U.S. DEPARTMENT OF AGRICULTURE **SPEED MEMO**

PART NUMBER	DATE
2	3/11/87

TO Will Moir
RO - RNA Task Group

FROM Mike Borens
Coronado NF

SUBJECT 4060
Pole Bridge RNA

MESSAGE

Attached are the Coronado's comments on the Draft Establishment Report. Basically looks good, but needs a little polishing up. How did the extension area go from 90 to 105 acres? — More accurate measurement? Probably should be explained. Please Call if you have questions about comments

SIGNATURE Mike

REPLY SO & Douglas RD Comments Both attached.

SIGNATURE

DATE

(DESTROY THIS PART 2 UPON RECEIPT OF REPLY.)

FORM AD-311 (REV. 3/81)

SENDER'S COPY

United States Department of Agriculture | Forest Service | Southwestern Region | 517 Gold Avenue SW. Albuquerque, NM 87102

Reply to: 4060

Date: February 12, 1987

Subject: Research Natural Area Draft Establishment Records

To: RNA Task Group Reviewers : Mike Scott

Preparation of Establishment Records (ER's) and signatory approvals are among the first steps implementing the Research Natural Area (RNA) portion of Forest Plans. In Region 3, the draft ER's were prepared under a contract with the Nature Conservancy. The Conservancy was guided by FSM 4063.41 which specifies the format and content of ER's.

Please review this draft ER. Is the information accurate, clear, not excessive? Was anything important omitted? Please note the signature page. Would you recommendcd approval by the appropriate person on that page? If not, what needs to be changed in order to put the ER into final form?

Your review is not to be considered an evaluation of RNA itself. This was already done as part of the Forest planning process. Instead, I am asking you to help us on the RNA Task Group and RNA Committee make sure the ER is accurate and complete before sending it on for the required signatures.

Your timely response will be appreciated. Any corrections can be sent electronically (DG: W.MOIR:R03A) or by mail. A final ER will be sent for signatory approval as soon as needed changes, if any, are incorporated.

W. H. MOIR

WILL MOIR
Chairperson, RNA Task Group

W.moir:sjj

DRAFT 2/9/87

ESTABLISHMENT RECORD

for

POLE BRIDGE CANYON (EXTENSION) RESEARCH NATURAL AREA

within

Coronado National Forest

Cochise County, Arizona

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Pole Bridge Canyon (Extension) Research Natural Area

Coronado National Forest

Cochise, Arizona

Prepared by_____Date_____
Mark H. Cochran, The Nature Conservancy
Andrew W. Laurenzi, The Nature Conservancy

Recommended by_____Date_____
Bernard H. Brunner, District Ranger,
Douglas Ranger District

Recommended by_____Date_____
R.B. Tippeconnic, Forest Supervisor,
Coronado National Forest

Recommended by_____Date_____
John W. Russell, Chairperson,
Southwestern Research Natural
Area Committee

Recommended by_____Date_____
Sotero Muniz, Regional Forester,
Southwestern Region

Recommended by_____Date_____
Charles M. Loveless, Station Director,
Rocky Mountain Forest and Range
Experiment Station

INTRODUCTION

The Pole Bridge Canyon Research Natural Area (PBCRNA) is located in the Chiricahua Mountains in the southeast corner of Arizona. The area is within the Douglas Ranger District of the Coronado National Forest, in Cochise County, and is all ~~aquired~~ reserved/Public domain National Forest System land. The original RNA boundary area and extension is within the Chiricahua Wilderness.

The PBCRNA was established in 1931 to include distinctive populations of southern Arizona pines: Southwestern white pine (Pinus strombiformis), Arizona pine (Pinus ponderosa var arizonica), Apache pine (Pinus englemanni), Chihuahua pine (Pinus leiophylla var chihuahensis) and border pinyon (Pinus discolor). Subsequent study since 1931 indicated that the original 460 acres (186 hectares) did not contain viable populations of Chihuahua Pine (Pinus leiophylla var chihuahuensis). The extension of 105 acres (43 hectares) was put forward by the Regional Task force to include such populations. This document provides information the expanded RNA of 565 acres (229 hectares) with special emphasis on the proposed extension.

Land Management Planning

The Southwestern RNA Progess Report (USDA Forest Service, 1984) and the current Coronado National Forest Plan and Environmental Impact Statement (USDA Forest Service, 1986a) include the PBCRNA extension. The environmental analysis conducted as part of the planning process supports the recommendation to establish this extension.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The pine-oak forest and woodlands centered in the Sierra Madre mountains reach their northernmost extent in the mountainous region of sub-Mogollon Arizona. Opportunities to represent this ecosystem occur primarily in the Coronado National Forest. Several pines are characteristic components of the Sierra Madrian pine-oak ecosystem in Arizona: Arizona pine, Apache pine, Chihuahua pine and border pinyon. Pole Bridge Canyon RNA was established in 1931 to represent the Mexican pine-oak ecosystem and to include viable populations of these southern Arizona pines. Later study documented the poor representation of Chihuahua pine.

The extension of 105 acres (43 hectares) encompasses good examples of two Chihuahua pine habitat types, Pinus leiophylla/Quercus arizonica and Pinus leiopylla/Quercus hypoleucoides and in doing so provides a more complete representation of the Seirra Madrean pine-oak ecosystem within the Southwestern Regional RNA system. The inclusion of five pine species in a single location contributes to the uniqueness of this RNA in the southwest.

LOCATION

The PBCRNA can be reached from either Douglas or Willcox, Arizona. From Douglas, U.S. Highway 666 leads north through the Sulphur Springs Valley. Turn onto Arizona highway 181 at its intersection with 666 and proceed ~~west~~ east for 12 miles (19.3 km) to the intersection with FDR#41 (Turkey Creek Road). Continue east approximately 10 miles on the unpaved road to a concrete one-lane bridge was constructed where this road crosses

Pole Bridge Canyon Creek. Here a trail sign indicates the start of Pole Bridge Trail #5264. The natural area boundary is 0.4 miles (0.65 km) up this trail. The trail continues an additional 2 miles (3.2 km) through the natural area, along the canyon bottom at first and then in numerous switchbacks up the canyon headwall to the ridge forming the south boundary. Trail #5264 intersects the John Long Trail #5267 on this ridge, and latter proceeds about 0.3 miles (0.5 km) along the south boundary. From Wilcox follow Arizona Highway 186 to its intersection with Arizona Highway 181. Continue about 10.5 miles (17 km) south on 181 ~~leads~~ to the graveled Turkey Creek Canyon Road.

AREA BY COVER TYPES

Information on cover types in the PBCRNA was obtained from the from the Southwest Regional RNA Progress Report (1984) and a field reconnaisance.

Ku"chler

The closest analagous type described is the Oak-juniper woodland (Ku"chler 1964). This type is a poor descriptor of the vegetation in the PBCRNA.

Society of American Foresters

Closest analagous type described is Western Live Oak SAF 241. This cover type is not an accurate descriptor of the PBCRNA vegetation.

Habitat Types or Plant Associations

No detailed information exists on the habitat types of the

PBCRNA. Field reconnaissance and information presented in the Southwestern Region RNA progress report (USDA Forest Service, 1984) indicates that the entire 105 acre (43 hectare) extension includes several habitat types of the Madrean evergreen forest and woodland, oak-pine series (Brown, 1982; Moir 1986). Detailed mapping information on the distribution of cover types in the extension which would provide acreage estimates by habitat types is unavailable.

PHYSICAL AND CLIMATIC CONDITIONS

Pole Bridge Canyon is carved out of granite and related crystalline intrusive rocks (Arizona Bureau of Mines, 1959). High ridges of cliffs and rock outcrops comprise the east and west boudaries (Fig. 3). The main drainage, trending northerly, divides the canyon at lower elevations into east- and west-facing slopes. These slopes are steep and disected into rocky and shallow canyons with numerous parent rock outcrops. The canyon bottom has a narrow, intermittent stream channel and lacks well-developed alluvial terraces or benches. The channel divides in the upper part of the natural area. At elevations above 7,600 feet (2,300 km) the slopes are steep, north-facing, and dissected by steep draws and cliffs (reproduced from Smith 1974:44). The extension includes a small, ephmeral drainage on the northwest boundary of the original area which bisects a small watershed into steep north and south-facing aspects.

There are no climatic records for PBCRNA. The nearest

weather station is at Chiricahua National Monument 11.0 miles (17.7 km) to the north. This station, however, is in a different bioclimatic zone at 5,400 feet (1,640 m) elevation. In the Chiricahua Mountains precipitation occurs in the form of summer convective showers, mostly in late July through mid September, and as winter frontal storms, generally from December to March. April through June is a relatively dry period. Assuming a precipitation increase of 1.6 cm per 100 m elevation in summer, and 1.3 per 100 m in winter (Whitaker and Niering, 1965), the mean annual precipitation at 2,200 m elevation at PBCRNA would be about 64 cm (25 inches), extrapolated from the record at Chiricahua National Monument. Precipitation usually occurs as snow in winter, and as rain or hail in summer (Climate description reproduced from Smith, 1974:44-45).

DESCRIPTION OF VALUES

Flora

The original RNA boundary area supports mixed-coniferous forest on the north-facing slopes above 7,600 feet (2,300 meters). Principal species include Douglas fir (Pseudotsuga menszieii) and Arizona pine. Southwestern white pine is less abundant and white fir (Abies concolor) occurs in the most mesic sites along drainageways (Smith,1974).

The colluvial west- and east-facing canyon slopes below 7,600feet (2,300 meters) support Sierra Madrean pine-oak woodland, the principal ecosystem for which the area originally established. On the lower slopes and along the Pole Bridge

canyon drainageway, Apache pine and silverleaf oak (Quercus hypoleucoides) are dominant species. This cover type has been recently described as Apache pine/silverleaf oak habitat type (USDA Forest Service, 1986a) important associated trees include Alligator juniper (Juniperus deppeana), Chihuahua pine, border pinyon, netleaf oak (Quercus rugosa), Arizona white oak (Quercus arizonica). Along the main stream course are scattered Arizona sycamore (Platanus wrightii) and Southwestern chokecherry (Prunus serotina). Understory shrubs include Schott's yucca (Yucca schottii), prickly pear (Opuntia chloritica), and Palmer's agave (Agave palmeri). Perennial grass cover is best developed on the slopes with longtonque muhly (Muhlenbergia longiligula), and mutton grass (Poa fenderliana var albescens) dominant.

On the upper, steeper slopes, the Apache pine/silverleaf oak habitat type is replaced by the silverleaf/longtongue muhly habitat type. This closed canopy woodland is dominated by silverleaf oak in association with Arizona white oak. Alligator juniper and border pinyon are minor associates. A well-defined herbaceous layer exists with longtongue muhly dominant.

Small scarps of limestone parent materials are scattered on the east-facing slopes and support a distinct association dominated in part by mountain mahogany (Cercocarpus breviflorus) in association with border pinyon. The oaks are absent from this association. The association appears to correspond to the border pinyon/mountain mahogany/evergreen sumac habitat type recently described by the USFS (ibid). Several shrubs such as Garrya wrightii and Apache plume (Fallugia paradoxa) are prevalent in

this type.

Conspicuously absent from the original area is Chihuahua pine which is represented by only several individuals at the original lower boundary. The proposed extension, remedies this deficiency by including two Chihuahua pine habitat types, Chihuahua pine/Arizona white oak and Chihuahua pine/silverleaf oak habitat types within the RNA. As is true for the Apache pine habitat type, Chihuahua pine habitat types are best represented on the lower slopes and stream terraces within the extension. An especially impressive stand of Chihuahua pine occurs on the alluvial terrace present at the confluence of the principal drainageway of the extension area and the main canyon stream course. The composition of the steep upper slopes is similar to that described in the original boundary area.

The flora of the area has not been throughly studied, inventoried or collected. No threatened or endangered species are known from the area. Arizona buttercup (Ranunculus arizonicus), a State-sensitive species has been collected from the eastern boundary ridgline. Astragalus cobrensis var maguirei, known from only two collections in the Chiricahua Mountains may occur in the canyon. The following plant list was compiled by Reggie Fletcher, Southwestern Regional USFS botanist following a field reconnaissance 20 May 1985. Nomenclature is after Lehr (1978).

Preliminary Plant Species List For Pole Bridge RNA

Latin Name	Common Name
Trees	
Abies concolor R	white fir
Arbutus arizonica I	Arizona madrone
Juniperus deppeana C	alligator juniper
Pinus discolor C	border pinyon
Pinus engelmannii C	Apache pine
Pinus leiophylla var chihuahuensis C	Chihuahua pine
Pinus ponderosa var arizonica C	Arizona pine
Pinus strobiformis I	white pine
Platanus wrightii R	Arizona sycamore
Prunus virginiana var melanocarpa I	black western choke cherry
Pseudotsuga menziesii C	douglas fir
Quercus arizonicus C	Arizona white oak
Quercus gambellii C	Gambel oak
Quercus hypoleucoides C	silver leaf oak
Quercus rugosa C	netleaf oak
Robinia neomexicana I	locust
Shrubs and Woody Lianas	
Agave palmeri I	Palmer's agave
Ceanothus fendleri R	buck brush
Cercocarpus montanus R	mountain mahogany
Echinocereus triglochidiatus var neomexicanus R	hedgehog cactus
Fallugia paradoxa I	Apache plume
Fraxinus papillosa C	Chihuahua ash
Garrya wrightii R	silk tassel
Jamesia americana R	cliff bush
Nolina microcarpa R	beargrass
Opuntia chlorotica C	prickly pear
Pontentilla thurberi R	cinquefoil
Ptelea trifoliata I	hoptree
Ranunculus arizonicus R	buttercup
Ranunculus hydrocharoides R	buttercup
Rhamnus betulaefolia I	birch leaf buck horn
Rubus neomexicanus I	New Mexican raspberry
Toxicodendron radicans R	
Vitis arizonica R	canyon grape
Yucca schottii C	Schott's yucca
Herbs	
Achilles lanulosa C	yarrow
Antennaria parvifolia C	pussy toes
Aquilegia chrysantha C	coumbine
Arceuthobium vaginatum var vaginatum C	Southwestern dwarf

	mistletoe
Astragalus cobrensis var maguirei R*	milk vetch
Castilleja laxa R	indian paint brush
Cerastium nutans var nutans R	powder horn
Cerastium texanum R	mouse-ear chich weed
Cheilanthes fendleri C	Fendler's lip fern
Conopholis mexicana R	Mexican squaw root
Corallorhiza maculata R	spotted coral root
Erigeron flagellaris C	running fleabane
Euphorbia incisa R	spurge
Hedeoma hyssopifolium I	mock-pennyroyal
Heuchera parvifolia var arizonica R	alum root
Hieracium carneum R	hawkweed
Hieracium fendleri R	Fendler's hawkweed
Juncus xiphioides R	rush
Leibnitzia seemannii R	
Lupinus blumeri R	lupine
Lupinus concinnus C	elegant lupine
Mimulus guttatus C	monkey flower
Oxytropis lambertii I	Lambert's locoweed
Pellaea wrightiana R	cliffbreak
Pseudocymopterus montanus C	mountain parsely
Pteridium aquilinum C	western bracken
Senecio neomexicanus var toumeyi C	groundsel
Senecio wootonii R	groundsel
Silene noctiflora R	catchfly
Sphenopholis obtusata R	prairie wedgegrass
Spiranthes parasitica R	ladys tresses
Taraxacum officinale R	common dandelion
Thalictrum fendleri C	meadow rue
Thermopsis pinetorum I	golden pea
Trifolium variegatum R	clover
Triodanis perfoliata R	venus looking glass
Viola canadensis I	violet
Woodsia plummerae R	flower cup fern
Zauschneria californica I	hummingbird trumpet

Grasses and Grass-like Plants

Agrostis semiverticillata R	water bent
Carex agrostoides C	sedge
Muhlenbergia longiligula C	longtongue mujhly
Poa fendleriana ssp. albescens C	mutton grass
Poa occidentalis R	blue grass

*known only from the Chirachuas

Relative Abundance:
R = rare
I = infrequent
C = common

Fauna

Three species listed by the Arizona Game and Fish Department as threatened may occur in the extension area. These are the buff-breasted flycatcher, spotted owl, and blue-throated hummingbird. While not limited to the PBCRNA, several species are of special interest in southeastern Arizona. Included are the twin-spotted rattlesnake, Arizona mountain kingsnake, Mexican chickadee, painted redstart, red-faced warbler, olive warbler, magnificent hummingbird, whiskered screech owl, flammulated owl, yellow-eyed junco, Apache fox squirrel, and pine white butterfly. Species hunted include black bear, white-tailed deer, Merrian's turkey, band-tailed pigeon, and Apache fox squirrel.

The following animal list was derived from the Run Wild III computer-stored data base (Lehmkuhl and Patton, 1982) for the Mexican Oak-Pine Series (225.100) of Cochise county, Arizona; and Smith (1974:46) (after Cockrum and Justice, 1956) for mammals.

Abbreviated Animal List for Pole Bridge Canyon R.N.A.

BIRDS:

Bluebird, Eastern	*Sialia sialis*
Bluebird, Mountain	*Sialia currucoides*
Bluebird, Western	*Sialia mexicana*
Bushtit	*Psaltriparus minimus*
Creeper, Brown	*Certhia americana*
Crossbill, Red	*Loxia curvirostra*
Flicker, Northern	*Colaptes auratus*
Flycatcher, Ash-throated	*Myiarchus cinerascens*
Flycatcher, Buff-breasted	*Empidonax fulvifrons*
Flycatcher, Dusky-capped	*Myiarchus tuberculifer*
Flycatcher, Sulfer-bellied	*Myiodynastes luteiventris*
Flycatcher, Western	*Empidonax difficilis*
Gnatcatcher, Blue-gray	*Polioptila caerulea*
Goshawk, Northern	*Accipiter gentilis*

Grosbeak, Black-headed	Pheucticus melanocephalus
Hummingbird, Berylline	Amazilia beryllina
Hummingbird, Lucifer	Calothorax lucifer
Hummingbird, Magnificent	Eugenes fulgens
Hummingbird, White-faced	Hyocharis leucotis
Jay, Gray-breasted	Aphelocoma ultramarina
Junco, ~~Mexican~~ Yellow-eyed	Junco phaeonotus
Kingbird, Cassin's	Tyrannus vociferans
Nighthawk, Common	Chordeiles minor
Nightjar, Buff-collared	Carpimulgus ridgwayi
Nuthatch, Pygmy	Sitta pygmaea
Nuthatch, White-breasted	Sitta carolinensis
Owl, Elf	Micrathene whitneyi
Owl, Flammulated	Otus flammeolus
Phoebe, Black	Sayornis nigricans
Pygmy-owl, Northern	Glaucidium gnoma
Redstart, Painted	Myioborus pictus
Robin, American	Turdus migratorius
Screech-owl, Whiskered	Otus trichopsis
Solitaire, Towsend's	Myadestes townsendi
Sparrow, Chipping	Spizella passerina
Swallow, Violet-green	Tachycineta thalassina
Tanager, Hepatic	Piranga flava
Tanager, Western	Piranga ludoviciana
Titmouse, Bridled	Parus wollweberi
Towhee, Rufous-side	Pipilo erythrophthalmus
Trogon, Eared	Euptilotis neoxenus
Vireo, Hutton's	Vireo huttoni
Warbler, Grace's	Dendroica graciae
Waxing, Cedar	Bombycilla cedrorum
Whip-poor-will	Caprimulgus vociferus
Woodpecker, Acorn	Melanerpes formicivorus
Woodpecker, Hairy	Picoides villosus
Woodpecker, Strickland's	Picoides stricklandi
Wood-pewee, Western	Contopus sordidulus
Wren, Bewick's	Thryomanes bewickii

MAMMALS:

Bat, Allen's Big-eared	Idionycteris phyllotis
Bat, Big Brown	Eptesicus fuscus
Bat, Big Free-tailed	Tadarida molossa
Bat, Brazilian Free-tailed	Tadarida brasiliensis
Bat, Hoary	Lasiurus cinereus
Bat, Peter's Leaf-chinned	Mormoops megalophylla
Bat, Mexican Long-tonqued	Choeronycteris mexicana
Bat, Long-nosed	Leptonycteris nivalis
Bat, Silver-haired	Lasionycteris noctivagans
Bat, Towsend's Big-eared	Plecotus townsendii
Bear, Black	Ursus americanus
Bobcat	Lynx rufus
Chipmunk, Cliff	Eutamius dorsalis
Coati	Nasua narica
Cottontail, Eastern	Sylvilagus floridanus

Coyote	Canis latrans
Deer, Mule	Odocoileus hemionus
Deer, White-tailed	Odocoileus virginianus
Fox, Gray	Urocyon cinereoargenteus
Gopher, Valley Pocket	Thomomys botae
Lion, Mountain	Felis concolor
Mouse, Brush	Peromyscus boylei rowleyi
Mouse, Deer	Peromyscus maniculatus
Mouse, Pinyon	Peromyscus truei
Mouse, Rock	Peromyscus nasutus
Myotis, California	Myotis clifornicus
Myotis, Long-eared	Myotis evotis
Myotis, Small-footed	Myotis subuatus
Myotis, Fringed	Myotis thysanodes
Myotis, Long-legged	Myotis volans
Pipistrelle	Pipistrellus hesperus
Porcupine	Erethizon dorsatum
Raccoon	Procyon lotor
Rat, Yellow-nosed Cotton	Sigmodon ochrognathus
Rat, Mexican Wood	Neotoma mexicana
Ringtail	Bassariscus astutus
Shrew, Arizona	Sorex arizonae
Shrew, Vagrant	Sores vagrans
Skunk, Hooded	Mephitis macroura
Skunk, Spotted	Spilogale putorius
Skunk, Striped	Mephitis mephitis
Squirrel, Arizona Gray	Sciurus arizonensis
Squirrel, Nayarit	Sciurus nayaritensis
Squirrel, Rock	Spermophilus variegatus
Weasel, Long-tailed	Mustela frenata

REPTILES:

Kingsnake, Sonoran Mountain	Lampropeltis pyromelana
Lizard, Striped Plateau	Sceloporus virgatus
Rattlesnake, Rock	Crotalus lepidus
Rattlesnake, Twin-spotted	Crotalu pricei
Skink, Mountain	Eumeces callicephalus
Snake, Mexican Garter	Thamnophis eques
Turtle, Sonoran Mud	Kinosternon sonoriense

AMPHIBIANS:

Treefrog, mountain	Hyla eximia

Geology

The major portion of the area is underlain by Tertiary and Cretaceous age volcanics (andesite flows). The eastern edge of the area is underlain by Tertiary age granite.

Soils

The dominant soils are classified as Ucic Haplustalfs, loamy-skeletal, mixed, mesic.

Cultural

No archaeological surveys have been conducted within the area and no cultural resources have been recorded in Forest Service files. Site density is considered to be low.

IMPACTS AND POSSIBLE CONFLICT

Mineral Resources

The RNA extension is a northward extension Pole Bridge Canyon RNA. The original RNA was withdrawn from mineral entry in 1977. No known mineral resources exist in the extension area. The extension is entirely within the Chiricahua Wilderness, and therefore withdrawn from mineral entry.

Grazing

The RNA extension receives some livestock use in the spring. The use level is light and results form cattle grazing the benches south of Turkey Creek. Cattle graze these benches and side canyons and move out on the trail in Pole Bridge. The majority of this movement is below the extension area, but some animals do drift through the area. A fence at the north end of the area could possibly trap any cattle coming down the canyon. The loss of AUM's in the area will be minimal. Forage production is low

due to needle cast and canopy cover.

Timber

The original boundary area and extension are in the Chiricahua Wilderness. Refer to the wildlife section for a discussion on the timber species.

Watershed Values

The RNA extension occurs within a small, ephemeral watershed that drains into the Pole Bridge Canyon which is a tributary to Turkey Creek. Water quality testing done for Turkey Creek in 1974 to 1979 indicated good quality water.

Recreation Values

The RNA extension receives little recreational use. Most use is from hikers and hunters. There are no expected significant conflicts with, or changes in, recreational use of the area.

Wildlife and Plant Values

Wildlife- Management of the area for research should not affect other activities such as hunting and bird watching or habitats of the species listed above. However, wildlife species (such as the white-tailed deer, Merrian's turkey, yellow-eyed junco and possibly the buff-breasted flycatcher) with habitat requirements dependent on fire-related seral stages will be negatively affected by total fire suppression in the research natural area.

not necessary / see Coronado Forest Plan pages 78 & 87

Plants- A complete botanical survey has not been completed for the area. Limited plant lists are available from Reggie

Fletcher and Will Moir, Regional Botanist and Ecologist, respectively, and are presented elsewhere in this document. No threatened or endangered species have been observed to date. Species to look for in an extensive inventory are Senecio huachucanus, Astragalus cobrensis var maguirei, Cheilnathes, C. pringlei, Peritvle cochisensis, and Polemonium ssp. hinkleyi.

If all fire are totally suppressed in the area, age and species mixture of conifers may decrease (Sawyer and Kinraide, 1980). Several species of Pinus rely on fire to some extent to open up forest floors for seed beds. These species are also less shade tolerant than the Douglas-fir and white fir found in the research natural area. No other negative impacts on plant resources are expected with management of the area for research.

See note on previous page

Wilderness, Wild and Scenic River, or National Recreation Area Values

The proposed RNA extension occurs within the Chiricahua Wilderness. Establishment of this extension as a RNA will not impact the purposes or management of this Wilderness.

Transportation Plans

The proposed RNA extension is accessed by a trail from a Forest Service road. The proposed area has no roads. There are no transportation plans which would adversely affect the RNA.

MANAGEMENT PLANNING

Land Management Planning

The PBCRNA extension is recommended in the Cornado National Forest Plan Management Area 8A (see Appendix). Management

emphasis is to manage for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state.

Vegetation Management

No harvest of forest products including fuelwood. Rangeland will be managed at Level A (no grazing). Prescribed fire will be used to reduce risks and enable lightening to play its natural role.

and manage vegetation

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of the Pole Bridge Canyon (Extension) RNA is the responsibility of the Coronado National Forest. The District Ranger, Douglas Ranger District, Douglas, AZ has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station, or his designee, will be responsible for any studies or research conducted in the area, and request to conduct research in the area should be referred to him. He, or his designee, will evaluate research proposals and coordinate all studies and research in the area with the District Ranger. All plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Rocky Mountain Station Director.

through the Forest RNA Coordinator

Records for the Pole Bridge Canyon (Extension) RNA will be maintained in the following offices:

Regional Forester, Southwestern Region, Albuquerque, NM

Rocky Mountain Station, Fort Collins, CO

Coronado National Forest, Tucson, AZ

District Ranger, Douglas Ranger District, Douglas, AZ

REFERENCES

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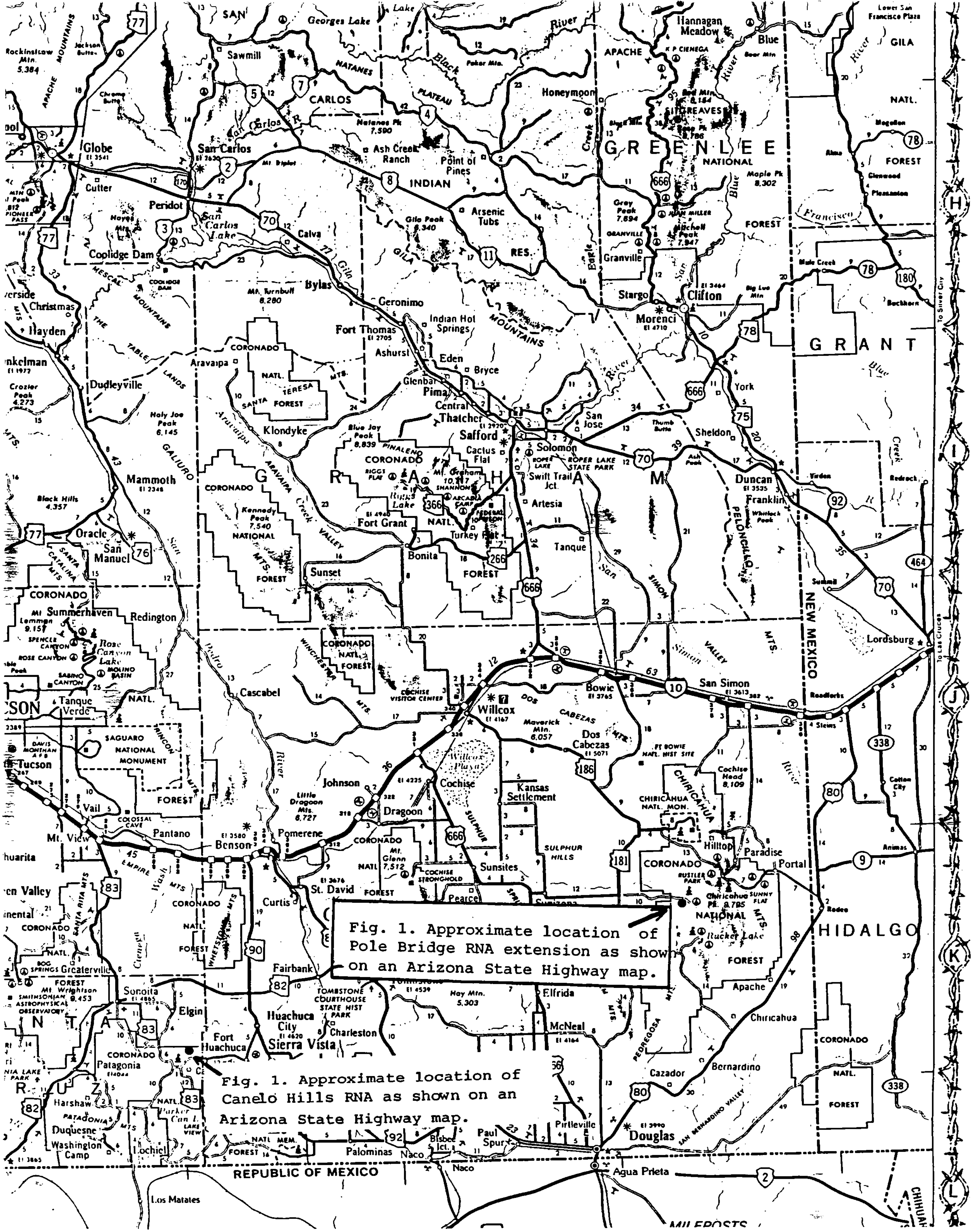

Globe
San Carlos
Peridot
Cutter
Coolidge Dam
San Carlos Lake
Calva
Bylas
Geronimo
Fort Thomas
Indian Hot Springs
Ashurst
Eden
Bryce
Glenbar
Pima
Central
Thatcher
Safford
Solomon
San Jose
Swift Trail Jct.
Artesia
Klondyke
Aravaipa
Fort Grant
Bonita
Sunset
Tanque
Hayden
Dudleyville
Mammoth
Oracle
San Manuel
Summerhaven
Redington
Cascabel
Tanque Verde
Tucson
Vail
Mt. View
Pantano
Benson
Pomerene
Johnson
Dragoon
Cochise
Willcox
Bowie
San Simon
Dos Cabezas
Kansas Settlement
Sunsites
Pearce
St. David
Curtis
Fairbank
Sonoita
Elgin
Fort Huachuca
Huachuca City
Sierra Vista
Charleston
Patagonia
Harshaw
Duquesne
Washington Camp
Lochiel
Palominas
Naco
Bisbee Jct.
Paul Spur
Pirtleville
Douglas
Agua Prieta
McNeal
Elfrida
Cazador
Bernardino
Apache
Chiricahua
Portal
Paradise
Hilltop
Rodeo
Animas
Lordsburg
Duncan
Franklin
Sheldon
York
Clifton
Morenci
Stargo
Granville
Honeymoon
Hannagan Meadow
Blue
Point of Pines
Ash Creek Ranch
Arsenic Tubs
Sawmill
Georges Lake
GREENLEE
GRAHAM
GRANT
HIDALGO
NEW MEXICO
REPUBLIC OF MEXICO
CORONADO NATIONAL FOREST
SAGUARO NATIONAL MONUMENT
CHIRICAHUA NATL. MON.
Los Matates

Fig. 1. Approximate location of Pole Bridge RNA extension as shown on an Arizona State Highway map.

Fig. 1. Approximate location of Canelo Hills RNA as shown on an Arizona State Highway map.

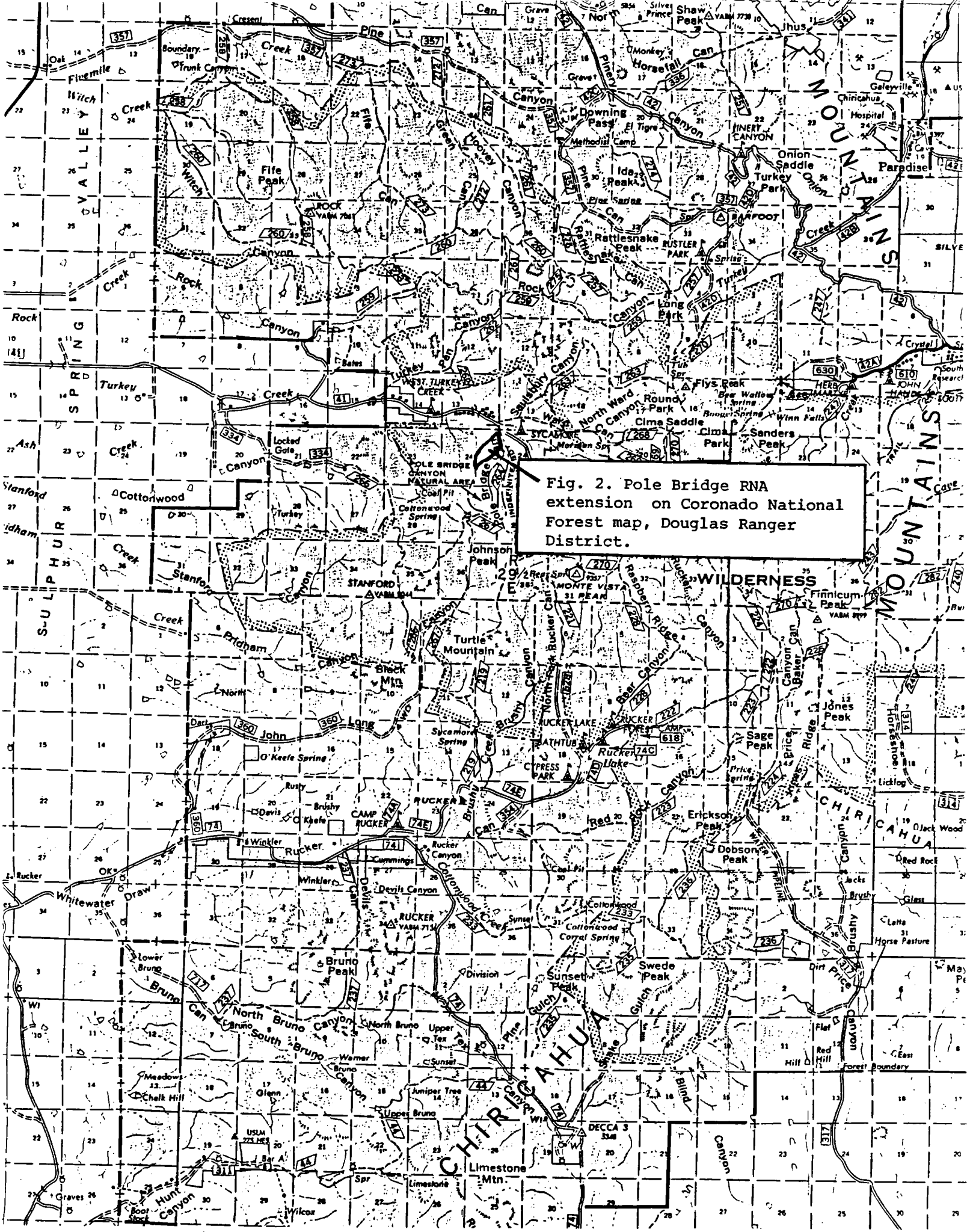


Fig. 2. Pole Bridge RNA extension on Coronado National Forest map, Douglas Ranger District.

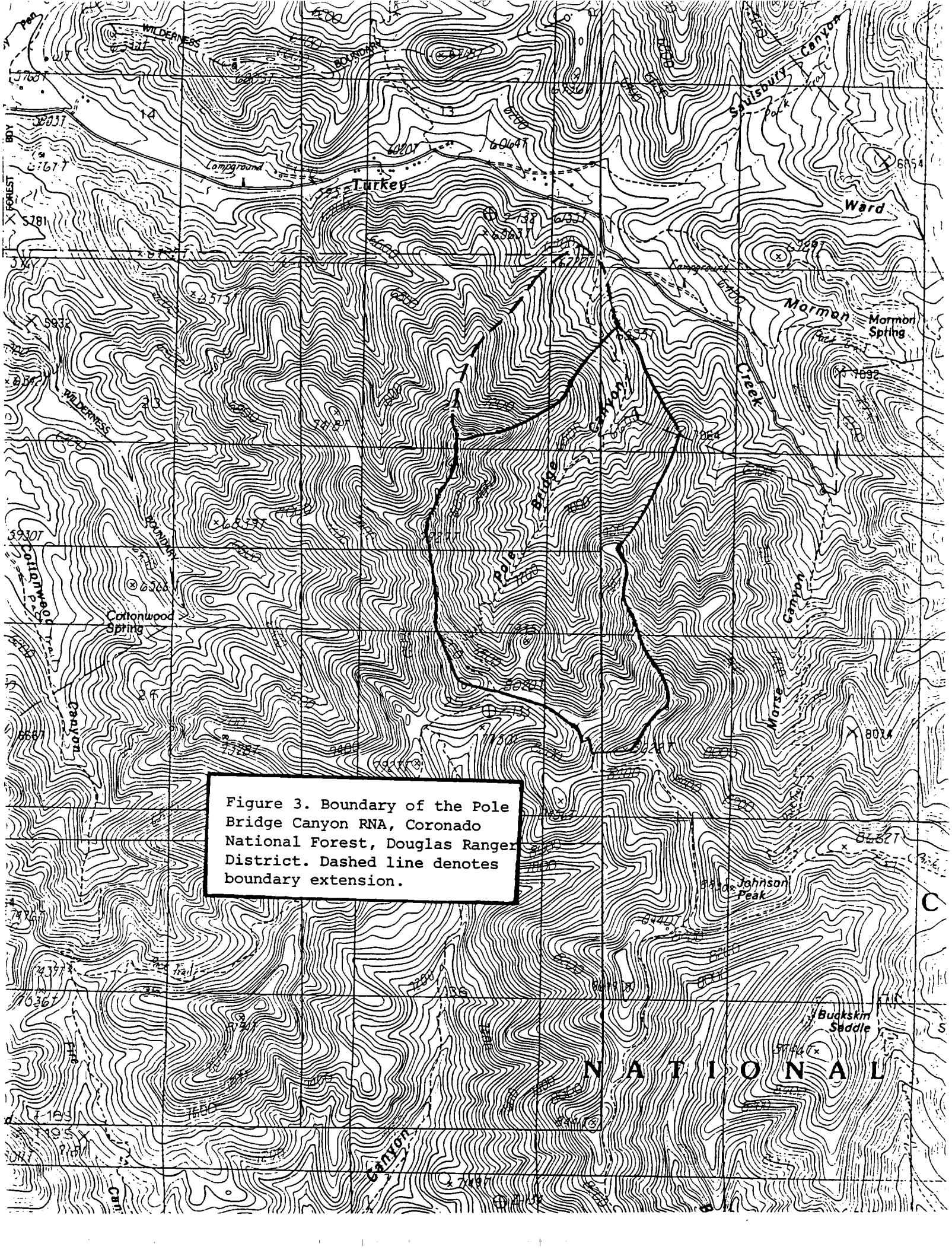


Figure 3. Boundary of the Pole Bridge Canyon RNA, Coronado National Forest, Douglas Ranger District. Dashed line denotes boundary extension.

