

# Vegetation and Wildlife Survey of Devil's Canyon, Tonto National Forest

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Rancho Rio Creek, tributary of Devil's Canyon

## Introduction

Devil's Canyon is located in Pinal County Arizona approximately 6 km east of the town of Superior in the Globe Ranger District of the Tonto National Forest. The area is generally rugged with deep canyons and is defined by its complex rock formations. Portions of Devil's Canyon have stretches of large and dense riparian growth that support a high diversity of breeding birds and other wildlife.

Aaron Flesch and I previously surveyed the area in early July 2007 ([2007 report](#)). This report is from a re-survey of woody plants and vertebrates in the same area done in May 2009.

## Methods

I chose this stretch of Devil's Canyon because it has the most surface water and associated riparian vegetation. I started the survey in a side canyon called Rancho Rio Creek (UTM coordinates: 0495969x3682877) and traveled downstream until it converged with Devil's Canyon at an elevation of 1,100m (3,600ft) and ended the survey at around 1,036m (3,400ft) where it begins to narrow to a slot canyon with drops and plunge-pools, becoming impassable without ropes. Riparian vegetation also dramatically declines in this area due to a lack of deep soils. This survey was conducted in Township 2 South, Range 13 East, mainly in Sections 9 and 16 on the Superior USGS quadrangle (figure 1).

On May 10-11 2009, I surveyed woody and succulent vegetation and wildlife in and around Devil's Canyon. I started my survey at around 3pm on the 10<sup>th</sup>, surveying till dark and from 5am on the 11<sup>th</sup> till around 3pm. To survey birds, I walked slowly and identified all birds that I could detect by sight or sound. I attempted to augment detections by periodically whistling a pygmy-owl call or by "pshhh"ing birds from hiding places. Observations of birds and plants include those observed from the entire hike including areas in Rancho Rio Canyon.

My objective was to document all species of woody or succulent plants and vertebrates that I encountered and could identify (2) assess occupancy of sensitive or special status species, (3) determine whether habitat was present for sensitive or special status species.



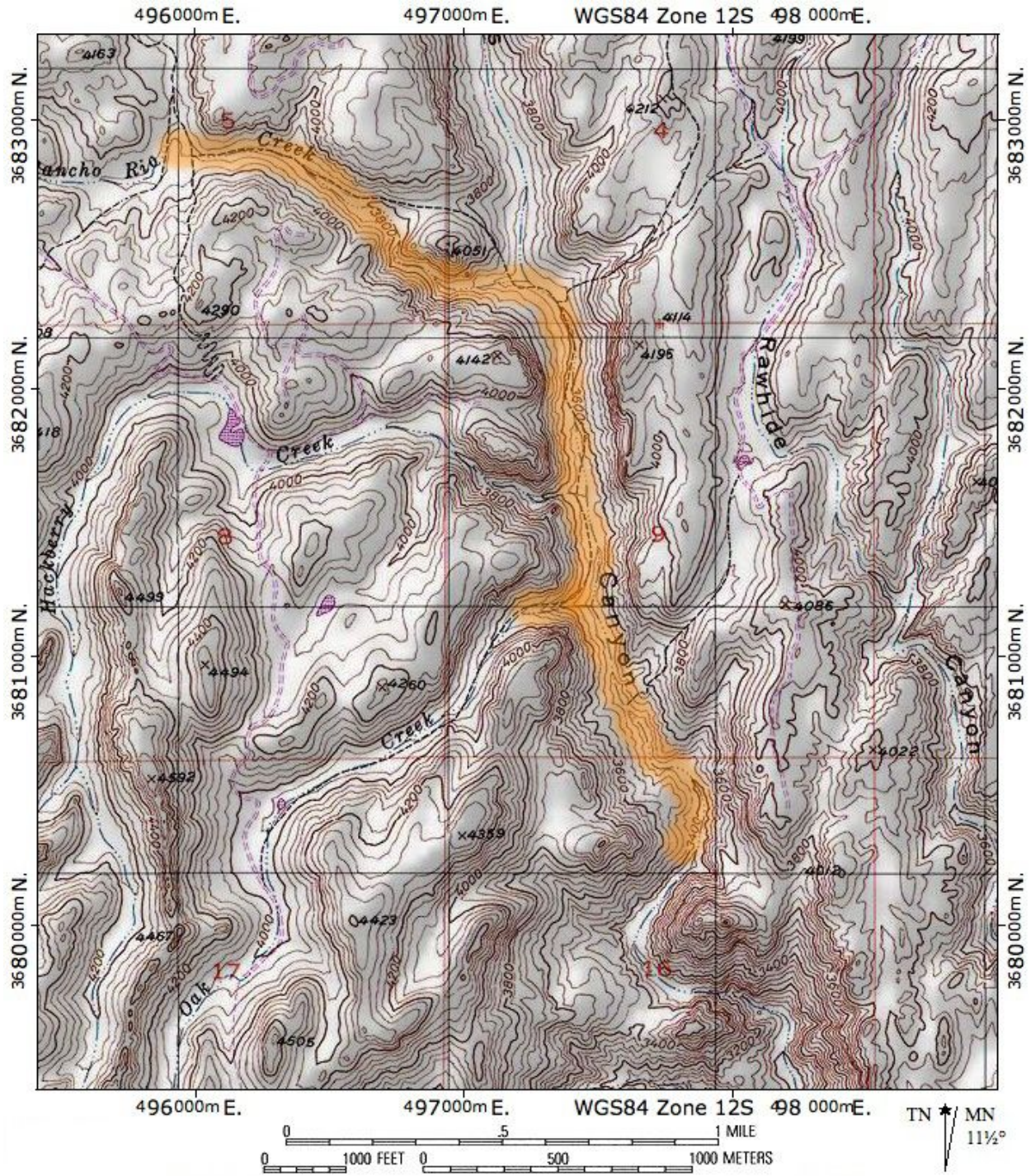


Figure 1: Map of Devil's Canyon and surrounding region. Survey route is indicated in orange.

