

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 10th, surveying till dark and from 5am on the 11th 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.

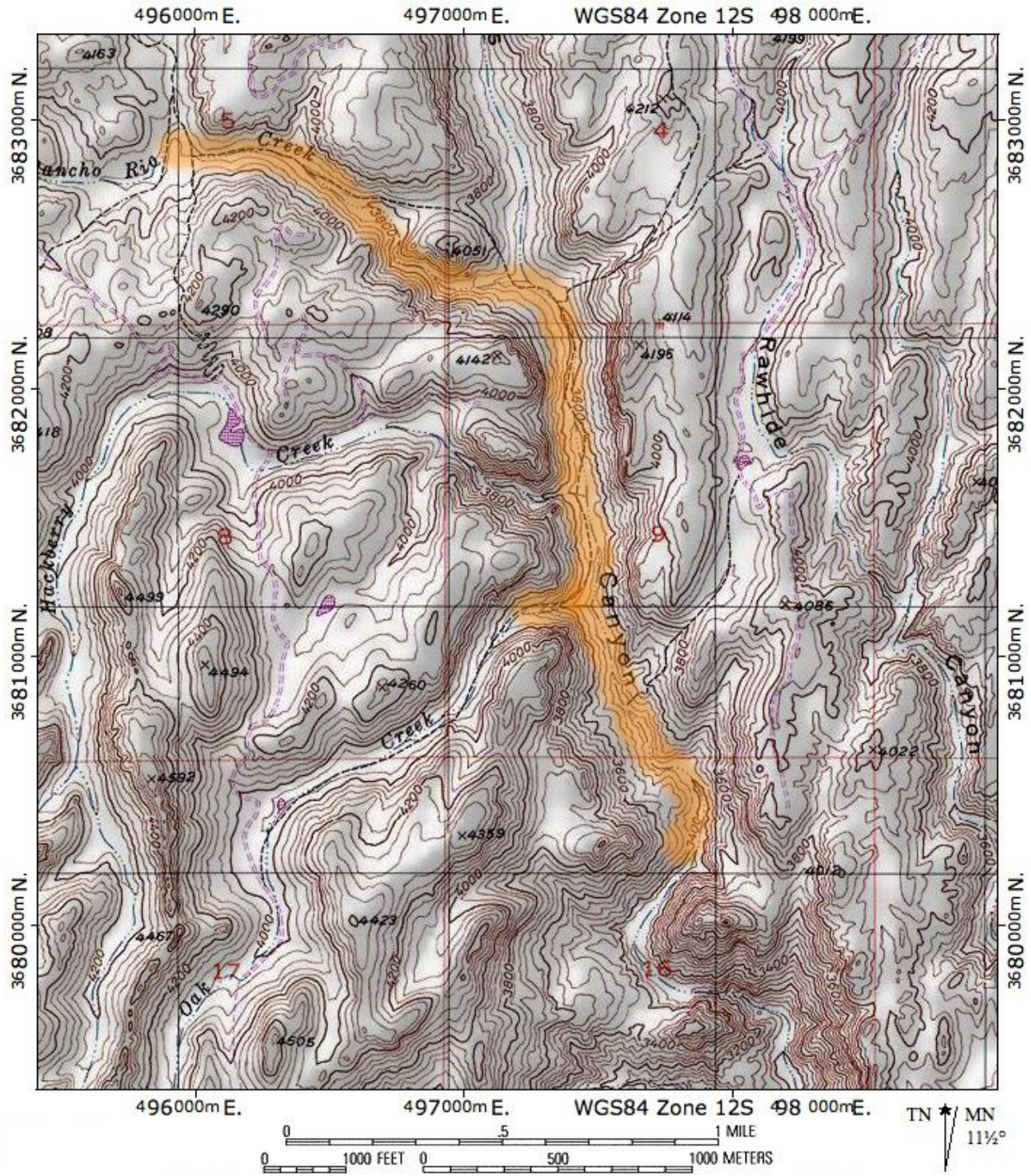


Figure 1: Map of Devil's Canyon and surrounding region. Survey route is indicated in orange.

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.

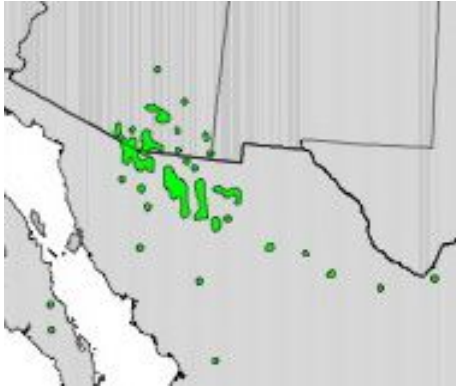


Figure 2: Blue Oak (*Quercus oblongifolia*).