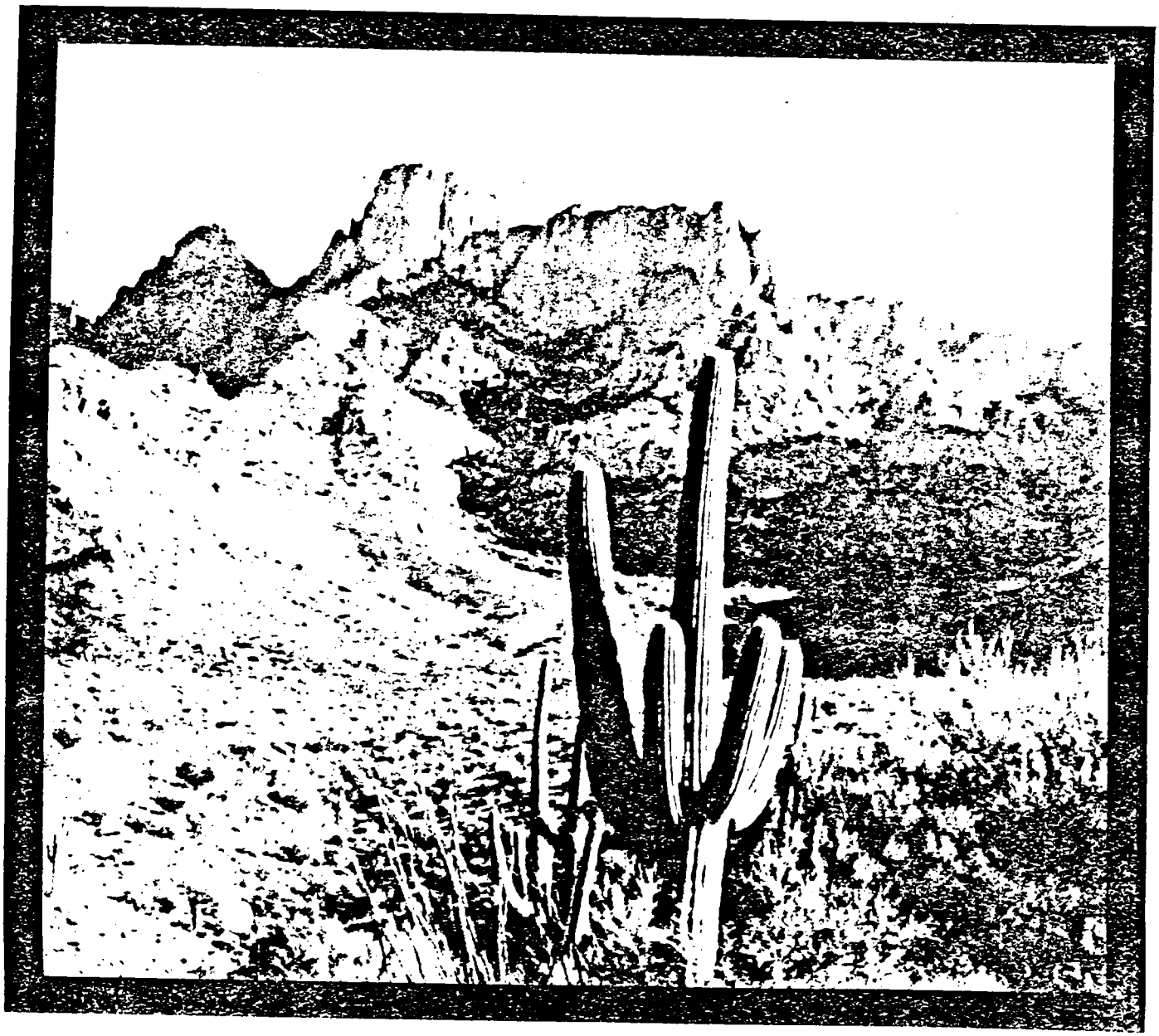
United States
Department of
Agriculture

**Forest
Service**

Southwestern
Region

July 1986

Coronado National Forest Plan



MANAGEMENT AREA 8A

Management Emphasis and Intensity: Manage for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state. There will be no harvest of forest products including fuelwood.

Management Area Description: Includes those lands that have been determined to be suitable for both wilderness designation and designation as research natural areas. Includes the following areas:

Existing RNA	Acres
Pole Bridge	460
Santa Catalina (reduced)	890
Goodding	545
Goudy (part is outside wilderness)	190

New RNA Proposal	Acres
Goodding extension	1470
Pole Bridge extension	90

The Santa Catalina RNA will be reduced from 4131 acres to 890 acres. This will give a more manageable size while maintaining viable populations of targeted species.

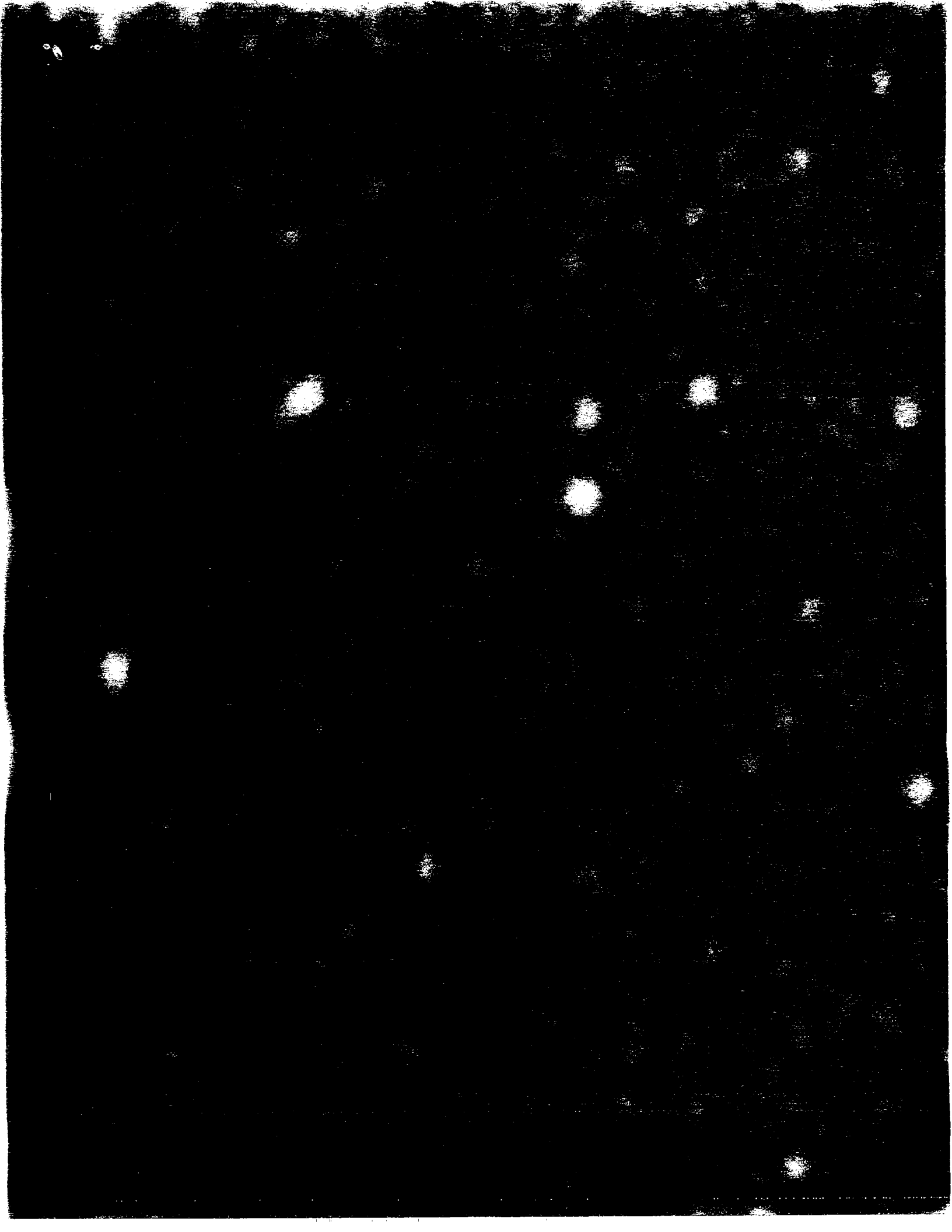
Pole Bridge RNA is enlarged to include a more representative example of Chihuahua pine. The Goodding RNA is enlarged to include additional examples of Southwestern riparian types.

Capability Area Types: 6H/M, 6M, 9AH/M, and 11AR.
Total acres = 3645

Specific Management Prescription

Timber Suitability: All Acres Unsuitable

Management Practices	Activities	Standards and Guidelines
Visual Resource Management (DU 2)	AO3	Manage the following acres at the indicated Visual Quality Objectives: 3,645 Acres Preservation 100%
Wilderness Recreation O&M (DU 8)	BO2, BO3	1. Maintain trails to level 1 and level 3. See Appendix E for a definition of levels. 2. Use of motorized vehicles is prohibited except as approved for emergency or other special needs. 3. Manage wilderness use at less than standard. 4. Maintain existing ROS class composition.
Wildlife & Fish O&M (DU 10)	CO1, CO2 C12	Specific standards and guidelines for management of wildlife are shown in the Forest-wide prescription for activities appropriate to this Management Area. They are intended to meet the following objectives: 1. Maintain or improve occupied habitat for federally and state listed animals. 2. Maintain or improve current populations of endangered and threatened plants.
T&E Plant Habitat Improvement (DU 12)	CO3, CO4 CO5	Nonstructural habitat improvement projects will be based on guidelines in the Forest-wide prescription. They are intended to meet the following objective:



ESTABLISHMENT RECORD

for

POLE BRIDGE CANYON RESEARCH NATURAL AREA (EXTENSION)

within

Coronado National Forest
Cochise County, Arizona

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Pole Bridge Canyon (Extension) Research Natural Area

Coronado National Forest

Cochise, Arizona

Prepared by Andrew W. Laurenzi Date 5/19/87
Mark H. Cochran, The Nature Conservancy
Andrew W. Laurenzi, The Nature Conservancy

Recommended by Bernard H. Brunner Date MAY 2, 1988
Bernard H. Brunner, District Ranger,
Douglas Ranger District

Recommended by R.B. Tippeconnic Date 5.16.88
R.B. Tippeconnic, Forest Supervisor,
Coronado National Forest

Recommended by John W Russell Date 5-26-88
John W. Russell, Chairperson,
Southwestern Research Natural
Area Committee

Recommended by for David F. Jolly Date 6/16/88
Sotero Muniz, Regional Forester,
Southwestern Region

Recommended by Charles M. Loveless Date Sept. 28, 1988
Charles M. Loveless, Station Director,
Rocky Mountain Forest and Range
Experiment Station

Decision Notice
Finding of No Significant Impact
Designation Order

Pole Bridge Canyon Research Natural Area (Extension)
Coronado National Forest
Douglas Ranger District
Cochise County, Arizona

By virtue of the authority vested in me by the Secretary of Agriculture under regulations at 7 CFR 2.42, 36 CFR 251.23, and 36 CFR Part 219, I hereby extend the Pole Bridge Canyon Research Natural Area (RNA). The extension shall be comprised of 105 acres (42 hectares) of lands in Cochise County, Arizona, on the Douglas Ranger District of the Coronado National Forest, as described in the section of the Establishment Record entitled "Location". This is a change of acreage from 90 acres, as designated in the Plan, to 105 acres, as described in the Establishment Record. Minor adjustments in the boundary resulted in the acreage change.

The Regional Forester recommended this extension in the Record of Decision for the Coronado National Forest Land and Resource Management Plan (Forest Plan) in 1986. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.41. Results of the Regional Forester's analysis are documented in the Forest Plan and Final Environmental Impact Statement, which are available to the public.

The Regional Forester has reexamined the Pole Bridge Canyon area to ensure the environmental effects of expanding the existing RNA have not changed since 1986. This analysis is documented in the attached environmental assessment. Based on the analysis in the environmental assessment, it is my decision to adopt Alternative A, to extend Pole Bridge Canyon RNA. Alternative A is selected because it provides long-term protection and recognition of southern Arizona pines, specifically Chihuahua pine. Pole Bridge Canyon RNA will be managed in compliance with all relevant laws, regulation, and Forest Service Manual direction regarding RNA's and in accordance with the management direction identified in the Forest Plan.

The alternative considered was Alternative B, the "No Action" alternative which would continue management of the extension of Pole Bridge Canyon as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection for these lands. Alternative B is consistent with the Forest Plan. Although the proposed action (Alternative A) is consistent with the management direction, it is not consistent with the land allocation for the Pole Bridge Canyon area in the Forest Plan. The Coronado Forest Plan is hereby amended to change the allocation of the extension of the Pole Bridge Canyon area from "Proposed" to Established RNA and to change the acreage from 90 to 105 acres. Ten (10) acres will be designated as Management Area 8 and the remainder as Management Area 8A. In the course of reexamining the Pole Bridge Canyon RNA extension, it was discovered that the original description of the Pole Bridge Canyon RNA location in the 1931 Establishment Record, was incorrect. Based on information contained in the Establishment Record, a new legal description has been written and is included in this current Establishment Record for the extension. The intent of the original RNA has not been altered, this is a correction of a mapping error. Both of these actions are non-significant amendments of the Forest Plan (36 CFR 219.10 [f]).

Legal notice of this decision will appear in the Federal Register. The Forest Supervisor of the Coronado National Forest shall notify the public of this decision and mail a copy of the Decision Notice and Designation Order to all persons on the Coronado National Forest mailing list.

It has been determined through the environmental assessment that the proposed action is not a major Federal action that would significantly affect the quality of the human environment; therefore, an environmental impact statement is not needed. This determination is based on the following factors) 40 CFR 1508.27):

A. Context.

Although this is an addition to the national system of RNA's both short-term and long-term physical and biological effects are limited to the local area.

B. Intensity.

1. There are no known effects on public health and safety.

2. There are no known effects on historic or cultural resources, actual or eligible National Register of Historic places sites, Park lands, prime farmlands, wetland, wild and scenic rivers. Effects on ecologically critical areas are minimal.

3. Effects on the human environment are not uncertain, do not involve unique or unknown risks, and are not likely to be highly controversial.

4. The action is not likely to establish a precedent for future actions with significant effects.

5. There are no known cumulative effects.

6. The proposed action would not adversely affect an endangered or threatened species or its critical habitat.

7. The proposed action is consistent with Federal, State, and local laws and requirements for the protection of the environment.

This decision is subject to appeal pursuant to 36 CFR 217. Two (2) copies of the Notice of Appeal must be in writing and submitted to:

The Secretary of Agriculture
14th and Independence Ave., S.W.
Washington, D.C. 20250

The Notice of Appeal prepared pursuant to 36 CFR 217.9(b) must be submitted within 45 days from the date of legal notice of this decision. Review by the Secretary is wholly discretionary. If the Secretary has not decided within 15 days of receiving the Notice of Appeal to review the Chief's decision, appellants will be notified that the Chief's decision is the final administrative decision of the U.S. Department of Agriculture (36 CFR 217.17[d]).

_____ _____

Chief Date

Environmental Assessment
Pole Bridge Canyon Research Natural Area (Extension)

Coronado National Forest
Douglas Ranger District
Cochise County, Arizona

Proposed Action

The proposed action is to extend the existing Pole Bridge Canyon RNA and correct the original legal description. The extension was identified as a "proposed" Research Natural Area (RNA) in the Land and Resource Management Plan (Forest Plan) for the Coronado National Forest. It will be managed according to the direction provided in the Forest Plan (Management Areas 8 and 8A). The proposed action, formal designation of the extension as an RNA by the Chief of the Forest Service, will amend the Forest Plan.

Purpose and Need for Action

The purpose of extending the Pole Bridge Canyon RNA is to contribute to a series of RNA's designated to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23). Pole Bridge Canyon RNA was established in 1931 to include distinctive populations of southern Arizona pines: southwestern white pine, Arizona pine, Apache pine, Chihuahua pine, and border pinyon. An evaluation by the Regional RNA Committee, pursuant to direction in Forest Service Manual (FSM) 4063.04b, identified that an extension of the RNA was needed to include viable populations of Chihuahua pine. Extending the Pole Bridge Canyon RNA provides long-term protection and recognition of Chihuahua pine.

The 1931 Establishment Record for the original Pole Bridge Canyon RNA has an error in the description of the boundary. The written descriptions consistently refer to Pole Bridge Canyon, but the map has the location in an adjacent canyon. The intent was to protect the watershed of the Pole Bridge Canyon. A corrected legal description is included with this Establishment Record to correct the mapping error from the 1931 Establishment Record.

The extension of the Pole Bridge Canyon area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of Chihuahua pine in the area at that time. Comments received from interested and affected members of the public supported extending the existing RNA. Site conditions and public concerns have been reviewed; no important changes have occurred.

Conditions and environmental effects of designation are the same as described in the EIS for the Forest Plan. Site specific conditions and effects are as follows:

-Forage production is low, and loss of grazing capacity will be minimal.

-The original RNA was withdrawn from mineral entry in 1977. No known significant mineral resources exist within the extension area.

-The original boundary area and extension are in the Chiricahua Wilderness, with the exception of an approximately 10 acre portion that lies in Sect. 13 and 24, as written in the legal description.

-Recreation use is light and limited to existing trails.

-No threatened or endangered plants or animals are known to occur within the area.

Designation of alternate RNA's for protection of this type was considered during Forest Plan development. The extension of Pole Bridge Canyon was determined at that time to provide the most appropriate site for inclusion in the national network for protection of Chihuahua pine.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would extend the existing Pole Bridge Canyon RNA by 105 acres (42 hectares). This is a change from the 90 acres described in the Forest Plan. Minor changes in the boundary account for this discrepancy. This alternative will provide long-term protection for the area. Management of the area will limit recreation use to non-motorized dispersed recreation at a low intensity and reduced service level, only minimal range improvements will be developed (e.g. boundary fences), and no harvest of forest products (including fuelwood) will be allowed. Wildfires outside the area that endanger the area will be extinguished in an appropriate manner, as will person-caused fires within the area. Unplanned ignitions within the area will receive appropriate suppression action. Use restrictions will be imposed as necessary to keep areas in their natural or unmodified condition (Forest Plan). Pole Bridge Canyon RNA was withdrawn from mineral entry in 1977, the extension will be withdrawn from mineral entry should future and as-yet-unknown information be found to require withdrawal for the protection and management of the basic objectives and purposes of the RNA.

The environmental consequences of Alternative A are described in the EIS for the Coronado Forest Plan. There are no adverse or irreversible environmental effects. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation. There are no significant cumulative effects of extending the RNA.

Alternative B, No Action

This alternative continues management according to direction in the Forest Plan for the "proposed" extension. Only short-term protection of the area, dependent on the life of the Forest Plan, will be provided. Management of the area will be the same as in Alternative A. Management emphasis is to provide opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep the area in an unmodified or natural condition.

The environmental consequences of Alternative B, the "No Action" alternative are as described in the EIS for the Coronado Forest Plan. No adverse or irreversible environmental effects are anticipated. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, several groups and individuals who may have additional information regarding the extension of Pole Bridge Canyon RNA were contacted. Representatives from the national office of The Nature Conservancy, the Arizona Chapter of The Nature Conservancy, Arizona Heritage Program, Arizona Game and Fish Department, and Arizona Cattle Growers groups. Documentation of the contacts made and summaries of the comments are attached to this Environmental Assessment.

Supplemental Public Contacts

During the months of August-September 1993, the following groups, agencies, and individuals were contacted, by phone, regarding the establishment of the Pole Bridge Canyon Research Natural Area (Extension). No negative comments were received. Phone contacts were made by Emilia Parra, Forest Botanist on the Coronado National Forest.

Arizona Chapter of Nature Conservancy - Andy Laurenzi, Peter Warren
Tucson Audubon Society - Doug Koppinger
Arizona State Parks, Natural Areas Association Committee - Jean Tripiano
Joe Austin, permittee for the Turkey Creek Allotment on Douglas Ranger District, contacted by Randy Mead, Range Conservationist on the Douglas Ranger District.
Mrs. Emily Sherbrooke, Southwest Research Station, Portal, Arizona - had no comment, negative or positive.

MESSAGE SCAN FOR REGGIE A. FLETCHER

To RNA

From: REGGIE A. FLETCHER
Postmark: Apr 01,93 8:41 AM Delivered: Apr 01,93 8:41 AM
Status: Certified Confidential Previously read Urgent
Subject: Forwarded:

Comments:
From: REGGIE A. FLETCHER:R03A
Date: Apr 01,93 8:41 AM
Enclosed is a summary of contacts Gerald Henke made with the livestock industry on our submitting the draft RNA establishment reports to the Chief for his signature. While it is not spelled out in the summary, Gerald informs me that none of the persons contacted voiced objections to proceeding with those RNA's in the Forest Plans in either state. For new RNA's we will need to contact these individuals once again and if boundaries are changed to any degree we will need to do likewise. Please consider these contacts as adequate for public involvement for these individuals and the organizations they represent. This should be placed in the project file for all of the draft ER's covered by Forest Plans as of this date and for which we are doing public involvement.
Reggie Fletcher, Regional Ecologist April, 1, 1993

Previous comments:
From: GERALD HENKE
Date: Mar 31,93 2:48 PM
names added

-------========X========-------

RESEARCH NATURAL AREAS'S

Discussions have occured within the past two months with the Arizona Cattle Growers' Association (C.B. Lane) and individuals that attended the annual meeting of the New Mexico Range Improvement Task Force concerning those identified Research Natural Areas in Forest Land and Resource Management Plans in Region 3. Discussions focused around the present National Forest public involvement process and that those identified Research Natural Areas in Forest Plans would be forwarded to the Chief's for inclusion into the National Research Natural Areas system. One such discussion with the Arizona Cattle Growers occured by phone on March 30, 1993 while the conversation with the New Mexico Range Improvement Task Force (John Fowler, Jim Knight, Kirk McDaniel, Karl Wood, Dean John Owens) and attendees (David Kincade, Bill Ball, Stearling Carter, Ray Margo, Linden Parker) of that meeting occured on February 18, 1993.

MESSAGE SCAN FOR REGGIE A. FLETCHER

To RNA

From: REGGIE A. FLETCHER
Postmark: Apr 02,93 11:29 AM Delivered: Apr 02,93 11:31 AM
Status: Confidential
Subject: supplemental public input

Comments:
The enclosed is provided for those conducting public involvement on the RNA's for the NEPA step to use if needed. If used, please place in the project file. Thanks. Reggie

----------X----------

As supplementary material to public involvement on formalizing the proposed Research Natural Areas which are contained in current Forest Land and Resource Management Plans through signature of the Chief of the Forest Service, the following record is provided. On August 13-14, 1992, John Humke, representing the national office of The Nature Conservancy; Dan Campbell, Peter Warren and Mark Heitlinger, representing the Arizona Chapter of The Nature Conservancy; Fenton Kay representing the Arizona Heritage Program, Arizona Game and Fish Department; Rick Johnson and Bill Waldman representing the New Mexico chapter of The Nature Conservancy and the New Mexico Natural Heritage Program met with Larry Henson, Regional Forester, Forrest Carpenter, Deputy Regional Forester, Teresa Prendusi, Regional Botanist, Art Briggs, Director Land Management Planning and Reggie Fletcher, Regional Ecologist.

Among the topics discussed was the pursuit of the formalization of the Region's proposed Research Natural Areas. The Nature Conservancy and Heritage Program officials urged the Region's representatives to pursue whatever means necessary to satisfy the new RNA establishment report requirements in order to obtain the Chief's signature. The representatives also encouraged continued investigation into the possibility of locating additional suitable RNA's and securing their establishment.

Reggie Fletcher
Regional Ecologist

INTRODUCTION

Pole Bridge Canyon Research Natural Area (RNA) is located in the Chiricahua Mountains in the southeast corner of Arizona. The area is within the Douglas Ranger District of the Coronado National Forest, in Cochise County, and is wholly reserved public domain National Forest System land. The original RNA and this extension are within the Chiricahua Wilderness.

Pole Bridge Canyon RNA was established in 1931 to include distinctive populations of southern Arizona pines: Southwestern white pine, Arizona pine, Apache pine, Chihuahua pine, and border pinyon (see Table 2 for a list of common and scientific names of plants found in Pole Bridge Canyon RNA). Subsequent study since 1931 indicated that the original 460 acres (186 hectares) did not contain viable populations of Chihuahua pine. The extension of 105 acres (42 hectares) was recommended in the Southwest Region RNA Progress Report to include such populations (USDA Forest Service, 1984). This Establishment Record provides information on the expanded RNA of 565 acres (229 hectares) with special emphasis on the proposed extension.

Land Management Planning. The Southwest Regional Guide (USDA Forest Service, 1983) and the Coronado National Forest Plan (USDA Forest Service, 1986a) include the Pole Bridge Canyon RNA extension. The environmental analysis conducted as part of the planning process supports the recommendation to establish this extension (USDA Forest Service, 1986b).

OBJECTIVES

The extension of Pole Bridge Canyon RNA was recommended by the Regional RNA Committee (USDA Forest Service, 1984) for the following objectives:

1. To provide examples of Chihuahua pine forest communities for research.

2. To permit old growth or late successional natural processes to maintain these Chihuahua pine communities.

3. To help insure the protection of genetic diversity of the Sierra Madrean pine-oak ecosystem.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The pine-oak forest and woodlands centered in the Sierra Madre mountains reach their northernmost extent in the mountainous region of sub-Mogollon Rim, Arizona. Opportunities to represent this ecosystem occur primarily in the Coronado National Forest. Several pines are characteristic components of the Sierra Madrean pine-oak ecosystem in Arizona, including Arizona pine, Apache pine, Chihuahua pine and border pinyon. Pole Bridge Canyon RNA was established in 1931 to represent the Mexican pine-oak ecosystem and to include viable populations of these southern Arizona pines.

The extension of 105 acres (42 hectares) encompasses excellent examples of two Chihuahua pine habitat types, Chihuahua Pine/Arizona White Oak and Chihuahua Pine/Silverleaf Oak (Muldavin et al., 1986), and in doing so provides a more complete representation of the Sierra Madrean pine-oak ecosystem within the Southwestern Region RNA system. The inclusion of five pine species in a single location contributes to the uniqueness of this RNA in the southwest.

Establishment Record, Pole Bridge Canyon RNA

PRINCIPAL DISTINGUISHING FEATURES

The principal distinguishing feature of the Pole Bridge Canyon RNA extension is the stand of Chihuahua pine forest habitat types within the entire watershed of a small ephemeral drainage.

LOCATION

Pole Bridge Canyon RNA can be reached from either Douglas or Willcox, Arizona (Figs. 1 and 2). From Douglas, U. S. Highway 666 leads north through Sulphur Springs Valley. Turn onto Arizona Highway 181 at its intersection with Arizona Highway 666 and proceed east 12 miles (19 kilometers) to the intersection of Forest Service Road 44 (Turkey Creek Canyon Road). Alternatively, from Willcox follow Arizona Highway 186 to its intersection with Arizona Highway 181, then continue 10.5 miles (17 kilometers) south on Highway 181 to the graveled Turkey Creek Canyon Road. Continue east about 10 miles (16 kilometers) on Forest Road 44 to a concrete one-lane bridge that crosses Pole Bridge Canyon Creek. Here a trail sign indicates the start of Pole Bridge Trail 5264. The new boundary starts within 200 feet (61 meters) of the road.

The extension of Pole Bridge Canyon RNA is located within the Douglas Ranger District of Coronado National Forest in Cochise County, Arizona. The area is at 31° 51′ North latitude and 109° 20′ West longitude. It is within portions of Sections 13 and 24, Township 18 South, Range 29 East, and Township 18 South, Range 29 1/2 East (unsurveyed), Gila and Salt Rivers Meridian, Arizona.

The boundaries of the extension of Pole Bridge Canyon RNA are more particularly described as follows:

COMMENCING at a peak with a shown elevation of 6,535 feet (1,992 meters), which is the POINT OF BEGINNING. Said point also being on the Chiricahua Wilderness Boundary (1984), and is the Point of Beginning for the Pole Bridge Canyon Research Natural Area.

THENCE northwesterly approximately 1,250 feet (381 meters) along said wilderness boundary to the NE section corner of section 24, Township 18 South, Range 29 East.

THENCE northwesterly approximately 400 feet (122 meters) to the crest of a northeast bearing ridge, at a contour elevation of 6,320 feet (1,926 meters).

THENCE southwesterly approximately 400 feet (122 meters), along same ridge to the intersection with the boundary of the Chiricahua Wilderness. This intersection point being on the line between sections 13 and 24, Township 18 South, Range 29 East, which is approximately 600 feet (183 meters) west of the corner to sections 13 and 24 of same township.

THENCE southwesterly and southerly approximately 4,100 feet (1,250 meters)along same ridge to a knoll with a contour elevation of 7,800 feet (2,377 meters). Said knoll is also a point on the Pole Bridge Canyon Research Natural Area.

THENCE northeasterly approximately 2,000 feet (610 meters), along Pole Bridge Canyon Research Natural Area Boundary, to a point on crest of ridge with a contour elevation of 7,280 feet (2,219 meters).

THENCE northeasterly approximately 1,800 feet (549 meters), along Pole Bridge Canyon Research Natural Area Boundary, to the POINT OF BEGINNING.

The portion of the extension above the Wilderness Boundary, between sections 13 and 24, is more formally described as the SE1/4,SE1/4,SE1/4 section 13, Township 18 South, Range 29 East, Gila and Salt River Meridian.

Lands herein described and topographic features referred to are based on 7.5' United States Geological Survey Quadrangle Sheet CHIRICAHUA PEAK, ARIZONA, Provisional Edition, dated 1986. The extension of Pole Bridge Canyon RNA contains 105 acres (42 hectares), more or less; the total expanded area of Pole Bridge Canyon RNA will be 565 acres (229 hectares), more or less. Elevations are from 6,200 to 7,840 feet (1,890 to 2,390 meters) in the extension (Fig. 3).

AREA BY COVER TYPES

Information on cover types in the Pole Bridge Canyon RNA was obtained from the Southwestern Region RNA Progress Report (USDA Forest Service, 1984) and a field reconnaissance.

Küchler. The closest analogous type described is the Oak-Juniper Woodland, K-27 (Küchler, 1966). This cover type is not an accurate descriptor of the vegetation in the Pole Bridge Canyon RNA.

Society of American Foresters. The closest analogous type described is the Western Live Oak, SAF-241 (Eyre, 1980). This cover type is not an accurate descriptor of the vegetation in the Pole Bridge Canyon RNA.

Habitat Types or Plant Associations. No detailed information exists on the habitat types of the Pole Bridge Canyon RNA. Field reconnaissance and information presented in the Southwestern Region RNA Progress Report (USDA Forest Service, 1984) indicate that the entire 105-acre (42-hectare) extension includes several habitat types of the Madrean evergreen forest and woodland, oak-pine series (Brown, 1982; Muldavin et al., 1986).

PHYSICAL AND CLIMATIC CONDITIONS

Pole Bridge Canyon is carved out of granite and related crystalline intrusive rocks (Arizona Bureau of Mines, 1959). High ridges of cliffs and rock outcrops comprise the east and west boundaries. The drainage, trending northerly, divides the canyon at lower elevations into east- and west- facing slopes. These slopes are steep and dissected into rocky and shallow canyons with numerous parent rock outcrops. The canyon bottom has a narrow, intermittent stream channel and lacks well-developed alluvial terraces or benches. The channel divides in the upper part of the natural area. At elevations above 7,600 feet (2,316 meters) the slopes are steep, north-facing, and dissected by steep draws and cliffs (Smith, 1974). The extension includes a small, ephemeral drainage on the northwest boundary of the original area that bisects a small watershed into steep north- and south-facing aspects.

There are no climatic records for Pole Bridge Canyon RNA. The nearest weather station is at Chiricahua National Monument 11 miles (18 kilometers) to the north. From interpolation of these data (USDA Forest Service, 1986c) the mean annual precipitation is calculated at 23 inches (58 centimeters) with two-thirds falling between July and late-September in the form of summer convective storms. The remainder falls primarily as snow brought by winter frontal storms originating in the Pacific Ocean that occur between December and March. April through June is a relatively dry period. Mean annual temperatures are 50°F (10°C) and 140 days are frost free.

DESCRIPTION OF VALUES

Flora. The original Pole Bridge Canyon RNA area supports mixed-coniferous forest on the north-facing slopes above 7,600 feet (2,316 meters). Principal species include Douglas fir and Arizona pine. Southwestern white pine is less abundant and white fir occurs in the most mesic sites along major drainages (Smith, 1974).

The colluvial west- and east-facing canyon slopes below 7,600 feet (2,316 meters) support Sierra Madrean pine-oak woodland, the principal ecosystem for which the area originally established. On the lower slopes and along the Pole Bridge Canyon drainage, Apache pine and silverleaf oak are predominant. This cover type has been recently described as Apache pine/silverleaf oak habitat type (Muldavin, 1986). Important associated trees include alligator juniper, Chihuahua pine, border pinyon, netleaf oak, and Arizona white oak. Along the main stream course are scattered Arizona sycamore and southwestern chokecherry. Understory shrubs include Schott's yucca, prickly pear, and Palmer's agave. Perennial grasses cover is best developed on the slopes with longtonque muhly and mutton grass. On the upper, steeper slopes, the Apache pine/silverleaf oak habitat type is replaced by the silverleaf oak/longtongue muhly habitat type (Moir, 1986). This closed canopy woodland is mostly silverleaf oak in association with Arizona white oak. Alligator juniper and border pinyon are minor associates. A well-defined herbaceous layer exists with longtongue muhly predominant.

Small scarps of limestone parent materials are scattered on the east-facing slopes and support a distinct association that is predominately mountain mahogany in association with border pinyon. The oaks are absent from this association. The association appears to correspond to the border pinyon/mountain mahogany/evergreen sumac habitat type (Moir, 1986). Several shrubs such as silktassel and Apache plume are prevalent in this type.

Essentially absent from the original area is Chihuahua pine, which is represented by only several individuals at the original lower boundary. The proposed extension remedies this deficiency by including two Chihuahua pine habitat types, Chihuahua pine/Arizona white oak and Chihuahua pine/silverleaf oak habitat types (Muldavin et al., 1986), within the RNA. As is true for the Apache pine habitat type, Chihuahua pine habitat types are best represented on the lower slopes and stream terraces within the extension. An especially impressive stand of Chihuahua pine occurs on the alluvial terrace present at the confluence of the principal drainageway of the extension area and the main canyon stream course. The composition of the steep upper slopes is similar to that described in the original boundary area.

The flora of the area has not been thoroughly studied, inventoried or collected. No threatened or endangered species are known from the area. Arizona buttercup, a State-sensitive species, has been collected from the eastern boundary ridgeline. Milk vetch *Astragalus cobrensis* var *maguirei*, known from only two collections in the Chiricahua Mountains, may occur in the canyon. Table 1 provides a plant list that was compiled by Reggie Fletcher (USDA Forest Service, Albuquerque, NM), following a field reconnaissance 20 May 1985. Nomenclature is after Lehr (1978).

Table 1. Preliminary plant species list for Pole Bridge Canyon Research Natural Area. Nomenclature and authority follow that of Lehr (1978).