## Flora

The area in and around Devil's Canyon has a diverse assemblage of vegetation (table 1). Rugged topography, abundant surface water, and steep elevation gradients produce an array of microclimates that help increase diversity. The area is primarily a mixing zone of upper Sonoran Desert and interior chaparral, with some influences from the Madrean vegetation community. In Devil's Canyon Oak (*Quercus*), Juniper (*Juniperus*), and Piñon Pine (*Pinus*) grow near Saguaros (*Carnegiea gigantea*) and Desert Hackberry (*Celtis pallida*).

The stretch of Devil's Canyon that I surveyed had riparian vegetation that was dominated by stands of Arizona Alder (*Alnus oblongifolia*) with scattered Sycamore (*Platanus wrightii*) and Velvet Ash (*Fraxinus velutina*). In many areas heights of riparian trees reached 20m (70ft) or more with near complete canopy cover. Other common trees included Goodding Willow (*Salix gooddingii*) and Arizona White Oak (*Quercus arizonica*). Arizona Alder became less common in the lower portion of canyon, which is more often dominated by Goodding Willow and Cottonwood (*Populus fremontii*).

Understory in this stretch was generally dominated by Button Willow (*Cephalanthus occidentalis* var. *angustifolius*) and Poison Ivy (*Rhus toxicodendron*), among a variety of other shrubs. Due to thick over-story and rocky substrates, understory cover was not particularly dense.

I noted several species that were near the edge of their distribution in this area. Bonpland Willow (*Salix bonplandiana*), Mexican Blue Oak (*Quercus oblongifolia*), and Arizona Rosewood (*Vauquelinia californica* ssp. *californica*) were all near the northern extent of their distribution (figures 2-4). Although debate over species designation continues (*edulis* or *monophylla*), Single-leaf Piñon (*Pinus monophylla* var. *fallax*) was near its southern limit here (figure 5) (Ecology and Biogeography of Pinus, David M. Richardson - Cambridge University Press, 2000).

Upland vegetation was dominated by interior chaparral including Scrub Live-oak (*Quercus turbinella*), Pointleaf Manzanita (*Arctostaphylos pringlei*), Hop Bush (*Dodonaea viscosa*), Birchleaf Mountain Mahogany (*Cercocarpus betuloides*), Jojoba (*Simmondsia chinensis*), Wait-a-minute Bush (*Mimosa biuncifera*), cholla (*Opuntia* sp.) and agave (*Agave* sp.). Vegetation composition throughout the uplands is significantly influenced by Sonoran Desert elements as evidenced by the presence of Saguaros (*Carnegiea gigantea*), which are fairly common on rocky east- and south-facing slopes throughout the area.



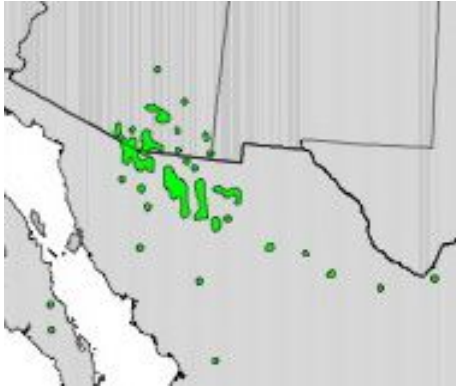


Figure 2: Blue Oak (*Quercus oblongifolia*).



Figure 3: Bonpland Willow (*Salix bonplandiana*)



Figure 4: Arizona Rosewood, *Vauquelinia californica* ssp. *Californica*

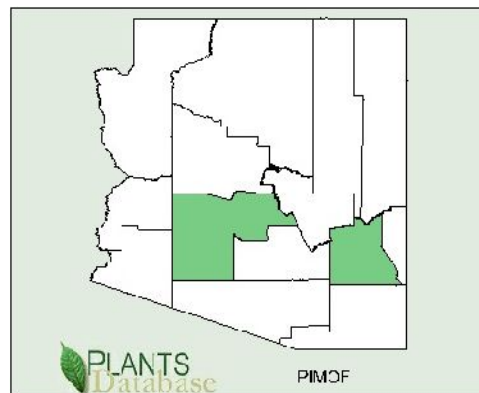


Figure 5: Single-leaf Piñon, *Pinus monophylla* var. *fallax*

## Fauna

**Birds:** I detected 52 species of birds (table 2) during my approximately 16 hours of survey time. Most of the species I presumed to be breeding in the area.

A pair of Zone-tailed Hawk was occupying a nest near the mouth of Hackberry Creek. In 2007 two pair of Zone-tailed Hawks occupied this stretch of Devil's Canyon and were nesting amazingly close to each other at only 580m. There appears to be only one pair in the survey area in 2009.