Figure 3: Bonpland Willow (*Salix bonplandiana*)



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

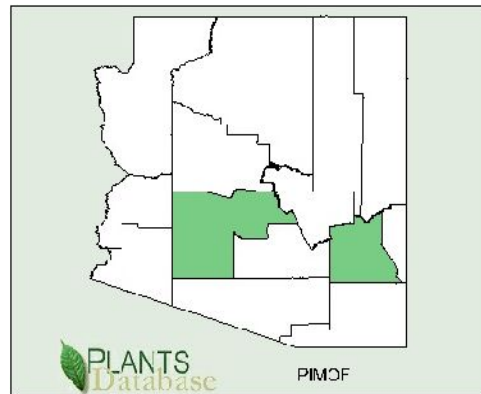


Figure 5: Single-leaf Piñon, *Pinus monophylla* var. *fallax*

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 10th, 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 10-11th, limiting potential for detection. Southwestern Willow Flycatchers also generally start appearing around May 15th, 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)

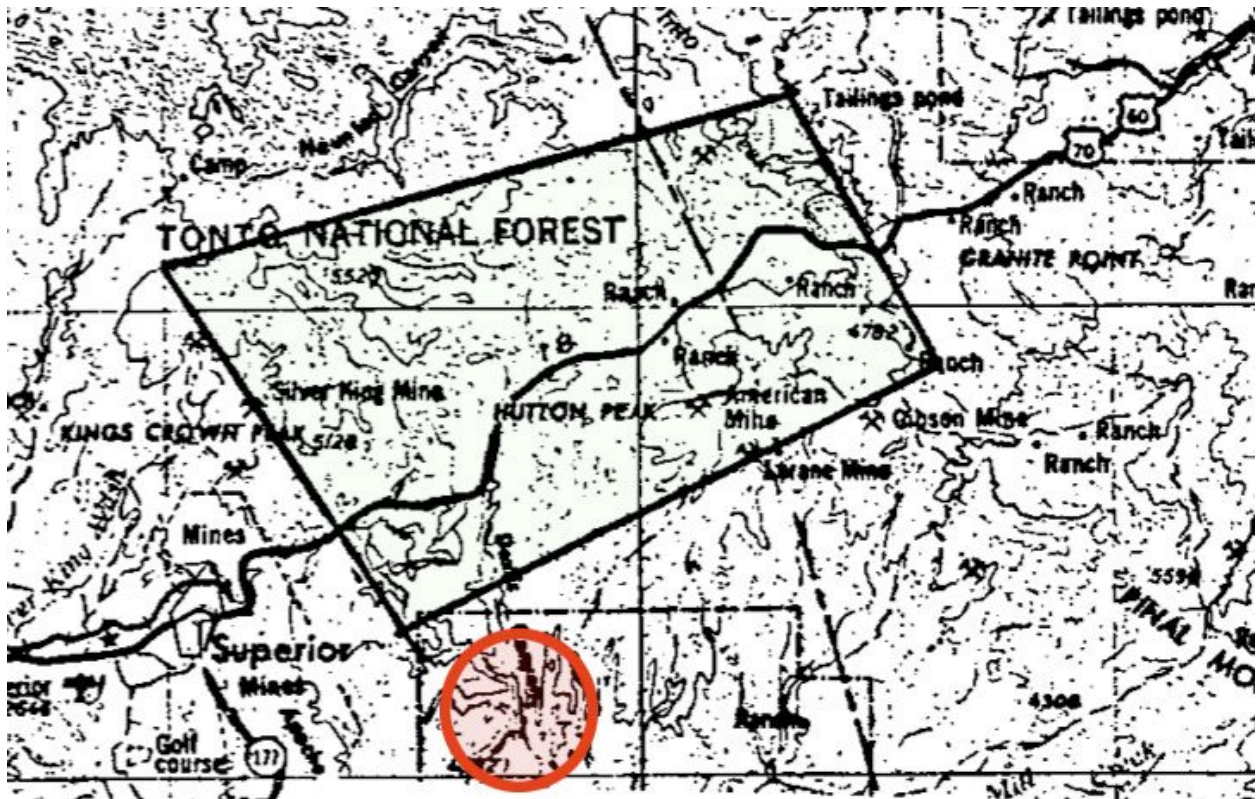


Figure 6: Range of *Echinocereus triglochidiatus* var. *arizonicus* as delineated April 1982 (Devil's Canyon survey area indicated in red) – Fish and Wildlife Draft Recovery Plan, 1984

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 (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 (<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 (<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 (<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 (<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 (<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 (<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 (<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 (<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 (<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 (<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 (<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.

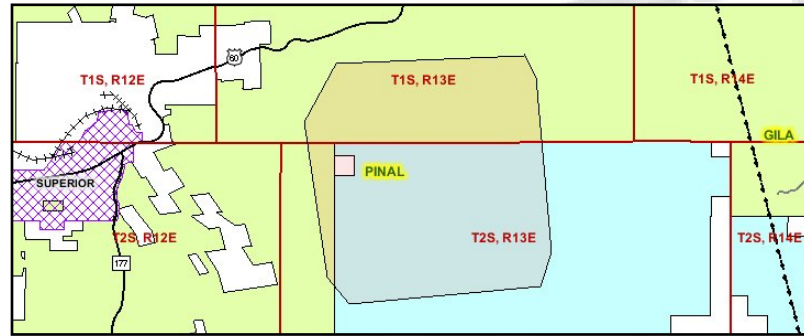
Arizona's On-line Environmental Review Tool

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			