Scientific Name	Relative Abundance	Common Name
TREES		
Abies concolor	R	white fir
Arbutus arizonica	I	Arizona madrone
Juniperus deppeana	C	alligator juniper
Pinus discolor	C	border pinyon
Pinus engelmannii	C	Apache pine
Pinus leiophylla var *chihuahuensis*	C	Chihuahua pine
Pinus ponderosa var *arizonica*	C	Arizona pine
Pinus strobiformis	I	white pine
Platanus wrightii	R	Arizona sycamore
Prunus virginiana var *melanocarpa*	I	black western chokecherry
Pseudotsuga menziesii	C	Douglas fir
Quercus arizonicus	C	Arizona white oak
Quercus gambellii	C	Gambel oak
Quercus hypoleucoides	C	silver leaf oak
Quercus rugosa	C	netleaf oak
Robinia neomexicana	I	locust
SHRUBS AND WOODY LIANAS		
Agave palmeri	I	Palmer's agave
Ceanothus fendleri	R	buck brush
Cercocarpus montanus	R	mountain mahogany
Echinocereus triglochidiatus var *neomexicanus*	R	hedgehog cactus
Fallugia paradoxa	I	Apache plume
Fraxinus papillosa	C	Chihuahua ash
Garrya wrightii	R	silk tassel
Holodiscus dumosus	I	mountain spray
Jamesia americana	R	cliff bush
Nolina microcarpa	R	beargrass
Opuntia chlorotica	C	prickly pear
Pontentilla thurberi	R	cinquefoil
Ptelea trifoliata	I	hoptree
Ranunculus arizonicus	R	buttercup
Ranunculus hydrocharoides	R	buttercup
Rhamnus betulaefolia	I	birchleaf buckthorn
Rubus neomexicanus	I	New Mexican raspberry
Toxicodendron radicans	R	poison ivy
Vitis arizonica	R	canyon grape
Yucca schottii	C	Schott's yucca
HERBS		
Achilles lanulosa	C	yarrow
Antennaria parvifolia	C	pussy toes
Aquilegia chrysantha	C	columbine
Arceuthobium vaginatum var *vaginatum*	C	Southwestern dwarfmistletoe
Astragalus cobrensis var *maguirei*	R*	milk vetch
Castilleja laxa	R	indian paint brush
Cerastium nutans var *nutans*	R	powder horn

Cerastium texanum	R	mouse-ear chick weed
Cheilanthes fendleri	C	Fendler's lip fern
Conopholis mexicana	R	Mexican squaw root
Corallorhiza muculata	R	spotted coral root
Erigeron flagellaris	C	running fleabane
Euphorbia incisa	R	spurge
Hedeoma hyssopifolium	I	mock-pennyroyal
Heuchera parvifolia var *arizonica*	R	alum root
Hieracium carneum	R	hawkweed
Hieracium fendleri	R	Fendler's hawkweed
Juncus xiphioides	R	rush
Leibnitzia seemannii	R	
Lupinus blumeri	R	lupine
Lupinus concinnus	C	elegant lupine
Mimulus guttatus	C	monkey flower
Oxytropis lambertii	I	Lambert's locoweed
Pellaea wrightiana	R	cliffbreak
Pseudocymopterus montanus	C	mountain parsley
Pteridium aquilinum	C	western bracken
Senecio neomexicanus var *toumeyi*	C	groundsel
Senecio wootonii	R	groundsel
Silene noctiflora	R	catchfly
Sphenopholis obtusata	R	prairie wedgegrass
Spiranthes parasitica	R	lady's tresses
Taraxacum officinale	R	common dandelion
Thalictrum fendleri	C	meadow rue
Thermopsis pinetorum	I	golden pea
Trifolium variegatum	R	clover
Triodanis perfoliata	R	venus looking glass
Viola canadensis	I	violet
Woodsia plummerae	R	flower cup fern
Zauschneria californica	I	hummingbird trumpet

GRASSES AND GRASS-LIKE PLANTS

Agrostis semiverticillata	R	water bent
Carex agrostoides	C	sedge
Muhlenbergia longiligula	C	longtongue muhly
Poa fendleriana ssp. *albescens*	C	mutton grass
Poa occidentalis	R	blue grass

*known only from the Chiricahua Mountains

Relative Abundance:
R = rare
I = infrequent
C = common

Fauna. Two species listed by the Arizona Game and Fish Department as threatened may occur in the extension area, the buff-breasted flycatcher, and the Mexican spotted owl. (Arizona Game and Fish Department, 1988). While not limited to the Pole Bridge Canyon RNA, several species are of special interest in southeastern Arizona. Included are the twin-spotted rattlesnake, Arizona mountain kingsnake, Mexican chickadee, painted redstart, red-faced warbler, olive warbler, magnificent hummingbird, whiskered screech owl, flammulated owl, yellow-eyed junco, Apache fox squirrel, and pine white butterfly. Species hunted include black bear, white-tailed deer, Merriam's turkey, band-tailed pigeon, and Apache fox squirrel.

Table 2 provides an animal list that was derived from the RUNWILD 3 computer-stored data base (Lehmkuhl and Patton, 1984) for the Mexican Oak-Pine Series (225.100) of Cochise County, Arizona; and Smith (1974) for mammals.

Table 2. Abbreviated animal list for Pole Bridge Canyon RNA. Nomenclature and authority follow that of Banks et al. (1987).

Common Name	Scientific Name
BIRDS	
Bluebird, eastern	*Sialia sialis*
Bluebird, mountain	*Sialia currucoides*
Bluebird, western	*Sialia mexicana*
Bushtit	*Psaltriparus minimus*
Creeper, brown	*Certhia americana*
Crossbill, red	*Loxia curvirostra*
Flicker, northern	*Colaptes auratus*
Flycatcher, ash-throated	*Myiarchus cinerascens*
Flycatcher, buff-breasted	*Empidonax fulvifrons*
Flycatcher, dusky-capped	*Myiarchus tuberculifer*
Flycatcher, sulphur-bellied	*Myiodynastes luteiventris*
Flycatcher, western	*Empidonax difficilis*
Gnatcatcher, blue-gray	*Polioptila caerulea*
Goshawk, northern	*Accipiter gentilis*
Grosbeak, black-headed	*Pheucticus melanocephalus*
Hummingbird, Lucifer	*Calothorax lucifer*
Hummingbird, magnificent	*Eugenes fulgens*
Hummingbird, white-eared	*Hyocharis leucotis*
Jay, gray-breasted	*Aphelocoma ultramarina*
Junco, yellow-eyed	*Junco hyemalis*
Kingbird, Cassin's	*Tyrannus vociferans*
Nighthawk, lesser	*Chordeiles minor*
Nuthatch, pygmy	*Sitta pygmaea*
Nuthatch, white-breasted	*Sitta carolinensis*
Owl, flammulated	*Otus flammeolus*
Phoebe, black	*Sayornis nigricans*
Pygmy-owl, northern	*Glaucidium gnoma*
Redstart, painted	*Myioborus pictus*
Robin, American	*Turdus migratorius*
Screech-owl, whiskered	*Otus trichopsis*
Solitaire, Townsend's	*Myadestes townsendi*
Sparrow, chipping	*Spizella passerina*
Swallow, violet-green	*Tachycineta thalassina*
Tanager, hepatic	*Piranga flava*
Tanager, western	*Piranga ludoviciana*
Titmouse, bridled	*Parus wollweberi*
Towhee, rufous-side	*Pipilo erythrophthalmus*
Vireo, Hutton's	*Vireo huttoni*
Warbler, Grace's	*Dendroica graciae*
Waxwing, cedar	*Bombycilla cedrorum*
Whip-poor-will	*Caprimulgus vociferus*
Woodpecker, acorn	*Melanerpes formicivorus*
Woodpecker, hairy	*Picoides villosus*
Woodpecker, Strickland's	*Picoides stricklandi*
Wood-pewee, western	*Contopus sordidulus*
Wren, Bewick's	*Thryomanes bewickii*

Establishment Record, Pole Bridge Canyon RNA

MAMMALS

Bat, Allen's big-eared	*Idionycteris phyllotis*
Bat, big brown	*Eptesicus fuscus*
Bat, big free-tailed	*Tadarida molossa*
Bat, Brazilian free-tailed	*Tadarida brasiliensis*
Bat, hoary	*Lasiurus cinereus*
Bat, Peter's leaf-chinned	*Mormoops megalophylla*
Bat, Mexican long-tongued	*Choeronycteris mexicana*
Bat, long-nosed	*Leptonycteris nivalis*
Bat, silver-haired	*Lasionycteris noctivagans*
Bat, Townsend's big-eared	*Plecotus townsendii*
Bear, black	*Ursus americanus*
Bobcat	*Lynx rufus*
Chipmunk, cliff	*Eutamius dorsalis*
Coati	*Nasua narica*
Cottontail, eastern	*Sylvilagus floridanus*
Coyote	*Canis latrans*
Deer, white-tailed	*Odocoileus virginianus*
Fox, gray	*Urocyon cinereoargenteus*
Gopher, valley pocket	*Thomomys botae*
Lion, mountain	*Felis concolor*
Mouse, brush	*Peromyscus boylei rowleyi*
Mouse, deer	*Peromyscus maniculatus*
Mouse, pinyon	*Peromyscus truei*
Mouse, rock	*Peromyscus nasutus*
Myotis, California	*Myotis clifornicus*
Myotis, long-eared	*Myotis evotis*
Myotis, small-footed	*Myotis subuatus*
Myotis, fringed	*Myotis thysanodes*
Myotis, long-legged	*Myotis volans*
Pipistrelle	*Pipistrellus hesperus*
Porcupine	*Erethizon dorsatum*
Raccoon	*Procyon lotor*
Rat, Mexican wood	*Neotoma mexicana*
Ringtail	*Bassariscus astutus*
Shrew, Arizona	*Sorex arizonae*
Shrew, vagrant	*Sores vagrans*
Skunk, hooded	*Mephitis macroura*
Skunk, spotted	*Spilogale putorius*
Skunk, striped	*Mephitis mephitis*
Squirrel, nayarit	*Sciurus nayaritensis*
Squirrel, rock	*Spermophilus variegatus*
Weasel, long-tailed	*Mustela frenata*

REPTILES

Kingsnake, Sonoran mountain	*Lampropeltis pyromelana*
Lizard, striped plateau	*Sceloporus virgatus*
Rattlesnake, rock	*Crotalus lepidus*
Rattlesnake, twin-spotted	*Crotalus pricei*
Skink, mountain	*Eumeces callicephalus*
Snake, Mexican garter	*Thamnophis eques*

AMPHIBIANS

Treefrog, mountain	*Hyla eximia*

Geology. The major portion of the area is underlain by Tertiary and Cretaceous age volcanics (andesite flows). The eastern edge of the area is underlain by Tertiary age granite (Arizona Highway Department, 1967).

Soils. Predominant soils are classified as Udic Haplustalfs, loamy-skeletal, mixed, mesic (USDA Forest Service, 1986c).

Lands. Pole Bridge Canyon RNA and extension are wholly reserved National Forest System lands.

Cultural. No archaeological surveys have been conducted within the area and no cultural resources have been recorded in Forest Service files. Site density is considered to be low.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources. Pole Bridge Canyon RNA extension is a northward extension of the Pole Bridge Canyon RNA. The original RNA was withdrawn from mineral entry in 1977. Ninety-five acres (38 hectares) of the extension is within the Chiricahua Wilderness and withdrawn from mineral entry. No known mineral resources exist in the extension area.

Grazing. Pole Bridge Canyon RNA extension receives some livestock use in the spring. The use level is light and results from cattle grazing the benches south of Turkey Creek. Cattle graze these benches and side canyons and move out on the trail in Pole Bridge Canyon. The majority of this movement is below the extension area, but some animals do drift through the area. A fence at the north end of the area could possibly trap any cattle coming down the canyon. The loss of Animal Unit Months in the area will be minimal. Forage production is low due to needle cast and canopy cover.

Timber. The original boundary area and extension are in the Chiricahua Wilderness.

Watershed Values. Pole Bridge Canyon RNA extension occurs within a small, ephemeral watershed that drains into the Pole Bridge Canyon, a tributary to Turkey Creek. Water quality testing done for Turkey Creek in 1974 to 1979 indicated good quality water.

Recreation Values. Pole Bridge Canyon RNA extension receives little recreational use. Most use is from hikers and hunters. There are no expected significant conflicts with, or changes in, recreational use of the area.

Wildlife and Plant Values. Wildlife: Management of the area for research should not affect other activities such as hunting and bird watching or habitats of the species listed above. However, wildlife species (such as the white-tailed deer, Merriam's turkey, yellow-eyed junco and possibly the buff-breasted flycatcher) with habitat requirements dependent on fire-related seral stages would be negatively affected by total fire suppression in the research natural area.

A complete botanical survey has not been completed for the area. Limited plant lists are available from the USDA Forest Service, Albuquerque, NM. No threatened or endangered species have been observed to date. Species to look for in an extensive inventory are: *Senecio huachucanus*, *Cheilanthes arizonica*, *C. pringlei*, *Perityle cochisensis*, and *Polemonium pauciflorum* ssp. *hinkleyi*.

Special Management Area Values. Pole Bridge Canyon RNA extension occurs within the Chiricahua Wilderness. Establishment of this extension as a RNA will not impact the purposes or management of this Wilderness.

Transportation Plans. The RNA extension is accessed by a trail from a Forest Service road. The RNA has no roads and there are no transportation plans that would adversely affect it.

MANAGEMENT PRESCRIPTION

Pole Bridge Canyon RNA extension is recommended in Management Area 8A in the Coronado National Forest Plan (USDA Forest Service, 1986a). Management emphasis is for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state.

Vegetation Management. No harvest of forest products, including fuelwood, is permitted. Rangeland will be managed at Level A (no grazing). Prescribed fire will be used to reduce risks and enable lightening to play its natural role.

If all fires are totally suppressed in the area, age and species mixtures of conifers may decrease. Several species of pines rely on fire to some extent to open up forest floors for seed beds. These species are also less shade tolerant than the Douglas-fir and white fir found in the research natural area. No other negative impacts on plant resources are expected with management of the area for research.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of the Pole Bridge Canyon RNA is the responsibility of the Coronado National Forest. The District Ranger, Douglas Ranger District, Douglas, AZ, has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station will be responsible for any studies or research conducted in the area, and requests to conduct research in the area should be referred to the Director. The Director will evaluate research proposals and coordinate all studies and research in the area with the District Ranger through the RNA research coordinator. All plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Rocky Mountain Station Director.

Records for Pole Bridge Canyon RNA will be maintained in the following offices of the USDA Forest Service:

Southwestern Region, Albuquerque, NM
Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO
Coronado National Forest, Tucson, AZ
Douglas Ranger District, Douglas, AZ

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LEGAL DESCRIPTION

Case Name/No. Pole Bridge Canyon RNA Extension

Forest/District Coronado/Douglas

Type of Case Research Natural Area Extension Establishment

This documents that the attached legal description for the case referenced above was reviewed by me for use in an area designation. It is a more specific description than the one included in the Establishment Record. No changes in the boundary, as described in the Establishment Record, are described by this legal description.

This legal description that describes the Pole Bridge Canyon RNA Extension is acceptable, and no potential problems were noted during my review.

Reviewed by: _____ Date: 9-21-93
Forest Land Surveyor

POLE BRIDGE CANYON
RESEARCH NATURAL AREA
EXTENSION

Commencing at a peak with a shown elevation of 6535 feet (CHIRICAHUA PEAK, Az Provisional Edition 1986, 7.5 quad) which is the POINT OF BEGINNING. Said point also being on the Chiricahua Wilderness Boundary (1984), and is the Point of Beginning for the Pole Bridge Canyon Research Natural Area.

Thence northwesterly approximately 1250 feet along said wilderness boundary to the NE section corner of section 24, T.18S., R.29E.

Thence northwesterly approximately 400 feet to the crest of a northeast bearing ridge, at a contour elevation of 6320 feet.

Thence southwesterly approximately 400 feet, along same ridge to the intersection with the boundary of the Chiricahua Wilderness. This intersection point being on the line between sections 13 and 24, T.18S., R.29E., which is approximately 600 feet west of the corner to sections 13 and 24 of same township.

Thence southwesterly and southerly approximately 4100 feet along same ridge to a knoll with a contour elevation of 7800 feet. Said knoll is also a point on the Pole Bridge Canyon Natural Area.

Thence northeasterly approximately 2000 feet, along Pole Bridge Canyon Natural Area Boundary, to a point on crest of ridge with a contour elevation of 7280 feet.

Thence northeasterly approximately 1800 feet, along Pole Bridge Canyon Natural Area Boundary, to the POINT OF BEGINNING.

The portion of the extension above the Wilderness Boundary, between sections 13 and 24, is more formally described as the SE1/4,SE1/4,SE1/4 section 13, T.18S., R.29E., G&SR Meridian.

LEGAL DESCRIPTION

Case Name/No. Pole Bridge Canyon RNA

Forest/District Coronado/Douglas

Type of Case Research Natural Area Boundary Correction

This documents the attached legal description for the original Pole Bridge Canyon RNA. The 1931 Designation Order and Establishment Record has an incorrect location for the RNA. This legal description describes the intended area as mapped in this Establishment Record for the Pole Bridge Canyon RNA Extension.

This legal description that describes the Pole Bridge Canyon RNA is acceptable, and no potential problems were noted during my review.

Reviewed by: _____ Date: 9-21-93
Forest Land Surveyor

POLE BRIDGE CANYON
RESEARCH NATURAL AREA

Commencing at the NE section corner of section 24, T.18S., R.29E.

Thence southeasterly approximately 1250 feet to a peak with a shown elevation of 6535' (CHIRICAHUA PEAK, AZ Provisional Edition 1986, 7.5 min. quad) which is the POINT OF BEGINNING. Said point also being on the boundary of the Chiricahua Wilderness (1984).

Thence southeasterly along said wilderness boundary, approximately 2250 feet to the north end of a northeast bearing ridge, with a shown elevation of 7064 feet.

Thence southwesterly and southeasterly along same ridge approximately 5250 feet to a peak with a contour elevation of 8600 feet.

Thence southwesterly approximately 1100 feet, along crest, to a peak with a shown elevation of 8622 feet.

Thence west approximately 600 feet to the intersection with trail 267.

Thence northwesterly approximately 2200 along said trail to the junction with trail 264.

Thence westerly approximately 600 feet to a peak with a contour elevation of 8200 feet.

Thence northerly approximately 4800 feet along crest of divide to a knoll with a contour elevation of 7800 feet.

Thence northeasterly approximately 2000 feet, along ridge, to a point on crest with a contour elevation of 7280 feet.

Thence northeasterly approximately 1800 feet to the POINT OF BEGINNING.

APPENDIX

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Coronado National Forest Plan

United States
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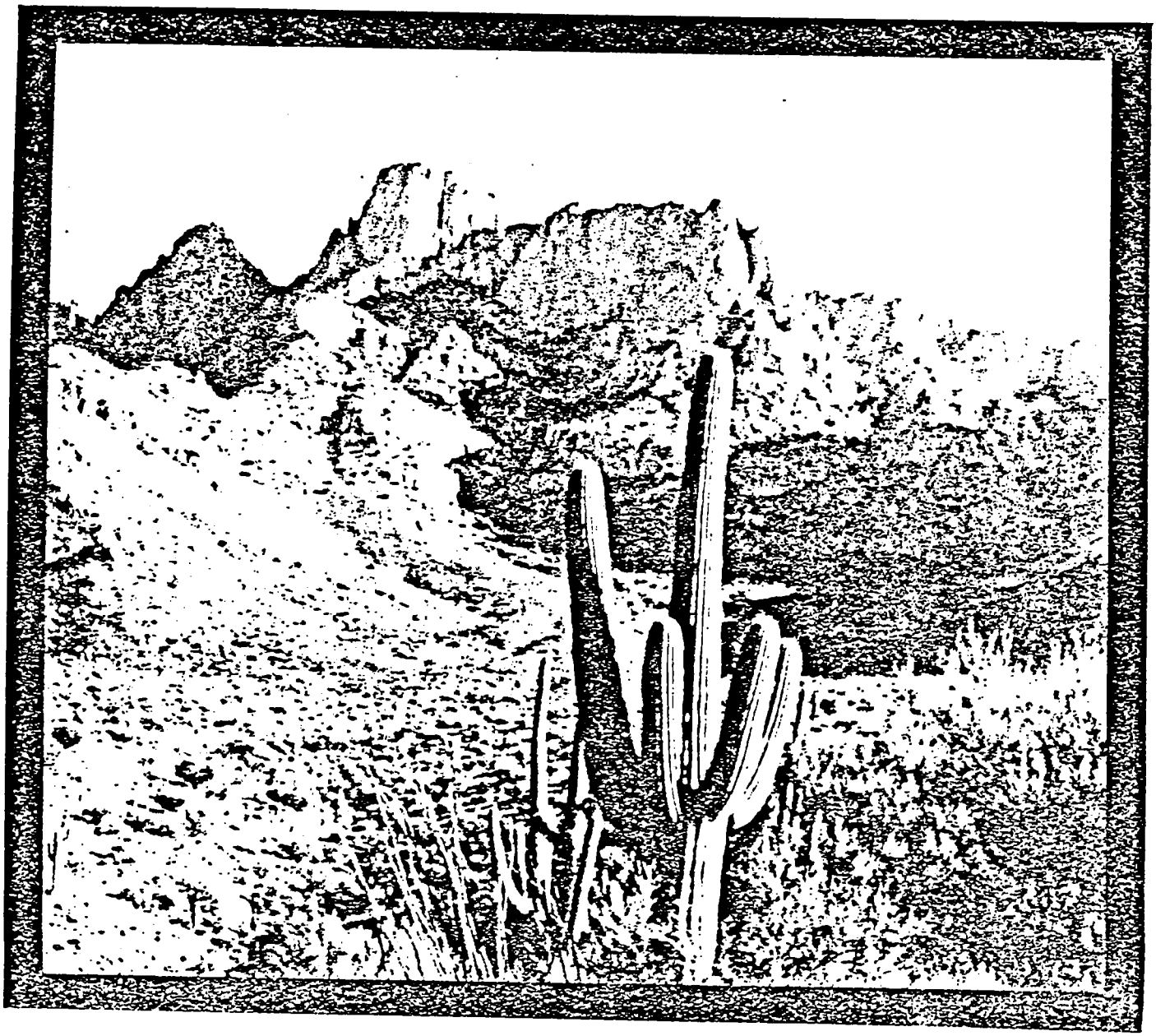
Forest
Service

Southwestern
Region

July 1986

Coronado National Forest Plan



MANAGEMENT AREA 8A

Management Emphasis and Intensity: Manage for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state. There will be no harvest of forest products including fuelwood.

Management Area Description: Includes those lands that have been determined to be suitable for both wilderness designation and designation as research natural areas. Includes the following areas:

Existing RNA	Acres
Pole Bridge	460
Santa Catalina (reduced)	890
Goodding	545
Goudy (part is outside wilderness)	190

New RNA Proposal	Acres
Goodding extension	1470
Pole Bridge extension	90

The Santa Catalina RNA will be reduced from 4131 acres to 890 acres. This will give a more manageable size while maintaining viable populations of targeted species.

Pole Bridge RNA is enlarged to include a more representative example of Chihuahua pine. The Goodding RNA is enlarged to include additional examples of Southwestern riparian types.

Capability Area Types: 6H/M, 6M, 9AH/M, and 11AR.
Total acres = 3645

Specific Management Prescription

Timber Suitability: All Acres Unsuitable

Management Practices	Activities	Standards and Guidelines
Visual Resource Management (DU 2)	A03	Manage the following acres at the indicated Visual Quality Objectives: 3,645 Acres Preservation 100%
Wilderness Recreation O&M (DU 8)	B02, B03	1. Maintain trails to level 1 and level 3. See Appendix E for a definition of levels. 2. Use of motorized vehicles is prohibited except as approved for emergency or other special needs. 3. Manage wilderness use at less than standard. 4. Maintain existing ROS class composition.
Wildlife & Fish O&M (DU 10)	C01, C02 C12	Specific standards and guidelines for management of wildlife are shown in the Forest-wide prescription for activities appropriate to this Management Area. They are intended to meet the following objectives: 1. Maintain or improve occupied habitat for federally and state listed animals. 2. Maintain or improve current populations of endangered and threatened plants.
T&E Plant Habitat Improvement (DU 12)	C03, C04 C05	Nonstructural habitat improvement projects will be based on guidelines in the Forest-wide prescription. They are intended to meet the following objective:

MANAGEMENT AREA 8A (Continued)

Management Practices	Activities	Standards and Guidelines
Fish Habitat Improvement (DU 13) Game Habitat Improvement (DU 14) Nongame Habitat Improvement		1. Delist threatened and endangered species following guidelines of approved recovery plans and memorandums of understanding.
Range Management O&M (DU 16)	D02	1. Manage rangeland at level A (no livestock). Management excludes livestock grazing to protect other values or eliminate conflicts with other uses.
Watershed Maintenance & Improvement (DU 33, 34)	F03, F05 K04	1. Watershed treatment is a low priority in this management area. If treatment is appropriate, activity selection criteria is described in Appendix D. 2. Monitor these areas for watershed condition trends as relic areas.
Minerals Management (DU 36)	G07	1. There will be no removal of mineral materials. 2. Continue withdrawals from mineral entry for all areas. 3. Recommend withdrawals from mineral entry for new areas.
Fire Management (DU 56)	P08, P09	1. The management area is in fire suppression zones one and two based on objectives for resource protection. See Section 5 for definition of zones. 2. Use prescribed fire to reduce risk and to permit lightning to more nearly play its natural role.
Insect & Disease Management		1. Outbreaks of insects or disease will not be controlled, except where there is a clear and imminent danger to timber or other values outside the research natural area.

MESSAGE SCAN FOR REGGIE A. FLETCHER

To RNA

From: REGGIE A. FLETCHER
Postmark: Apr 01,93 8:41 AM Delivered: Apr 01,93 8:41 AM
Status: Certified Confidential Previously read Urgent
Subject: Forwarded:

Comments:
From: REGGIE A. FLETCHER:R03A
Date: Apr 01,93 8:41 AM
Enclosed is a summary of contacts Gerald Henke made with the livestock industry on our submitting the draft RNA establishment reports to the Chief for his signature. While it is not spelled out in the summary, Gerald informs me that none of the persons contacted voiced objections to proceeding with those RNA's in the Forest Plans in either state. For new RNA's we will need to contact these individuals once again and if boundaries are changed to any degree we will need to do likewise. Please consider these contacts as adequate for public involvement for these individuals and the organizations they represent. This should be placed in the project file for all of the draft ER's covered by Forest Plans as of this date and for which we are doing public involvement.
Reggie Fletcher, Regional Ecologist April, 1, 1993

Previous comments:
From: GERALD HENKE
Date: Mar 31,93 2:48 PM
names added

-------========X========-------

RESEARCH NATURAL AREAS'S

Discussions have occured within the past two months with the Arizona Cattle Growers' Association (C.B. Lane) and individuals that attended the annual meeting of the New Mexico Range Improvement Task Force concerning those identified Research Natural Areas in Forest Land and Resource Management Plans in Region 3. Discussions focused around the present National Forest public involvement process and that those identified Research Natural Areas in Forest Plans would be forwarded to the Chief's for inclusion into the National Research Natural Areas system. One such discussion with the Arizona Cattle Growers occured by phone on March 30, 1993 while the conversation with the New Mexico Range Improvement Task Force (John Fowler, Jim Knight, Kirk McDaniel, Karl Wood, Dean John Owens) and attendees (David Kincade, Bill Ball, Stearling Carter, Ray Margo, Linden Parker) of that meeting occured on February 18, 1993.

MESSAGE SCAN FOR REGGIE A. FLETCHER

To RNA

From: REGGIE A. FLETCHER
Postmark: Apr 02,93 11:29 AM Delivered: Apr 02,93 11:31 AM
Status: Confidential
Subject: supplemental public input

Comments:
The enclosed is provided for those conducting public involvement on the RNA's for the NEPA step to use if needed. If used, please place in the project file. Thanks. Reggie

----------X----------

As supplementary material to public involvement on formalizing the proposed Research Natural Areas which are contained in current Forest Land and Resource Management Plans through signature of the Chief of the Forest Service, the following record is provided. On August 13-14, 1992, John Humke, representing the national office of The Nature Conservancy; Dan Campbell, Peter Warren and Mark Heitlinger, representing the Arizona Chapter of The Nature Conservancy; Fenton Kay representing the Arizona Heritage Program, Arizona Game and Fish Department; Rick Johnson and Bill Waldman representing the New Mexico chapter of The Nature Conservancy and the New Mexico Natural Heritage Program met with Larry Henson, Regional Forester, Forrest Carpenter, Deputy Regional Forester, Teresa Prendusi, Regional Botanist, Art Briggs, Director Land Management Planning and Reggie Fletcher, Regional Ecologist.

Among the topics discussed was the pursuit of the formalization of the Region's proposed Research Natural Areas. The Nature Conservancy and Heritage Program officials urged the Region's representatives to pursue whatever means necessary to satisfy the new RNA establishment report requirements in order to obtain the Chief's signature. The representatives also encouraged continued investigation into the possibility of locating additional suitable RNA's and securing their establishment.

Reggie Fletcher
Regional Ecologist

APPENDIX

These pages are reproduced from the
Coronado National Forest Plan

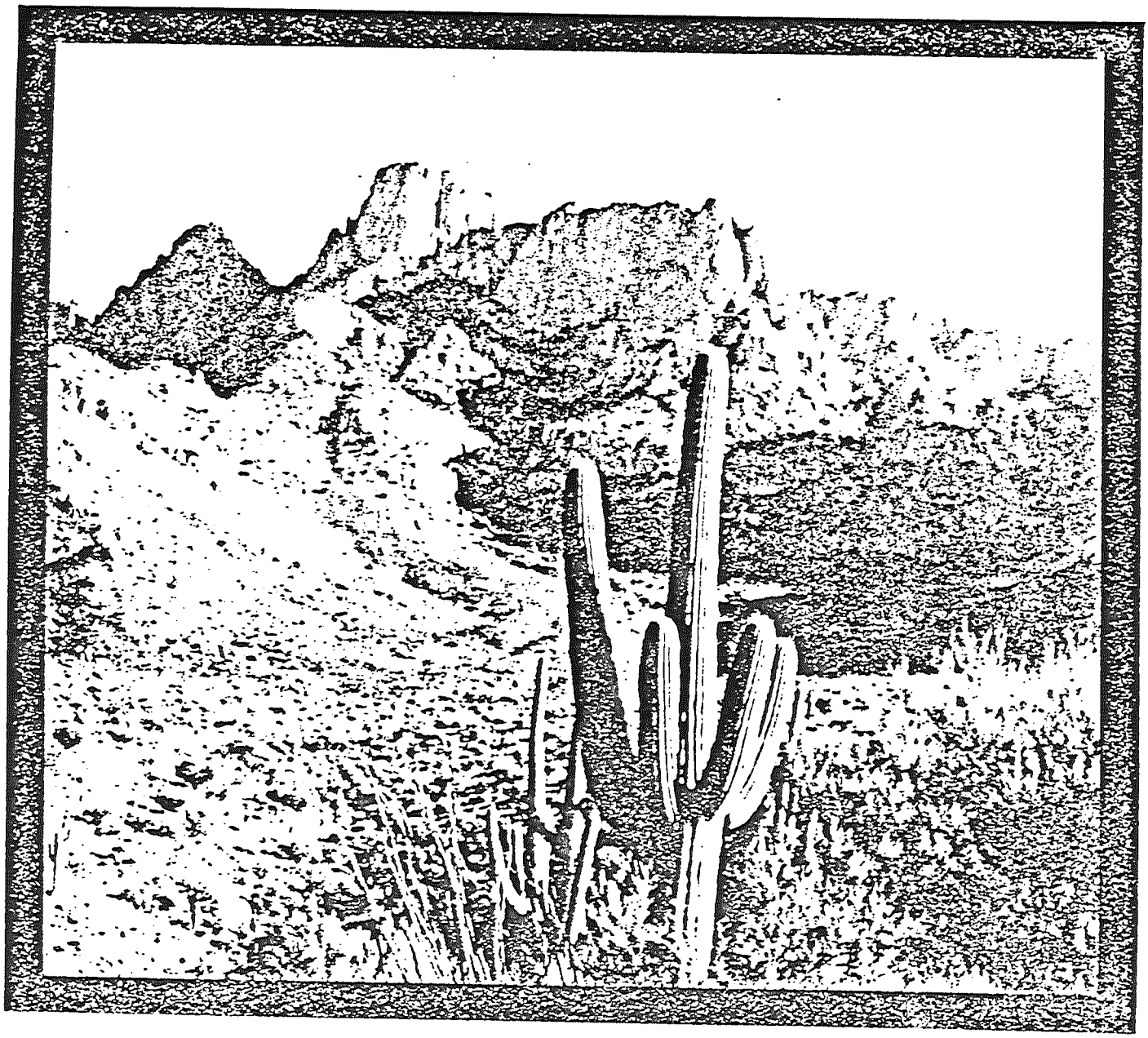
United States
Department of
Agriculture

Forest
Service

Southwestern
Region

July 1986

Coronado National Forest Plan



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Insect & Disease Management		1. Outbreaks of insects or disease will not be controlled, except where there is a clear and imminent danger to timber or other values outside the research natural area.

USDA-FOREST SERVICE

PHOTOGRAPHIC RECORD

(See FSM 1643.52)

PHOTOGRAPHER	DATE SUBMITTED
Jim Malusa	12/14/92
HEADQUARTERS UNIT	**LOCATION**

INITIAL DISTRIBUTION OF PRINTS AND FORM 1600-1:

☐ WO ☐ RO ☐ DIV. ☐ FOREST ☐ DISTRICT ☐ PHOTOGRAPHER Date _____

INSTRUCTIONS: Submit to Washington Office in quadruplicate. Permanent numbers will be assigned and the forms will be distributed as follows: (1) Washington Office, (2) RO or Station, (3) Forest or Center and (4) Photographer.

PHOTOGRAPH NUMBER		SELECTED FOR W.O. PHOTO LIBRARY	DATE OF EXPOSURE	LOCATION (State, Forest, District and County)	CONCISE DESCRIPTION OF VIEW	NEGATIVE (Show size and BW for black and white or C for color)
TEMP.	PERMANENT (To be filled in by the WO)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)
			11/16/92	ALL Arizona, Coronado NF Douglas District Cochise County	Pole Bridge Canyon RNA Extension 1. Pole Bridge Canyon RNA extension, Chihuahua pine (Pinus leiophyllan var chihuahua) , arizona white oak (Quercus arizonica) habitat type. 2. Pole Bridge Canyon RNA extension Chihuahua pine (Pinus leiophylla var chihuahua) Silverleaf oak (Quercus hypoleucoides) habitat type. Arizona madrone (Arbutus arizonica) in the right foreground. 3. Chihuahua pine (Pinus leiophylla var chihuahua)with dense cover of long tongue muhly (Muhlenbergia longiligula) in foreground. 4. Aerial view of Pole Bridge Canyon RNA extension. Pole Bridge Canyon-Turkey Creek confluence at top center. 5. Small stand of Douglas fir (Pseudotsuga menziesii) with young Apache pine (Pinus engelmanni) in the foreground with single-leaf ash (Fraxinus anomala).	All 24 x 36 mm color slides

U.S. DEPARTMENT OF AGRICULTURE

SPEED MEMO

PART NUMBER 2

DATE Feb 20, 1987

TO Bud Brunner

SUBJECT Pole Bridge Canyon RNA (extension)

FROM Will Moir, RNA Task Group, RO

MESSAGE

Please review this draft Establishment Record for accuracy and clarity. Is anything important omitted? What, if anything, needs to be changed in order to put final form ready for signatory approval?

Any needed corrections can be mailed to me or sent by DG (W.MOIR:RØ3A).

After incorporating revisions into this draft, you will receive from the Research Natural Area Committee a "final" Establishment Record for signatures and forwarding to WO for Chief's review and approval.

Many thanks.

SIGNATURE Will Moir

REPLY

SIGNATURE

DATE

(DESTROY THIS PART 2 UPON RECEIPT OF REPLY.)

FORM AD-311 (REV. 3/81)

SENDER'S COPY

ESTABLISHMENT RECORD

for

POLE BRIDGE CANYON (EXTENSION) RESEARCH NATURAL AREA

within

Coronado National Forest

Cochise County, Arizona

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Pole Bridge Canyon (Extension) Research Natural Area

Coronado National Forest

Cochise, Arizona

Prepared by Andrew W. Laurenzi Date 5/19/87
Mark H. Cochran, The Nature Conservancy
Andrew W. Laurenzi, The Nature Conservancy

Recommended by_____Date_____
Bernard H. Brunner, District Ranger,
Douglas Ranger District

Recommended by_____Date_____
R.B. Tippeconnic, Forest Supervisor,
Coronado National Forest

Recommended by_____Date_____
John W. Russell, Chairperson,
Southwestern Research Natural
Area Committee

Recommended by_____Date_____
Sotero Muniz, Regional Forester,
Southwestern Region

Recommended by_____Date_____
Charles M. Loveless, Station Director,
Rocky Mountain Forest and Range
Experiment Station

INTRODUCTION

The Pole Bridge Canyon Research Natural Area (PBCRNA) is located in the Chiricahua Mountains in the southeast corner of Arizona. The area is within the Douglas Ranger District of the Coronado National Forest, in Cochise County, and is all reserved public domain National Forest system land. The original RNA boundary area and extension is within the Chiricahua Wilderness.

The PBCRNA was established in 1931 to include distinctive populations of southern Arizona pines: Southwestern white pine (Pinus strombiformis), Arizona pine (Pinus ponderosa var arizonica), Apache pine (Pinus englemani), Chihuahua pine (Pinus leiophylla var chihuahiensis) and border pinyon (Pinus discolor). Subsequent study since 1931 indicated that the original 460 acres (186 hectares) did not contain viable populations of Chihuahua Pine (Pinus leiophylla var chihuahuensis). The extension of 105 acres (43 hectares) was put forward by the Regional Task force to include such populations. This document provides information on the expanded RNA of 565 acres (229 hectares) with special emphasis on the proposed extension.

LAND MANAGEMENT PLANNING

The Southwest Regional Guide (August, 1983) and the Coronado National Forest Plan and Environmental Impact Statement (USDA Forest Service, 1986a,1986b) include the PBCRNA extension. The environmental analysis conducted as part of the planning process supports the recommendation to establish this extension.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The pine-oak forest and woodlands centered in the Sierra Madre mountains reach their northernmost extent in the mountainous region of sub-Mogollon Arizona. Opportunities to represent this ecosystem occur primarily in the Coronado National Forest. Several pines are characteristic components of the Sierra Madrean pine-oak ecosystem in Arizona, Arizona pine, Apache pine, Chihuahua pine and border pinyon. Pole Bridge Canyon RNA was established in 1931 to represent the Mexican pine-oak ecosystem and to include viable populations of these southern Arizona pines.