I observed a pair Common Black Hawks nesting in an Arizona Alder (UTM coordinates: 0497409x3681705). Nearby sign indicated that this pair had been feeding on non-native crayfish (*Cambarellus* sp.). Common Black Hawks are generally obligated to productive riparian areas feeding predominately on fish and frogs. Common Black Hawks are a state threatened species in Texas and Arizona. There is an estimated population of 220-250 pairs in Arizona, New Mexico and Texas (from a [literature summary](#) by Public Employees for Environmental Responsibility).

I observed a pair of Peregrine Falcons perched together on rock spires (figure 7 and 8, UTM coordinates: 0497428x3681725). This pair was almost certainly nesting nearby and seemed to favor an area on the east side of Devil's Canyon across from the mouth of Oak Creek Canyon. Devil's Canyon provides excellent habitat for Peregrine Falcons, which typically nest on cliffs near areas where food is abundant, such as the lush riparian areas in found in this canyon. Peregrine Falcons are a delisted federally endangered species and currently considered a threatened species in Arizona (Fish and Wildlife Service: [Threatened and Endangered Species by county: Pinal County](#)).

Riparian-obligate Yellow Warblers and Summer Tanagers are common throughout this stretch of Devil's Canyon (figure 9 and 10). Yellow Warblers were feeding young and Summer Tanagers were paired.

**Other Wildlife:** Black Bear sign was seen in the 2007 and 2009 surveys. No other large mammals were seen in the area during surveys.

Non-native Green Sunfish (*Lepomis cyanellus*) and Crayfish (*Cambarellus sp.*) were common and well established in the Devil's Canyon and have likely had negative impacts on native aquatic species. Lowland Leopard Frogs (*Rana yavapaiensis*) and native fish species were not detected on my survey. Habitat was present for these native aquatic species, but they may have been displaced non-natives.

Bullfrogs (*Rana catesbeiana*) were not evident in Devil's Canyon and possibly can't survive frequent and severe flooding. There were only a few large stagnant ponds, which are the Bullfrogs preferred habitat.

Canyon Treefrogs (*Hyla arenicolor*) were doing quite well in this canyon. I noted dozens of Canyon Treefrogs calling simultaneously during the evening of May 10<sup>th</sup>, making sleep difficult for several hours after dark. Tadpoles of this species were also common in Rancho Rio and Oak Creek side canyons.

Other reptiles observed included Plateau Lizard (*Sceloporus tristichus*), Greater Earless Lizard (*Cophosaurus texanus*), Clark's Spiny Lizard (*Sceloporus clarkii*), Western Whiptail (*Aspidoscelis tigris ssp. punctilinealis*), the very common Ornate Tree Lizard (*Urosaurus ornatus*), and an unknown Spotted Whiptail (possibly *Aspidoscelis flagellicauda*).

## Special Status Species

I accessed the [AGFD Environmental On-line Review Tool](#) to obtain records of special status species within 5 miles of the survey area. I also consulted the most current listing of threatened, endangered, proposed, and candidate species in Pinal County from the USFWS website ([link](#)) updated January 8, 2009. Third, I evaluated the survey area for species' habitat requirements noted in these searches.

Table 3 lists special status species that may occur in the area and Appendix A lists all special status species or designated Critical Habitat known to occur within 5 miles of the survey area as

noted by AGFD Environmental On-line Review Tool.

I did not detect Yellow-billed Cuckoos or Southwestern Willow Flycatcher along this stretch of Devil's Canyon. Cuckoos generally appear from migration in mid-June, later than my survey dates of May 10-11<sup>th</sup>, limiting potential for detection. Southwestern Willow Flycatchers also generally start appearing around May 15<sup>th</sup>, several days after my survey dates.

Although lush, vegetation structure and composition are likely not suitable for Southwest Willow Flycatchers due to limited dense vegetation volume between 1.5 and 5m above the ground. In Arizona, Yellow-billed Cuckoos typically prefer lower elevation riparian areas that support mesquite, cottonwood, and willow and may also require larger patches of riparian vegetation with more understory cover than observed in Devil's Canyon. Although cuckoos do occur in montane riparian areas similar to that in Devil's Canyon, they are much less common in these areas and may not occur at a given locale every year.

Peregrine Falcons, seen and likely nesting in Devil's Canyon in both 2007 and 2009, were delisted from the ESA, but are currently considered an Arizona threatened species (Fish and Wildlife Service: [Threatened and Endangered Species by county: Pinal County](#)).

Common Black Hawks, found nesting during both 2007 and 2009 surveys, are listed as sensitive by the USFS as well as a threatened species by the state of Arizona ([Arizona Game and Fish Department, 2005, Black Hawk](#)).

There is potential for occurrence of Mexican Spotted Owls (*Strix occidentalis lucida*) in the canyon; Critical Habitat has been designated for this subspecies within 5 miles (appendix A).

The Federally endangered Gila Chub (*Gila intermedia*) is currently known from the Mineral Creek drainage, a tributary that converges with Devil's Canyon approximately 5km below my survey area ([Arizona Game and Fish Department, 2005, Gila intermedia](#)). Additional fish-specific surveys would be needed to determine whether these fish occur in Devil's Canyon despite the presence of non-native Green Sunfish and Crayfish. Critical Habitat has been designated for Gila Chub within 5 miles of the survey area (appendix A).

