

843.12(i), the purpose of the operation that is the subject of the determination and any person whose interests may be adversely affected by the outcome on appeal and who participated before OSM.

4. Section 4.1153 is proposed to be amended by revising paragraph (b) to read as follows:

§ 4.1151 Time for filing.

(a) * * *

(b) If a timely request for a conference has been made pursuant to 30 CFR 723.17 or 845.17, a petition for review must be filed with OSM 30 days from service of notice by the conference officer that the conference is deemed completed.

5. Section 4.1152 is proposed to be amended by revising paragraph (a)(2) to read as follows:

§ 4.1152 Contents of petition; payment required.

(a) * * *

(2) If the amount of penalty is being contested based upon a misapplication of the civil penalty formula, a statement indicating how the civil penalty formula contained in 30 CFR Part 723 or 845 was misapplied, along with a proposed civil penalty utilizing the civil penalty formula;

6. Section 4.1154 is proposed to be amended by revising paragraph (a) to read as follows:

§ 4.1154 Review of waiver determination.

(a) Within 10 days of the filing of a petition under this part, petitioner may move the administrative law judge to review the granting or denial of a waiver of the civil penalty formula pursuant to 30 CFR 723.16 or 845.16.

7. Section 4.1155 is proposed to be amended by revising paragraphs (a) and (b)(1) to read as follows:

§ 4.1157 Determination by administrative law judge.

(a) The administrative law judge shall incorporate in his decision concerning the civil penalty, findings of fact on each of the four criteria set forth in 30 CFR 723.13 or 845.13, and conclusions of law.

(b) If the administrative law judge finds that—

(1) A violation occurred or that the fact of violation is uncontested, he shall establish the amount of the penalty, but in so doing, he shall adhere to the point system and conversion table contained in 30 CFR 723.13 and 723.14 or 845.13

and 845.14, except that the administrative law judge may waive the use of such point system where he determines that a waiver would further abatement of violations of the Act. However, the administrative law judge shall not waive the use of the point system and reduce the proposed assessment on the basis of an argument that a reduction in the proposed assessment could be used to abate other violations of the Act.

8. Section 4.1271 is proposed to be amended by revising paragraph (a) to read as follows:

§ 4.1271 Notice of appeal.

(a) Any aggrieved party may file a notice of appeal from an order or decision of an administrative law judge disposing of a proceeding under §§ 4.1160-4.1171, 4.1200-4.1205, 4.1260-4.1267, 4.1290-4.1296 and 4.1350-4.1356.

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Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AB73

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Five Limestone Endemic Plants From Southern California

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) proposes to determine endangered status for Erigeron parishii (Parish's daisy), Eriogonum ovalifolium var. vineum (Cushenbury buckwheat), Astragalus albens (Cushenbury milk-vetch), Lesquerella kingii ssp. bernardina (San Bernardino Mountains bladderpod) and Oxytheca parishii var. goodmaniana (Cushenbury oxytheca). These five plant species are endemic to the calcium carbonate deposits (limestone and dolomite) of the San Bernardino Mountains in southern California. Most of the limestone deposits in this mountain range are within actively used mining claims or mining claims which are identified for future mining. The open or terraced mining techniques that are used result in destruction of the plants' habitat. This proposed rule, is made final, would implement Federal protection under the Endangered Species Act of 1973, as amended (Act), for these five plants.

Comments and materials related to this proposal are solicited.

DATES: Comments from all interested parties must be received by January 21, 1992. Public hearing requests must be received by January 3, 1992.

ADDRESSES: Comments and materials concerning this proposal should be sent to the U.S. Fish and Wildlife Service, Southern California Field Station, Ventura Office, 2140 Eastman Avenue, suite 100, Ventura, California 93003. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Dr. Steven Chambers at the above address or at (805) 644-1766 or FTS 983-6039.

SUPPLEMENTARY INFORMATION:

Background

The San Bernardino Mountains in southern California have been recognized for supporting a wide diversity of natural habitats that have resulted from their geographic position between desert and coastal environments, elevational zonation, and uncommon elements such as limestone outcrops. The San Bernardino National Forest, which encompasses most of the San Bernardino Mountains, constitutes less than 1 percent of the land area of the State, yet contains populations of over 25 percent of all plant species that occur naturally in California.