The extension of 105 acres (43 hectares) encompasses excellent examples of two Chihuahua pine habitat types, Pinus leiophylla/Quercus arizonica and Pinus leiophylla/Quercus hypoleucoides (Muldavin et al., 1986), and in doing so provides a more complete representation of the Sierra Madrean pine-oak ecosystem within the Southwestern Regional RNA system. The inclusion of five pine species in a single location contributes to the uniqueness of this RNA in the southwest.

The objectives to augment this RNA are:

1. To provide examples of Chihuhua pine forest communities for research.
2. To permit old growth or late successional natural processes to maintain these Chihuhua pine communities.
3. To help insure the protection of genetic diversity of the Sierra Madrean pine-oak ecosystem.

PRINCIPAL DISTINGUISHING FEATURES

The principal distinguishing feature of the RNA extension is the stand of Chihuahua pine forest habitat types within the entire watershed of a small ephemeral drainage.

LOCATION

The PBCRNA can be reached from either Douglas or Willcox, Arizona (Fig.1). From Douglas, U.S. Highway 666 leads north through the Sulphur Springs Valley. Turn onto Arizona highway 181 at its intersection with 666 and proceed east for 12 miles (19.3 km) to the intersection of Forest Service Road #41 (Turkey Creek Road). Continue east approximately 10 miles (16.9 km) on the unpaved road to a concrete one-lane bridge which crosses Pole Bridge Canyon Creek (Fig. 2). Here a trail sign indicates the start of Pole Bridge Trail #5264. The original natural area boundary is 0.4 miles (0.65 km) up this trail. The new boundary starts within 200 feet (65 m) of the road. The trail continues an additional 2 miles (3.2 km) through the natural area, along the canyon bottom at first and then in numerous switchbacks up the canyon to the ridge forming the south boundary. Trail #5264 intersects the John Long Trail #5267 on this ridge, and latter proceeds about 0.3 miles (0.5 km) along the south boundary.

From Willcox follow Arizona Highway 186 to its intersection with Arizona Highway 181 continue about 10.5 miles (17 km) south on 181 to the graveled Turkey Creek Canyon Road.

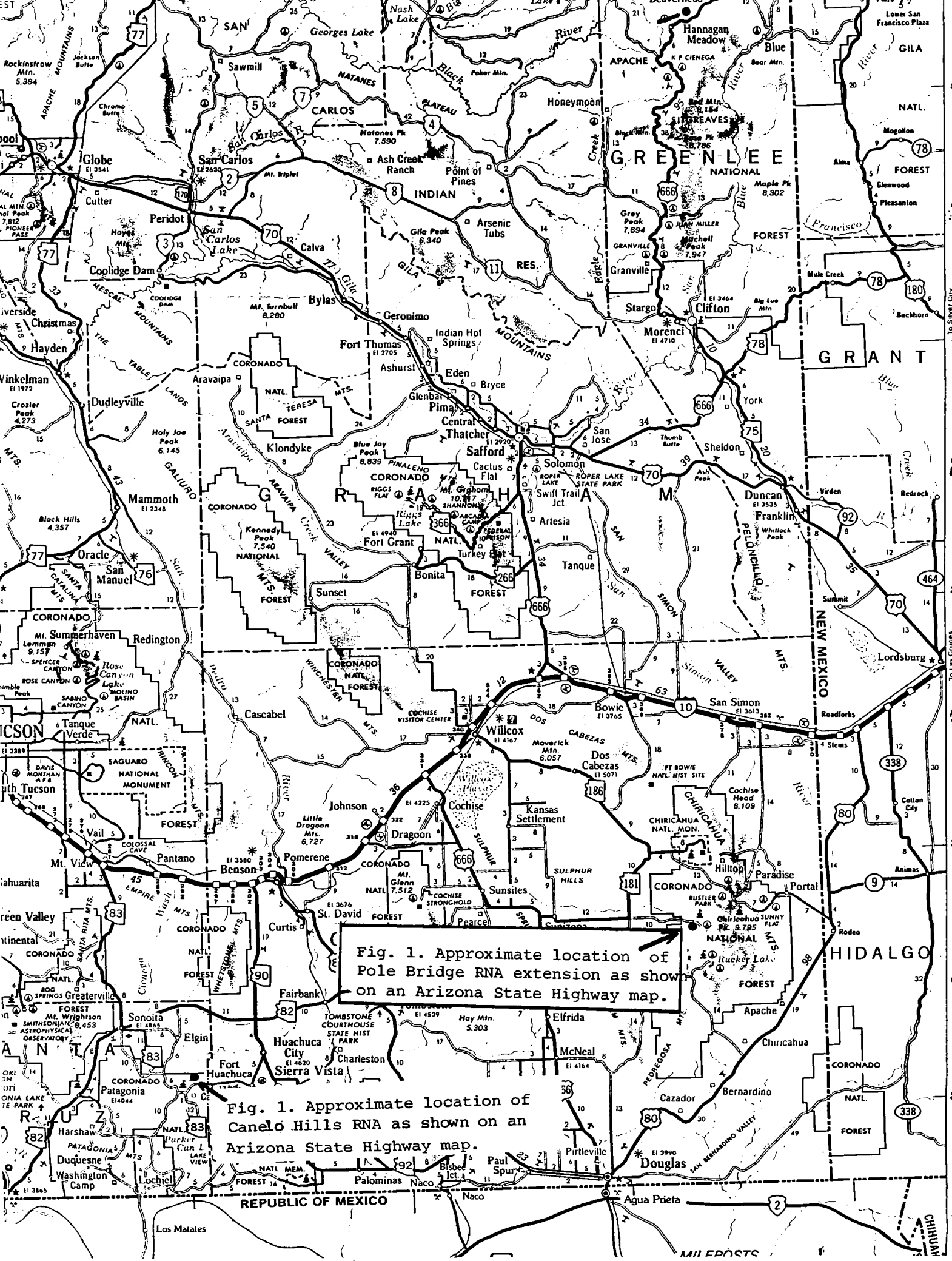
Fig. 1. Approximate location of Pole Bridge RNA extension as shown on an Arizona State Highway map.
Fig. 1. Approximate location of Canelo Hills RNA as shown on an Arizona State Highway map.
REPUBLIC OF MEXICO
NEW MEXICO
GREENLEE
GRANT
HIDALGO
APACHE
GILA
COCHISE
PINAL
SANTA CRUZ
GRAHAM
Globe
San Carlos
Peridot
Coolidge Dam
Bylas
Geronimo
Fort Thomas
Safford
Solomon
Thatcher
Pima
Eden
Ashurst
Clifton
Morenci
Duncan
Franklin
Lordsburg
San Simon
Bowie
Willcox
Cochise
Dragoon
Benson
Tombstone
Sierra Vista
Fort Huachuca
Douglas
Agua Prieta
Naco
Paul Spur
Bisbee Jct.
Palominas
Tucson
Oracle
Mammoth
Dudleyville
Winkelman
Hayden
Christmas
Superior
Kearny
Hayden
Florence
Casa Grande
Eloy
Coolidge
Stanfield
Maricopa
Phoenix
Mesa
Tempe
Chandler
Gilbert
Scottsdale
Glendale
Peoria
Sun City
Buckeye
Gila Bend
Ajo
Why
Tucson
Marana
Oro Valley
Catalina
Vail
Colossal Cave
Pantano
Mt. View
Sahuarita
Green Valley
Continental
Greaterville
Sonoita
Elgin
Patagonia
Harshaw
Duquesne
Washington Camp
Lochiel
Nogales
Rio Rico
Tubac
Amado
Arivaca
Ruby
Sasabe
Los Matates
Naco
Douglas
Pirtleville
Paradise
Portal
Rodeo
Animas
Hilltop
Chiricahua
Cazador
Bernardino
McNeal
Elfrida
Apache
Kansas Settlement
Cochise
Willcox Playa
Dos Cabezas
Bowie
San Simon
Roadforks
Stems
Cotton City
Lordsburg
Summit
Redrock
Virden
Franklin
Duncan
Sheldon
York
Mule Creek
Buckhorn
Clifton
Stargo
Granville
Gila
Safford
Thatcher
Pima
Central
Eden
Bryce
Ashurst
Fort Thomas
Indian Hot Springs
Geronimo
Bylas
Coolidge Dam
Peridot
San Carlos
Globe
Cutter
Christmas
Hayden
Winkelman
Dudleyville
Mammoth
Oracle
San Manuel
Redington
Summerhaven
Tanque Verde
Saguaro National Monument
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Pomerene
St. David
Curtis
Fairbank
Greaterville
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Elgin
Patagonia
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Washington Camp
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Fort Huachuca
Sierra Vista
Huachuca City
Charleston
Tombstone
Hereford
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Naco
Bisbee Jct.
Paul Spur
Pirtleville
Douglas
Agua Prieta
Los Matates
Cascabel
Dragoon
Johnson
Cochise
Kansas Settlement
Willcox
Bowie
Dos Cabezas
San Simon
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Franklin
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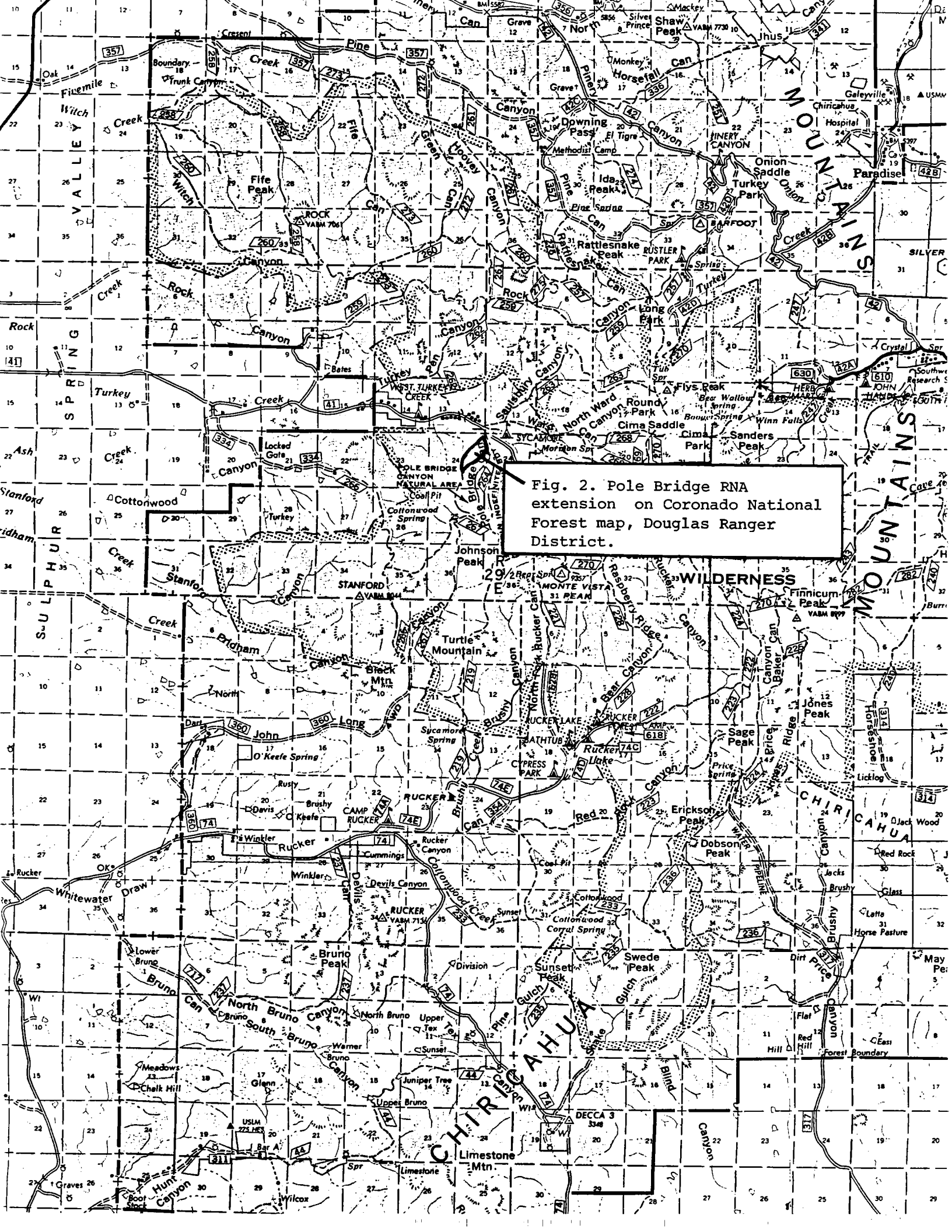
SULPHUR SPRING VALLEY
CHIRICAHUA MOUNTAINS
WILDERNESS
POLE BRIDGE CANYON NATURAL AREA
Pole Bridge Canyon
Pine Creek
Rucker Canyon
Cottonwood Creek
Whitewater Draw
Turkey Creek
Rock Creek
Ash Creek
Stanford Creek
Bridham Canyon
Long John Dart
Brushy Can
Bear Canyon
Raspberry Ridge
Price Ridge
Horseshoe
Pipeline
Dobson Peak
Erickson Peak
Sage Peak
Jones Peak
Finnicum Peak
Sunset Peak
Swede Peak
Bruno Peak
Limestone Mtn.
Turtle Mountain
Johnson Peak
Shaw Peak
Monte Vista Peak
Fife Peak
Ida Peak
Rattlesnake Peak
Long Park
Cima Park
Sanders Peak
Flys Peak
Onion Saddle
Turkey Park
Paradise
Downing Pass
Pinery Canyon
Horsefall Can
Monkey Can
Methodist Camp
Rustler Park
Barfoot
Roundy Park
Cima Saddle
Sycamore
Stanford
Cottonwood
Rucker
Rucker Lake
Cypress Park
Camp Rucker
Rucker Forest Camp
Bathtub
Sycamore Spring
O'Keefe Spring
Devils Canyon
Cummings
Winkler
Meadows
Chalk Hill
Glenn
Juniper Tree
Upper Bruno
Lower Bruno
North Bruno Canyon
South Bruno
Werner
Sunset
Division
Coal Pit
Cottonwood Corral Spring
Jacks Brushy
Glass
Latte
Horse Pasture
Dirt Price
Red Rock
Jack Wood
Licklog
Price Spring
Rucker Lake
Bates
Locked Gate
Crystal Spr
Herb Martyr
John Hands
Southwest Research
Bear Wallow Spring
Boone Spring
Winn Falls
Mormon Spr
Tub Spr
Pine Spring
Rock Spr
Turkey Spr
Coal Pit Spring
Cottonwood Spring
Sycamore Spring
Rucker Spring
Bar A
Boot Stock
Hunt Canyon
Wilcox
Graves
Limestone
Spr
Chiricahua Wilderness
Forest Boundary
Fivemile Canyon
Witch Creek
Boundary Trunk Canyon
Crescent
Oak
Pine
Green Valley
Silver Prince
Mackey
Jhus
Galeyville
Chiricahua
Hospital
Paradise
Silver
Southwest Research
Locked Gate
Pole Bridge Canyon Natural Area
Coal Pit
Cottonwood Spring
Sycamore Spring
Rucker Spring
Bar A
Boot Stock
Forest Boundary
Fig. 2. Pole Bridge RNA extension on Coronado National Forest map, Douglas Ranger District.

AREA BY COVER TYPES

Information on cover types in the PBCRNA was obtained from the from the Southwest Regional RNA Progress Report (1984) and a field reconnaisance.

Küchler

Closet analagous type described is the Oak-juniper woodland (Küchler 1964). This cover type is not an accurate descriptor of the vegetation in the PBCRNA.

Society of American Foresters

The closest analagous type described is the Western Live Oak SAF 241. This cover type is not an accurate descriptor of the PBCRNA vegetation.

Habitat Types or Plant Associations

No detailed information exists on the habitat types of the PBCRNA. Field reconnaisance and information presented in the Southwestern Region RNA Progress Report (USDA Forest Service, 1984) indicate that the entire 105-acre (43 hectare) extension includes several habitat types of the Madrean evergreen forest and woodland, oak-pine series (Brown, 1982; Muldavin et al., 1986). Detailed mapping information on the distribution of cover types in the extension which would provide acreage estimates by habitat type is unavailable.

PHYSICAL AND CLIMATIC CONDITIONS

Pole Bridge Canyon is carved out of granite and related crystalline intrusive rocks (Arizona Bureau of Mines, 1959). High ridges of cliffs and rock outcrops comprise the east and west boundaries (Fig. 3). The drainage, trending northerly, divides the canyon at lower elevations into east- and west-facing slopes. These slopes are steep and disected into rocky and shallow canyons with numerous parent rock outcrops. The canyon bottom has a narrow, intermittent stream channel and lacks well-developed alluvial terraces or benches. The channel divides in the upper part of the natural area. At elevations above 7,600 feet (2,300 km) the slopes are steep, north-facing, and dissected by steep draws and cliffs (Reproduced from Smith 1974:44). The extension includes a small, ephemeral drainage on the northwest boundary of the original area which bisects a small watershed into steep north- and south-facing aspects.

There are no climatic records for PBCRNA. The nearest weather station is at Chiricahua National Monument 11.0 miles (17.7 km) to the north. From interpolation of these data (USDA FOrest Service, 1986c) the mean annual precipitation is calculated at 23 inches (58 cm) with two thirds falling between July and late-September in the form of summer convective storms. The remainder falls primarily as snow brought by winter frontal storms originating in the Pacific which occur between December and March. April through June is a relatively dry period. Mean annual temperatures are 50oF (10oC) and 140 days are frost free.

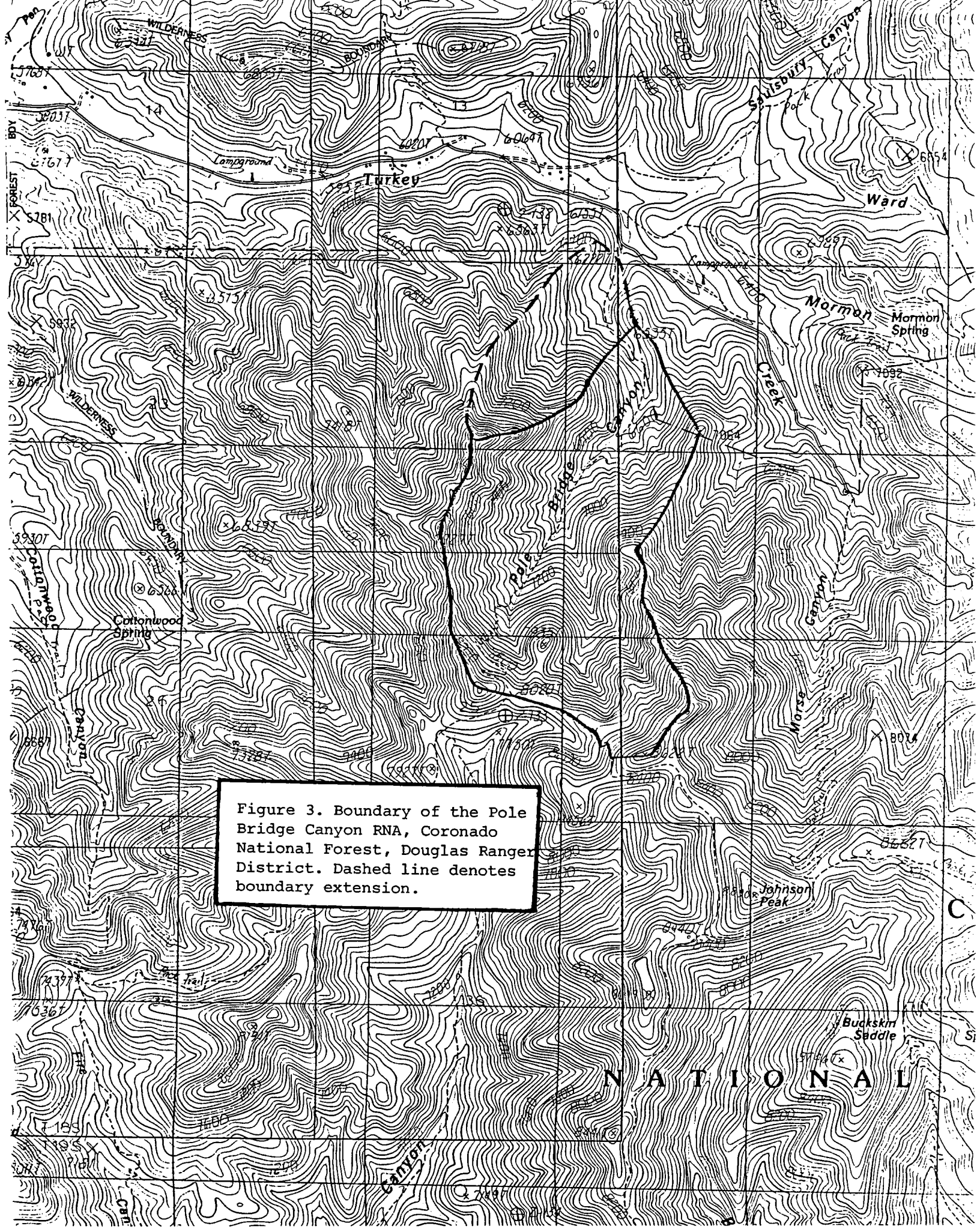

Figure 3. Boundary of the Pole Bridge Canyon RNA, Coronado National Forest, Douglas Ranger District. Dashed line denotes boundary extension.

DESCRIPTION OF VALUES

Flora

The original RNA boundary area supports mixed-coniferous forest on the north-facing slopes above 7,600 feet (2,300 meters). Principal species include Douglas fir (Pseudotsuga menziesii) and Arizona pine. Southwestern white pine is less abundant and white fir (Abies concolor) occurs in the most mesic sites along major drainageways (Smith,1974).

The colluvial west- and east-facing canyon slopes below 7,600 feet (2,300 meters) support Sierra Madrean pine-oak woodland, the principal ecosystem for which the area originally established. On the lower slopes and along the Pole Bridge canyon drainageway, Apache pine and silverleaf oak (Quercus hypoleucoides) are dominant species. This cover type has been recently described as Apache pine/silverleaf oak habitat type (Muldavin, 1986). Important associated trees include Alligator juniper (Juniperus deppeana), Chihuahua pine, border pinyon, netleaf oak (Quercus rugosa), Arizona white oak (Quercus arizonica). Along the main stream course are scattered Arizona sycamore (Platanus wrightii) and Southwestern chokecherry (Prunus serotina). Understory shrubs include Schott's yucca (Yucca schottii), prickly pear (Opuntia chloritica), and Palmer's agave (Agave palmeri). Perennial grasses cover is best developed on the slopes with longtonque muhly (Muhlenbergia longiligula), and mutton grass (Poa fenderliana var albescens).

On the upper, steeper slopes, the Apache pine/silverleaf oak habitat type is replaced by the silverleaf oak/longtongue muhly habitat type (Moir, 1986). This closed canopy woodland is dominated by silverleaf oak in association with Arizona white oak. Alligator juniper and border pinyon are minor associates. A well-defined herbaceous layer exists with longtongue muhly dominant.

Small scarps of limestone parent materials are scattered on the east-facing slopes and support a distinct association dominated in part by mountain mahogany (Cercocarpus breviflorus) in association with border pinyon. The oaks are absent from this association. The association appears to correspond to the border pinyon/mountain mahogany/evergreen sumac habitat type (Moir, 1986). Several shrubs such as Garrya wrightii and Apache plume (Fallugia paradoxa) are prevalent in this type.

Absent from the original area is Chihuahua pine which is represented by only several individuals at the original lower boundary. The proposed extension remedies this deficiency by including two Chihuahua pine habitat types, Chihuahua pine/Arizona white oak and Chihuahua pine/silverleaf oak habitat types (Muldalvin et al., 1986), within the RNA. As is true for the Apache pine habitat type, Chihuahua pine habitat types are best represented on the lower slopes and stream terraces within the extension. An especially impressive stand of Chihuahua pine occurs on the alluvial terrace present at the confluence of the principal drainageway of the extension area and the main canyon

stream course. The composition of the steep upper slopes is similar to that described in the original boundary area.

The flora of the area has not been throughly studied, inventoried or collected. No threatened or endangered species are known from the area. Arizona buttercup (Ranunculus arizonicus), a State-sensitive species, has been collected from the eastern boundary ridgeline. Astragalus cobrensis var maguirei, known from only two collections in the Chiricahua Mountains, may occur in the canyon. The following plant list was compiled by Reggie Fletcher, Southwestern Regional USFS botanist, following a field reconnaissance 20 May 1985. Nomenclature is after Lehr (1979).

Preliminary Plant Species List For Pole Bridge RNA

Latin Name	Common Name
Trees	
Abies concolor R	white fir
Arbutus arizonica I	Arizona madrone
Juniperus deppeana C	alligator juniper
Pinus discolor C	border pinyon
Pinus engelmannii C	Apache pine
Pinus leiophylla var chihuahuensis C	Chihuahua pine
Pinus ponderosa var arizonica C	Arizona pine
Pinus strobiformis I	white pine
Platanus wrightii R	Arizona sycamore
Prunus virginiana var melanocarpa I	black western chokecherry
Pseudotsuga menziesii C	Douglas fir
Quercus arizonicus C	Arizona white oak
Quercus gambellii C	Gambel oak
Quercus hypoleucoides C	silver leaf oak
Quercus rugosa C	netleaf oak
Robinia neomexicana I	locust
Shrubs and Woody Lianas	
Agave palmeri I	Palmer's agave
Ceanothus fendleri R	buck brush

Cercocarpus montanus R	mountain mahogany
Echinocereus triglochidiatus var neomexicanus R	hedgehog cactus
Fallugia paradoxa I	Apache plume
Fraxinus papillosa C	Chihuahua ash
Garrya wrightii R	silk tassel
Holodiscus dumosus I	mountain spray
Jamesia americana R	cliff bush
Nolina microcarpa R	beargrass
Opuntia chlorotica C	prickly pear
Pontentilla thurberi R	cinquefoil
Ptelea trifoliata I	hoptree
Ranunculus arizonicus R	buttercup
Ranunculus hydrocharoides R	buttercup
Rhamnus betulaefolia I	birchleaf buckthorn
Rubus neomexicanus I	New Mexican raspberry
Toxicodendron radicans R	poison ivy
Vitis arizonica R	canyon grape
Yucca schottii C	Schott's yucca

Herbs

Achilles lanulosa C	yarrow
Antennaria parvifolia C	pussy toes
Aquilegia chrysantha C	columbine
Arceuthobium vaginatum var vaginatum C	Southwestern dwarf mistletoe
Astragalus cobrensis var maguirei R*	milk vetch
Castilleja laxa R	indian paint brush
Cerastium nutans var nutans R	powder horn
Cerastium texanum R	mouse-ear chick weed
Cheilanthes fendleri C	Fendler's lip fern
Conopholis mexicana R	Mexican squaw root
Corallorhiza muculata R	spotted coral root
Erigeron flagellaris C	running fleabane
Euphorbia incisa R	spurge
Hedeoma hyssopifolium I	mock-pennyroyal
Heuchera parvifolia var arizonica R	alum root
Hieracium carneum R	hawkweed
Hieracium fendleri R	Fendler's hawkweed
Juncus xiphioides R	rush
Leibnitzia seemannii R	
Lupinus blumeri R	lupine
Lupinus concinnus C	elegant lupine
Mimulus guttatus C	monkey flower
Oxytropis lambertii I	Lambert's locoweed
Pellaea wrightiana R	cliffbreak
Pseudocymopterus montanus C	mountain parsly
Pteridium aquilinum C	western bracken
Senecio neomexicanus var toumeyi C	groundsel
Senecio wootonii R	groundsel

Silene noctiflora R	catchfly
Sphenopholis obtusata R	prairie wedgegrass
Spiranthes parasitica R	ladys tresses
Taraxacum officinale R	common dandelion
Thalictrum fendleri C	meadow rue
Thermopsis pinetorum I	golden pea
Trifolium variegatum R	clover
Triodanis perfoliata R	venus looking glass
Viola canadensis I	violet
Woodsia plummerae R	flower cup fern
Zauschneria californica I	hummingbird trumpet

Grasses and Grass-like Plants

Agrostis semiverticillata R	water bent
Carex agrostoides C	sedge
Muhlenbergia longiligula C	longtongue muhly
Poa fendleriana ssp. albescens C	mutton grass
Poa occidentalis R	blue grass

*known only from the Chirachuas

Relative Abundance:
R = rare
I = infrequent
C = common

Fauna

Three species listed by the Arizona Game and Fish Department as threatened may occur in the extension area. These are the buff-breasted flycatcher, spotted owl, and blue-throated hummingbird. While not limited to the PBCRNA, several species are of special interest in southeastern Arizona. Included are the twin-spotted rattlesnake, Arizona mountain kingsnake, Mexican chickadee, painted redstart, red-faced warbler, olive warbler, magnificent hummingbird, whiskered screech owl, flammulated owl, yellow-eyed junco, Apache fox squirrel, and pine white butterfly. Species hunted include black bear, white-tailed deer, Merriam's

turkey, band-tailed pigeon, and Apache fox squirrel.

The following animal list was derived from the Run Wild III computer-stored data base (Lehmkuhl and Patton, 1982) for the Mexican Oak-Pine Series (225.100) of Cochise County, Arizona; and Smith (1974:46) (after Cockrum and Justice, 1956) for mammals.

Abbreviated Animal List for Pole Bridge Canyon R.N.A.

BIRDS:

Bluebird, Eastern	Sialia sialis
Bluebird, Mountain	Sialia currucoides
Bluebird, Western	Sialia mexicana
Bushtit	Psaltriparus minimus
Creeper, Brown	Certhia americana
Crossbill, Red	Loxia curvirostra
Flicker, Northern	Colaptes auratus
Flycatcher, Ash-throated	Myiarchus cinerascens
Flycatcher, Buff-breasted	Empidonax fulvifrons
Flycatcher, Dusky-capped	Myiarchus tuberculifer
Flycatcher, Sulpher-bellied	Myiodynastes luteiventris
Flycatcher, Western	Empidonax difficilis
Gnatcatcher, Blue-gray	Polioptila caerulea
Goshawk, Northern	Accipiter gentilis
Grosbeak, Black-headed	Pheucticus melanocephalus
Hummingbird, Lucifer	Calothorax lucifer
Hummingbird, Magnificent	Eugenes fulgens
Hummingbird, White-eared	Hyocharis leucotis
Jay, Gray-breasted	Aphelocoma ultramarina
Junco, Yellow-eyed	Junco hyemalis
Kingbird, Cassin's	Tyrannus vociferans
Nighthawk, Lesser	Chordeiles minor
Nuthatch, Pygmy	Sitta pygmaea
Nuthatch, White-breasted	Sitta carolinensis
Owl, Flammulated	Otus flammeolus
Phoebe, Black	Sayornis nigricans
Pygmy-owl, Northern	Glaucidium gnoma
Redstart, Painted	Myioborus pictus
Robin, American	Turdus migratorius
Screech-owl, Whiskered	Otus trichopsis
Solitaire, Towsend's	Myadestes townsendi
Sparrow, Chipping	Spizella passerina
Swallow, Violet-green	Tachycineta thalassina
Tanager, Hepatic	Piranga flava
Tanager, Western	Piranga ludoviciana
Titmouse, Bridled	Parus wollweberi

Towhee, Rufous-side	Pipilo erythrophthalmus
Vireo, Hutton's	Vireo huttoni
Warbler, Grace's	Dendroica graciae
Waxwing, Cedar	Bombycilla cedrorum
Whip-poor-will	Caprimulgus vociferus
Woodpecker, Acorn	Melanerpes formicivorus
Woodpecker, Hairy	Picoides villosus
Woodpecker, Strickland's	Picoides stricklandi
Wood-pewee, Western	Contopus sordidulus
Wren, Bewick's	Thryomanes bewickii

MAMMALS:

Bat, Allen's Big-eared	Idionycteris phyllotis
Bat, Big Brown	Eptesicus fuscus
Bat, Big Free-tailed	Tadarida molossa
Bat, Brazilian Free-tailed	Tadarida brasiliensis
Bat, Hoary	Lasiurus cinereus
Bat, Peter's Leaf-chinned	Mormoops megalophylla
Bat, Mexican Long-tongued	Choeronycteris mexicana
Bat, Long-nosed	Leptonycteris nivalis
Bat, Silver-haired	Lasionycteris noctivagans
Bat, Towsend's Big-eared	Plecotus townsendii
Bear, Black	Ursus americanus
Bobcat	Lynx rufus
Chipmunk, Cliff	Eutamius dorsalis
Coati	Nasua narica
Cottontail, Eastern	Sylvilagus floridanus
Coyote	Canis latrans
Deer, White-tailed	Odocoileus virginianus
Fox, Gray	Urocyon cinereoargenteus
Gopher, Valley Pocket	Thomomys botae
Lion, Mountain	Felis concolor
Mouse, Brush	Peromyscus boylei rowleyi
Mouse, Deer	Peromyscus maniculatus
Mouse, Pinyon	Peromyscus truei
Mouse, Rock	Peromyscus nasutus
Myotis, California	Myotis clifornicus
Myotis, Long-eared	Myotis evotis
Myotis, Small-footed	Myotis subuatus
Myotis, Fringed	Myotis thysanodes
Myotis, Long-legged	Myotis volans
Pipistrelle	Pipistrellus hesperus
Porcupine	Erethizon dorsatum
Raccoon	Procyon lotor
Rat, Mexican Wood	Neotoma mexicana
Ringtail	Bassariscus astutus
Shrew, Arizona	Sorex arizonae
Shrew, Vagrant	Sores vagrans
Skunk, Hooded	Mephitis macroura
Skunk, Spotted	Spilogale putorius
Skunk, Striped	Mephitis mephitis

Squirrel, Nayarit	Sciurus nayaritensis
Squirrel, Rock	Spermophilus variegatus
Weasel, Long-tailed	Mustela frenata

REPTILES:

Kingsnake, Sonoran Mountain	Lampropeltis pyromelana
Lizard, Striped Plateau	Sceloporus virgatus
Rattlesnake, Rock	Crotalus lepidus
Rattlesnake, Twin-spotted	Crotalu pricei
Skink, Mountain	Eumeces callicephalus
Snake, Mexican Garter	Thamnophis eques

AMPHIBIANS:

Treefrog, mountain	Hyla eximia

Geology

The major portion of the area is underlain by Tertiary and Cretaceous age volcanics (andesite flows). The eastern edge of the area is underlain by Tertiary age granite (Arizona Highway Department, 1967).

Soils

The dominant soils are classified as Udic Haplustalfs, loamy-skeletal, mixed, mesic (USDA Forest Service, 1986c).

Cultural

No archaeological surveys have been conducted within the area and no cultural resources have been recorded in Forest Service files. Site density is considered to be low.

IMPACTS AND POSSIBLE CONFLICT

Mineral Resources

The RNA extension is a northward extension of the Pole Bridge

Canyon RNA. The original RNA was withdrawn from mineral entry in 1977. The extension is entirely within the Chiricahua Wilderness Area and withdrawn from mineral entry. No known mineral resources exist in the extension area.

Grazing

The RNA extension receives some livestock use in the spring. The use level is light and results from cattle grazing the benches south of Turkey Creek. Cattle graze these benches and side canyons and move out on the trail in Pole Bridge. The majority of this movement is below the extension area, but some animals do drift through the area. A fence at the north end of the area could possibly trap any cattle coming down the canyon. The loss of AUM's in the area will be minimal. Forage production is low due to needle cast and canopy cover.

Timber

The original boundary area and extension are in the Chiricahua Wilderness. Refer to the wildlife section for a discussion on the timber species.

Watershed Values

The RNA extension occurs within a small, ephemeral watershed that drains into the Pole Bridge Canyon which is a tributary to Turkey Creek. Water quality testing done for Turkey Creek in 1974 to 1979 indicated good quality water.

Recreation Values

The RNA extension receives little recreational use. Most use is from hikers and hunters. There are no expected significant conflicts with, or changes in, recreational use of the area.

Wildlife and Plant Values

Wildlife- Management of the area for research should not affect other activities such as hunting and bird watching or habitats of the species listed above. However, wildlife species (such as the white-tailed deer, Merriam's turkey, yellow-eyed junco and possibly the buff-breasted flycatcher) with habitat requirements dependent on fire-related seral stages would be negatively affected by total fire suppression in the research natural area.

Plants- A complete botanical survey has not been completed for the area. Limited plant lists are available from USFS Region 3 office. No threatened or endangered species have been observed to date. Species to look for in an extensive inventory are Senecio huachucanus, Cheilanthes arizonica, C. pringlei, Perityle cochisensis, and Polemonium pauciflorum ssp. hinkleyi.

Wilderness, Wild and Scenic River, or National Recreation Area Values

The RNA extension occurs within the Chiricahua Wilderness. Establishment of this extension as a RNA will not impact the purposes or management of this Wilderness.

Transportation Plans

The RNA extension is accessed by a trail from a Forest Service road. The area has no roads and there are no transportation plans which would adversely affect the RNA.

MANAGEMENT PLANNING

Land Management Planning

The PBCRNA extension is recommended in the Coronado National Forest Plan, Management Area 8A (see Appendix). Management emphasis is for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state.

Vegetation Management

No harvest of forest products including fuelwood. Rangeland will be managed at Level A (no grazing). Prescribed fire will be used to reduce risks and enable lightening to play its natural role.

If all fires are totally suppressed in the area, age and species mixtures of conifers may decrease. Several species of Pinus rely on fire to some extent to open up forest floors for seed beds. These species are also less shade tolerant than the Douglas-fir and white fir found in the research natural area. No other negative impacts on plant resources are expected with management of the area for research.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of the Pole Bridge Canyon RNA is the responsibility of the Coronado National Forest. The District Ranger, Douglas Ranger District, Douglas, AZ, has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station, or his designee, will be responsible for any studies or research conducted in the area, and requests to conduct research in the area should be referred to him. He, or his designee, will evaluate research proposals and coordinate all studies and research in the area with the District Ranger through the RNA research coordinator. All plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Rocky Mountain Station Director.