Other special status native fish species that are likely extirpated from the area include Loach Minnow (*Tiaroga cobitis*), Spikedace (*Media Fulgida*), Roundtail Chub (*Gila Robusta*), and Gila Topminnow (*Poeciliopsis occidentalis occidentalis*).

The Mexican Gartersnake (*Thamnophis eques megalops*) has likely been extirpated from the region ([Petition to list the Mexican Garter Snake](#), page 15).

Arizona Hedgehog Cactus (*Echinocereus triglochidiatus var. arizonicus*) is a [federally listed](#) species under the Endangered Species Act. This cactus has a very limited distribution, which is confined to areas just to the north and northeast of my survey area (figure 6). I did not find individuals of this



hedgehog during my survey. It is documented approximately 3km north of my survey area near the highway 60 bridge across Devil's Canyon ([Arizona Game and Fish map](#)). More surveys could potentially locate individuals closer to my survey area. This species is primarily found at elevations of 1,150 to 1,600m (3,770ft to 5,249ft), slightly higher than my survey area.

Useful documents related to *Echinocereus triglochidiatus* var. *arizonicus* in Devil's Canyon area:

- U.S. Fish and Wildlife Service [species overview](#)
- U.S. Fish and Wildlife Service [recovery plan](#) for Arizona hedgehog cactus
- Arizona Game and Fish [species overview](#)
- Arizona Game and Fish [distribution map](#)
- [Biological Opinion](#), May 2008 (State Highway 60 road construction work)

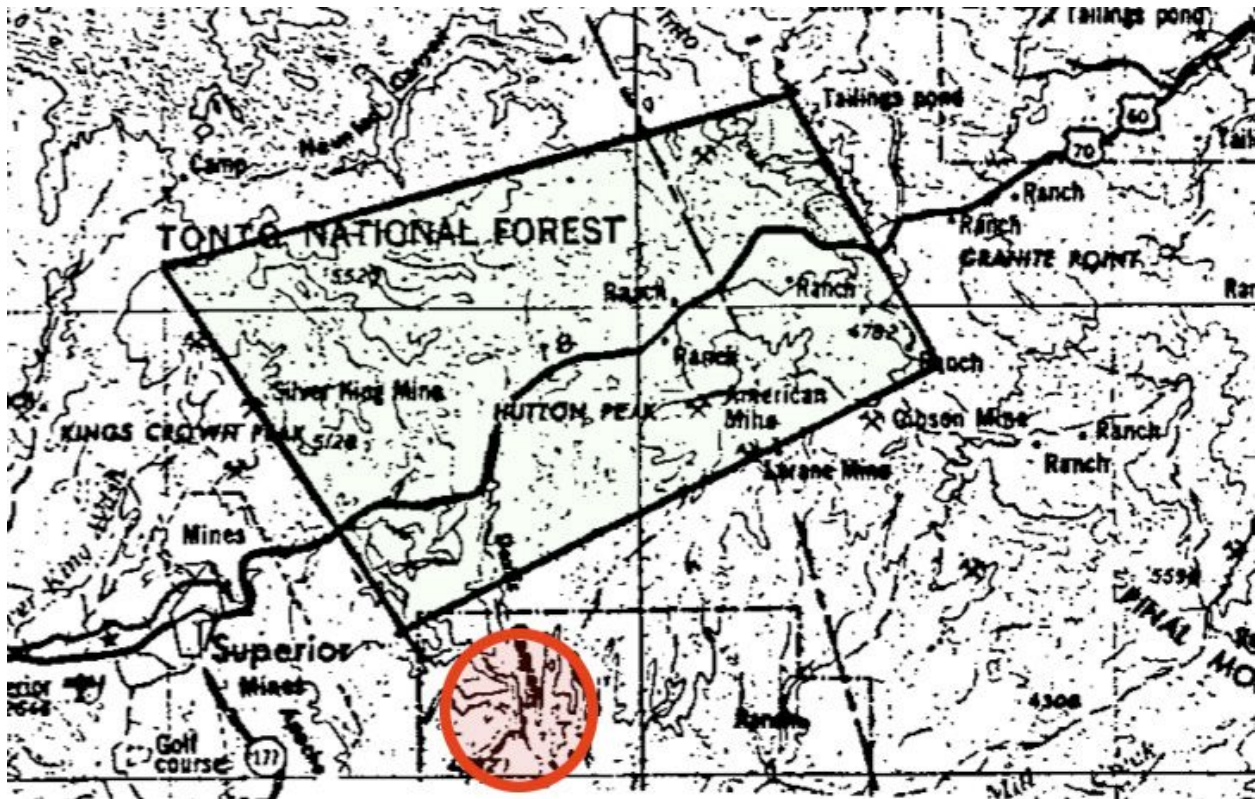


Figure 6: Range of *Echinocereus triglochidiatus* var. *arizonicus* as delineated April 1982 (Devil's Canyon survey area indicated in red) – Fish and Wildlife Draft Recovery Plan, 1984

## Conclusion

Devil's Canyon is an interesting transition zone between vegetation communities with influences from the Sonoran Desert, interior chaparral, and Madrean woodlands. This association of vegetation communities is somewhat unique in Arizona.

Cattle appear to be limited to the stretch above Rancho Rio Creek in Devil's Canyon, enhancing the health of the riparian area below. Human impacts beyond non-native species are currently



minimal in the survey area.

The countryside in the vicinity of Devil’s Canyon has stunning scenery rivaling some of the best in Arizona and the nation.

