gartersnake <i>Thamnophis marcianus</i>	X	
Black-necked Gartersnake <i>Thamnophis cyrtopsis</i>		X
Green Ratsnake <i>Senticolis triaspis</i>		X
Western Hog-nosed Snake <i>Heterodon nasicus</i>	X	X
Western Lyresnake <i>Trimorphodon biscutatus</i>		X

Coral Snakes

Family Elaphidae

Sonoran Coralsnake <i>Micruroides euryxanthus</i>	X	X
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Rattlesnakes

Family Viperidae

Western Diamond-backed Rattlesnake <i>Crotalus atrox</i>	X	X
Mohave Rattlesnake <i>Crotalus scutulatus</i>	X	X
Black-tailed Rattlesnake <i>Crotalus molossus</i>		X

Fish

Although fish are a relatively small minority of the total biodiversity of arid lands, they comprise an important sentinel group for the entire ecosystem. Their decline is a sensitive measure of significant environmental changes. San Bernardino NWR once was historic habitat for eight native fishes, representing 22% of the entire freshwater fish species in Arizona and 47% of the entire freshwater fish species of the Río Yaqui in Mexico.

The refuges are on the northern margin of the Río Yaqui Basin, which begins as the Río Papigochic in Chihuahua, receives water from the Río de Bavispe in Sonora, and flows south into the Sea of Cortez near Ciudad Obregon. The vast majority of the watershed is in Mexico, with only about 2% draining from the United States. The extensive wetlands here were crucial to fish survival, but water development and pumping of the underground aquifer ultimately led to severe habitat changes and the eventual local extinction of many species. In addition, the introduction and spread of non-native species such as the Western mosquitofish and the Asian tapeworm continue to threaten the existence of native fish populations.

The Yaqui sucker and Mexican round-tailed chub are currently extirpated from the refuges, but still exist in tributaries of the San Bernardino River in Mexico. The Yaqui chub and Yaqui topminnow are federally listed as endangered, while the Yaqui catfish and beautiful shiner are listed as threatened. All aquatic habitats on San Bernardino NWR are designated as critical habitat for the shiner, chub, and catfish, and the U.S. Fish and Wildlife Service requires secure populations in Mexico before down-listing or de-listing can be considered for these species in the United States. Fish recovery actions include stabilization of existing populations, establishment of self-sustaining populations, and extensive restoration of wetland habitat in both the United States and in Mexico.

E = Once present on the refuge but currently extirpated.

	SB	LC
Minnnows		
<i>Family Cyprinidae</i>		
Mexican Roundtail Chub <i>Gila minacea</i>	E	
Yaqui Chub <i>Gila purpurea</i>	X	X
Mexican Longfin Dace <i>Agosia</i> sp. nov.	X	X
Beautiful Shiner <i>Cyprinella formosa</i>	X	
Mexican Stoneroller <i>Campostoma ornatum</i>	X	
Suckers		
<i>Family Catostomidae</i>		
Yaqui Sucker <i>Catostomus bernardini</i>	E	
Catfishes		
<i>Family Ictaluridae</i>		
Yaqui Catfish <i>Ictalurus pricei</i>	X	
Topminnows		
<i>Family Poeciliidae</i>		
Yaqui Topminnow <i>Poeciliopsis occidentalis sonoriensis</i>	X	X

*Mexican
Stoneroller*



Beautiful Shiner

Yaqui Catfish



Butterflies

Butterflies are widely recognized by everyone, and butterfly watching has developed into a popular hobby. Encouraged by the availability of excellent field guides, close-focus binoculars, and even books that describe where to search for certain species, butterflies have become watchable wildlife, and butterfly watching is now supported by regional societies that offer activities such as informative programs, field trips, and annual counts.