Outcrops of calcium carbonate, primarily limestone, occur in several bands running on an east-west axis along the desert-facing slopes of the San Bernardino Mountains, with disjunct patches occurring to the south as far as Sugarlump Ridge and to the east as far as the Sawtooth Hills. These outcrops are a remnant of an ancient formation of sandstone, shale, and limestone through which the granitic core of the Transverse Ranges has emerged (Fife 1988).

The species proposed herein for listing, Erigeron parishii (Parish's daisy), Eriogonum ovalifolium var. vineum (Cushenbury buckwheat), Astragalus albens (Cushenbury milk-vetch), Lesquerella kingii ssp. bernardina (San Bernardino Mountains bladderpod), and Oxytheca parishii var. goodmaniana (Cushenbury oxytheca), are restricted to calcium carbonate deposits, or soils derived from them, and hence are commonly referred to as "limestone endemics." They span a range of approximately 35 miles (56 kilometers (km)), ranging in elevation from 4,000 feet (ft) (1,219 meters (m)) at the base of

the mountains to approximately 8,000 ft (2,438 m) in elevation and occur as components in the understory of pinyon-juniper woodland communities.

Pinyon-juniper woodland communities dominate the desert-facing slopes above 4,000 ft (1,219 m) in elevation and grade into a Joshua tree woodland at lower elevations (Vasek and Thorne 1988). Pinyon-juniper woodlands extend up to almost 8,000 ft (2,438 m) in elevation, where they intergrade with an open forest of white fir (*Abies concolor*) and limber pine (*Pinus flexilis*). The latter community has been referred to as southern California white fir forest by Holland (1986). Within the pinyon-juniper woodland, there is a wide variation in the species composition. Pinyon pine (*Pinus monophylla*) or California juniper (*Juniperus californica*), and more rarely western juniper (*Juniperus occidentalis*), or Utah juniper (*Juniperus osteosperma*) are the structurally dominant species, occasionally occurring together. Holland (1986) has referred to separate Mojavean pinyon woodland and scrub communities. The understory varies with slope and elevation, but typically includes such species as mountain mahogany (*Cercocarpus ledifolius*), Mormon tea (*Ephedra viridis*), Mohave yucca (*Yucca schidigera*), and encelia (*Encelia virginensis*). Patches of local dominance by blackbrush (*Coleogyne ramosissima*) on desert facing slopes or manzanita (*Arctostaphylos* sp.) on more interior canyons are common.

Erigeron parishii (Parish's daisy) is a small perennial herb of the daisy family (Asteraceae) that reaches 4–12 inches (in) (1–3 decimeters (dm)) in height. The linear leaves are covered with soft, silvery hairs. Up to 10 solitary flower heads are borne on cauline stalks; ray flowers are deep rose to lavender, and heads have greyish green and glandular phyllaries. *Erigeron parishii* was first described by Gray in 1884 based on specimens collected by S.B. Parish in Cushenbury Canyon in 1881.

Erigeron parishii is the most widely ranging of the limestone endemics, spanning a range of 35 miles (56 km). The plant is known from fewer than 25 occurrences, with the total population numbering approximately 16,000 individuals. Less than a third of the occurrences support more than 1,000 individuals (Barrows 1988a). From White Knob at the western terminus, populations occur primarily along the belt of carbonaceous substrates southeast to Pioneertown. The plant is typically found associated with pinyon and juniper woodlands from 4,000 to

6,400 ft (1,219 to 1,951 m) in elevation. It is usually found on dry rocky slopes, shallow drainages, and outwash plains on substrates derived from limestone. Some populations occur on a granite/limestone interface, usually a granitic parent material overlain with an outwash of limestone materials. Two small outlying populations at the eastern edge of its range occur on quartz monzonite substrates.

Eriogonum ovalifolium var. *vineum* is a low, densely-matted perennial of the buckwheat family (Polygonaceae). The flowers are whitish-cream, darken to a reddish or purple with age, and are borne on flowering stalks reaching 4 inches (1 dm) in height. The plant flowers from May through June. The round to ovate leaves are white-wooly on both surfaces and are less than 1 inch (7–15 millimeter (mm)) long. The diameter of mats is typically 6–10 inches (1.5–2.5 dm), but may reach up to 20 inches (5 dm) on particularly well-developed individuals.