Devil’s Canyon is an important riparian resource in the region that supports a high diversity of plant and animal life. Well functioning riparian ecosystems are rare and threatened in Arizona and those that remain should be protected.

**Table 1: Plant species identified in Devil’s Canyon Survey (2007 and 2009)**

Note: Survey focused only on woody perennial plants. Survey efforts were not exhaustive; this list represents a partial record of plants in the area.

| Family           | Genus          | Species                          | Common Name                   |
|------------------|----------------|----------------------------------|-------------------------------|
| Acanthaceae      | Anisacanthus   | thurberi                         | Desert Honeysuckle, Chuparosa |
| Anacardiaceae    | Rhus           | rydbergii                        | Western Poison Ivy            |
| Anacardiaceae    | Rhus           | trilobata                        | Lemonade Berry, Squawbush     |
| Asclepiadaceae   | Asclepias      | linaria                          | Pine-needle Milkweed          |
| Asteraceae       | Baccharis      | sarothroides                     | Desert Broom                  |
| Asteraceae       | Ericameria     | laricifolia                      | Turpentine Bush               |
| Berberidaceae    | Berberis       | haematocarpa                     | Bloodberry Barberry           |
| Betulaceae       | Alnus          | oblongifolia                     | Arizona Alder                 |
| Bignoniaceae     | Catalpa        | speciosa                         | Non-native Catalpa            |
| Cactaceae        | Carnegiea      | gigantea                         | Saguaro                       |
| Cactaceae        | Cylindropuntia | versicolor                       | Staghorn Cholla               |
| Cactaceae        | Ferocactus     | emoryi                           | Barrel Cactus                 |
| Cactaceae        | Opuntia        | 2 unknown species                | Prickly Pear                  |
| Caprifoliaceae   | Lonicera       | arizonica                        | Arizona Honeysuckle           |
| Crossosomataceae | Crossosoma     | bigelovii                        | Ragged Rockflower             |
| Cupressaceae     | Juniperus      | coahuilensis                     | One-seed Juniper              |
| Cupressaceae     | Cupressus      | arizonica ssp. Arizonica         | Arizona Cypress               |
| Ericaceae        | Arctostaphylos | pungens                          | Pointleaf Manzanita           |
| Fabaceae         | Acacia         | angustissima var. suffrutescens? | Prairie Acacia                |
| Fabaceae         | Acacia         | greggii                          | Catclaw Acacia                |
| Fabaceae         | Amorpha        | fruticosa var. occidentalis      | False indigo Bush             |
| Fabaceae         | Mimisa         | biuncifera                       | Wait-a-minute Bush            |
| Fabaceae         | Prosopis       | velutina                         | Velvet Mesquite               |
| Fagaceae         | Quercus        | arizonica                        | Arizona White Oak             |
| Fagaceae         | Quercus        | emoryi                           | Emory Oak                     |
| Fagaceae         | Quercus        | oblongifolia                     | Mexican Blue Oak              |
| Fagaceae         | Quercus        | turbinella                       | Scrub Live-oak                |
| Garryaceae       | Garrya         | wrightii                         | Wright’s siltassel            |
| Juglandaceae     | Juglans        | major                            | Arizona Black Walnut          |
| Liliaceae        | Agave          | palmeri                          | Palmer’s Agave                |
| Liliaceae        | Dasyllirion    | wheeleri                         | Sotol                         |
| Liliaceae        | Nolina         | microcarpa                       | Beargrass                     |
| Liliaceae        | Yucca          | arizonica                        | Arizona Yucca                 |
| Oleaceae         | Fraxinus       | velutina                         | Velvet Ash                    |

|                |                |                              |                                       |
|----------------|----------------|------------------------------|---------------------------------------|
| Oleaceae       | Fraxinus       | cuspidata var. macropetala   | Fragrant Ash???                       |
| Pinaceae       | Pinus          | monophylla var. fallax       | Single-leaf Pinyon Pine               |
| Platanaceae    | Platanus       | wrightii                     | Arizona sycamore                      |
| Poaceae        | Muhlenbergia   | dumosa                       | Bamboo Muhly                          |
| Ranunculaceae  | Aquilegia      | chrysantha                   | Golden Columbine                      |
| Rhamnaceae     | Ceanothus      | greggii                      | Desert Ceanothus                      |
| Rhamnaceae     | Rhamnus        | californica                  | California Buckthorn                  |
| Rhamnaceae     | Rhamnus        | ilicifolia                   | Hollyleaf Buckthorn                   |
| Rhamnaceae     | Zizyphus       | obtusifolia                  | Greythorn                             |
| Rhamnaceae     | Sageretia      | wrightii                     | Sageretia                             |
| Rosaceae       | Prunus         | virginiana                   | Wild Cherry                           |
| Rosaceae       | Vauquelinia    | californica ssp. californica | Arizona Rosewood<br>(0497498x3681393) |
| Salicaceae     | Populus        | fremontii                    | Fremont Cottonwood.                   |
| Salicaceae     | Salix          | bonplandiana                 | Bonpland Willow                       |
| Salicaceae     | Salix          | gooddingii                   | Goodding Willow                       |
| Sapindaceae    | Dodonaea       | viscosa                      | Hop Bush                              |
| Solanaceae     | Lycium         | andersonii?                  | Wolfberry                             |
| Simmondsiaceae | Simmondsia     | chinensis                    | Jojoba                                |
| Ulmaceae       | Celtis         | reticulata                   | Netleaf Hackberry                     |
| Ulmaceae       | Celtis         | pallida                      | Desert Hackberry                      |
| Verbenaceae    | Aloysia        | wrightii                     | Bee Brush, Oregonillo                 |
| Vitaceae       | Parthenocissus | vitacea                      | Virginia Creeper                      |
| Vitaceae       | Vitis          | arizonica                    | Arizona Grape                         |