Southeastern Arizona offers the naturalist one of the largest butterfly faunas in the United States, due to its proximity to Mexico, numerous habitats, diverse plant life, and mild climate. Of particular importance are the summer rains or “monsoons” that trigger explosive plant growth and a wealth of associated butterflies. During the monsoon season, expect to see many tropical species that are here at the northern limits of their ranges. In a tiny fraction of the region; the eight square miles that comprise San Bernardino and Leslie Canyon NWRs; over 130 butterfly species have been observed. On all but the coldest days of the year, at least a few butterflies will be on the wing. All plants and wildlife on the refuges, including butterflies, are protected from collecting.

*Below, Two-tailed Swallowtail
Right, Great Purple Hairstreak*



	SB	LC
Skippers		
<i>Family Hesperidae – Skippers</i>		
Dull Firetip <i>Apyrrothrix araxes</i>		X
Hammock Skipper <i>Polygonus leo</i>		X
Silver-spotted Skipper <i>Epargyreus clarus</i>		X
White-striped Longtail <i>Chioides albofasciatus</i>		X
Golden-banded Skipper <i>Autochton cellus</i>		X
Arizona Skipper <i>Codattractus arizonensis</i>		X
Dorantes Longtail <i>Urbanus dorantes</i>	X	X
Drusius Cloudywing <i>Thorybes drusius</i>		X
Northern Cloudywing <i>Thorybes pylades</i>		X
Desert Cloudywing <i>Achalarus casica</i>		X
Acacia Skipper <i>Cogia hippalus</i>	X	X
Caicus Skipper <i>Cogia caicus</i>		X
Golden-headed Scallopwing <i>Staphylus ceos</i>	X	X
Arizona Powdered-Skipper <i>Systasea zampa</i>	X	X
White-patched Skipper <i>Chiomara asychis</i>	X	X
Sleepy Duskywing <i>Erynnis brizo</i>		X
Meridian Duskywing <i>Erynnis meridianus</i>		X
Juvenal's Duskywing <i>Erynnis juvenalis</i>		X
Mournful Duskywing <i>Erynnis tristis</i>		X
Funereal Duskywing <i>Erynnis funeralis</i>	X	X
White Checkered-Skipper <i>Pyrgus albescens</i>	X	X
Common Checkered-Skipper <i>Pyrgus communis</i>		X
Tropical Checkered-Skipper <i>Pyrgus oileus</i>	X	X
Desert Checkered-Skipper <i>Pyrgus philetas</i>	X	X
Small Checkered-Skipper <i>Pyrgus scriptura</i>		X
Northern White-Skipper <i>Heliopetes ericetorum</i>		X
Erichson's White-Skipper <i>Heliopetes domicella</i>		X
Common Streaky-Skipper <i>Celotes nessus</i>	X	X
Common Sootywing <i>Pholisora catullus</i>	X	X
Saltbush Sootywing <i>Hesperopsis alpheus</i>	X	
Clouded Skipper <i>Lerema accius</i>	X	X
Tropical Least Skipper <i>Ancyloxypha arene</i>	X	X
Orange Skipperling <i>Copaeodes aurantiacus</i>	X	X
Tiny Skipperling <i>Copaeodes minimus</i>		X
Fiery Skipper <i>Hylephila phyleus</i>	X	X
Pahaska Skipper <i>Hesperia pahaska</i>		X
Green Skipper <i>Hesperia viridis</i>		X
Carus Skipper <i>Polites carus</i>	X	X
Sachem Skipper <i>Atalopedes campestris</i>	X	
White-barred Skipper <i>Atrytonopsis pittacus</i>	X	
Moon-marked Skipper <i>Atrytonopsis lunus</i>		X
Sheep Skipper <i>Atrytonopsis edwardsi</i>		X
Large Roadside-Skipper <i>Amblyscirtes exoteria</i>		X
Bronze Roadside-Skipper <i>Amblyscirtes aenus</i>		X
Oslar's Roadside-Skipper <i>Amblyscirtes oslari</i>		X
Texas Roadside-Skipper <i>Amblyscirtes texanae</i>	X	X
Toltec Roadside-Skipper <i>Amblyscirtes tolteca</i>	X	X
Nysa Roadside-Skipper <i>Amblyscirtes nysa</i>	X	X
Dotted Roadside-Skipper <i>Amblyscirtes eos</i>	X	X