Records for the Pole Bridge Canyon (Extension) RNA will be maintained in the following offices:

Regional Forester, Southwestern Region, Albuquerque, NM

Rocky Mountain Station, Fort Collins, CO

Rocky Mountain Station, Tempe, AZ

Coronado National Forest, Tucson, AZ

District Ranger, Douglas Ranger District, Douglas, AZ

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APPENDIX

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Coronado National Forest Plan

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**Forest
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Southwestern
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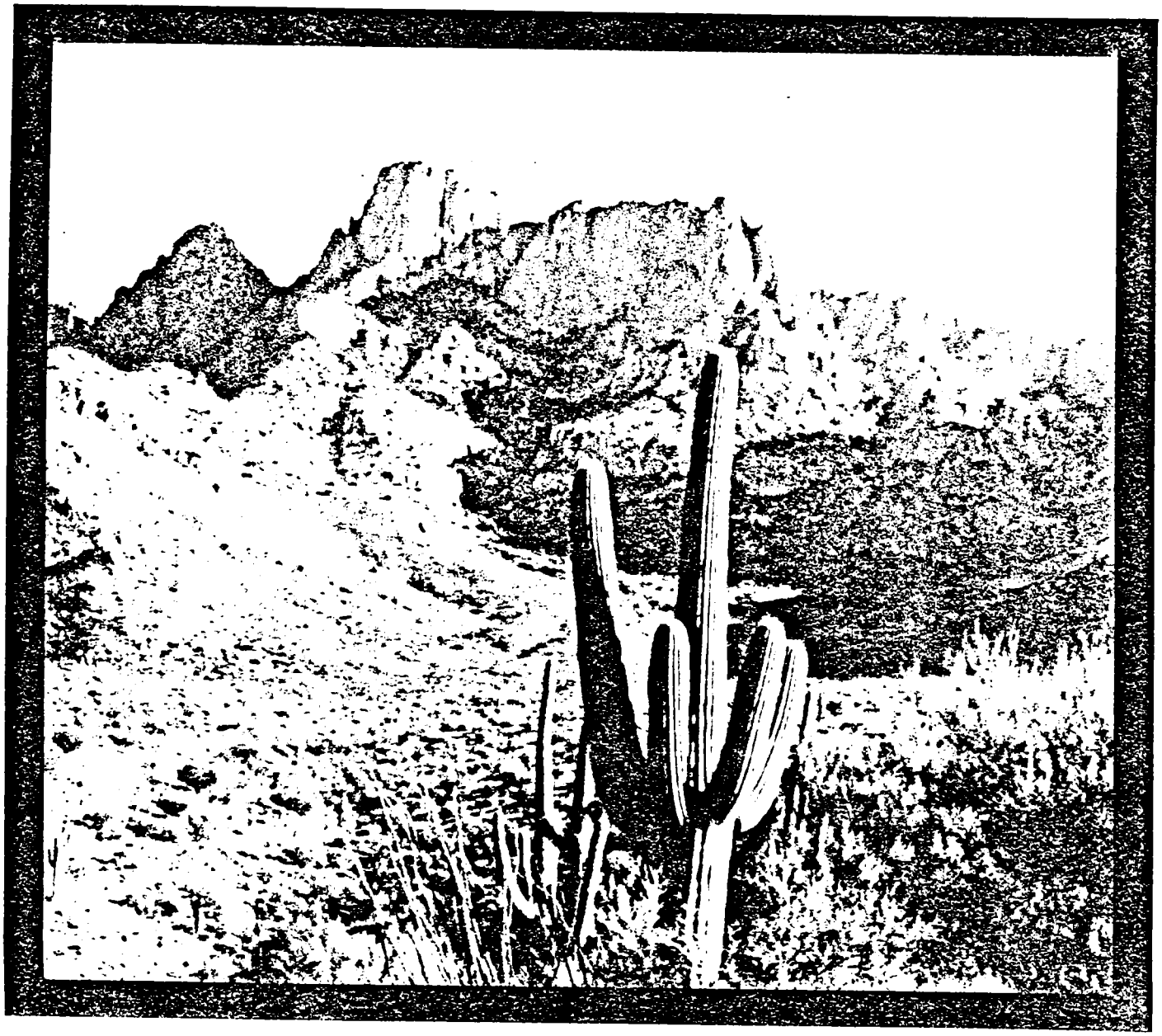
July 1986

Coronado National Forest Plan



MANAGEMENT AREA 8A

Management Emphasis and Intensity: Manage for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state. There will be no harvest of forest products including fuelwood.

Management Area Description: Includes those lands that have been determined to be suitable for both wilderness designation and designation as research natural areas. Includes the following areas:

Existing RNA	Acres
Pole Bridge	460
Santa Catalina (reduced)	890
Goodding	545
Goudy (part is outside wilderness)	190

New RNA Proposal	Acres
Goodding extension	1470
Pole Bridge extension	90

The Santa Catalina RNA will be reduced from 4131 acres to 890 acres. This will give a more manageable size while maintaining viable populations of targeted species.

Pole Bridge RNA is enlarged to include a more representative example of Chihuahua pine. The Goodding RNA is enlarged to include additional examples of Southwestern riparian types.

Capability Area Types: 6H/M, 6M, 9AH/M, and 11AR.
Total acres = 3645

Specific Management Prescription

Timber Suitability: All Acres Unsuitable

Management Practices	Activities	Standards and Guidelines
Visual Resource Management (DU 2)	A03	Manage the following acres at the indicated Visual Quality Objectives: 3,645 Acres Preservation 100%
Wilderness Recreation O&M (DU 8)	B02, B03	1. Maintain trails to level 1 and level 3. See Appendix E for a definition of levels. 2. Use of motorized vehicles is prohibited except as approved for emergency or other special needs. 3. Manage wilderness use at less than standard. 4. Maintain existing ROS class composition.
Wildlife & Fish O&M (DU 10)	C01, C02 C12	Specific standards and guidelines for management of wildlife are shown in the Forest-wide prescription for activities appropriate to this Management Area. They are intended to meet the following objectives: 1. Maintain or improve occupied habitat for federally and state listed animals. 2. Maintain or improve current populations of endangered and threatened plants.
T&E Plant Habitat Improvement (DU 12)	C03, C04 C05	Nonstructural habitat improvement projects will be based on guidelines in the Forest-wide prescription. They are intended to meet the following objective:

MANAGEMENT AREA 8A (Continued)

Management Practices	Activities	Standards and Guidelines
Fish Habitat Improvement (DU 13)		1. Delist threatened and endangered species following guidelines of approved recovery plans and memorandums of understanding.
Game Habitat Improvement (DU 14)		
Nongame Habitat Improvement		
Range Management O&M (DU 16)	D02	1. Manage rangeland at level A (no livestock). Management excludes livestock grazing to protect other values or eliminate conflicts with other uses.
Watershed Maintenance & Improvement (DU 33, 34)	F03, F05 K04	1. Watershed treatment is a low priority in this management area. If treatment is appropriate, activity selection criteria is described in Appendix D.
		2. Monitor these areas for watershed condition trends as relic areas.
Minerals Management (DU 36)	G07	1. There will be no removal of mineral materials.
		2. Continue withdrawals from mineral entry for all areas.
		3. Recommend withdrawals from mineral entry for new areas.
Fire Management (DU 56)	P08, P09	1. The management area is in fire suppression zones one and two based on objectives for resource protection. See Section 5 for definition of zones.
		2. Use prescribed fire to reduce risk and to permit lightning to more nearly play its natural role.
Insect & Disease Management		1. Outbreaks of insects or disease will not be controlled, except where there is a clear and imminent danger to timber or other values outside the research natural area.

Research Natural Areas

USDA Forest Service, Rocky Mountain, Intermountain, Southwestern and Great Plains States

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USDA Forest Service Northern Region, Rocky Mountain Region, Southwestern Region, Intermountain Region, Rocky Mountain Research Station, and the Montana Natural Heritage Program

POLE BRIDGE CANYON

General Information S.USNAHP*89

- Created: 1931
- Size: 320 (acres)
- Elevation Range: 6450 - 8200ft
- Location: *Pole Bridge Canyon RNA is located on the west side of the Chiricahua Mountains of southeastern Arizona, about 53 road miles southeast of Wilcox, Arizona. The RNA lies within the Chiricahua Wilderness.*

Site Description

Pole Bridge Canyon RNA was established to feature distinctive populations of southern Arizona pines. These pines are Apache pine (Pinus engelmanni), southwestern white pine (P. strobiformis), border pinyon (P. discolor), and Arizona pine (Pinus arizonica). The RNA is within the Turkey Creek watershed. Goshawks and Mexican spotted owls occur in the vicinity of the RNA. Other rare elements include the Chiracahua squirrel, and red-faced warbler.

Climate and Enviromental Information

Data not Available

Vegetation - Pole Bridge Canyon

Interior Ponderosa Pine (SAF 237) Pinyon-Juniper (SAF 239)

R
Natural Areas
Coronado

POLE BRIDGE CANYOB NATURAL AREA

Purpose

In this canyon are found good individual specimens and groups of Apache pine, Arizona pine, and Chihuahua pine, all of which have a very restricted range in the United States. There are indications that these pines, particularly Apache pine, can not maintain themselves naturally against the adverse factors of competition and the activities of man. It is important that several areas containing these species be preserved both for scientific study and possibly artificial propagation. Although Apache pine and Chihuahua pine are the primary consideration, the area is valuable because it contains typical specimens of the live oaks, walnut, sycamore and madrone.

Description

Location of Areas:

(a) T. 18 S., R. 29⅛? E. G. & S. R. M., Sections 24 and 25 (unsurveyed.)

(b) Located in Pole Bridge Canyon, commencing at a point about 30 chains more or less from its junction with Mormon Canyon and extending from this point in a southerly direction to its source and up to the top of the divide. All within the Chihuahua division of the forest. (See attached map.)

(c) Acreage 320 acres, more or less. All public. No entries under any of the public land laws are of record.

Acreage by dominant cover types:

The dominant type is comprised of the rare species of southern Arizona pines, which occur throughout the area. The principal trees and other plants occurring within the area are:

Pinus apacheca
Pinus chihuahuana
Pinus arizonica
Pinus cembroides
Quercus arizonica
Quercus hypoleuca
Quercus gambelii
Juniperus pachyphloca
Pseudotsuga taxifolia
Platanus
Cercocarpus
Robinia neomexicana
Anisacanthus
Juglans major
Arbutus arizonica
Plantanus wrightii

Animal and Bird Life:

Birds

Stephens Vireo (Vireo h. stephensi)
Red-shafted Flicker (Colaptes cafer collaris)
Arizona Jay (Aohelocoma sieberi srisonae)
Arizona Junco (Junso phasonotes)
Ruby-crowned Kinglet (Regulua calendula)
Mearns Woodpecker (Melanerpes fromicivorus mearnsi)
Rocky Mountain Jay (Cyanocitta stelleri diademata)
Rocky Mountain Nuthatch (Sitta carolinensis nelsoni)
Mountain Towhee (Pipilo maculatus montanus)
Western Robin (Planesticus migratorius propinquus)

Mammals:

Pacific Raccoon (Procyon lotor pacifica)
Packet Gopher (Thyomomys)
Black Bear (Ursus altifrontalis)
White-tailed Deer (odoocileus souesi)
Cottontail (Sylvilagus sp.)
Rock Squirrel (Citellus grammurus)
Chiricahua Tree Squirrel (Sciurus apache)
Mountain Lion (Felis (reported))
Striped Skunk (Mephitis (reported))
Bob cat (Lynx (reported))
Chipmunk (Eutamias)

Animal life is rather typically Upper Sonoran or woodland, with a slight ad mixture of transition or pine type.

Physical and Climatic Conditions Prevailing on Areas:

(a) Elevation from about 7000 to 7800 feet.

(b) Topography: the canyon is steep and the ridges, particularly that to the west, consist of rhyelite cliffs. The canyon has two principal forks or branches and is not over a mile or a mile and a half in length.

(c) Soils: Shallow and exceedingly risky. In the canyon bottom the soil attains a fair depth, mostly alluvial in character and volcanic in origin.

(d) Precipitation: The average annual precipitation is from 18 to 18 inched. Rainfall occurs generally from mid-July to min-September and more in December, January and February.

(e) Temperature ranges from a maximum average of 72 degrees to a minimum average of 40 degrees. The mean average is around 60 degrees.

(f) Killing frosts rarely occur after May 1 or before November 1.

Forest Value

The dominant species as previously described, consists of southern Arizona pines. This timber for the most part is unmerchantable due to inaccessibility. The accessible timber was cut over, near the mouth of Pole Bridge Canyon in the early eighties to supply the demand in the mining camp of Tombstone. The principal value of the forest cover is for watershed protection. Reproduction is well established. The area was burned over about 18 years ago (1918), but since then their have been no fires within the tract. There is practically no use of this timber at the present time and little possibility of any future demand.

Agricultural Value

There is no agricultural value within the area which has been extremely classified. Water occurs in Pole Bridge Canyon during most of the year but in the summer months this water is very low and at times wholly wanting.

Grazing Value

This area is included within the Turkey Creek grazing allotment opened only to cattle and horses on a yearlong basis. The particular canyon, however, is grazed but lightly by horses and cattle and what few head are found therein are mostly drift. The upper portion of Pole Bridge Canyon is accordingly very lightly grazed by domestic stock, but a considerable number of white-tail deer use the area especially during the winter months. Indications of rather heavy deer grazing of the following species was noted: Quercus hypoleusa, Robinia neomexicana, Quercus gambelii. Grazing by domestic livestock is not very much of a factor within the area.

Mineral Value

There are no indications of present mineral value. This area and the entire Chiricahua division has been intensively prospected for the past forty years or more. Some old rock monuments were noted, but no signs of posting and no development work are anywhere in evidence.

Value of Area for Public Uses Other than Those Enumerated:

(a) No hydro-electric power values.

(b) No reservoir development in the interest if irrigation feasible.

(c) The mouth of the canyon at its junction with Mormon Canyon just below the boundary of the proposed natural area in used quit extensively for the picnic purposes in summer months, but the natural area itself is to rough for picnicking or camping. Its classification as a natural area would not conflict with the recreational plan of the forest. Ample provision for the public camp ground has

been made in Mormon Canyon and hence this area would not be in demand for that purpose.

Settlements

The nearest settlement is bout 6 miles to the west in the foothills. The Sulphur Spring Valley to the west of the area is quite extremely settled – mostly by small ranch owners and dry farmers and by a few large cattle outfits.

Transportation Facilities

A fairly good mountain road extends from the Sulphur Springs Valley up Mormon Canyon to a point about one mile above the junction of Pole Bridge Canyon and Mormon Canyon. An old logging road extends about one-quarter mile up Pole Bridge Canyon and from this point, a trail leads up through the canyon to the crest of the mountains. This area can best be reached on foot or horseback from the mouth of the canyon and is for this reason without difficulty for the purpose of study and experiments.

Public Sentiment

So far as the public has been advised of the purpose behind these research reserves, the attitude has been favorable. The Pole Bridge Canyon area was examined on November 4, 1929 by the following.

G. A. Pearson, Southwest Forest Experiment Station Walter P. Taylor, Senior Biologist, ?. S. Biological Survey ?. G. McGinnies, Grazing Range Specialist, University of Arizona T. W. Bentley, Forest Ranger Fred Winn, Forest Supervisor, Coronado National Forest.

Plan of Management

The light cutting in the lower part of the canyon is healing through the growth of saplings, poles and some mature trees. No marks of cutting remain in the upper portion of the canyon. No cutting of either green of dead timber should be permitted in the future. The area should also be closed to camping and all other recreational uses. It should be protected against fire and insect infestation. Grazing may continue as long as it does not change the vegetation or soil cover. All stock can be excluded by building a few rods of fence across the mouth of the canyon. In this connection, the maintaining of little in comparatively undisturbed condition is important. No additional road should enter the area. The present unimproved road and trail nay be used for protection purposes, but they should not be improved to such extend to invite travel by the public.

Approved:

Forest Supervisor

Director, Southwestern Forest & Range Exp. Station

Regional Forester

Washington D.C.
Feb. 26 _____, 1931.

By virtue of the authority vested in me by Reg. L-20 of the regulations of the Secretary of Agriculture retaining to the occupancy, use, recreation, and administration of the National Forest, I do hereby designate as the ___Pole Bridge Canyon__ Natural Area the lands described in the report dated _____January_, 1931 by ___Fred G. Winn_: said lands shall be hereafter administered as a Natural Area subject to the provisions of said regulations and instructions thereunder.

Forester.

The establishment report lists the following tree species

Pinus apachea, P chihuahuana, P arizonica, P cembroidea, Quercus arizonica, Q hypoleuca, Q gambelii, Juniperus pachyploca, Pseudotsuga taxifolia, Cercocarpus, Robinia neomexicana, Anisacanthus, Juglans major, Arbutus arizonica, and Platanus wrightii

Apparently all species except the pinyon and juniper are classified as ponderosa pine type SAF-237

POLE BRIDGE

ponderosa pine – Pinus ponderosa
chihuahua pine – Pinus chihuahuana
Apache pine – Pinus latifolia
alligator juniper – Juniperus deppeana
pinon – Pinus edulis
Pinyon – Pinus cembroides
one seed juniper – Juniperus monsperma
Douglas Fir – Pseudotsuga menziesii
ash – Fraxinus sp
cherry – Prunus
Boxelder – Acer negundo
Gambel oak – Quercus gambelii
gray oak – Quercus grisea
sticky snakeweed – Gutierrezia lucida
lupine – Lupinus argenteus
yarrow – Achilles lanulosa
senecio – Senecio vulgaris
senecio – Senecio fendleri
loco – Astragalus diphysus
germanium – Germanium sp
columbine – Aquilegia
pentstemon – Pentstemon
trailing fleabane – Erigeron flagellaris
green sage – Artemesia carruthii
cinquefoil – Potentilla sp
sumac – Rhus glabra
false carrot – Caucalis microcarpa
bedstraw – Galium aparine
marrigold – Tagetes
monkey flower – Mimulus glabratus
ceanothus – Ceanothus greggi
mescal – Agave palmeri
pincushion cactus – Mammilaria sp
cliffrose – Cowania mexicana
pussytoes – Antennaria sp
garrya – Garrya flavescens
grape – Vitis Arizonica
little pentstemon – Pentstemon sp
vetch – Vicia sp
peavine – Lathyrus
mock orange – Philadelphus microphyllus
carex – Carex sp
lichens –

moss –
fern –
Juncus – Juncus sp
brachens – Pteridium auilinum
bluegrass – Poa
little seed bluegrass – Oryzopsis
needlegrass – Stipa sp
brome grass – Bromus anomalus
Mountain muhly – Muhlenbergia montana
long tongue muhly – Muhlenbergia longiligula
deer grass – Muhlenbergia rigens
bears – Ursus americanus
coyote – Canis latrans

Pole Bridge EA

Environmental Assessment
Pole Bridge Canyon Research Natural Area (Extension)

Coronado National Forest
Douglas Ranger District
Cochise County, Arizona

Proposed Action

The proposed action is to extend the existing Pole Bridge Canyon RNA and correct the original legal description. The extension was identified as a "proposed" Research Natural Area (RNA) in the Land and Resource Management Plan (Forest Plan) for the Coronado National Forest. It will be managed according to the direction provided in the Forest Plan (Management Areas 8 and 8A). The proposed action, formal designation of the extension as an RNA by the Chief of the Forest Service, will amend the Forest Plan.

Purpose and Need for Action

The purpose of extending the Pole Bridge Canyon RNA is to contribute to a series of RNA's designated to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23). Pole Bridge Canyon RNA was established in 1931 to include distinctive populations of southern Arizona pines: southwestern white pine, Arizona pine, Apache pine, Chihuahua pine, and border pinyon. An evaluation by the Regional RNA Committee, pursuant to direction in Forest Service Manual (FSM) 4063.04b, identified that an extension of the RNA was needed to include viable populations of Chihuahua pine. Extending the Pole Bridge Canyon RNA provides long-term protection and recognition of Chihuahua pine.

The 1931 Establishment Record for the original Pole Bridge Canyon RNA has an error in the description of the boundary. The written descriptions consistently refer to Pole Bridge Canyon, but the map has the location in an adjacent canyon. The intent was to protect the watershed of the Pole Bridge Canyon. A corrected legal description is included with this Establishment Record to correct the mapping error from the 1931 Establishment Record.

The extension of the Pole Bridge Canyon area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of Chihuahua pine in the area at that time. Comments received from interested and affected members of the public supported extending the existing RNA. Site conditions and public concerns have been reviewed; no important changes have occurred.

Conditions and environmental effects of designation are the same as described in the EIS for the Forest Plan. Site specific conditions and effects are as follows:

-Forage production is low, and loss of grazing capacity will be minimal.

-The original RNA was withdrawn from mineral entry in 1977. No known significant mineral resources exist within the extension area.

-The original boundary area and extension are in the Chiricahua Wilderness, with the exception of an approximately 10 acre portion that lies in Sect. 13 and 24, as written in the legal description.

-Recreation use is light and limited to existing trails.

-No threatened or endangered plants or animals are known to occur within the area.

Designation of alternate RNA's for protection of this type was considered during Forest Plan development. The extension of Pole Bridge Canyon was determined at that time to provide the most appropriate site for inclusion in the national network for protection of Chihuahua pine.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would extend the existing Pole Bridge Canyon RNA by 105 acres (42 hectares). This is a change from the 90 acres described in the Forest Plan. Minor changes in the boundary account for this discrepancy. This alternative will provide long-term protection for the area. Management of the area will limit recreation use to non-motorized dispersed recreation at a low intensity and reduced service level, only minimal range improvements will be developed (e.g. boundary fences), and no harvest of forest products (including fuelwood) will be allowed. Wildfires outside the area that endanger the area will be extinguished in an appropriate manner, as will person-caused fires within the area. Unplanned ignitions within the area will receive appropriate suppression action. Use restrictions will be imposed as necessary to keep areas in their natural or unmodified condition (Forest Plan). Pole Bridge Canyon RNA was withdrawn from mineral entry in 1977, the extension will be withdrawn from mineral entry should future and as-yet-unknown information be found to require withdrawal for the protection and management of the basic objectives and purposes of the RNA.

The environmental consequences of Alternative A are described in the EIS for the Coronado Forest Plan. There are no adverse or irreversible environmental effects. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation. There are no significant cumulative effects of extending the RNA.

Alternative B, No Action

This alternative continues management according to direction in the Forest Plan for the "proposed" extension. Only short-term protection of the area, dependent on the life of the Forest Plan, will be provided. Management of the area will be the same as in Alternative A. Management emphasis is to provide opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep the area in an unmodified or natural condition.

The environmental consequences of Alternative B, the "No Action" alternative are as described in the EIS for the Coronado Forest Plan. No adverse or irreversible environmental effects are anticipated. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, several groups and individuals who may have additional information regarding the extension of Pole Bridge Canyon RNA were contacted. Representatives from the national office of The Nature Conservancy, the Arizona Chapter of The Nature Conservancy, Arizona Heritage Program, Arizona Game and Fish Department, and Arizona Cattle Growers groups. Documentation of the contacts made and summaries of the comments are attached to this Environmental Assessment.

Supplemental Public Contacts

During the months of August-September 1993, the following groups, agencies, and individuals were contacted, by phone, regarding the establishment of the Pole Bridge Canyon Research Natural Area (Extension). No negative comments were received. Phone contacts were made by Emilia Parra, Forest Botanist on the Coronado National Forest.

Arizona Chapter of Nature Conservancy - Andy Laurenzi, Peter Warren
Tucson Audubon Society - Doug Koppinger
Arizona State Parks, Natural Areas Association Committee - Jean Tripiano
Joe Austin, permittee for the Turkey Creek Allotment on Douglas Ranger District, contacted by Randy Mead, Range Conservationist on the Douglas Ranger District.
Mrs. Emily Sherbrooke, Southwest Research Station, Portal, Arizona - had no comment, negative or positive.

DESIGNATION ORDER

original or extension?

By virtue of the authority vested in me by the Secretary of Agriculture under regulations 7 CFR 2.42 and 36 CFR 251.23, I hereby establish the Pole Bridge Canyon Research Natural Area. The Pole Bridge Canyon Research Natural Area shall be comprised of the following land: Located in Sections 13 and 24, Township 18 South, range 29 East, and Township 18 South, Range 29 1/2 East (unsurveyed), Gila and Salt River Meridian.
Commencing at the northeast section corner of Section 24, T. 18S., R 29E.;
THENCE, southerly along the Range line of Section 24, T. 18S., R. 29E.;
THENCE, northwesterly approximately .13 miles to a point on the crest of an unnamed ridge;
THENCE, southwesterly along said ridge to a peak at a contour elevation of 7840' and intersection with the ridge on the northwest side of Pole Bridge Canyon;
THENCE, northeasterly along that ridge which is common with the existing boundary of the Pole Bridge Canyon RNA approximately .64 miles to a point on the Pole Bridge Canyon Trail;
THENCE, northeasterly approximately .09 miles to a knob with a shown elevation of 6535 which is on the boundary of the Chiricahua Wilderness;
THENCE, northwesterly approximately .23 miles along said wilderness boundary to the Point of Beginning..

Regional Forester, Sotero Muniz, recommended the establishment of the Pole Bridge Canyon Research Natural Area in the Coronado National Forest Land and Resource Plan. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.41. The results of the Regional Forester's analysis are documented in the Final Environmental Impact Statement for the National Forest Land and Resource Management Plan and the Establishment Record which are available to the public.

The Pole Bridge Canyon Research Natural Area will be managed in compliance with all relevant laws, regulations, and manual direction regarding Research Natural Areas. The Pole Bridge Canyon Research Natural Area will be administered in accordance with the management direction identified in the Establishment Record.
The Coronado National Forest Land and Resource Management Plan is hereby amended to be consistent with the management direction identified in the Establishment Record and this designation order. Directions on pages__of the Coronado National Forest Land and Resource Management Plan are replaced by the directions on pages____of the Establishment Record. This direction will remain in effect unless amended pursuant to 36 CFR 219.10. This is a nonsignificant amendment of the Coronado National Forest Land and Resource Management Plan.

The Forest Supervisor of the Coronado National Forest shall notify the public of this amendment and will mail a copy of the Designation Order and amended direction to all persons on the Coronado Land and Resource Management Plan mailing list.

Based on the environmental analysis documented in the National Forest Land and Resource Management Plan and the Establishment Record I find that the designation of the Pole Bridge Canyon Research Natural Area is not a major federal action significantly affecting the quality of the human environment.

This decision is subject to appeal pursuant to 36 CFR 211.18. A Notice of Appeal must be in writing and submitted to:

Chief
USDA, Forest Service
P.O. Box 96090
Washington, D.C. 20013-6090

The Notice of Appeal must be submitted within 45 days form the date of this decision. Within five days of receipt, the Chief will transmit the Notice of Appeal and a copy of the Designation order to the Secretary of Agriculture for review at the Secretary's discretion. The appeal will be deemed denied if the Secretary takes no action within ten days of receiving the appeal.

_____ _____

Chief Date

POLE BRIDGE

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deer grass - Muhlenbergia rigens
bears - Ursus americanus
coyote - Canis latrans

Decision Notice
Finding of No Significant Impact
Designation Order

Pole Bridge Canyon Research Natural Area (Extension)
Coronado National Forest
Douglas Ranger District
Cochise County, Arizona

By virtue of the authority vested in me by the Secretary of Agriculture under regulations at 7 CFR 2.42, 36 CFR 251.23, and 36 CFR Part 219, I hereby extend the Pole Bridge Canyon Research Natural Area (RNA). The extension shall be comprised of 105 acres (42 hectares) of lands in Cochise County, Arizona, on the Douglas Ranger District of the Coronado National Forest, as described in the section of the Establishment Record entitled "Location". This is a change of acreage from 90 acres, as designated in the Plan, to 105 acres, as described in the Establishment Record. Minor adjustments in the boundary resulted in the acreage change.

The Regional Forester recommended this extension in the Record of Decision for the Coronado National Forest Land and Resource Management Plan (Forest Plan) in 1986. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.41. Results of the Regional Forester's analysis are documented in the Forest Plan and Final Environmental Impact Statement, which are available to the public.

The Regional Forester has reexamined the Pole Bridge Canyon area to ensure the environmental effects of expanding the existing RNA have not changed since 1986. This analysis is documented in the attached environmental assessment. Based on the analysis in the environmental assessment, it is my decision to adopt Alternative A, to extend Pole Bridge Canyon RNA. Alternative A is selected because it provides long-term protection and recognition of southern Arizona pines, specifically Chihuahua pine. Pole Bridge Canyon RNA will be managed in compliance with all relevant laws, regulation, and Forest Service Manual direction regarding RNA's and in accordance with the management direction identified in the Forest Plan.

The alternative considered was Alternative B, the "No Action" alternative which would continue management of the extension of Pole Bridge Canyon as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection for these lands. Alternative B is consistent with the Forest Plan. Although the proposed action (Alternative A) is consistent with the management direction, it is not consistent with the land allocation for the Pole Bridge Canyon area in the Forest Plan. The Coronado Forest Plan is hereby amended to change the allocation of the extension of the Pole Bridge Canyon area from "Proposed" to Established RNA and to change the acreage from 90 to 105 acres. Ten (10) acres will be designated as Management Area 8 and the remainder as Management Area 8A. In the course of reexamining the Pole Bridge Canyon RNA extension, it was discovered that the original description of the Pole Bridge Canyon RNA location in the 1931 Establishment Record, was incorrect. Based on information contained in the Establishment Record, a new legal description has been written and is included in this current Establishment Record for the extension. The intent of the original RNA has not been altered, this is a correction of a mapping error. Both of these actions are non-significant amendments of the Forest Plan (36 CFR 219.10 [f]).

Legal notice of this decision will appear in the Federal Register. The Forest Supervisor of the Coronado National Forest shall notify the public of this decision and mail a copy of the Decision Notice and Designation Order to all persons on the Coronado National Forest mailing list.

It has been determined through the environmental assessment that the proposed action is not a major Federal action that would significantly affect the quality of the human environment; therefore, an environmental impact statement is not needed. This determination is based on the following factors) 40 CFR 1508.27):

A. Context.

Although this is an addition to the national system of RNA's both short-term and long-term physical and biological effects are limited to the local area.

B. Intensity.

1. There are no known effects on public health and safety.

2. There are no known effects on historic or cultural resources, actual or eligible National Register of Historic places sites, Park lands, prime farmlands, wetland, wild and scenic rivers. Effects on ecologically critical areas are minimal.

3. Effects on the human environment are not uncertain, do not involve unique or unknown risks, and are not likely to be highly controversial.

4. The action is not likely to establish a precedent for future actions with significant effects.

5. There are no known cumulative effects.

6. The proposed action would not adversely affect an endangered or threatened species or its critical habitat.

7. The proposed action is consistent with Federal, State, and local laws and requirements for the protection of the environment.

This decision is subject to appeal pursuant to 36 CFR 217. Two (2) copies of the Notice of Appeal must be in writing and submitted to:

The Secretary of Agriculture
14th and Independence Ave., S.W.
Washington, D.C. 20250

The Notice of Appeal prepared pursuant to 36 CFR 217.9(b) must be submitted within 45 days from the date of legal notice of this decision. Review by the Secretary is wholly discretionary. If the Secretary has not decided within 15 days of receiving the Notice of Appeal to review the Chief's decision, appellants will be notified that the Chief's decision is the final administrative decision of the U.S. Department of Agriculture (36 CFR 217.17[d]).

_____ _____

Chief Date

Environmental Assessment
Pole Bridge Canyon Research Natural Area (Extension)

Coronado National Forest
Douglas Ranger District
Cochise County, Arizona

Proposed Action

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Purpose and Need for Action

The purpose of extending the Pole Bridge Canyon RNA is to contribute to a series of RNA's designated to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23). Pole Bridge Canyon RNA was established in 1931 to include distinctive populations of southern Arizona pines: southwestern white pine, Arizona pine, Apache pine, Chihuahua pine, and border pinyon. An evaluation by the Regional RNA Committee, pursuant to direction in Forest Service Manual (FSM) 4063.04b, identified that an extension of the RNA was needed to include viable populations of Chihuahua pine. Extending the Pole Bridge Canyon RNA provides long-term protection and recognition of Chihuahua pine.

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Conditions and environmental effects of designation are the same as described in the EIS for the Forest Plan. Site specific conditions and effects are as follows:

-Forage production is low, and loss of grazing capacity will be minimal.

-The original RNA was withdrawn from mineral entry in 1977. No known significant mineral resources exist within the extension area.

-The original boundary area and extension are in the Chiricahua Wilderness, with the exception of an approximately 10 acre portion that lies in Sect. 13 and 24, as written in the legal description.

-Recreation use is light and limited to existing trails.

-No threatened or endangered plants or animals are known to occur within the area.

Designation of alternate RNA's for protection of this type was considered during Forest Plan development. The extension of Pole Bridge Canyon was determined at that time to provide the most appropriate site for inclusion in the national network for protection of Chihuahua pine.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would extend the existing Pole Bridge Canyon RNA by 105 acres (42 hectares). This is a change from the 90 acres described in the Forest Plan. Minor changes in the boundary account for this discrepancy. This alternative will provide long-term protection for the area. Management of the area will limit recreation use to non-motorized dispersed recreation at a low intensity and reduced service level, only minimal range improvements will be developed (e.g. boundary fences), and no harvest of forest products (including fuelwood) will be allowed. Wildfires outside the area that endanger the area will be extinguished in an appropriate manner, as will person-caused fires within the area. Unplanned ignitions within the area will receive appropriate suppression action. Use restrictions will be imposed as necessary to keep areas in their natural or unmodified condition (Forest Plan). Pole Bridge Canyon RNA was withdrawn from mineral entry in 1977, the extension will be withdrawn from mineral entry should future and as-yet-unknown information be found to require withdrawal for the protection and management of the basic objectives and purposes of the RNA.

The environmental consequences of Alternative A are described in the EIS for the Coronado Forest Plan. There are no adverse or irreversible environmental effects. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation. There are no significant cumulative effects of extending the RNA.

Alternative B, No Action

This alternative continues management according to direction in the Forest Plan for the "proposed" extension. Only short-term protection of the area, dependent on the life of the Forest Plan, will be provided. Management of the area will be the same as in Alternative A. Management emphasis is to provide opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep the area in an unmodified or natural condition.

The environmental consequences of Alternative B, the "No Action" alternative are as described in the EIS for the Coronado Forest Plan. No adverse or irreversible environmental effects are anticipated. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, several groups and individuals who may have additional information regarding the extension of Pole Bridge Canyon RNA were contacted. Representatives from the national office of The Nature Conservancy, the Arizona Chapter of The Nature Conservancy, Arizona Heritage Program, Arizona Game and Fish Department, and Arizona Cattle Growers groups. Documentation of the contacts made and summaries of the comments are attached to this Environmental Assessment.

Supplemental Public Contacts

During the months of August-September 1993, the following groups, agencies, and individuals were contacted, by phone, regarding the establishment of the Pole Bridge Canyon Research Natural Area (Extension). No negative comments were received. Phone contacts were made by Emilia Parra, Forest Botanist on the Coronado National Forest.

Arizona Chapter of Nature Conservancy - Andy Laurenzi, Peter Warren
Tucson Audubon Society - Doug Koppinger
Arizona State Parks, Natural Areas Association Committee - Jean Tripiano
Joe Austin, permittee for the Turkey Creek Allotment on Douglas Ranger District, contacted by Randy Mead, Range Conservationist on the Douglas Ranger District.
Mrs. Emily Sherbrooke, Southwest Research Station, Portal, Arizona - had no comment, negative or positive.

ESTABLISHMENT RECORD

for

POLE BRIDGE CANYON RESEARCH NATURAL AREA (EXTENSION)

within

Coronado National Forest
Cochise County, Arizona

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Pole Bridge Canyon (Extension) Research Natural Area

Coronado National Forest

Cochise, Arizona

Prepared by Andrew W. Laurenzi Date 5/19/87
Mark H. Cochran, The Nature Conservancy
Andrew W. Laurenzi, The Nature Conservancy

Recommended by [signature] Date MAY 2, 1988
Bernard H. Brunner, District Ranger,
Douglas Ranger District

Recommended by R.B. Tippeconnic Date 5.16.88
R.B. Tippeconnic, Forest Supervisor,
Coronado National Forest

Recommended by John W Russell Date 5-26-88
John W. Russell, Chairperson,
Southwestern Research Natural
Area Committee

Recommended by [signature] Date 6/16/88
for Sotero Muniz, Regional Forester,
Southwestern Region

Recommended by Charles M. Loveless Date Sept. 28, 1988
Charles M. Loveless, Station Director,
Rocky Mountain Forest and Range
Experiment Station

INTRODUCTION

Pole Bridge Canyon Research Natural Area (RNA) is located in the Chiricahua Mountains in the southeast corner of Arizona. The area is within the Douglas Ranger District of the Coronado National Forest, in Cochise County, and is wholly reserved public domain National Forest System land. The original RNA and this extension are within the Chiricahua Wilderness.

Pole Bridge Canyon RNA was established in 1931 to include distinctive populations of southern Arizona pines: Southwestern white pine, Arizona pine, Apache pine, Chihuahua pine, and border pinyon (see Table 2 for a list of common and scientific names of plants found in Pole Bridge Canyon RNA). Subsequent study since 1931 indicated that the original 460 acres (186 hectares) did not contain viable populations of Chihuahua pine. The extension of 105 acres (42 hectares) was recommended in the Southwest Region RNA Progress Report to include such populations (USDA Forest Service, 1984). This Establishment Record provides information on the expanded RNA of 565 acres (229 hectares) with special emphasis on the proposed extension.

Land Management Planning. The Southwest Regional Guide (USDA Forest Service, 1983) and the Coronado National Forest Plan (USDA Forest Service, 1986a) include the Pole Bridge Canyon RNA extension. The environmental analysis conducted as part of the planning process supports the recommendation to establish this extension (USDA Forest Service, 1986b).