**Table 2: All birds observed by sight or sound. May 10-11, 2009 Devil's Canyon survey.**

| Code | Common Name          | Latin Name                     | Family         | Order         | Notes  |
|------|----------------------|--------------------------------|----------------|---------------|--|
| GAQU | Gambel's quail       | <i>Callipepla gambelii</i>     | Odontophoridae | Galliformes   | Common   |
| TUVU | turkey vulture       | <i>Cathartes aura</i>          | Cathartidae    | Ciconiiformes | Abundant   |
| COHA | Cooper's hawk        | <i>Accipiter cooperii</i>      | Accipitridae   | Falconiformes | Calling and agitated in same area both afternoons - likely nesting.  |
| CBHA | common black-hawk    | <i>Buteogallus anthracinus</i> | Accipitridae   | Falconiformes | Paired, nesting. Sign they are eating crayfish. (*APIF)              |
| ZTHA | zone-tailed hawk     | <i>Buteo albonotatus</i>       | Accipitridae   | Falconiformes | Paired, nesting. Seems to be only one pair in survey area this year. |
| PEFA | peregrine falcon     | <i>Falco peregrinus</i>        | Falconidae     | Falconiformes | Paired, likely nesting. See photos.                                  |
| WWDO | white-winged dove    | <i>Zenaida asiatica</i>        | Columbidae     | Columbiformes | Common   |
| MODO | mourning dove        | <i>Zenaida macroura</i>        | Columbidae     | Columbiformes | Common   |
| WESO | western screech-owl  | <i>Megascops kennicottii</i>   | Strigidae      | Strigiformes  | Called just after dark.  |
| ELOW | elf owl              | <i>Micrathene whitneyi</i>     | Strigidae      | Strigiformes  | Several calling at dusk.   |
| WTSW | white-throated swift | <i>Aeronautes saxatalis</i>    | Apodidae       | Apodiformes   |  |
| ANHU | Anna's hummingbird   | <i>Calypte anna</i>            | Trochilidae    | Apodiformes   | Nesting - female on nest.  |
| COHU | Costa's hummingbird  | <i>Calypte costae</i>          | Trochilidae    | Apodiformes   | Abundant. Males displaying.  |
| GIWO | Gila woodpecker      | <i>Melanerpes uropygialis</i>  | Picidae        | Piciformes    | Common   |
| LBWO | ladder-backed        | <i>Picoides scalaris</i>       | Picidae        | Piciformes    |  |