Eufala Skipper	<i>Lerodea eufala</i>	X	X
Violet-clouded Skipper	<i>Lerodia arabus</i>	X	X
Arizona Giant-Skipper	<i>Agathymus aryxna</i>		X

Swallowtails

Family Papilionidae

Pipevine Swallowtail	<i>Battus philenor</i>	X	X
Black Swallowtail	<i>Papilio polyxenes</i>	X	X
Giant Swallowtail	<i>Papilio cresphontes</i>	X	X
Two-tailed Swallowtail	<i>Papilio multicaudatus</i>		X

Whites and Sulphurs

Family Pieridae

Checkered White	<i>Pieris protodice</i>	X	X
Spring White	<i>Pontia sisymbrii</i>		X
Cabbage White	<i>Pieris rapae</i>	X	X
Howarth's White	<i>Ascia howarthii</i>	X	X
Pearly Marble	<i>Euchloe hyantis</i>	X	X
Desert Orangetip	<i>Anthocharis cethura</i>	X	X
Sara Orangetip	<i>Anthocharis sara</i>	X	X
Orange Sulphur	<i>Colias eurytheme</i>	X	X
Southern Dogface	<i>Colias cesonia</i>	X	X
White Angled-Sulphur	<i>Anteos clorinde</i>		X
Cloudless Sulphur	<i>Phoebis sennae</i>	X	X
Large Orange Sulphur	<i>Phoebis agarithe</i>	X	X
Lyside Sulphur	<i>Kricogonia lyside</i>	X	X
Boisduval's Yellow	<i>Eurema boisduvalianum</i>	X	X
Mexican Yellow	<i>Eurema mexicanum</i>	X	X
Tailed Orange	<i>Eurema proterpia</i>	X	X
Little Yellow	<i>Eurema lisa</i>		X
Mimosa Yellow	<i>Eurema nise</i>	X	X
Sleepy Orange	<i>Eurema nicippe</i>	X	X
Dainty Sulphur	<i>Nathalis iole</i>	X	X

Hairstreaks and Blues

Family Lycaenidae

Great Purple Hairstreak	<i>Atlides halesus</i>	X	X
Leda Ministreak	<i>Ministrymon leda</i>	X	X
Gray Hairstreak	<i>Strymon melinus</i>	X	X
Western Pygmy Blue	<i>Brephidium exile</i>	X	X
Marine Blue	<i>Leptotes marina</i>	X	X
Ceraunus Blue	<i>Hemiargus Ceraunus</i>	X	X
Reakirt's Blue	<i>Hemiargus isola</i>	X	X
Eastern Tailed-Blue	<i>Everes comyntas</i>		X
Rita Blue	<i>Euphilotes rita</i>	X	X
Southwestern Azure	<i>Celastrina echo</i>		X
Acmon Blue	<i>Plebejus acmon</i>		X

Metalmarks

Family Riodinidae

Arizona Metalmark	<i>Calephelis arizonensis</i>	X	
Fatal Metalmark	<i>Calephelis nemesis</i>	X	X

Palmer's Metalmark	<i>Apodemia palmeri</i>	X	X
Mormon Metalmark	<i>Apodemia mormo</i>	X	X

Snout Butterflies

Family Libytheidae

American Snout	<i>Libytheana carinenta</i>	X	X
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Brush-footed Butterflies