OBJECTIVES

The extension of Pole Bridge Canyon RNA was recommended by the Regional RNA Committee (USDA Forest Service, 1984) for the following objectives:

1. To provide examples of Chihuahua pine forest communities for research.

2. To permit old growth or late successional natural processes to maintain these Chihuahua pine communities.

3. To help insure the protection of genetic diversity of the Sierra Madrean pine-oak ecosystem.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The pine-oak forest and woodlands centered in the Sierra Madre mountains reach their northernmost extent in the mountainous region of sub-Mogollon Rim, Arizona. Opportunities to represent this ecosystem occur primarily in the Coronado National Forest. Several pines are characteristic components of the Sierra Madrean pine-oak ecosystem in Arizona, including Arizona pine, Apache pine, Chihuahua pine and border pinyon. Pole Bridge Canyon RNA was established in 1931 to represent the Mexican pine-oak ecosystem and to include viable populations of these southern Arizona pines.

The extension of 105 acres (42 hectares) encompasses excellent examples of two Chihuahua pine habitat types, Chihuahua Pine/Arizona White Oak and Chihuahua Pine/Silverleaf Oak (Muldavin et al., 1986), and in doing so provides a more complete representation of the Sierra Madrean pine-oak ecosystem within the Southwestern Region RNA system. The inclusion of five pine species in a single location contributes to the uniqueness of this RNA in the southwest.

Establishment Record, Pole Bridge Canyon RNA

PRINCIPAL DISTINGUISHING FEATURES

The principal distinguishing feature of the Pole Bridge Canyon RNA extension is the stand of Chihuahua pine forest habitat types within the entire watershed of a small ephemeral drainage.

LOCATION

Pole Bridge Canyon RNA can be reached from either Douglas or Willcox, Arizona (Figs. 1 and 2). From Douglas, U. S. Highway 666 leads north through Sulphur Springs Valley. Turn onto Arizona Highway 181 at its intersection with Arizona Highway 666 and proceed east 12 miles (19 kilometers) to the intersection of Forest Service Road 44 (Turkey Creek Canyon Road). Alternatively, from Willcox follow Arizona Highway 186 to its intersection with Arizona Highway 181, then continue 10.5 miles (17 kilometers) south on Highway 181 to the graveled Turkey Creek Canyon Road. Continue east about 10 miles (16 kilometers) on Forest Road 44 to a concrete one-lane bridge that crosses Pole Bridge Canyon Creek. Here a trail sign indicates the start of Pole Bridge Trail 5264. The new boundary starts within 200 feet (61 meters) of the road.

The extension of Pole Bridge Canyon RNA is located within the Douglas Ranger District of Coronado National Forest in Cochise County, Arizona. The area is at 31° 51′ North latitude and 109° 20′ West longitude. It is within portions of Sections 13 and 24, Township 18 South, Range 29 East, and Township 18 South, Range 29 1/2 East (unsurveyed), Gila and Salt Rivers Meridian, Arizona.

The boundaries of the extension of Pole Bridge Canyon RNA are more particularly described as follows:

COMMENCING at a peak with a shown elevation of 6,535 feet (1,992 meters), which is the POINT OF BEGINNING. Said point also being on the Chiricahua Wilderness Boundary (1984), and is the Point of Beginning for the Pole Bridge Canyon Research Natural Area.

THENCE northwesterly approximately 1,250 feet (381 meters) along said wilderness boundary to the NE section corner of section 24, Township 18 South, Range 29 East.

THENCE northwesterly approximately 400 feet (122 meters) to the crest of a northeast bearing ridge, at a contour elevation of 6,320 feet (1,926 meters).

THENCE southwesterly approximately 400 feet (122 meters), along same ridge to the intersection with the boundary of the Chiricahua Wilderness. This intersection point being on the line between sections 13 and 24, Township 18 South, Range 29 East, which is approximately 600 feet (183 meters) west of the corner to sections 13 and 24 of same township.

THENCE southwesterly and southerly approximately 4,100 feet (1,250 meters)along same ridge to a knoll with a contour elevation of 7,800 feet (2,377 meters). Said knoll is also a point on the Pole Bridge Canyon Research Natural Area.

THENCE northeasterly approximately 2,000 feet (610 meters), along Pole Bridge Canyon Research Natural Area Boundary, to a point on crest of ridge with a contour elevation of 7,280 feet (2,219 meters).

THENCE northeasterly approximately 1,800 feet (549 meters), along Pole Bridge Canyon Research Natural Area Boundary, to the POINT OF BEGINNING.

The portion of the extension above the Wilderness Boundary, between sections 13 and 24, is more formally described as the SE1/4,SE1/4,SE1/4 section 13, Township 18 South, Range 29 East, Gila and Salt River Meridian.

Lands herein described and topographic features referred to are based on 7.5' United States Geological Survey Quadrangle Sheet CHIRICAHUA PEAK, ARIZONA, Provisional Edition, dated 1986. The extension of Pole Bridge Canyon RNA contains 105 acres (42 hectares), more or less; the total expanded area of Pole Bridge Canyon RNA will be 565 acres (229 hectares), more or less. Elevations are from 6,200 to 7,840 feet (1,890 to 2,390 meters) in the extension (Fig. 3).

AREA BY COVER TYPES

Information on cover types in the Pole Bridge Canyon RNA was obtained from the Southwestern Region RNA Progress Report (USDA Forest Service, 1984) and a field reconnaissance.

Küchler. The closest analogous type described is the Oak-Juniper Woodland, K-27 (Küchler, 1966). This cover type is not an accurate descriptor of the vegetation in the Pole Bridge Canyon RNA.

Society of American Foresters. The closest analogous type described is the Western Live Oak, SAF-241 (Eyre, 1980). This cover type is not an accurate descriptor of the vegetation in the Pole Bridge Canyon RNA.

Habitat Types or Plant Associations. No detailed information exists on the habitat types of the Pole Bridge Canyon RNA. Field reconnaissance and information presented in the Southwestern Region RNA Progress Report (USDA Forest Service, 1984) indicate that the entire 105-acre (42-hectare) extension includes several habitat types of the Madrean evergreen forest and woodland, oak-pine series (Brown, 1982; Muldavin et al., 1986).

PHYSICAL AND CLIMATIC CONDITIONS

Pole Bridge Canyon is carved out of granite and related crystalline intrusive rocks (Arizona Bureau of Mines, 1959). High ridges of cliffs and rock outcrops comprise the east and west boundaries. The drainage, trending northerly, divides the canyon at lower elevations into east- and west- facing slopes. These slopes are steep and dissected into rocky and shallow canyons with numerous parent rock outcrops. The canyon bottom has a narrow, intermittent stream channel and lacks well-developed alluvial terraces or benches. The channel divides in the upper part of the natural area. At elevations above 7,600 feet (2,316 meters) the slopes are steep, north-facing, and dissected by steep draws and cliffs (Smith, 1974). The extension includes a small, ephemeral drainage on the northwest boundary of the original area that bisects a small watershed into steep north- and south-facing aspects.

There are no climatic records for Pole Bridge Canyon RNA. The nearest weather station is at Chiricahua National Monument 11 miles (18 kilometers) to the north. From interpolation of these data (USDA Forest Service, 1986c) the mean annual precipitation is calculated at 23 inches (58 centimeters) with two-thirds falling between July and late-September in the form of summer convective storms. The remainder falls primarily as snow brought by winter frontal storms originating in the Pacific Ocean that occur between December and March. April through June is a relatively dry period. Mean annual temperatures are 50°F (10°C) and 140 days are frost free.

DESCRIPTION OF VALUES

Flora. The original Pole Bridge Canyon RNA area supports mixed-coniferous forest on the north-facing slopes above 7,600 feet (2,316 meters). Principal species include Douglas fir and Arizona pine. Southwestern white pine is less abundant and white fir occurs in the most mesic sites along major drainages (Smith, 1974).

The colluvial west- and east-facing canyon slopes below 7,600 feet (2,316 meters) support Sierra Madrean pine-oak woodland, the principal ecosystem for which the area originally established. On the lower slopes and along the Pole Bridge Canyon drainage, Apache pine and silverleaf oak are predominant. This cover type has been recently described as Apache pine/silverleaf oak habitat type (Muldavin, 1986). Important associated trees include alligator juniper, Chihuahua pine, border pinyon, netleaf oak, and Arizona white oak. Along the main stream course are scattered Arizona sycamore and southwestern chokecherry. Understory shrubs include Schott's yucca, prickly pear, and Palmer's agave. Perennial grasses cover is best developed on the slopes with longtonque muhly and mutton grass. On the upper, steeper slopes, the Apache pine/silverleaf oak habitat type is replaced by the silverleaf oak/longtongue muhly habitat type (Moir, 1986). This closed canopy woodland is mostly silverleaf oak in association with Arizona white oak. Alligator juniper and border pinyon are minor associates. A well-defined herbaceous layer exists with longtongue muhly predominant.

Small scarps of limestone parent materials are scattered on the east-facing slopes and support a distinct association that is predominately mountain mahogany in association with border pinyon. The oaks are absent from this association. The association appears to correspond to the border pinyon/mountain mahogany/evergreen sumac habitat type (Moir, 1986). Several shrubs such as silktassel and Apache plume are prevalent in this type.

Essentially absent from the original area is Chihuahua pine, which is represented by only several individuals at the original lower boundary. The proposed extension remedies this deficiency by including two Chihuahua pine habitat types, Chihuahua pine/Arizona white oak and Chihuahua pine/silverleaf oak habitat types (Muldavin et al., 1986), within the RNA. As is true for the Apache pine habitat type, Chihuahua pine habitat types are best represented on the lower slopes and stream terraces within the extension. An especially impressive stand of Chihuahua pine occurs on the alluvial terrace present at the confluence of the principal drainageway of the extension area and the main canyon stream course. The composition of the steep upper slopes is similar to that described in the original boundary area.

The flora of the area has not been thoroughly studied, inventoried or collected. No threatened or endangered species are known from the area. Arizona buttercup, a State-sensitive species, has been collected from the eastern boundary ridgeline. Milk vetch *Astragalus cobrensis* var *maguirei*, known from only two collections in the Chiricahua Mountains, may occur in the canyon. Table 1 provides a plant list that was compiled by Reggie Fletcher (USDA Forest Service, Albuquerque, NM), following a field reconnaissance 20 May 1985. Nomenclature is after Lehr (1978).

Table 1. Preliminary plant species list for Pole Bridge Canyon Research Natural Area. Nomenclature and authority follow that of Lehr (1978).

Scientific Name	Relative Abundance	Common Name
TREES		
Abies concolor	R	white fir
Arbutus arizonica	I	Arizona madrone
Juniperus deppeana	C	alligator juniper
Pinus discolor	C	border pinyon
Pinus engelmannii	C	Apache pine
Pinus leiophylla var *chihuahuensis*	C	Chihuahua pine
Pinus ponderosa var *arizonica*	C	Arizona pine
Pinus strobiformis	I	white pine
Platanus wrightii	R	Arizona sycamore
Prunus virginiana var *melanocarpa*	I	black western chokecherry
Pseudotsuga menziesii	C	Douglas fir
Quercus arizonicus	C	Arizona white oak
Quercus gambellii	C	Gambel oak
Quercus hypoleucoides	C	silver leaf oak
Quercus rugosa	C	netleaf oak
Robinia neomexicana	I	locust
SHRUBS AND WOODY LIANAS		
Agave palmeri	I	Palmer's agave
Ceanothus fendleri	R	buck brush
Cercocarpus montanus	R	mountain mahogany
Echinocereus triglochidiatus var *neomexicanus*	R	hedgehog cactus
Fallugia paradoxa	I	Apache plume
Fraxinus papillosa	C	Chihuahua ash
Garrya wrightii	R	silk tassel
Holodiscus dumosus	I	mountain spray
Jamesia americana	R	cliff bush
Nolina microcarpa	R	beargrass
Opuntia chlorotica	C	prickly pear
Pontentilla thurberi	R	cinquefoil
Ptelea trifoliata	I	hoptree
Ranunculus arizonicus	R	buttercup
Ranunculus hydrocharoides	R	buttercup
Rhamnus betulaefolia	I	birchleaf buckthorn
Rubus neomexicanus	I	New Mexican raspberry
Toxicodendron radicans	R	poison ivy
Vitis arizonica	R	canyon grape
Yucca schottii	C	Schott's yucca
HERBS		
Achilles lanulosa	C	yarrow
Antennaria parvifolia	C	pussy toes
Aquilegia chrysantha	C	columbine
Arceuthobium vaginatum var *vaginatum*	C	Southwestern dwarfmistletoe
Astragalus cobrensis var *maguirei*	R*	milk vetch
Castilleja laxa	R	indian paint brush
Cerastium nutans var *nutans*	R	powder horn

Establishment Record, Pole Bridge Canyon RNA

Cerastium texanum	R	mouse-ear chick weed
Cheilanthes fendleri	C	Fendler's lip fern
Conopholis mexicana	R	Mexican squaw root
Corallorhiza muculata	R	spotted coral root
Erigeron flagellaris	C	running fleabane
Euphorbia incisa	R	spurge
Hedeoma hyssopifolium	I	mock-pennyroyal
Heuchera parvifolia var *arizonica*	R	alum root
Hieracium carneum	R	hawkweed
Hieracium fendleri	R	Fendler's hawkweed
Juncus xiphioides	R	rush
Leibnitzia seemannii	R	
Lupinus blumeri	R	lupine
Lupinus concinnus	C	elegant lupine
Mimulus guttatus	C	monkey flower
Oxytropis lambertii	I	Lambert's locoweed
Pellaea wrightiana	R	cliffbreak
Pseudocymopterus montanus	C	mountain parsley
Pteridium aquilinum	C	western bracken
Senecio neomexicanus var *toumeyi*	C	groundsel
Senecio wootonii	R	groundsel
Silene noctiflora	R	catchfly
Sphenopholis obtusata	R	prairie wedgegrass
Spiranthes parasitica	R	lady's tresses
Taraxacum officinale	R	common dandelion
Thalictrum fendleri	C	meadow rue
Thermopsis pinetorum	I	golden pea
Trifolium variegatum	R	clover
Triodanis perfoliata	R	venus looking glass
Viola canadensis	I	violet
Woodsia plummerae	R	flower cup fern
Zauschneria californica	I	hummingbird trumpet

GRASSES AND GRASS-LIKE PLANTS

Agrostis semiverticillata	R	water bent
Carex agrostoides	C	sedge
Muhlenbergia longiligula	C	longtongue muhly
Poa fendleriana ssp. *albescens*	C	mutton grass
Poa occidentalis	R	blue grass

*known only from the Chiricahua Mountains

Relative Abundance:
R = rare
I = infrequent
C = common

Fauna. Two species listed by the Arizona Game and Fish Department as threatened may occur in the extension area, the buff-breasted flycatcher, and the Mexican spotted owl. (Arizona Game and Fish Department, 1988). While not limited to the Pole Bridge Canyon RNA, several species are of special interest in southeastern Arizona. Included are the twin-spotted rattlesnake, Arizona mountain kingsnake, Mexican chickadee, painted redstart, red-faced warbler, olive warbler, magnificent hummingbird, whiskered screech owl, flammulated owl, yellow-eyed junco, Apache fox squirrel, and pine white butterfly. Species hunted include black bear, white-tailed deer, Merriam's turkey, band-tailed pigeon, and Apache fox squirrel.

Establishment Record, Pole Bridge Canyon RNA

Table 2 provides an animal list that was derived from the RUNWILD 3 computer-stored data base (Lehmkuhl and Patton, 1984) for the Mexican Oak-Pine Series (225.100) of Cochise County, Arizona; and Smith (1974) for mammals.

Table 2. Abbreviated animal list for Pole Bridge Canyon RNA. Nomenclature and authority follow that of Banks et al. (1987).

Common Name	Scientific Name
BIRDS	
Bluebird, eastern	*Sialia sialis*
Bluebird, mountain	*Sialia currucoides*
Bluebird, western	*Sialia mexicana*
Bushtit	*Psaltriparus minimus*
Creeper, brown	*Certhia americana*
Crossbill, red	*Loxia curvirostra*
Flicker, northern	*Colaptes auratus*
Flycatcher, ash-throated	*Myiarchus cinerascens*
Flycatcher, buff-breasted	*Empidonax fulvifrons*
Flycatcher, dusky-capped	*Myiarchus tuberculifer*
Flycatcher, sulphur-bellied	*Myiodynastes luteiventris*
Flycatcher, western	*Empidonax difficilis*
Gnatcatcher, blue-gray	*Polioptila caerulea*
Goshawk, northern	*Accipiter gentilis*
Grosbeak, black-headed	*Pheucticus melanocephalus*
Hummingbird, Lucifer	*Calothorax lucifer*
Hummingbird, magnificent	*Eugenes fulgens*
Hummingbird, white-eared	*Hyocharis leucotis*
Jay, gray-breasted	*Aphelocoma ultramarina*
Junco, yellow-eyed	*Junco hyemalis*
Kingbird, Cassin's	*Tyrannus vociferans*
Nighthawk, lesser	*Chordeiles minor*
Nuthatch, pygmy	*Sitta pygmaea*
Nuthatch, white-breasted	*Sitta carolinensis*
Owl, flammulated	*Otus flammeolus*
Phoebe, black	*Sayornis nigricans*
Pygmy-owl, northern	*Glaucidium gnoma*
Redstart, painted	*Myioborus pictus*
Robin, American	*Turdus migratorius*
Screech-owl, whiskered	*Otus trichopsis*
Solitaire, Townsend's	*Myadestes townsendi*
Sparrow, chipping	*Spizella passerina*
Swallow, violet-green	*Tachycineta thalassina*
Tanager, hepatic	*Piranga flava*
Tanager, western	*Piranga ludoviciana*
Titmouse, bridled	*Parus wollweberi*
Towhee, rufous-side	*Pipilo erythrophthalmus*
Vireo, Hutton's	*Vireo huttoni*
Warbler, Grace's	*Dendroica graciae*
Waxwing, cedar	*Bombycilla cedrorum*
Whip-poor-will	*Caprimulgus vociferus*
Woodpecker, acorn	*Melanerpes formicivorus*
Woodpecker, hairy	*Picoides villosus*
Woodpecker, Strickland's	*Picoides stricklandi*
Wood-pewee, western	*Contopus sordidulus*
Wren, Bewick's	*Thryomanes bewickii*

Establishment Record, Pole Bridge Canyon RNA

MAMMALS

Bat, Allen's big-eared	*Idionycteris phyllotis*
Bat, big brown	*Eptesicus fuscus*
Bat, big free-tailed	*Tadarida molossa*
Bat, Brazilian free-tailed	*Tadarida brasiliensis*
Bat, hoary	*Lasiurus cinereus*
Bat, Peter's leaf-chinned	*Mormoops megalophylla*
Bat, Mexican long-tongued	*Choeronycteris mexicana*
Bat, long-nosed	*Leptonycteris nivalis*
Bat, silver-haired	*Lasionycteris noctivagans*
Bat, Townsend's big-eared	*Plecotus townsendii*
Bear, black	*Ursus americanus*
Bobcat	*Lynx rufus*
Chipmunk, cliff	*Eutamius dorsalis*
Coati	*Nasua narica*
Cottontail, eastern	*Sylvilagus floridanus*
Coyote	*Canis latrans*
Deer, white-tailed	*Odocoileus virginianus*
Fox, gray	*Urocyon cinereoargenteus*
Gopher, valley pocket	*Thomomys botae*
Lion, mountain	*Felis concolor*
Mouse, brush	*Peromyscus boylei rowleyi*
Mouse, deer	*Peromyscus maniculatus*
Mouse, pinyon	*Peromyscus truei*
Mouse, rock	*Peromyscus nasutus*
Myotis, California	*Myotis clifornicus*
Myotis, long-eared	*Myotis evotis*
Myotis, small-footed	*Myotis subuatus*
Myotis, fringed	*Myotis thysanodes*
Myotis, long-legged	*Myotis volans*
Pipistrelle	*Pipistrellus hesperus*
Porcupine	*Erethizon dorsatum*
Raccoon	*Procyon lotor*
Rat, Mexican wood	*Neotoma mexicana*
Ringtail	*Bassariscus astutus*
Shrew, Arizona	*Sorex arizonae*
Shrew, vagrant	*Sores vagrans*
Skunk, hooded	*Mephitis macroura*
Skunk, spotted	*Spilogale putorius*
Skunk, striped	*Mephitis mephitis*
Squirrel, nayarit	*Sciurus nayaritensis*
Squirrel, rock	*Spermophilus variegatus*
Weasel, long-tailed	*Mustela frenata*

REPTILES

Kingsnake, Sonoran mountain	*Lampropeltis pyromelana*
Lizard, striped plateau	*Sceloporus virgatus*
Rattlesnake, rock	*Crotalus lepidus*
Rattlesnake, twin-spotted	*Crotalus pricei*
Skink, mountain	*Eumeces callicephalus*
Snake, Mexican garter	*Thamnophis eques*

AMPHIBIANS

Treefrog, mountain	*Hyla eximia*

Geology. The major portion of the area is underlain by Tertiary and Cretaceous age volcanics (andesite flows). The eastern edge of the area is underlain by Tertiary age granite (Arizona Highway Department, 1967).

Soils. Predominant soils are classified as Udic Haplustalfs, loamy-skeletal, mixed, mesic (USDA Forest Service, 1986c).

Lands. Pole Bridge Canyon RNA and extension are wholly reserved National Forest System lands.

Cultural. No archaeological surveys have been conducted within the area and no cultural resources have been recorded in Forest Service files. Site density is considered to be low.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources. Pole Bridge Canyon RNA extension is a northward extension of the Pole Bridge Canyon RNA. The original RNA was withdrawn from mineral entry in 1977. Ninety-five acres (38 hectares) of the extension is within the Chiricahua Wilderness and withdrawn from mineral entry. No known mineral resources exist in the extension area.

Grazing. Pole Bridge Canyon RNA extension receives some livestock use in the spring. The use level is light and results from cattle grazing the benches south of Turkey Creek. Cattle graze these benches and side canyons and move out on the trail in Pole Bridge Canyon. The majority of this movement is below the extension area, but some animals do drift through the area. A fence at the north end of the area could possibly trap any cattle coming down the canyon. The loss of Animal Unit Months in the area will be minimal. Forage production is low due to needle cast and canopy cover.

Timber. The original boundary area and extension are in the Chiricahua Wilderness.

Watershed Values. Pole Bridge Canyon RNA extension occurs within a small, ephemeral watershed that drains into the Pole Bridge Canyon, a tributary to Turkey Creek. Water quality testing done for Turkey Creek in 1974 to 1979 indicated good quality water.

Recreation Values. Pole Bridge Canyon RNA extension receives little recreational use. Most use is from hikers and hunters. There are no expected significant conflicts with, or changes in, recreational use of the area.

Wildlife and Plant Values. Wildlife: Management of the area for research should not affect other activities such as hunting and bird watching or habitats of the species listed above. However, wildlife species (such as the white-tailed deer, Merriam's turkey, yellow-eyed junco and possibly the buff-breasted flycatcher) with habitat requirements dependent on fire-related seral stages would be negatively affected by total fire suppression in the research natural area.

A complete botanical survey has not been completed for the area. Limited plant lists are available from the USDA Forest Service, Albuquerque, NM. No threatened or endangered species have been observed to date. Species to look for in an extensive inventory are: *Senecio huachucanus, Cheilanthes arizonica, C. pringlei, Perityle cochisensis,* and *Polemonium pauciflorum* ssp. *hinkleyi*.

Special Management Area Values. Pole Bridge Canyon RNA extension occurs within the Chiricahua Wilderness. Establishment of this extension as a RNA will not impact the purposes or management of this Wilderness.

Transportation Plans. The RNA extension is accessed by a trail from a Forest Service road. The RNA has no roads and there are no transportation plans that would adversely affect it.

MANAGEMENT PRESCRIPTION

Pole Bridge Canyon RNA extension is recommended in Management Area 8A in the Coronado National Forest Plan (USDA Forest Service, 1986a). Management emphasis is for wilderness values and uses while providing opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep areas in their climax state.

Vegetation Management. No harvest of forest products, including fuelwood, is permitted. Rangeland will be managed at Level A (no grazing). Prescribed fire will be used to reduce risks and enable lightening to play its natural role.

If all fires are totally suppressed in the area, age and species mixtures of conifers may decrease. Several species of pines rely on fire to some extent to open up forest floors for seed beds. These species are also less shade tolerant than the Douglas-fir and white fir found in the research natural area. No other negative impacts on plant resources are expected with management of the area for research.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of the Pole Bridge Canyon RNA is the responsibility of the Coronado National Forest. The District Ranger, Douglas Ranger District, Douglas, AZ, has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station will be responsible for any studies or research conducted in the area, and requests to conduct research in the area should be referred to the Director. The Director will evaluate research proposals and coordinate all studies and research in the area with the District Ranger through the RNA research coordinator. All plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Rocky Mountain Station Director.

Records for Pole Bridge Canyon RNA will be maintained in the following offices of the USDA Forest Service:

Southwestern Region, Albuquerque, NM
Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO
Coronado National Forest, Tucson, AZ
Douglas Ranger District, Douglas, AZ

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LEGAL DESCRIPTION

Case Name/No. Pole Bridge Canyon RNA Extension

Forest/District Coronado/Douglas

Type of Case Research Natural Area Extension Establishment

This documents that the attached legal description for the case referenced above was reviewed by me for use in an area designation. It is a more specific description than the one included in the Establishment Record. No changes in the boundary, as described in the Establishment Record, are described by this legal description.

This legal description that describes the Pole Bridge Canyon RNA Extension is acceptable, and no potential problems were noted during my review.

Reviewed by: _____ Date: 9-21-93
Forest Land Surveyor

POLE BRIDGE CANYON
RESEARCH NATURAL AREA
EXTENSION

Commencing at a peak with a shown elevation of 6535 feet (CHIRICAHUA PEAK, Az Provisional Edition 1986, 7.5 quad) which is the POINT OF BEGINNING. Said point also being on the Chiricahua Wilderness Boundary (1984), and is the Point of Beginning for the Pole Bridge Canyon Research Natural Area.

Thence northwesterly approximately 1250 feet along said wilderness boundary to the NE section corner of section 24, T.18S., R.29E.

Thence northwesterly approximately 400 feet to the crest of a northeast bearing ridge, at a contour elevation of 6320 feet.

Thence southwesterly approximately 400 feet, along same ridge to the intersection with the boundary of the Chiricahua Wilderness. This intersection point being on the line between sections 13 and 24, T.18S., R.29E., which is approximately 600 feet west of the corner to sections 13 and 24 of same township.

Thence southwesterly and southerly approximately 4100 feet along same ridge to a knoll with a contour elevation of 7800 feet. Said knoll is also a point on the Pole Bridge Canyon Natural Area.

Thence northeasterly approximately 2000 feet, along Pole Bridge Canyon Natural Area Boundary, to a point on crest of ridge with a contour elevation of 7280 feet.

Thence northeasterly approximately 1800 feet, along Pole Bridge Canyon Natural Area Boundary, to the POINT OF BEGINNING.

The portion of the extension above the Wilderness Boundary, between sections 13 and 24, is more formally described as the SE1/4,SE1/4,SE1/4 section 13, T.18S., R.29E., G&SR Meridian.

LEGAL DESCRIPTION

Case Name/No. Pole Bridge Canyon RNA

Forest/District Coronado/Douglas

Type of Case Research Natural Area Boundary Correction

This documents the attached legal description for the original Pole Bridge Canyon RNA. The 1931 Designation Order and Establishment Record has an incorrect location for the RNA. This legal description describes the intended area as mapped in this Establishment Record for the Pole Bridge Canyon RNA Extension.

This legal description that describes the Pole Bridge Canyon RNA is acceptable, and no potential problems were noted during my review.

Reviewed by: _____ Date: 9-21-93
Forest Land Surveyor

POLE BRIDGE CANYON NATURAL AREA

ABSTRACT

This natural area contains Southwestern mixed conifer forest (Kuchler type 19) at upper elevations and pine-oak woodland (no Kuchler designation) along lower slopes and streamsides. The woodland features Apache pine (*Pinus engelmannii*) as the principal tall conifer.

Pole Bridge Canyon Natural Area (320 acres, 130 ha) delineates a cool, mesic northflowing drainage system in which Apache pine is abundant in drains and lower slopes. Steep, mountainous topography ranges from 6,450-8,200 feet (11960-2500 m) elevation. The area is located at 31° 51′ N. Lat., 109° 20.5′ W. Long. in the Chiricahua Mountains, Arizona. It is administered by the U.S. Forest Service, Coronado National Forest.

Location

Pole Bridge Canyon Natural Area (PBCNA) is located in the Chiricahua Mountains, Cochise County, Arizona. The site is due west of Chiricahua Peak in T. 18S., R. 29 1/2 E. just outside the boundary of the Chiricahua Wilderness Area and approximately 9 miles (14.4 km) south of the southern boundary of Chiricahua National Monument (See Figure 1).

Access and Accommodations

PBCNA can be reached from either Douglas or Willcox, Arizona. From Douglas, U.S. Highway 666 leads north through the Sulphur Springs Valley. Turn onto Arizona highway 181 at its intersection with 666 and proceed west for 12 miles (19.3 km). Both highways are paved. Continue west on the gravelled Turkey Creek Canyon Road another 10 miles (16.1 km). A concrete one-lane bridge was constructed where this road crosses Pole Bridge Canyon Creek. Here a trail sign indicates the start of Pole Bridge Trail #5264. The natural area boundary is 0.4 miles (0.65 km) up this trail. The trail continues an additional 2 miles (3.2 km) through the natural area, along the canyon bottom at first and then in numerous switchbacks up the canyon headwall to the high ridge forming the south boundary. Trail #5264 intersects the John Long Trail #5267 on this ridge, and the latter proceeds about 0.3 miles (0.5 km) along the south boundary.

From Willcox follow Arizona Highway 186 to its intersection with Arizona Highway 181. About 10.5 miles (17 km) on 181 brings one to the gravelled Turkey Creek Canyon Road.

The nearest accommodations are campground facilities along Turkey Creek. Sycamore Camp (Turkey Creek campground on the USGS Chiricahua Peak Quadrangle) is situated just 200 yards (180 m) from the beginning of Pole Bridge Trail #5264 at the Turkey Creek Road. The nearest motel facilities are at Douglas or Willcox. Several guest ranches can also provide nearby accommodations.

Climate

There are no climatic records for PBCNA. The nearest weather station is at Chiricahua National Monument 11.0 miles (17.7 km) to the north. This station, however, is in a different bioclimatic zone (See Picket Park Natural Area) at 5,400 feet (1,640 m) elevation. In the Chiricahua Mountains precipitation occurs in the form of summer convective showers, mostly in late July through mid September, and as winter frontal storms, generally from December to March. April through June is a relatively dry period. Assuming a precipitation increase of 1.6 cm per 100 m elevation in summer, and 1.3 per 100 m in winter (Whitlaker and Niering, 1965), the mean annual precipitation at 2,200 m

elevation in PBCNA would be about 64 cm (25 inches), extrapolated from the record at Chiricahua National Monument. Precipitation usually occurs as snow in winter, and as rain or hail in summer.

Topography and Landform

Steep, mountainous topography characterizes the natural area. Pole Bridge Canyon is carved out of granite and related crystalline intrusive rocks (Arizona Bureau of Mines, 1959). High ridges of cliffs, rock outcrop, and precipitous, broken land comprise the east and west boundaries (See Map). The drainage, trending northerly, divides the canyon at lower elevations into east- and west-facing slopes. These slopes are steep and dissected into rocky and shallow canyons with numerous parent rock outcrops. The canyon bottom has a narrow, intermittent stream channel and lacks well-developed alluvial terraces or benches. This channel divides in the upper part of the natural area. At elevations above 7,600 feet (2,300 km) the slopes are steep, north-facing, and dissected by steep draws and cliffs.

Biota

Mixed coniferous forest occurs on the north-facing slopes generally above 7,600 feet (2,300 km). Principal species are Douglas fir (*Pseudotsuga menziesii*) and ponderosa pine (*Pinus ponderosa*). Southwestern white pine (*Pinus strobiformis*) is less abundant, and white fir (*Abies concolor*) is occasional along the principal drainages. This forest occurs mostly as dense pole and sapling thickets with sparse understory, but occasionally more open stands of old growth pine and Douglas fir can be found. Larger trees are invariably fire scarred. Associate species of the mixed coniferous forest include scattered individuals of netleaf and silverleaf oak (*Quercus reticulata, Q. hypoleucoides*) and occasional patches of Gambel oak (*Q. gambelii*). The grass, *Muhlenbergia virescens*, is common. Aspen (*Populus tremuloides*) is found in draws where snow can accumulate or soils are well-watered by runoff. Other plants occasionally encountered include locust (*Robinia neonexicana*), New Mexico thimbleberry (*Rubus neomexicana*) and, on rocky ledges, dwarf false mockorange (*Fendlarella utahensis*) and saxifrage (*Saxifraga eriophora*).

Characteristic birds of the mixed coniferous forest include Grace's Warbler (*Dendroica graciae*), Olive Warbler (*Peucedramus taeniatus*), Pygmy Nuthatch (*Sitta pygmeae*), Ruby-crowned Kinglet (*Regulus calendula*) and in summer, Turkeys (*Meleagris gallopavo*).

The mixed coniferous forest at PBCNA is representative of this forest type as it occurs at higher elevations over most of the Chiricahua Mountains. It is also similar to the upper pine forest and montane fir forest described in the Santa Catalina and Pinaleno Mountains by Whittaker and Niering (1964, 1965).

The colluvial west- and east-facing canyon slopes generally below 7,600 feet (2,300 km) elevation contain pine-oak woodland. On the lower slopes silverleaf oak (*Quercus hypoleucoides*) and Apache pine (*Pinus engelmannii*) are the common trees; on mid and upper slopes pinyon pine (*P. cembroides*) and Arizona white oak (*Q. arizonica*) are common. Mountain mahogany (*Cercocarpus breviflorus*) is abundant on rocky ribs. Common associate plants include agaves (*Agave parryi* and *A. palmeri*), beargrass (*Nolina microcarpa*), yucca (*Yucca schottii*), silverleaf oak, and grasses (principally *Muhlenbergia longiligula, M. emersleyi, Aristida orcuttiana, Bouteloua curtipendula*).

The streamside forest at elevations generally below 7,200 feet (2,200 m) is dominated by Apache pine. All size classes of this tree are found, from seedlings growing vigorously under oaks to saplings and older individuals. Douglas fir, however, is the principal conifer of reproductive size classes in the understory. Ponderosa pine is infrequent, white fir rare, and Chihuahua pine (*Pinus leiophylla*) represented by only several individuals near the lower boundary of the natural area. Other streamside trees include scattered sycamore (*Platanus wrightii*), chokecherry (*Prunus serotina*), walnut (*Juglans major*), Madrone (*Arbutus arizonica*), and alligator bark juniper

(*Juniperus deppeana*). The common oaks are silverleaf, Arizona, and netleaf oaks. Shrubs include New Mexico thimbleberry, Schott's yucca, and mockorange (*Philadelphus microphylla*), the latter especially on rock ledges. Mutton grass (*Poa fendleriana*) and Ross sedge (*Carex rossii*) are common grasslike plants, and Wooton's groundsel (*Senecio wootoni*) a common spring-flowering forb.

Because of the mesic nature of this canyon and the numerous microhabitats presented, many of the lichens described by Weber (1963) and mosses and liverworts occur in PBCNA.

The avifauna of the lower elevations has been described by Marshall (1957). Of particular interest in this natural area are the Red-faced Warblers (*Cardellina rubrifrons*) and Turkeys.

Research History

There is no ongoing research in the area, nor past work specific to PBCNA. Studies within similar ecosystems in nearby Southwestern mountain areas have been published by Whittaker and Niering (1964, 1965, 1968), Wallmo (1955), Marshall (1957), Blumer (1909) and White (1948).

The area presents opportunity for silvicultural and ecological investigations of the Apache pine.

Maps and Aerial Photographs

The area is included in USGS Chiricahua Peak Quadrangle (15 minute series), and in the Geologic Map prepared by the Arizona Bureau of Mines (1959).

TABLE 1. List of mammals likely to be found or transient in the Pole Bridge Canyon Natural Area (after Cockrum and Justice, 1956).