|      |                          |  |               |               |   |
|------|--------------------------|--|---------------|---------------|---|
|      | woodpecker               |  |               |               |   |
| GIFL | gilded flicker           | <i>Colaptes chrysoides</i>             | Picidae       | Piciformes    |   |
| UNEM | unknown empid            | <i>Empidonax sp.</i>                   | Tyrannidae    | Passeriformes |   |
| BLPH | black phoebe             | <i>Sayornis nigricans</i>              | Tyrannidae    | Passeriformes | Common  |
| ATFL | ash-throated flycatcher  | <i>Myiarchus cinerascens</i>           | Tyrannidae    | Passeriformes | Paired  |
| CAKI | Cassin's kingbird        | <i>Tyrannus vociferans</i>             | Tyrannidae    | Passeriformes | Family group                                    |
| BEVI | Bell's vireo             | <i>Vireo bellii</i>                    | Vireonidae    | Passeriformes | Common. Singing.                                |
| WAVI | warbling vireo           | <i>Vireo gilvus</i>                    | Vireonidae    | Passeriformes |   |
| CHRA | Chihuahuan raven         | <i>Corvus cryptoleucus</i>             | Corvidae      | Passeriformes |   |
| VGSW | violet-green swallow     | <i>Tachycineta thalassina</i>          | Hirundinidae  | Passeriformes | Common. Likely group nesting area.              |
| BRTI | bridled titmouse         | <i>Baeolophus wollweberi</i>           | Paridae       | Passeriformes |   |
| VERD | verdin                   | <i>Auriparus flaviceps</i>             | Remizidae     | Passeriformes |   |
| BUSH | bush tit                 | <i>Psaltriparus minimus</i>            | Aegithalidae  | Passeriformes |   |
| CACW | cactus wren              | <i>Campylorhynchus brunneicapillus</i> | Troglodytidae | Passeriformes |   |
| ROWR | rock wren                | <i>Salpinctes obsoletus</i>            | Troglodytidae | Passeriformes |   |
| CANW | canyon wren              | <i>Catherpes mexicanus</i>             | Troglodytidae | Passeriformes | Abundant. Young exploring and learning to sing. |
| BEWR | Bewick's wren            | <i>Thryomanes bewickii</i>             | Troglodytidae | Passeriformes | Common  |
| BTGN | black-tailed gnatcatcher | <i>Polioptila melanura</i>             | Sylviidae     | Passeriformes |   |
| NOMO | northern mockingbird     | <i>Mimus polyglottos</i>               | Mimidae       | Passeriformes |   |
| PHAI | phainopepla              | <i>Phainopepla nitens</i>              | Ptilonotidae  | Passeriformes | Common  |
| VIWA | Virginia's warbler       | <i>Vermivora virginiae</i>             | Parulidae     | Passeriformes | 1 individual (*APIF)                            |
| LUWA | Lucy's warbler           | <i>Vermivora luciae</i>                | Parulidae     | Passeriformes | Common  |
| YWAR | yellow warbler           | <i>Dendroica petechia</i>              | Parulidae     | Passeriformes | Common. Singing.                                |
| AUWA | Audubon's warbler        | <i>Dendroica coronata auduboni</i>     | Parulidae     | Passeriformes | Several individuals                             |
| TOWA | Townsend's warbler       | <i>Dendroica townsendi</i>             | Parulidae     | Passeriformes | Several individuals                             |
| WIWA | Wilson's warbler         | <i>Wilsonia pusilla</i>                | Parulidae     | Passeriformes | Several individuals                             |
| SUTA | summer tanager           | <i>Piranga rubra</i>                   | Thraupidae    | Passeriformes | Common. Paired. Carrying nesting materials.     |
| WETA | western tanager          | <i>Piranga ludoviciana</i>             | Thraupidae    | Passeriformes | Several individuals                             |
| GTTO | green-tailed towhee      | <i>Pipilo chlorurus</i>                | Emberizidae   | Passeriformes |   |
| CANT | canyon towhee            | <i>Pipilo fuscus</i>                   | Emberizidae   | Passeriformes | Common  |
| BCSP | black-chinned sparrow    | <i>Spizella atrogularis</i>            | Emberizidae   | Passeriformes | Common. Paired. (*APIF)                         |
| SOSP | song sparrow             | <i>Melospiza melodia</i>               | Emberizidae   | Passeriformes | Singing   |
| NOCA | northern cardinal        | <i>Cardinalis cardinalis</i>           | Cardinalidae  | Passeriformes | Common  |
| BHGR | black-headed grosbeak    | <i>Pheucticus melanocephalus</i>       | Cardinalidae  | Passeriformes |   |
| HOOR | hooded oriole            | <i>Icterus cucullatus</i>              | Icteridae     | Passeriformes | Common. Family Groups.                          |
| HOFI | house finch              | <i>Carpodacus mexicanus</i>            | Fringillidae  | Passeriformes |   |
| LEGO | lesser goldfinch         | <i>Carduelis psaltria</i>              | Fringillidae  | Passeriformes | Common  |

\* APIF = [Arizona Partners in Flight Bird Conservation Plan priority species](#)





Figure 7: This pair of Peregrine Falcons seemed at home in this part of Devil's Canyon



Figure 8: Peregrine Falcon flying overhead



Figure 9: Yellow Warbler



Figure 10: Female Summer Tanager



**Table 3: Special status species that have potential to occur in survey area (Pinal County). E=federally-listed endangered, T=federally-listed threatened, C=candidate for federal listing, DL=delisted, AZ=protected by Arizona state law.**

| Species  | Status | Distribution/Habitat Characteristics   | Potential Occurrence in Project Area   |
|--|--------|--|--|
| Arizona Hedgehog<br>( <i>Echinocereus triglochidiatus</i> var. <i>arizonicus</i> ) | E, AZ  | Occurs in ecotone between interior chaparral and Madrean evergreen woodland. Pinal and Gila counties only.   | Habitat exists within the survey area. Additional surveys required to determine status in immediate area. Species occurs within 3 km of area.  |
| Acuna Cactus<br>( <i>Echinomastus erectocentrus</i> var. <i>acunensis</i> )        | C      | Well-drained knolls and ridges in Sonoran desertscrub. Three known localities in Pima County and 1 in Pinal County.  | Unlikely, but possible in larger region. Population near Florence, AZ.   |
| Mexican Spotted Owl<br>( <i>Strix occidentalis lucida</i> )                        | T, AZ  | Commonly found in mixed conifer woodland at higher elevation. Can also nest in lower elevation canyons with well-developed riparian habitat. Known to use cliff ledges for nesting in some localities. | Although commonly found higher in elevation, is known to nest in lower elevation canyons with well-developed riparian vegetation and cliffs. Possibility of occurrence in Devil's Canyon. Sufficient riparian woodland as well as suitable cliffs for nesting. USFS may have surveyed this area previously and should be consulted for data. Designated Critical Habitat exists within 5 miles (Appendix A). |
| Cactus Ferruginous Pygmy-owl<br>( <i>Glaucidium brasilianum cactorum</i> )         | DL     | Mature cottonwood/willow forest, mesquite woodland, Sonoran desertscrub, and semidesert grasslands with well-developed vertical vegetation cover and mature saguaros with cavities.                    | Little habitat. Range no longer reaches this part of Arizona. This area is very unlikely to support species except perhaps during dispersal. No longer listed.   |
| Bald Eagle<br>( <i>Haliaeetus leucocephalus</i> )                                  | DL     | Needs large rivers, lakes, or reservoirs with abundant prey.   | Little habitat in Devil's Canyon. Creek is too small.  |
| Southwestern Willow Flycatcher<br>( <i>Empidonax traillii extimus</i> )            | E      | Cottonwood/willow and tamarisk vegetation communities along rivers and streams.  | Vegetation structure and composition likely not suitable due to limited vegetation volume between 1.5 and 5m above ground.   |
| Western Yellow-billed Cuckoo<br>( <i>Coccyzus americanus</i> )                     | C      | Large stands of riparian and/or mesquite woodland.   | Cuckoos are typically found in lower elevation riparian areas that support Mesquite, Cottonwood, and Willow. Although we have observed cuckoos in other more montane riparian areas similar to Devil's Canyon, they are much less common in these areas. Cuckoo may occur in this area some years.   |