Family Nymphalidae

Gulf Fritillary	<i>Agraulis vanillae</i>	X	X
Zebra Longwing	<i>Heliconius charitonius</i>		X
Variigated Fritillary	<i>Euptoieta claudia</i>	X	X
Mexican Fritillary	<i>Euptoieta hegesia</i>	X	X
Theona Checkerspot	<i>Thessalia theona</i>		X
Fulvia Checkerspot	<i>Thessalia fulvia</i>		X
Bordered Patch	<i>Chlosyne lacinia</i>	X	X
Rosita Patch	<i>Chlosyne rosita</i>	X	
Tiny Checkerspot	<i>Dymasia dymas</i>	X	X
Elada Checkerspot	<i>Texola elada</i>	X	X
Texan Crescent	<i>Anthanassa texana</i>	X	X
Graphic Crescent	<i>Phyciodes graphica</i>		X
Pearl Crescent	<i>Phyciodes tharos</i>	X	X
Painted Crescent	<i>Phyciodes pictus</i>	X	X
Question Mark	<i>Polygonia interrogationis</i>	X	X
Satyr Comma	<i>Polygonia satyrus</i>	X	X
Mourning Cloak	<i>Nymphalis antiopa</i>	X	X
American Lady	<i>Vanessa virginiensis</i>	X	X
Painted Lady	<i>Vanessa cardui</i>	X	X
West Coast Lady	<i>Vanessa annabella</i>		X
Red Admiral	<i>Vanessa atalanta</i>	X	X
Common Buckeye	<i>Junonia coenia</i>	X	X
Tropical Buckeye	<i>Junonia nigrosuffusa</i>	X	X
Red-spotted Purple	<i>Limenitis arthemis</i>	X	X
Viceroy	<i>Limenitis archippus</i>	X	X
Arizona Sister	<i>Adelpha eulalia</i>	X	X
Ruddy Daggerwing	<i>Marpesia petreus</i>		X
Common Mestra	<i>Mestra amymone</i>		X
Black-patched Cracker	<i>Hamadryas atlantis</i>	X	
Dingy Purplewing	<i>Eunica monima</i>		X
Goatweed Leafwing	<i>Anaea andria</i>	X	
Tropical Leafwing	<i>Anaea aidea</i>	X	X
Silver Emperor	<i>Doxocopa laure</i>		X
Hackberry Emperor	<i>Asterocampa celtis</i>	X	X
Tawny Emperor	<i>Asterocampa clyton</i>	X	X
Empress Leilia	<i>Asterocampa leilia</i>	X	X
Red Satyr	<i>Megisto rubricata</i>		X

Milkweed Butterflies

Family Danaidae

Monarch	<i>Danaus plexippus</i>	X	X
Queen	<i>Danaus gilippus</i>	X	X
Soldier	<i>Danaus eresimus</i>		X

Dragonflies and Damselflies

Dragonflies are some of our largest, fastest, and most colorful insects. They are one of the most ancient insect groups and not very different from their ancestors that flew over the backs of dinosaurs. The Native Americans of the Southwest were keenly aware of these insects, and the dragonfly's sudden appearance and unusual emergence from the water led these people to consider them as links to other worlds. These days, the combination of new field guides, digital cameras, and close-focusing binoculars have made dragonflies, and their smaller cousins the damselflies, watchable wildlife that can be enjoyed by refuge visitors.

Dragonflies are inhabitants of two worlds. The winged adults hunt and breed at the water's edge. Females lay their eggs in water and these later hatch into aquatic larvae that spend a few weeks to a year or more hunting and growing at the bottom of a pond or stream. Once mature, the larvae crawls out of the water and a flying adult emerges from its final larval skin, beginning the cycle again.

At first glance, this area with only 14-inches of rain per year would seem an unlikely place to search for aquatic insects such as dragonflies. Nonetheless, the riparian corridors and spring-fed wetlands of Leslie Canyon and San Bernardino NWRs are home to at least 77 kinds in six families, comprising about 60% of all the species found in Arizona. Some of these such as the common green darner and familiar bluet are widespread, occurring throughout North America. Others, such as spot-winged meadowhawk and Sierra Madre dancer, are regional specialties known from only one or two counties in the United States. Like all other wildlife on the two refuges, dragonflies and damselflies are protected from collection.