Vagrant Shrew	*Sorex vagrans*
Peter's Leaf-chinned Bat	*Mormoops megalophylla*
Mexican Longue-tongued Bat	*Choeronycteris mexicana*
Long-nosed Bat	*Leptonycteris nivalis*
California Myotis	*Myotis californicus*
Long-eared Myotis	*Myotis evotis*
Small-footed Myotis	*Myotis subulatus*
Fringed Myotis	*Myotis thysanodes*
Long-legged Myotis	*Myotis volans*
Western Pipistrelle	*Pipistrellus hesperus*
Big Brown Bat	*Eptesicus fuscus*
Hoary Bat	*Lasiurus cinereus*
Silver-haired Bat	*Lasionycteris noctivagans*
Townsend's Big-eared Bat	*Plecotus townsendii*
Allen's Big-eared Bat	*Idionycteris phyllotis*
Brazilian Free-tailed Bat	*Tadarida brasiliensis*
Big Free-tailed Bat	*Tadarida molossa*
Eastern Cottontail	*Sylvilagus floridanus*
Rock Squirrel	*Spermophilus variegatus*
Cliff Chipmunk	*Eutamius dorsalis*
Apache Squirrel	*Sciurus apache*
Valley Pocket Gopher	*Thomomys bottae*
Deer Mouse	*Peromyscus maniculatus*
Brush Mouse	*Peromyscus boylei rowleyi*
Pinyon Mouse	*Peromyscus truei*
Rock Mouse	*Peromyscus nasutus*
Yellow-nosed Cotton Rat	*Sigmodon ocrognathus*
Mexican Wood Rat	*Neotoma mexicana*
Porcupine	*Erethizon dorsatum*
Black Bear	*Euarctos americanus*
Raccoon	*Procyon lotor*
Coati	*Nasua narica*
Ringtail	*Bassariscus astutus*
Long-tailed Weasel	*Mustela frenata*
Spotted Skunk	*Spilogale putorius*
Striped Skunk	*Mephitis mephitis*
Hooded Skunk	*Mephitis macroura*
Gray Fox	*Urocyon cinereoargenteus*
Coyote	*Canis latrans*
Mountain Lion	*Felis concolor*
Bobcat	*Lynx rufus*
Mule Deer	*Odocoileus hemionus*
White-tailed Deer	*Odocoileus virginianus*

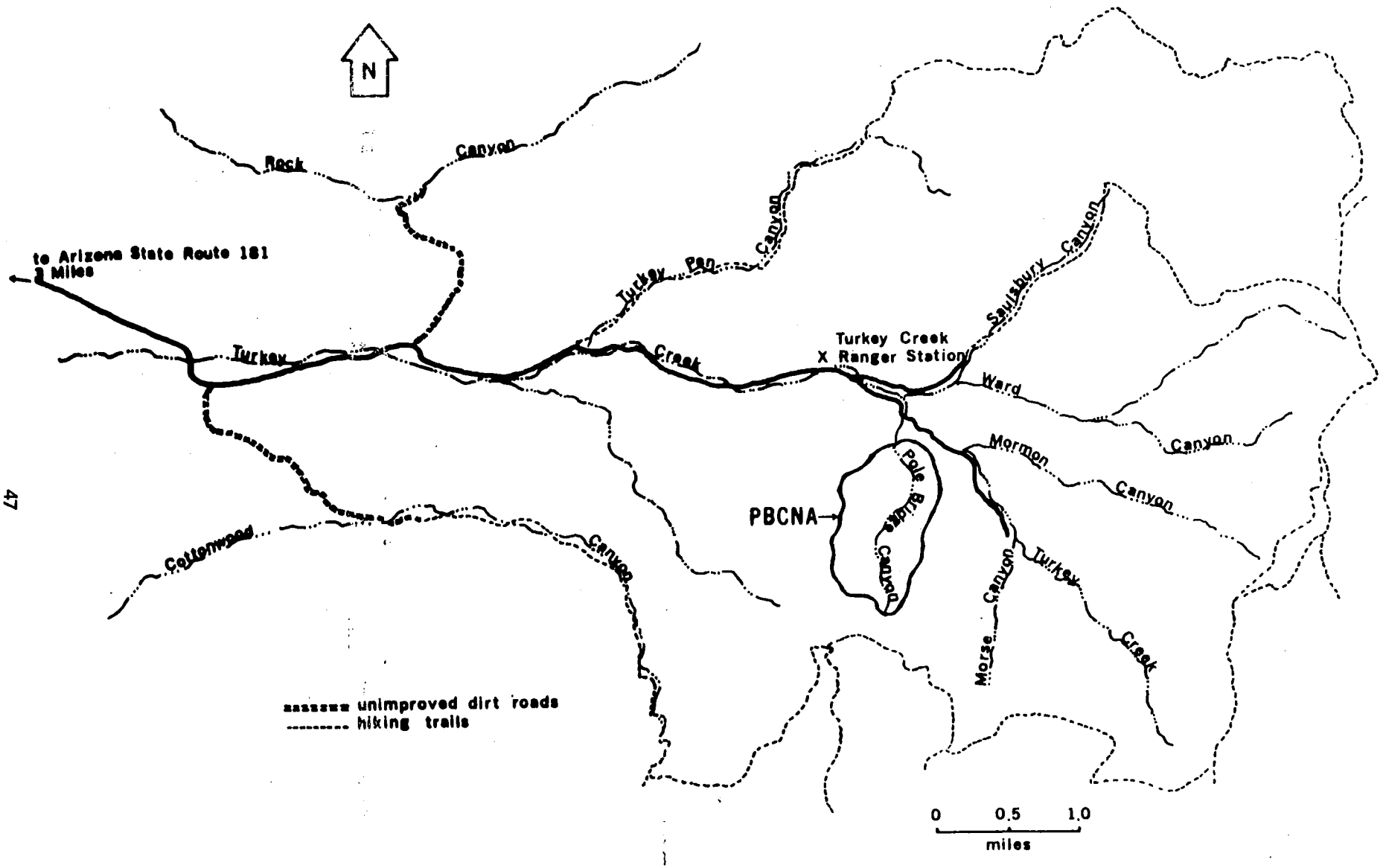

FIGURE 1. Pole Bridge Canyon Natural Area (PBCNA) in the Chiricahua Mountains.

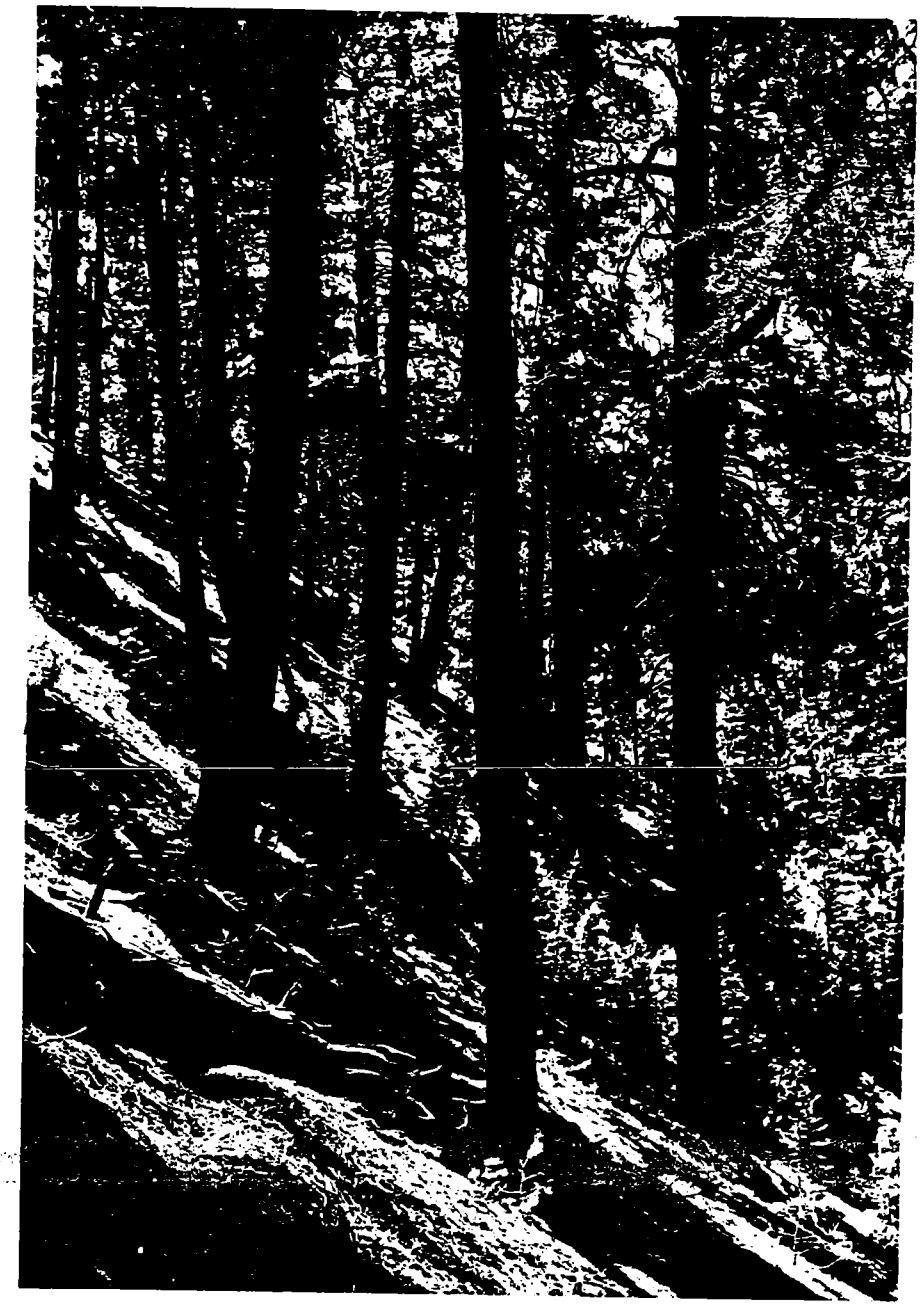

Photo 1. Mixed stand of Douglas fir and ponderosa pine in Pole Bridge Canyon Natural Area. Note the large number of sapling conifers.

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1968 Vegetation of the Santa Catalina Mountains, Arizona. III. Species distribution and floristic relations on the north slope. J. Ariz. Acad. Sci. 5:3-21.

United States Department of Agriculture | Forest Service | Southwestern Region | 517 Gold Avenue SW. Albuquerque, NM 87102

Reply To: 4060

Date: November 10, 1986

Mr. Andy Laurenzi
The Nature Conservancy
30 North Tucson Blvd.
Tucson, AZ 85716

Dear Andy:

Enclosed is my Spring 1985 plant list from Pole Bridge Research Natural Area. I hope it will be of some help in preparing the establishment report for the extension. Only the main canyon area was looked at, and I am sure we will pick up more species in the side canyons. If I can be of assistance with additional information, please let me know.

Sincerely,

Reggie

REGGIE FLETCHER
Regional Botanist

Enclosure

cc:
FS, Coronado NF
Will Moir ✔
Robert Szaro

Preliminary Plant Species List for Pole Bridge RNA
and Addition Prepared from Collections by Reggie Fletcher
May 20, 1985

Abies concolor R
Achillea lanulosa C
Agave palmeri I
Agrostis semiverticillata R
Antennaria parvifolia C
Aquilegia chrysantha C
Arbutus arizonica I
Arceuthobium vaginatum var. vaginatum C
Astragalus cobrensis var. maguirei R (known only from Chiricahua Mts.)
Carex agrostoides C
Castilleja laxa R
Ceanothus fendleri R
Cerastium nutans var. nutans R
Cerastium texanum R
Cercocarpus montanus R
Cheilanthes fendleri C
Conopholis mexicana R
Corallorhiza maculata R
Echinocereus triglochidiatus var. neomexicanus R
Erigeron flagellaris C
Euphorbia incisa R
Fallugia paradoxa I
Fraxinus papillosa C
Garrya wrightii R
Hedeoma hyssopifolium I
Heuchera parvifolia var. arizonica R
Hieracium carneum R
Hieracium fendleri R
Jamesia americana R
Juncus xiphioides R
Juniperus deppeana C
Leibnitzia seemannii R
Lupinus blumeri R
Lupinus concinnus C
Mimulus guttatus C
Muhlenbergia virescens C
Nolina microcarpa R
Opuntia chlorotica C
Oxytropis lambertii I
Pellea wrightiana R
Pinus discolor C
Pinus engelmannii C
Pinus leiophylla var. chihuahuensis C
Pinus ponderosa var. arizonica C
Pinus strobiformis I
Platanus wrightii R
Poa fendleriana ssp. albescens C
Poa occidentalis R

Potentilla thurberi R
Prunus virginiana var. melanocarpa I
Pseudocymopterus montanus C
Pseudotsuga menziesii C
Ptelea trifoliata I
Pteridium aquilinum C
Quercus arizonicus C
Quercus gambellii C
Quercus hypoleucoides C
Quercus rugosa C
Ranunculus arizonicus R
Ranunculus hydrocharoides R
Rhamnus betulaefolia I
Robinia neomexicana I
Rubus neomexicanus I
Senecio neomexicanus var. toumeyi C
Senecio wootonii R
Silene noctiflora R
Sphenopholis obtusata R
Spiranthes parasitica R
Taraxacum officinale R
Thalictrum fendleri C
Thermopsis pinetorum I
Toxicodendron radicans R
Trifolium variegatum R
Triodanis perfoliata R
Viola canadensis I
Vitis arizonica R
Woodsia plummerae R
Yucca baccata C
Zauschneria californica I

Relative Abundance:

R = rare
I = infrequent
C = common

POLE BRIDGE CANYON RESEARCH NATURAL AREA

Coronado National Forest, Douglas District

Primary Ecosystem: 123.32 oak-pine forest

565 acres (229 ha)

This area was established in 1931 to include distinctive populations of southern Arizona pines. These pines are Apache pine (Pinus engelmanni),southwestern white pine (P. strobiformis), border pinyon (P. discolor), Arizona pine (Pinus arizonica), and Chihuahua pine (P. leiophylla). Inclusion of all of these pine species in a single location contributes to the uniqueness of this Research Natural Area. General description of the area is provided by Smith (1974, p 43 ff).

The original boundary included 460 acres (186 ha) but did not contain viable populations of Chihuahua pine. The enlarged boundary encompasses good examples of the Pinus leiophylla/Quercus arizonica and Pinus leiophylla/Quercus hypoleucoides habitat types (DeVelice and Ludwig 1983). The additional 105 acres (43 ha) includes a small natural drainage on the northwest boundary of the original area, and has excellent stands of Chihuahua pine. Associated plants include Arizona white oak and silverleaf oak (Quercus arizonica, Q hypoleucoides), border pinyon, alligator juniper (Juniperus deppeana), Schotts yucca (Yucca schottii), bullgrass (Muhlenbergia longiligula), three-awn (Aristida orcuttiana), Texas bludstem (Andropogon cirratus), pinyon ricegrass (Piptochaetium fimbriatum), and bedstraw (Galium asperrimum).

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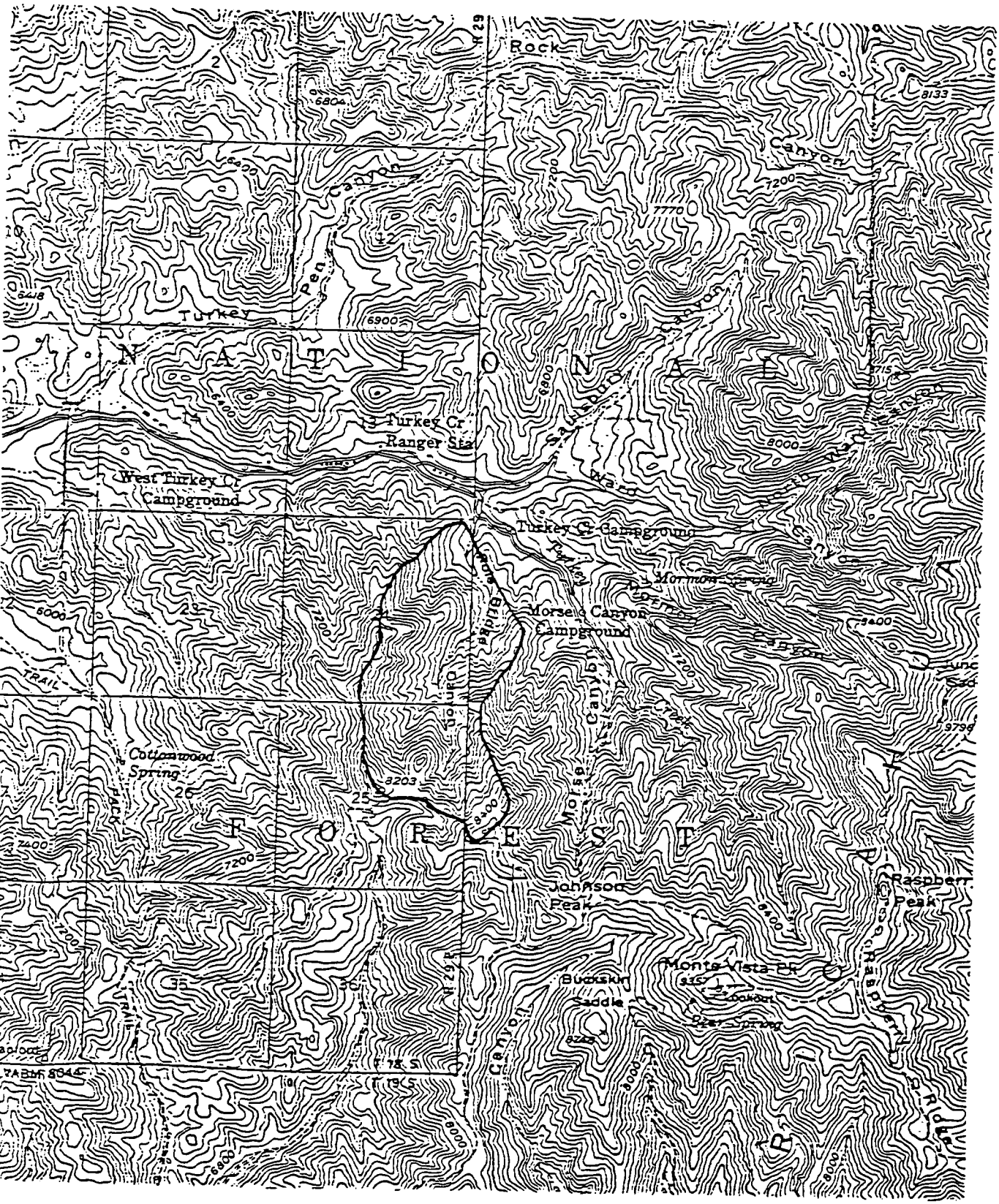
DeVelice, Robert L. and John A. Ludwig. 1983. Forest habitat types south of the Mogollon Rim, Arizona and New Mexico. Final Rep. Coop. Agreement 28-K2-240, Rocky Mountain Forest & Range Exp. Sta., Flagstaff, AZ 86001.

Smith, E. Linwood. 1974. Established natural areas in Arizona, A guidebook for scientists and educators. Ariz. Off. Economic Planning & Development, Office of the Governor, Phoenix, AZ, 300 p.

POLE BRIDGE CANYON RESEARCH NATURAL AREA

Chiricahua Peak Quadrangle (USGS 15')



Society of American Foresters
Committee on Natural Areas

Proposed Natural Area

Name of Proposed Natural Area Pole Bridge Canyon

Location: State Arizona County Cochise

Nearest Town Pearce

Nearest Federal, State or county highway S. 86 181

Permanence Afforded Through What Means Regulation
(law, regulation, will, endowment, Board of Directors, etc.)

Name of Administration Unit Coronado N.F.
(National Forest, national park, national wildlife refuge, State, university, etc.)

Listing of Timber Types on Area:

S.A.F. Type No.	Acres	Average Age
237	230	125
239	90	50
Barren, water, buffer zone, etc.		
Total:	320	

Range in Elevation: Low 7000 Feet High 7800 Feet

Topography Steep & broken
(Level, rolling steep, broken, etc.)

Geology Alluvial of volcanic origin
(Volcanic, alluvial, moraine, etc.)

Average Height and Diameter of each major species:

Species	Average Height	Average Diameter
Chihuahua pine	40'	15"
Apache pine	80'	20"
Mexican pinyon	20'	14"

Submitted by _____ Title _____

Mailing Address Forest Supervisor Date 2-10-69
Box 551
Tucson, Arizona 85702

pole bridge Cmnts

12/27/93

Pole Bridge Canyon (ext.)
Peg Boland

deleted from DC 9/10/93

EA, p. 10: lightning is misspelled as lightening.

Otherwise, EA is OK (decision to use prescribed fire was made in forest plan).

Whitmore Comments

1. Great maps!

2. No acreages for SAF/Kuchler types. If they don't represent the real types, say so, then give acreages for the types and show in a table.

3. P. 1 of the ER states "the original 460 acres". But my original ER says 320 acres. Maybe we need a map showing the old (erroneous) RNA & the newly corrected one, with the extensions marked also.

4. Location, p. 2 of ER: Forest Road 44 = 41, according to the map.

5. P. 3, ER: no length of weather record at the weather station.

6. Refer to E.L.Little on p. 4. (& be sure names conform to his).

7. Grazing? best to indicate plans to install a fence. (p.9)

8. DN/DO, p.2, 4th line: put "(40" instead of ")40".

9. P. 9, Ariz. Highway Dept. 1967 or 1961?? (see Refs.)

Cheers!

--Les--

U.S. DEPARTMENT OF AGRICULTURE **SPEED MEMO**

PART NUMBER	DATE
3	Feb 20, 1987

FROM Bud Brunner

SUBJECT Pole Bridge Canyon RNA (extension)

TO Will Moir, RNA Task Group, RO

MESSAGE

Please review this draft Establishment Record for accuracy and clarity. Is anything important omitted? What, if anything, needs to be changed in order to put final form ready for signatory approval?

Any needed corrections can be mailed to me or sent by DG (W.MOIR:RØ3A).

After incorporating revisions into this draft, you will receive from the Research Natural Area Committee a "final" Establishment Record for signatures and forwarding to WO for Chief's review and approval.

Many thanks.

SIGNATURE Will Moir

REPLY

Nature Conservancy needs to check lists of mammals, reptiles, birds, and other species for accuracy. Suggest bird additions are attached (re - Tom Decker)

Lots of typos - needs proofing.

SIGNATURE Corey Wong DATE 3/2/87

FORM AD-311 (REV 3/81)

RETURN TO SENDER

Hawk, Red-tailed
Hummingbird, Black-Chinned
Hummingbird, Blue-throated
Hummingbird, Broad-tailed
Jay, Stellar's
Junco, Dark-eyed (migrant)
Kinglet, Ruby-crowned
, Golden-crowned
Nuthatch, Red-breasted
Owl, Spotted
Owl, Great-horned
Raven, Common
Swift, White-throated
Thrush, Hermit
Turkey, Merriam (?)
Vulture, Turkey
Warbler, Olive
Warbler, Red-faced
Warbler, Townsends
Warbler, Yellow-rumped
Warbler, Black-throated Gray
Woodpewee, Greater ? (Coues)
Wren, House (Brown-throated)

Pole Bridge Cyn

RNA Coronado

Feb 23 1983

"Falls at approximate
Boundary of lower extension
Schmidt Stain

Pole Bridge RNA

"yellow" extension

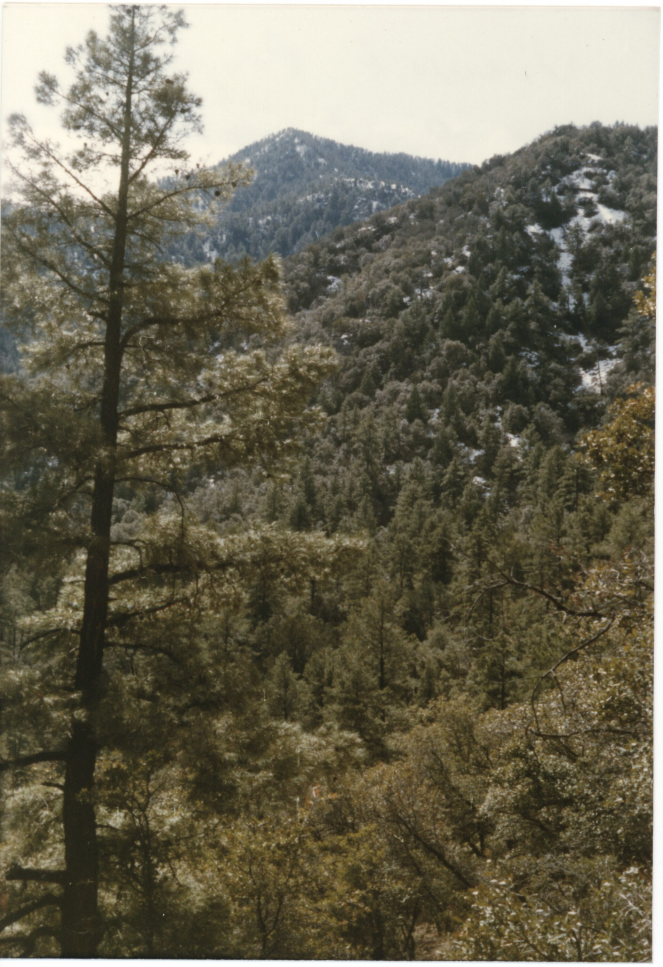
"Red" Current

eastern Boundary

2-23-83

Schmidt

Coronado NF



Stereo left
View of Pole
Bridge Canyon RNA

2-23-83
Schmidt

"Taken from proposed
extension Boundary"

Chihuahua Pine
in Pole Bridge RNA
extension

2-23-83
Schmidt
Coronado NF

View of Proposed
Pole Bridge RNA
Extension area
of about 90 acres
designed to include
a substantial community
of Chihuahua pine

2-23-83
Coronado NF
Schmidt

Stereo Right
View of Pole Bridge
Canyon RNA

2-23-83
Schmidt

"Taken from proposed
extension Boundary"

POLE BRIDGE CANYON RESEARCH NATURAL AREA

Coronado National Forest, Douglas District

Primary Ecosystem: 123.32 oak-pine forest

565 acres (229 ha)

This area was established in 1931 to include distinctive populations of southern Arizona pines. These pines are Apache pine (Pinus engelmanni), southwestern white pine (P. strobiformis), border pinyon (P. discolor), Arizona pine (Pinus arizonica), and Chihuahua pine (P. leiophylla). Inclusion of all of these pine species in a single location contributes to the uniqueness of this Research Natural Area. General description of the area is provided by Smith (1974, p 43 ff).

The original boundary included 460 acres (186 ha) but did not contain viable populations of Chihuahua pine. The enlarged boundary encompasses good examples of the Pinus leiophylla/Quercus arizonica and Pinus leiophylla/Quercus hypoleucoides habitat types (DeVelice and Ludwig 1983). The additional 105 acres (43 ha) includes a small natural drainage on the northwest boundary of the original area, and has excellent stands of Chihuahua pine. Associated plants include Arizona white oak and silverleaf oak (Quercus arizonica, Q hypoleucoides), border pinyon, alligator juniper (Juniperus deppeana), Schotts yucca (Yucca schottii), bullgrass (Muhlenbergia longiligula), three-awn (Aristida orcuttiana), Texas bludstem (Andropogon cirratus), pinyon ricegrass (Piptochaetium fimbriatum), and bedstraw (Galium asperrimum).

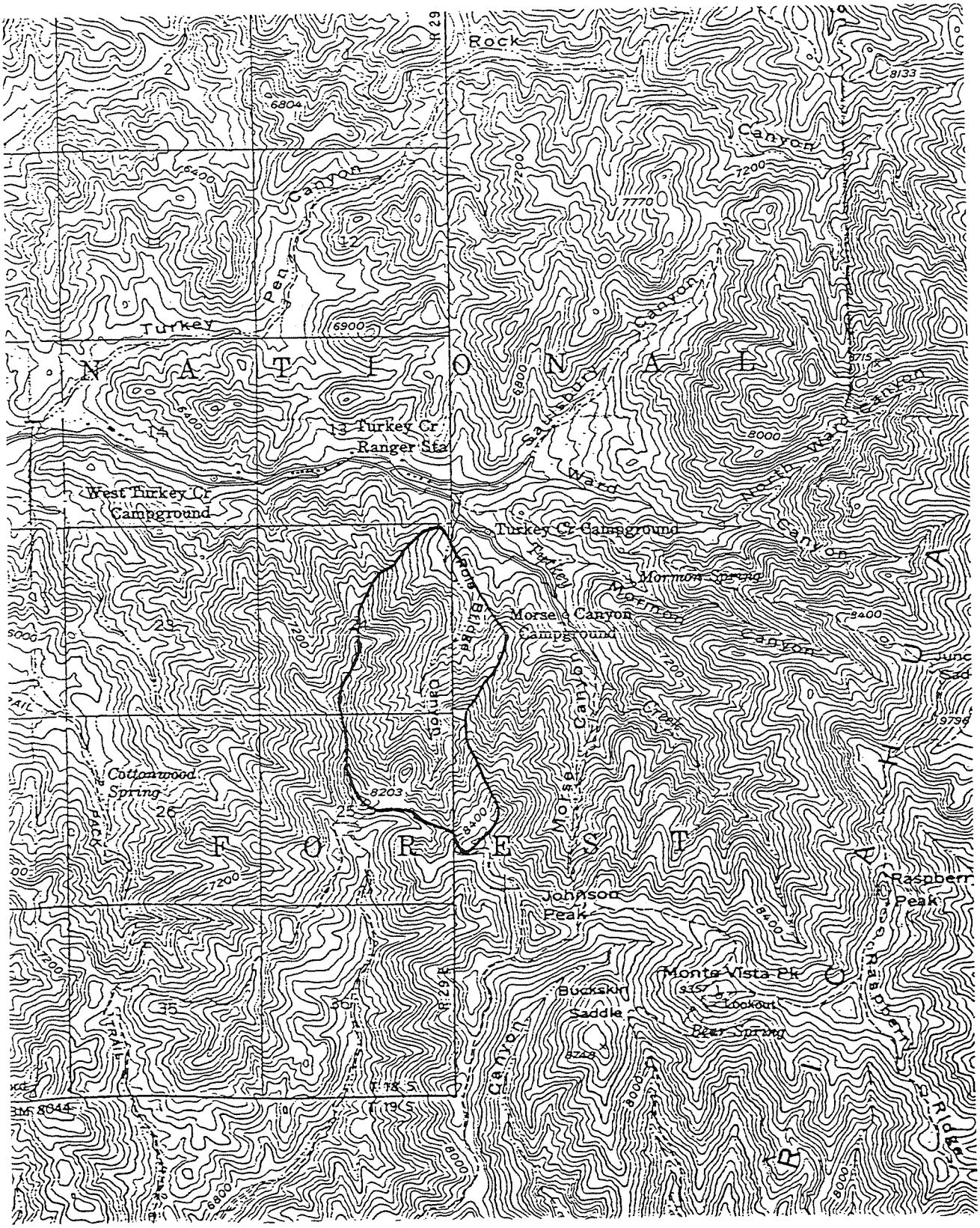
References:

DeVelice, Robert L. and John A. Ludwig. 1983. Forest habitat types south of the Mogollon Rim, Arizona and New Mexico. Final Rep. Coop. Agreement 28-K2-240, Rocky Mountain Forest & Range Exp. Sta., Flagstaff, AZ 86001.

Smith, E. Linwood. 1974. Established natural areas in Arizona, A guidebook for scientists and educators. Ariz. Off. Economic Planning & Development, Office of the Governor, Phoenix, AZ, 300 p.

POLE BRIDGE CANYON RESEARCH NATURAL AREA

Chiricahua Peak Quadrangle (USGS 15')



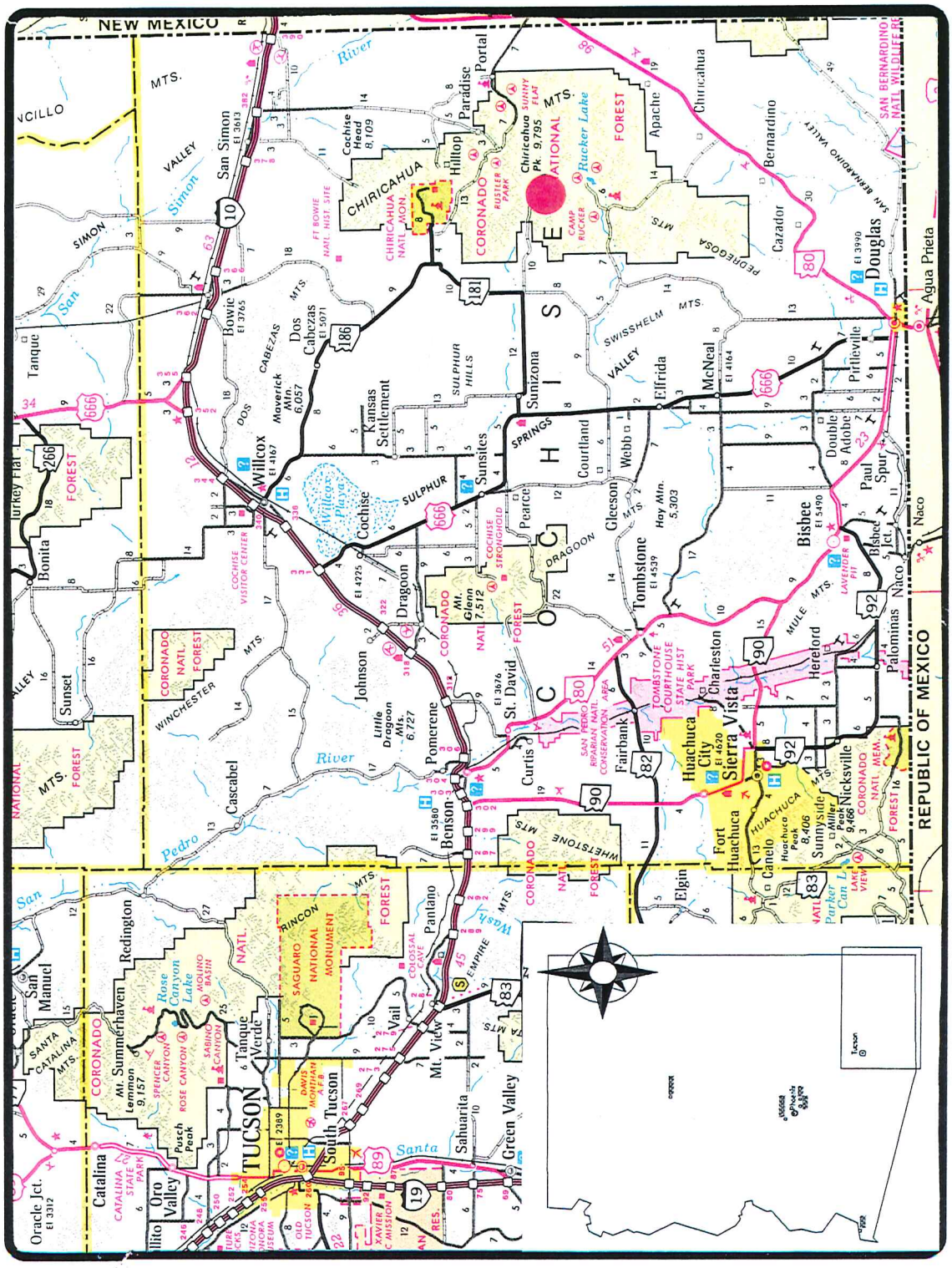


Figure 1. General location of Pole Bridge Canyon Research Natural Area, Arizona, showing nearby cities. Scale: 1 inch=16 miles (1 centimeter=10 kilometers).

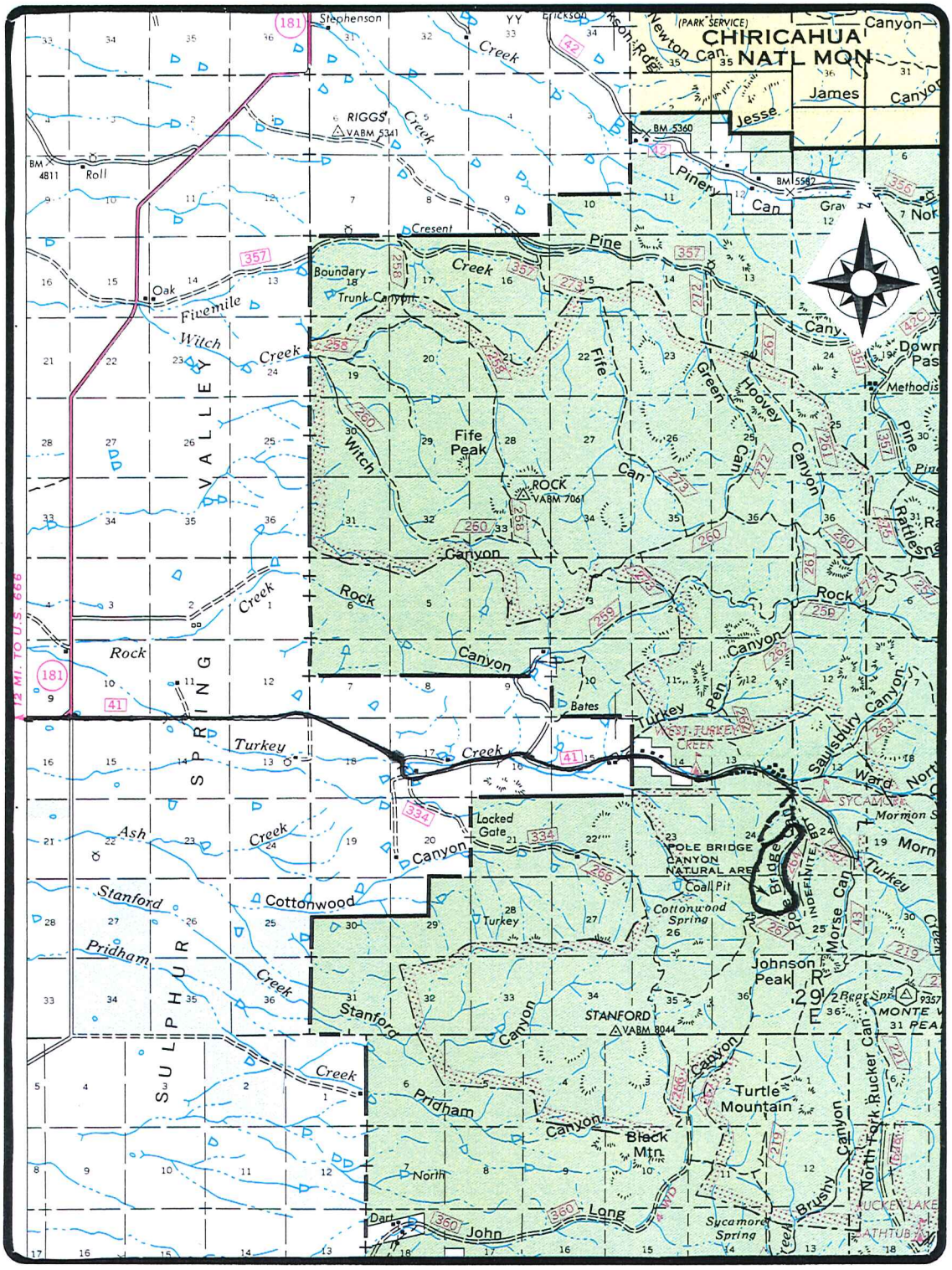


Figure 2. Vicinity map of Pole Bridge Canyon Research Natural Area, Arizona, showing recommended access. Scale: 1 inch=2 miles (1 centimeter=1.27 kilometers).