Eriogonum ovalifolium var. *vineum* was first collected in 1894 by S.B. Parish near Rose Mine, San Bernardino Mountains and was described in 1896 by J.K. Small as *Eriogonum vineum* (Small 1896). In 1911, Nelson published a combination changing the name to *Eriogonum vineum* Nuttall *vineum* (Small). Jepson published the combination *Eriogonum ovalifolium* var. *vineum* in 1943 (Jepson 1943). Munz (1956) accepted the work of Stokes (1936), which revised the name to *Eriogonum ovalifolium* ssp. *vineum*. In 1966, Reveal clarified its relationship to var. *nivale*, with which it had been confused, and re-established its name as *Eriogonum ovalifolium* var. *vineum*. (Reveal and Munz 1968).

Eriogonum ovalifolium var. *vineum* is also limited in distribution to the belt of limestone substrates of the north slopes of the San Bernardino Mountains. The species is currently known from fewer than 20 occurrences that span a range of approximately 25 miles (40 km). Only 4 of those occurrences support more than 1,000 individuals, with the total population numbering approximately 10,000 individuals (Barrows 1988b). *Eriogonum ovalifolium* var. *vineum* ranges from White Knob east to Rattlesnake Canyon. Recent surveys by Barrows (1988b) resulted in a slight range extension of the species in the Rattlesnake Canyon drainage.

This plant occurs within openings of pinyon pine and juniper woodland communities between 4,600 and 7,900 ft (1,402 and 2,408 m) in elevation. In addition to carbonate rock substrates, other habitat characteristics include

open areas with little accumulation of organic material, a canopy cover generally less than 15 percent, and powdery fine soils with rock cover exceeding 50 percent. The plant typically occurs on moderate slopes, though a few occurrences are on slopes over 60 percent. On milder north-facing slopes, it co-occurs with *Astragalus albens*.

Astragalus albens (Cushenbury milk-vetch) is a small silvery-white perennial herb of the pea family (Fabaceae). The slender stems are decumbent to 12 inches (30 centimeters (cm)) in length. The purple flowers occur towards the ends of the branches in 5 to 14 flowered racemes. This plant blooms from March to May. *Astragalus albens* was first described by Greene (1885) based on a collection made by Parish & Parish 3 years earlier. Ryberg (1927) recognized the name *Hamosa albens* that Jones had used 4 years earlier. Barneby (1964) eliminated the genus name *Hamosa* and restored the plant to the genus *Astragalus*.

Astragalus albens is currently known from fewer than 20 occurrences scattered throughout the eastern half of the limestone belt, running from Furnace Canyon southeast to Burns Canyon, a range of 25 miles. Recent surveys by Barrows (1988c) indicated that 6 of the occurrences had fewer than 50 individuals present, with the total population numbering approximately 2,000 individuals. The total number of individuals is likely to be greater in years of substantial rainfall.

The plant is typically found on limestone substrates along rocky washes and gentle slopes within pinyon pine and juniper woodland communities. Parish's daisy and Cushenbury buckwheat co-occur with Cushenbury milk-vetch at several locations.

Most occurrences are found between 5,000 and 6,000 ft (1,524 and 2,012 m) in elevation on soils derived directly from decomposing limestone bedrock. Three occurrences are found below 5,000 ft (1,524 m) in elevation in rocky washes that have received limestone outwash from erosion higher in the drainages. Other habitat characteristics include an open canopy cover with little accumulation of organic material, rock and cover exceeding 75 percent, and gentle to moderate slopes (5–30 percent).

Lesquerella kingii ssp. *bernardina* is a silvery perennial of the mustard family (Brassicaceae) reaching 8 inches (1–2 dm) in height. The plant has yellow flowers which occur toward the ends of the stems. The basal leaves are ovate and occur on the ends of long petioles. The type material was collected by Peirson

at the east end of Bear Valley in 1924. In 1932, Munz described this plant as *Lesquerella bernardina* (Munz 1932). Later, Munz (1959) combined *Lesquerella kingii* and *Lesquerella bernardina* and retained the taxon under consideration here (*Lesquerella kingii* ssp. *bernardina*).

This plant is currently known from 6 occurrences, with the total population numbering approximately 15,000 individuals (California Natural Diversity Data Base (CNDDB) 1990). This plant is less widely distributed than the three previously discussed limestone endemic species. One cluster of occurrences is near the east end of Bertha Ridge, adjacent to the community of Big Bear, and is subject to impacts from urbanization. The other cluster is centered on the north-facing slope of Sugarlump Ridge, approximately 4 miles (6.4 km) to the south of the Bertha Ridge occurrences. These latter occurrences were discovered during spring 1990 on, and adjacent to, a proposed downhill ski area (CNDDB 1990).