Several factors account for the diversity of dragonflies on the refuges. Situated where it is, Arizona is home to species characteristic of the Rocky Mountains, the Great Plains, and the southern deserts. Locally, the Sierra Madre of northwestern Mexico provides species characteristic of high elevations. One of the most significant factors is the presence of abundant and clean water present in refuge wetlands throughout the year. This water eliminates the possibility of larvae drying out, a frequent cause of death to inhabitants of less secure desert wetlands. Both refuges feed water to the Río Yaqui in Sonora Mexico, and occasionally dragonflies use this river as a corridor to move northward, providing records of some of our rarest tropical species. Finally, a number of the dragonflies are migratory, pausing during their northbound or southbound flights to lay eggs and feed at refuge ponds and watercourses.



Desert Firetail Damselflies

Zygoptera–Damselflies

Broad-winged Damselflies

Family Calopterygidae

American Rubyspot *Hetaerina americana*

Canyon Rubyspot *Hetaerina vulnerata*

Spreadwing Damselflies

Family Lestidae

California Spreadwing *Archilestes californicus*

Great Spreadwing *Archilestes grandis*

Plateau Spreadwing *Lestes alacer*

Pond Damselflies

Family Coenagrionidae

Black-and-white Damsel *Apanisagrion lais*

California Dancer *Argia agrioides*

Paiute Dancer *Argia alberta*

Yaqui Dancer *Argia carlcooki*

Spine-tipped Dancer *Argia extranea*

Variable Dancer *Argia fumipennis violacea*

Lavender Dancer *Argia hinei*

Kiowa Dancer *Argia immunda*

Sierra Madre Dancer *Argia lacrimans*

Sooty Dancer *Argia lugens*

Aztec Dancer *Argia nahuana*

Amethyst Dancer *Argia pallens*

Springwater Dancer *Argia plana*

Dusky Dancer *Argia translata*

Double-striped Bluet *Enallagma basidens*

Tule Bluet *Enallagma carunculatum*

Familiar Bluet *Enallagma civile*

Arroyo Bluet *Enallagma praevarum*

Claw-tipped Bluet *Enallagma semicirculare*

Painted Damsel *Hesperagrion heterodoxum*

Desert Forktail *Ischnura barberi*

Plains Forktail *Ischnura damula*

Mexican Forktail *Ischnura demorsa*

Black-fronted Forktail *Ischnura denticollis*

Citrine Forktail *Ischnura hastata*

Rambur's Forktail *Ischnura ramburii*

Desert Firetail *Telebasis salva*



Filigree Skimmer

Anisoptera—Dragonflies

Darners

Family Aeshnidae

Arroyo Darner *Aeshna dugesi*

Blue-eyed Darner *Aeshna multicolor*

Persephone's Darner *Aeshna persephone*

Turquoise-tipped Darner *Aeshna psilus*

Common Green Darner *Anax junius*

Giant Darner *Anax walsinghami*

Malachite Darner *Coryphaeschna luteipennis*

Clubtails

Family Gomphidae

White-belted Ringtail *Erpetogomphus compositus*

Yellow-legged Ringtail *Erpetogomphus crotalinus*

Serpent Ringtail *Erpetogomphus lampropeltis*

Gray Sanddragon *Progomphus borealis*

Skimmers

Family Libellulidae

Red-tailed Pennant *Brachymesia furcata*

Pale-faced Clubskimmer *Brechmorhoga mendax*

Checkered Setwing *Dythemis fugax*

Mayan Setwing *Dythemis maya*

Black Setwing *Dythemis nigrescens*

Western Pondhawk *Erythemis collocata*

Great Pondhawk *Erythemis vesiculosa*

Plateau Dragonlet *Erythrodiplax basifusca*

Black-winged Dragonlet *Erythrodiplax funerea*

Comanche Skimmer *Libellula comanche*

Bleached Skimmer *Libellula composita*

Neon Skimmer *Libellula croceipennis*

Widow Skimmer *Libellula luctuosa*