|   |   |   |  |
|---|---|---|--|
| Lesser Long-nosed Bat<br>( <i>Leptonycteris curasoae yerbabuena</i> ) | E | Desert Scrub Habitat with agave and columnar cacti present as food plants.  | Habitat present in Devil's Canyon but may not occur in area because it is at edge of range. Roosting areas and food sources are present in area. |
| Gila Chub<br>( <i>Gila intermedia</i> )                               | E | Pools, springs, cienegas, and streams. 2,000 – 5,500 ft.  | Additional surveys required to determine status. Designated Critical Habitat exists within 5 miles (Appendix A).                                 |
| Gila Topminnow<br>( <i>Poeciliopsis occidentalis occidentalis</i> )   | E | Small streams, springs, and cienegas with vegetated shallows. <4,500 ft.  | Likely extirpated from area. Additional surveys required to determine status.  |
| Loach Minnow<br>( <i>Tiaroga cobitis</i> )                            | T | Swift, shallow water with cobble and gravel. Recurrent flooding and natural hydrograph important. <8,000 ft.  | Likely extirpated from area. Additional surveys required to determine status.  |
| Northern Mexican Gartersnake ( <i>Thamnophis eques</i> )              | C | Large-river riparian woodlands and forests, streamside gallery forests. Strongly associated with the presence of a native prey including leopard frogs and native fish. | Likely extirpated from area. Additional surveys required to determine status.  |

**Appendix A: Results of Environmental On-line Review Tool.**

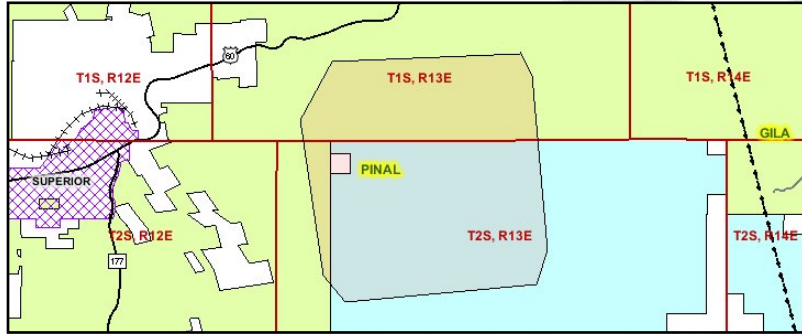
Arizona's On-line Environmental Review Tool

Search ID: 20090524008896

Project Name: Devils Canyon

Date: 5/24/2009 6:38:43 PM

**Project Location**



**Project Name:** Devils Canyon

**Submitted By:** Sky Jacobs

**On behalf of:** OTHER

**Project Search ID:** 20090524008896

**Date:** 5/24/2009 6:38:37 PM

**Project Category:** Mining, Other mineral extraction (copper, limestone, cinders, shale, salt)

**Project Coordinates (UTM Zone 12-NAD 83):** 497243.671, 3683012.739 meter

**Project Area:** 5359.869 acres

**Project Perimeter:** 17792.212 meter

**County:** PINAL

**USGS 7.5 Minute Quadrangle ID:** 1361

**Quadrangle Name:** SUPERIOR

**Project locality is currently being scoped**

**Location Accuracy Disclaimer**

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

**Special Status Species Occurrences/Critical Habitat/Tribal Lands within 5 miles of Project Vicinity:**

| Name   | Common Name   | ESA | USFS | BLM | State |
|--|---|-----|------|-----|-------|
| <i>Agosia chrysogaster chrysogaster</i>                    | Gila Longfin Dace                                   | SC  |      | S   |       |
| Bat Colony   |   |     |      |     |       |
| <i>Buteogallus anthracinus</i>                             | Common Black-Hawk                                   |     | S    | S   | WSC   |
| CH for <i>Gila intermedia</i>                              | Designated Critical Habitat for Gila chub           |     |      |     |       |
| CH for <i>Strix occidentalis lucida</i>                    | Designated Critical Habitat for Mexican spotted owl |     |      |     |       |
| <i>Chionactis occipitalis klauberi</i>                     | Tucson Shovel-nosed Snake                           |     |      | S   |       |
| <i>Echinocereus triglochidiatus</i> var. <i>arizonicus</i> | Arizona Hedgehog Cactus                             | LE  | S    |     | HS    |
| <i>Falco peregrinus anatum</i>                             | American Peregrine Falcon                           | SC  | S    | S   | WSC   |
| <i>Gila robusta</i>  | Roundtail Chub                                      | SC  | S    | S   | WSC   |
| <i>Gopherus agassizii</i> (Sonoran Population)             | Sonoran Desert Tortoise                             | SC  |      | S   | WSC   |
| <i>Lithobates yavapaiensis</i>                             | Lowland Leopard Frog                                | SC  | S    | S   | WSC   |
| <i>Myotis ciliolabrum</i>                                  | Western Small-footed Myotis                         | SC  |      |     |       |