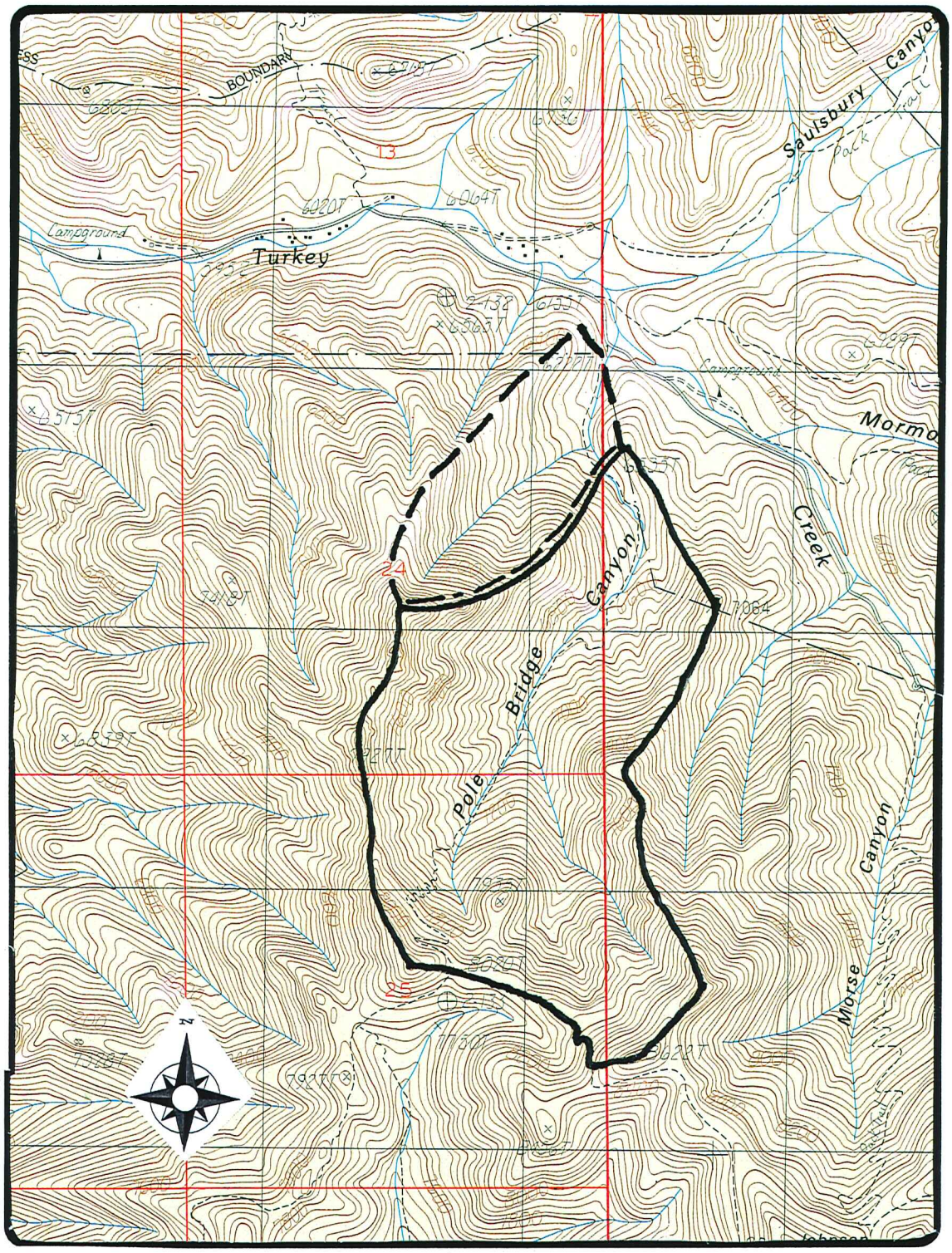
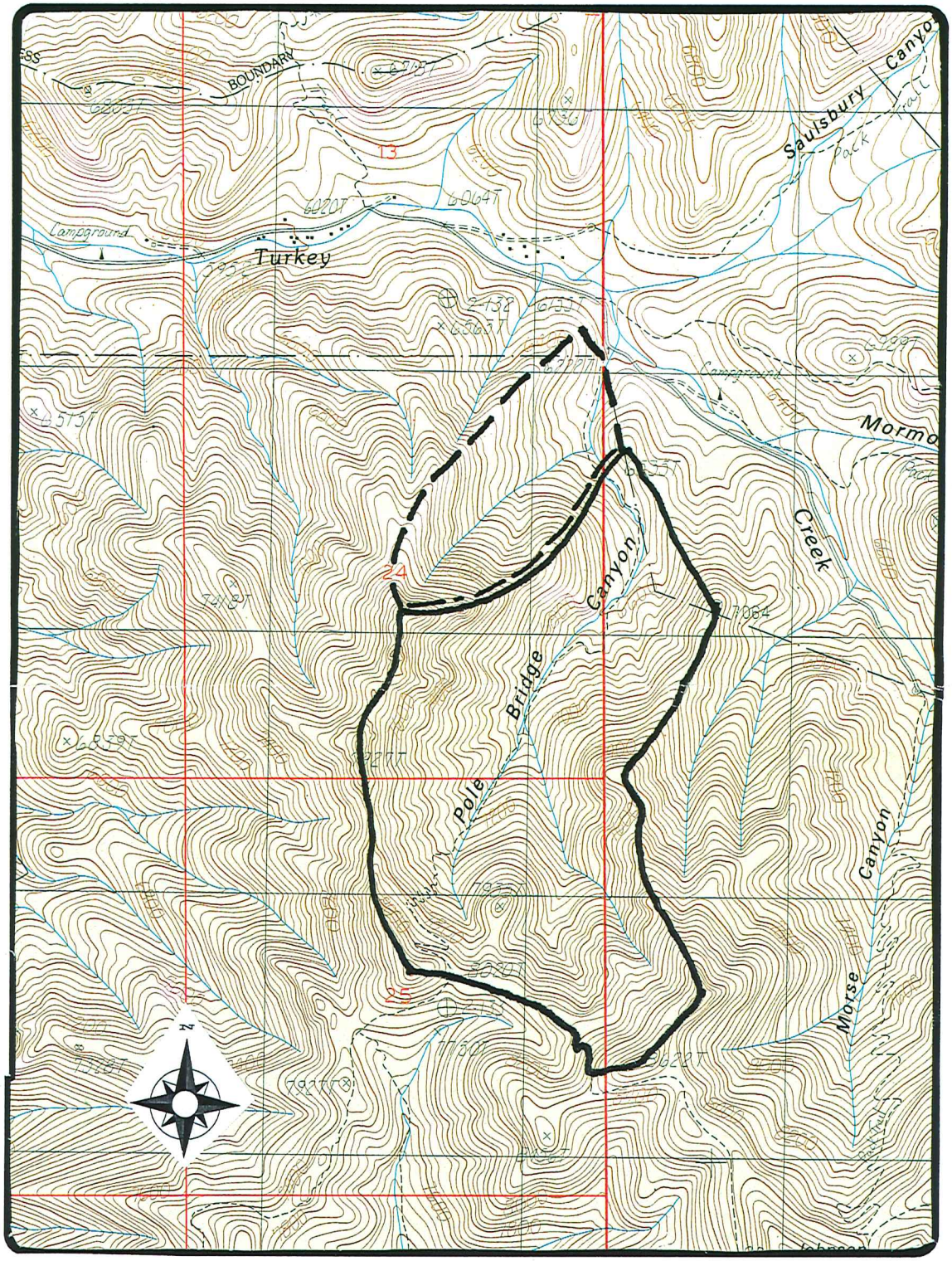


Figure 3. Boundary map of Pole Bridge Canyon Research Natural Area, Arizona, with elevations shown in feet. Dotted line indicates extension. Scale: 2.64 inches=1 mile (42 millimeters=1 kilometer).



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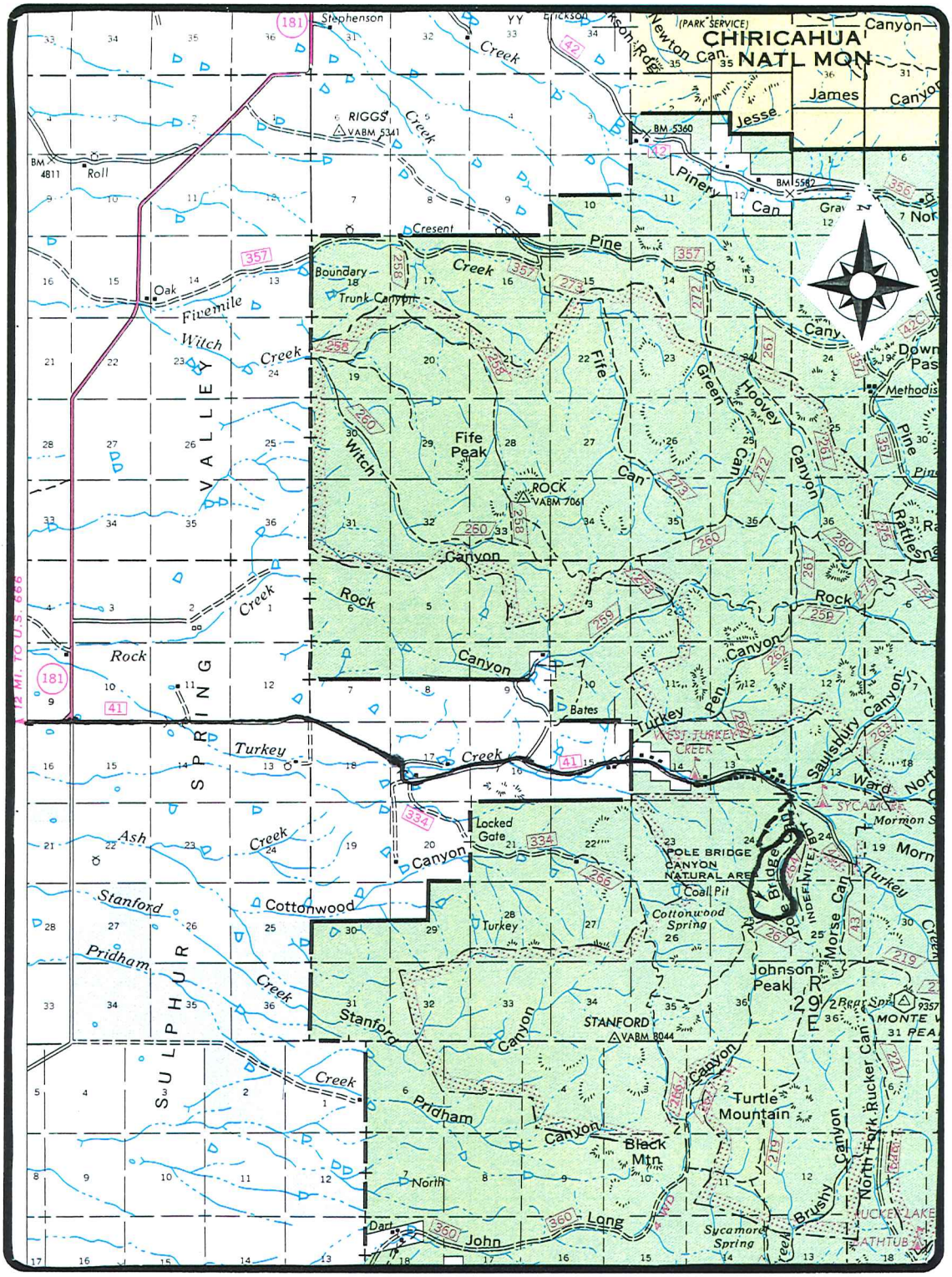

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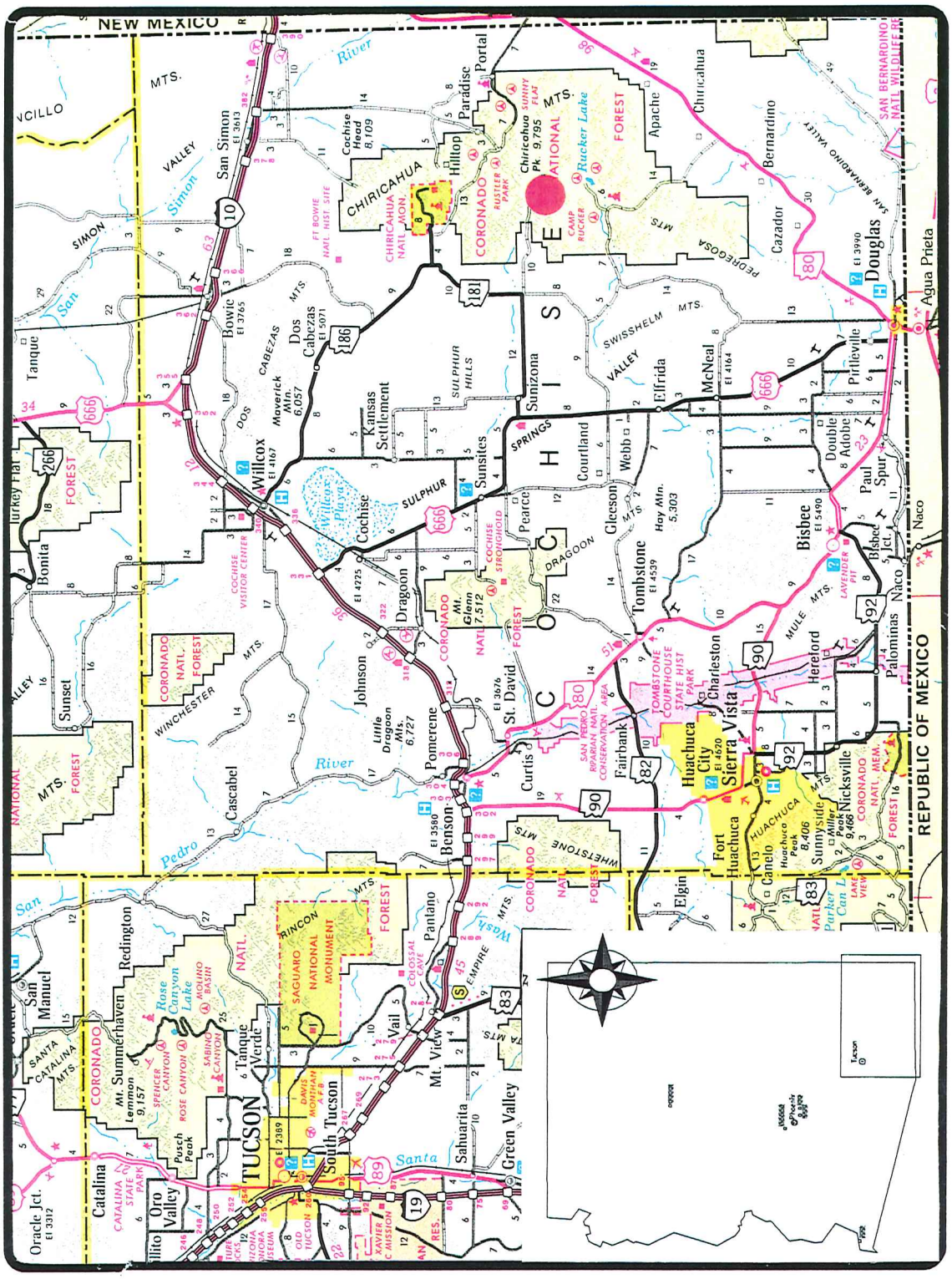
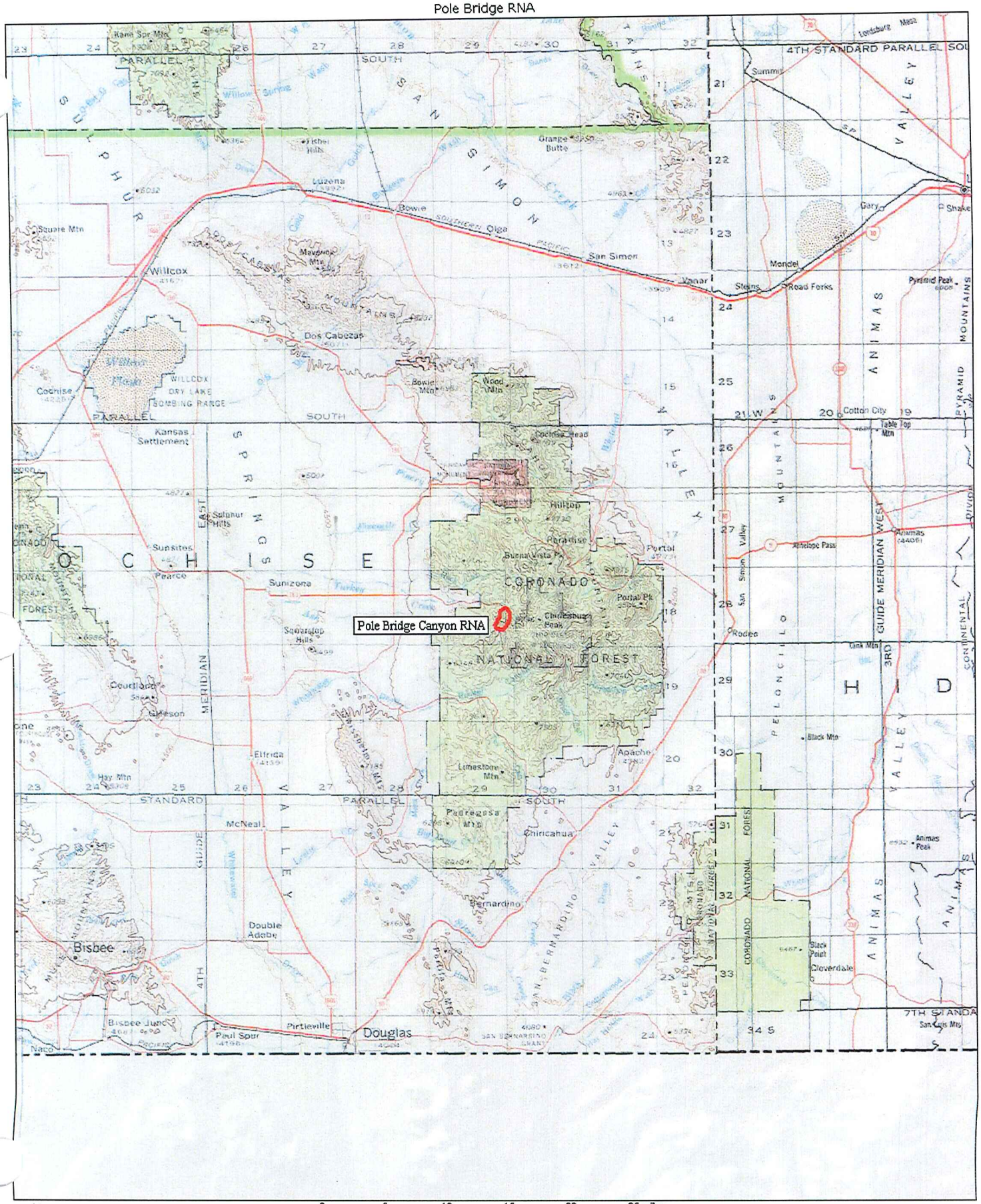
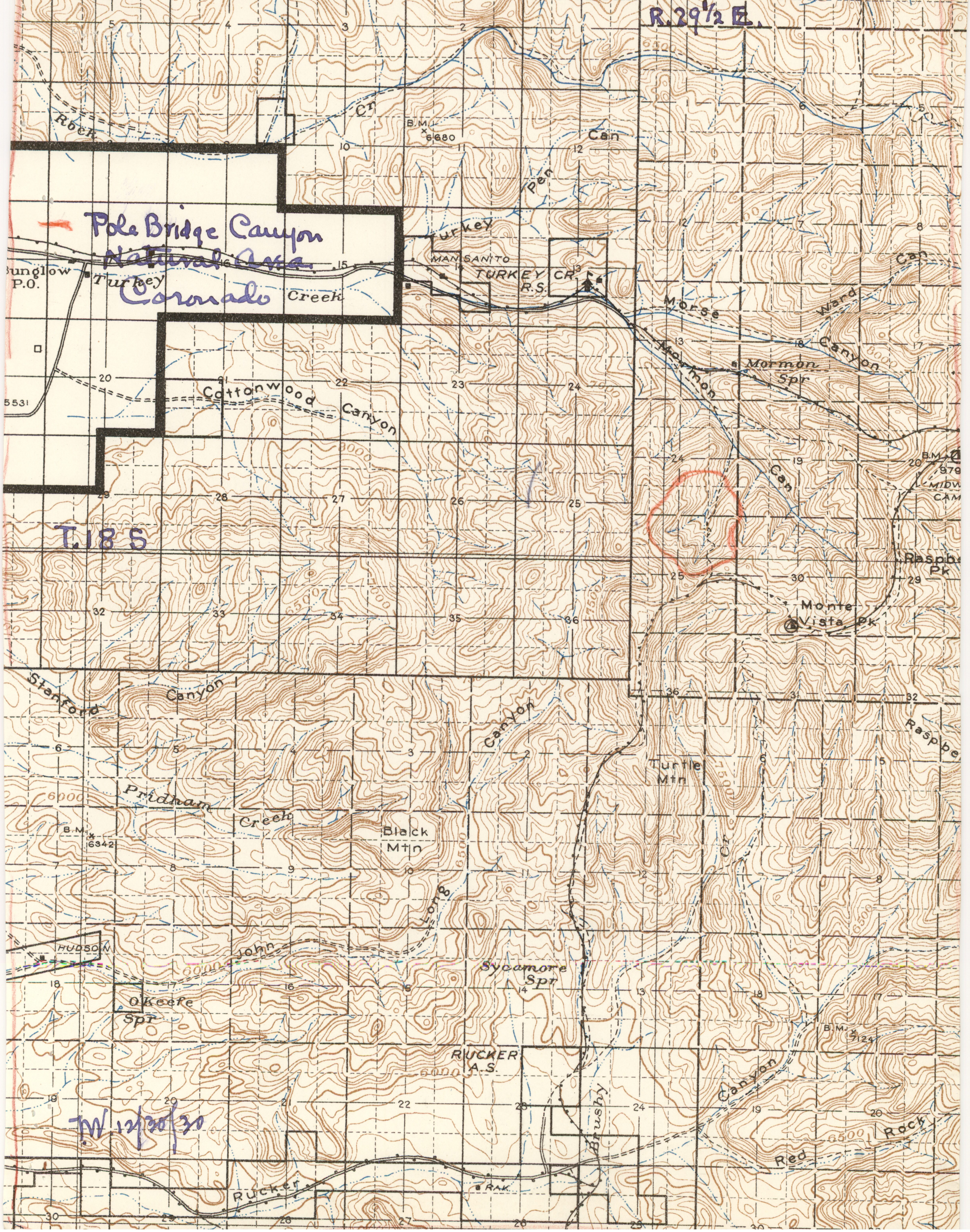


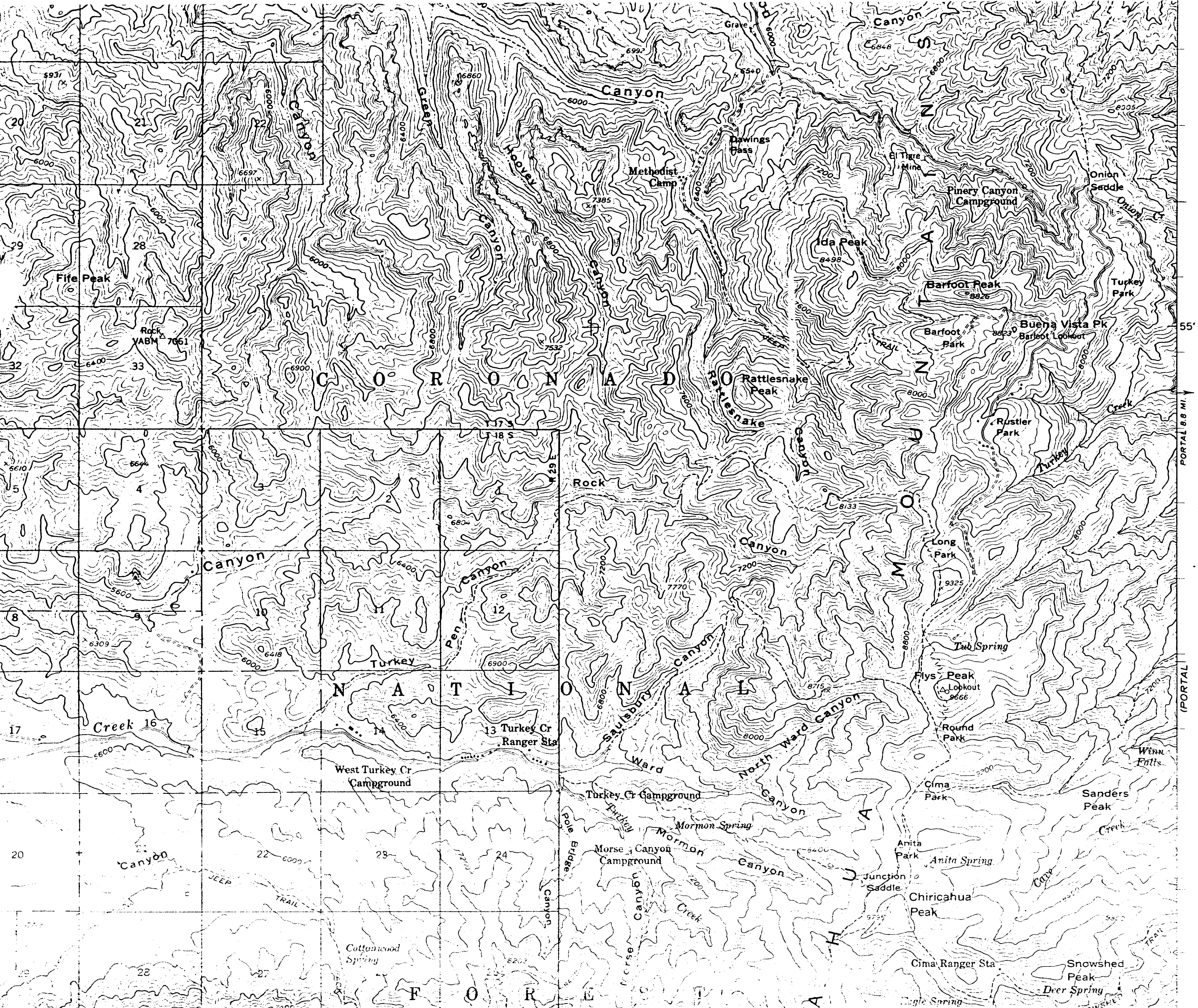
Figure 1. General location of Pole Bridge Canyon Research Natural Area, Arizona, showing nearby cities. Scale: 1 inch=16 miles (1 centimeter=10 kilometers).

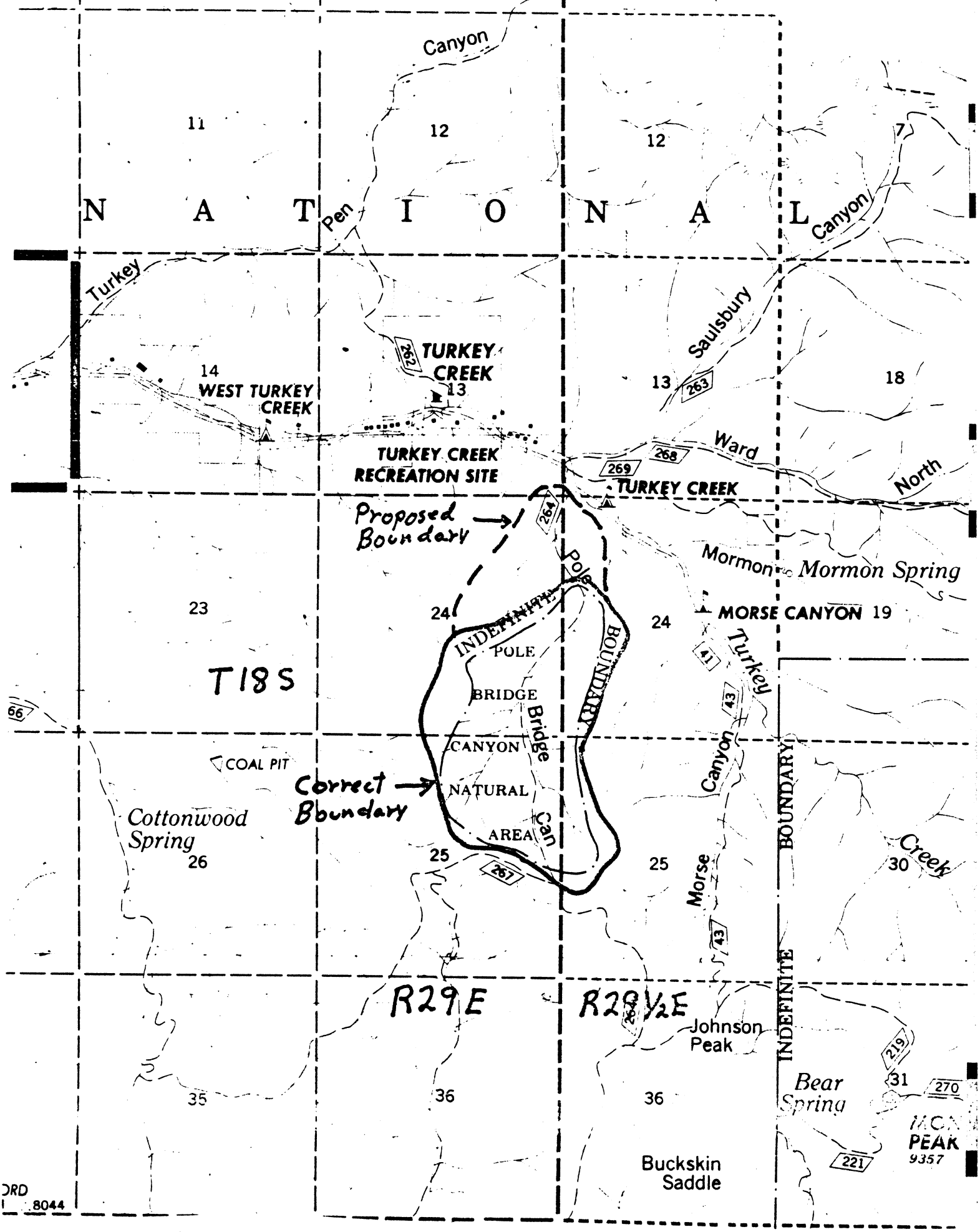
Pole Bridge RNA

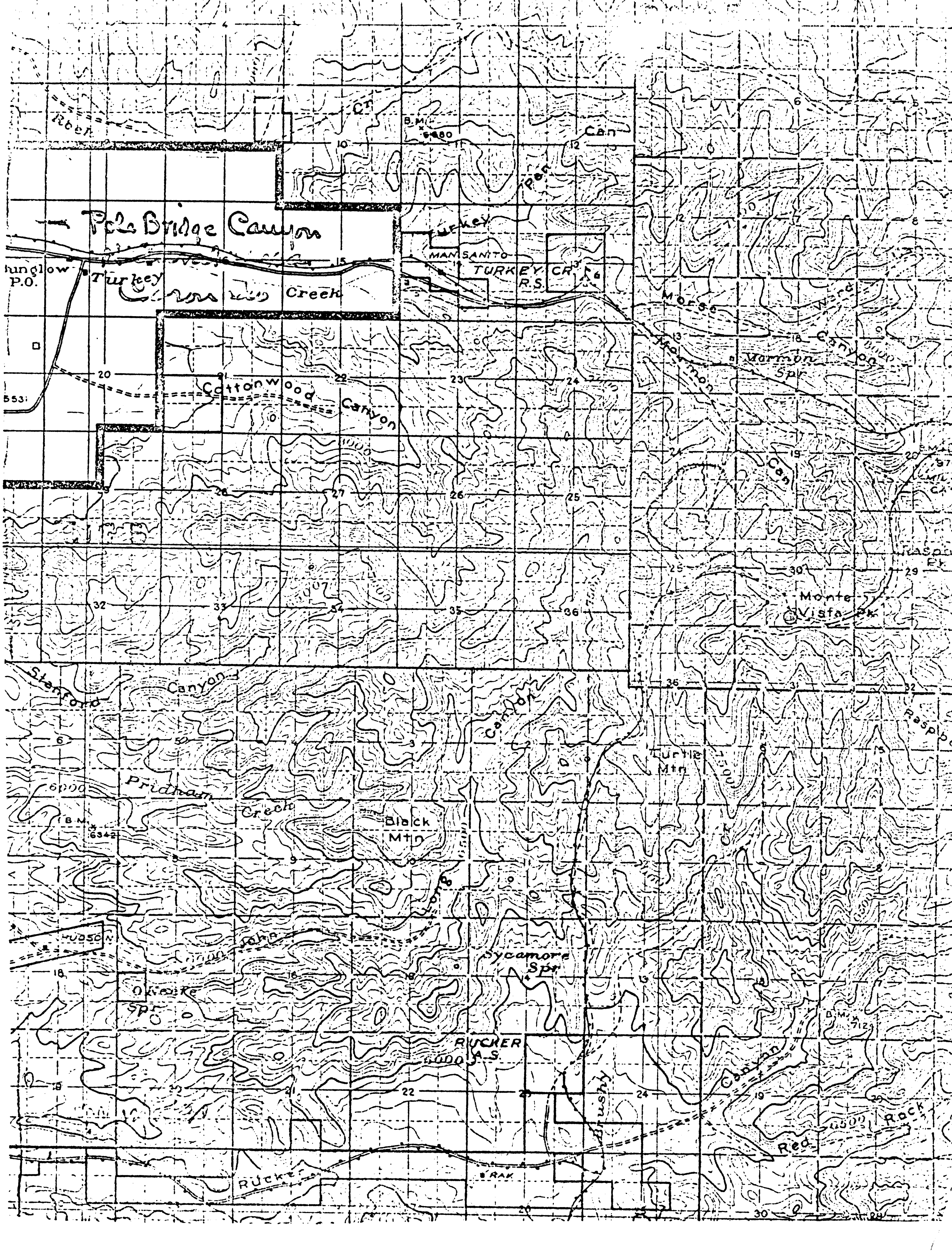



R. 29 1/2 E.
Pole Bridge Canyon
Natural Area
Coronado
T. 18 S
T.W. 12/30/30
Rock
Cr
B.M. 6680
Can
Pen
Turkey
MAN SANITO
TURKEY CR.
R.S.
Bunglow
P.O.
Turkey
Creek
Morse
Ward
Can
Mormon
Canyon
Mormon
Spr
Cottonwood
Canyon
Can
Monte
Vista Pk
Stanford
Canyon
Canyon
Turtle
Mtn
Pridham
Creek
B.M. 6342
Black
Mtn
Long
Cr
John
HUDSON
O'Keefe
Spr
Sycamore
Spr
RUCKER
A.S.
B.M. 7124
Brushy
Canyon
Red
Rock
Rucker


Pole Bridge Canyon
Current Boundary circa 1972 (yellow) = 460 Acres
Proposed Addition to include Pinus chihuahuana (Chihuahua Pine) would add approximately 90 acres.
CORONADO NATIONAL FOREST
APACHE NATIONAL FOREST
Rattlesnake Peak
Rattlesnake Canyon
Rustler Park
Long Park
Tub Spring
Flys Peak Lookout
Round Park
Cima Park
Sanders Peak
Anita Park
Anita Spring
Junction Saddle
Chiricahua Peak
Cima Ranger Sta
Snowshed Peak
Deer Spring
Eagle Spring
Johnson Peak
Buckskin Saddle
Turtle Mtn
Black Mtn
Stanford
VABM 8044
Turkey Creek
Pen Canyon
Rock Canyon
Salisbury Canyon
Ward Canyon
North Ward Canyon
Mormon Canyon
Mormon Spring
Morse Canyon
Morse Canyon Campground
West Turkey Cr Campground
Turkey Cr Campground
13 Turkey Cr Ranger Sta
Pole Bridge Canyon
Cottonwood Spring
JEEP TRAIL
PACK TRAIL
PORTAL 8.8 MI.
(PORTAL


CORONADO NATIONAL FOREST
CHIRICAHUA MOUNTAINS
Fife Peak
Rock VABM 7061
Green Canyon
Hoovey Canyon
Methodist Camp
Dawings Pass
El Tigre Mine
Pinery Canyon Campground
Onion Saddle
Onion Cr
Ida Peak
Barfoot Peak
Barfoot Park
Buena Vista Pk
Barfoot Lookout
Turkey Park
Rattlesnake Peak
Rattlesnake Canyon
Rustler Park
Turkey Creek
Rock Canyon
Long Park
Tub Spring
Flys Peak
Lookout
Round Park
Winn Falls
Cima Park
Sanders Peak
Saulsbury Canyon
North Ward Canyon
Ward Canyon
Turkey Cr Ranger Sta
West Turkey Cr Campground
Turkey Cr Campground
Pole Bridge Canyon
Mormon Spring
Mormon Canyon
Morse Canyon Campground
Morse Canyon
Anita Park
Anita Spring
Junction Saddle
Chiricahua Peak
Cima Ranger Sta
Snowshed Peak
Deer Spring
Cave Creek
Cottonwood Spring
Pen Canyon
Turkey Canyon
JEEP TRAIL
T 17 S
T 18 S
R 29 E
PORTAL 8.8 MI.
(PORTAL
55'


Canyon
11
12
12
7
N A T Pen I O N A L
Canyon
Turkey
Saulsbury
262
TURKEY CREEK
14
WEST TURKEY CREEK
13
13
263
18
Ward
268
269
TURKEY CREEK RECREATION SITE
TURKEY CREEK
North
Proposed Boundary
264
Pole
Mormon
Mormon Spring
23
24
INDEFINITE
POLE
BRIDGE
BOUNDARY
24
MORSE CANYON
19
41
Turkey
T18S
43
66
Bridge
Canyon
COAL PIT
CANYON
Correct Boundary
NATURAL
AREA
Can
Canyon
BOUNDARY
Cottonwood Spring
26
25
267
25
Morse
30
Creek
43
INDEFINITE
R29E
R28½E
Johnson Peak
219
Bear Spring
31
270
35
36
36
PEAK
9357
Buckskin Saddle
221
ORD
8044



Turkey
MANSANITO
TURKEY CR.
R.S.
Turkey Creek
Morse
Canyon
Mormon
Spr
Cottonwood
Canyon
Can
Monte
Vista Pk
Stanford
Canyon
Pridham
Creek
Black
Mtn
Turtle
Mtn
Sycamore
Spr
HUDSON
RUCKER
Brushy
Red
Rock
Canyon