Hoary Skimmer *Libellula nodisticta*

Twelve-spotted Skimmer *Libellula pulchella*

Flame Skimmer *Libellula saturata*

Wide-tipped Sylph *Macrothemis pseudimitans*

Roseate Skimmer *Orthemis ferruginea*

Blue Dasher *Pachydiplax longipennis*

Red Rock Skimmer *Paltothemis lineatipes*

Wandering Glider *Pantala flavescens*

Spot-winged Glider *Pantala hymenaea*

Slough Amberwing *Perithemis domitia*

Mexican Amberwing *Perithemis intensa*

Eastern Amberwing *Perithemis tenera*

Common Whitetail *Plathemis lydia*

Desert Whitetail *Plathemis subornata*

Filigree Skimmer *Pseudoleon superbus*

Variiegated Meadowhawk *Sympetrum corruptum*

Cardinal Meadowhawk *Sympetrum illotum*

Band-winged Meadowhawk *Sympetrum semicinctum*

Spot-winged Meadowhawk *Sympetrum signiferum*

Black Saddlebags *Tramea lacerata*

Red Saddlebags *Tramea onusta*

Directions

San Bernardino NWR is located adjacent to the Republic of Mexico 16 miles east of Douglas, Arizona along Geronimo Trail Road (15th Street). The road continues through the Peloncillo Mountains to New Mexico. Leslie Canyon NWR is located on the edge of the Swisshelm Mountains 16 miles north of Douglas on Leslie Canyon Road, or 11 miles east of McNeal on Davis Road. Follow the road signs to Leslie Canyon. The roadway continues through the refuge to Coronado National Forest's Rucker Canyon in the nearby Chiricahua Mountains. Refuge headquarters, open weekdays from 8:00 a.m. – 3:00 p.m., is located about ten miles north of Douglas and about six miles south of McNeal on the west side of Highway 191 at the end of San Gabriel Drive. Portions of both refuges are open every day during daylight hours to activities such as wildlife viewing, photography, hiking, and sight-seeing. A selected and posted area of San Bernardino NWR is open to seasonal hunting of doves, quail, and cottontail rabbit. For border security reasons, refuge gates remain closed and locked, requiring foot traffic only on the refuges.

Nearby Attractions

While visiting this part of Cochise County, be sure to visit the historic and scenic Slaughter Ranch, located adjacent to San Bernardino NWR and operated by the Johnson Historical Museum of the Southwest. Call 520/558-2474 for information. Or stop to visit the Whitewater Draw Wildlife Area, located west of Leslie Canyon NWR in the Sulphur Springs Valley and operated by the Arizona Game and Fish Department. Call 520/642-3763 for information.

Acknowledgements

This watchable wildlife list has been compiled over several years by various refuge staff with the additional valuable expertise of volunteers Richard Bailowitz, Robert Behrstock, E. Clark Bloom, Doug Danforth, Arnold Moorhouse, Rose Ann Rowlett, Sandy Upson, Lisa and Wezil Walraven, and Richard Webster. Photographs were taken by William Radke. All visitors are urged to report any noteworthy sightings to the refuge manager to help make this species list current and accurate.



*Chiricahua Leopard
Frog*

San Bernardino/Leslie Canyon National Wildlife Refuges
7628 North Highway 191
San Gabriel Drive
Douglas, Arizona 85608
520/364-2104
520/364-2130 FAX

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

For Refuge Information
1 800/344-WILD

Arizona State Relay System
1 800/367-8939

Vermilion Flycatchers can be common at the Refuge wetlands

Photograph by William R. Radke

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