The habitat for *Lesquerella* is characterized by limestone substrates, either brown sandy soils with white carbonate rocks or outcrops of large carbonate rock. Slopes are typically gentle to moderate and are both north- and south-facing between 6,800 and 7,800 ft (2,073 and 2,377 m) in elevation. Within pinyon and juniper woodlands, as well as white fir forest in some locations, it is found in open areas with little accumulation of organic material.

The limestone substrates that support *Lesquerella* lay south and west of those that support most of the populations of the four other limestone endemic species. However, near the east end of Bertha Ridge, the southernmost population of *Eriogonum ovalifolium* var. *vineum* occurs in close proximity to one colony of *Lesquerella*.

Oxytheca parishii var. *goodmaniana* is a small wiry annual of the buckwheat family (Polygonaceae). The type material was collected by Parish & Parish in 1881 near Cushenbury Spring. For a number of years, historical collections were mistakenly identified as *Oxytheca parishii* var. *abramsii* and *Oxytheca watsonii*. In 1980, Ertter published the combination *Oxytheca parishii* var. *goodmaniana* in honor of Goodman, who was the first to recognize both the distinctiveness of the variant and its close relationship to *Oxytheca parishii* (Ertter 1980).

Oxytheca parishii var. *goodmaniana* is the most restricted of the limestone endemic species of the San Bernardino Mountains. Recent surveys brought the total number of known occurrences to four (CNDDB 1990). One historic

location near Cushenbury Spring is located near an active limestone mine. Two more occurrences are located near the abandoned Green Lead gold mine, one of which is bisected by a road. The fourth occurrence is located near the north side of Holcomb Valley. All populations occur on limestone, though at some locations the limestone is in a mosaic with quartz and granitic substrates. In 1990, the total number of individuals was estimated to be under 3,000. Since it is an annual species, the number of individuals might be higher in years with substantial rainfall. The low number of occurrences, however, as well as individuals, also subjects the species to the possibility of stochastic extinction.

Federal action on these plants began when the Secretary of the Smithsonian Institution, as directed by section 12 of the Act, prepared a report on those native U.S. plants considered to be endangered, threatened, or extinct in the United States. This report (House Document No. 94-51), which included *Eriogonum parishii* and *Lesquerella kingii* ssp. *bernardina* as threatened and *Eriogonum ovalifolium* var. *vineum* as endangered, but not *Astragalus albens* or *Oxytheca parishii* var. *goodmaniana*, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) accepting the report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act and of the Service's intention thereby to review the status of the plant taxa named therein, including *Eriogonum parishii*, *Eriogonum ovalifolium* var. *vineum*, and *Lesquerella kingii* ssp. *bernardina*.

On June 16, 1976, the Service published a proposed rule in the **Federal Register** (41 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. This list, which did not include any of the species under consideration here, was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the July 1, 1975 **Federal Register** publication (43 FR 17909).

In 1978, amendments to the Endangered Species Act required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to those proposals already more than 2 years old. Subsequently, on December 10, 1979, the Service published a notice (44 FR 70798) of the withdrawal of the portion of the June 16, 1976, proposal that had not been made final, along with four other proposals

that had expired. The Service published an updated notice of review for plants on December 15, 1980 (45 FR 82480). This notice included *Eriogonum ovalifolium* var. *vineum* and *Lesquerella kingii* ssp. *bernardina* as category 1 candidates (species for which data in the Service's possession is sufficient to support proposals for listing) for Federal listing, and *Eriogonum parishii* as a category 2 candidate (species for which data in the Service's possession indicate listing may be appropriate, but for which additional biological information is needed to support a proposed rule).

On February 15, 1983, the Service published a notice (48 FR 6752) of its prior finding that the listing of *Eriogonum ovalifolium* var. *vineum* and *Lesquerella kingii* ssp. *bernardina* was warranted but precluded in accordance with section 4(b)(3)(B)(iii) of the Act as amended in 1982. Pursuant to section 4(b)(3)(C)(i) of the Act, this finding must be recycled on an annual basis, until the species is either proposed for listing, or the petitioned action is found to be not warranted. In October 1983, 1984, 1985, 1986, 1987, 1988, 1989, and 1990, further findings were made that the listing of *Eriogonum ovalifolium* var. *vineum* and *Lesquerella kingii* ssp. *bernardina* was warranted, but that the listing of these species was precluded by other pending proposals of higher priority. In the September 27, 1985 (50 FR 39526) and February 21, 1990 (55 FR 6184) Plant Notices of Review, *Eriogonum ovalifolium* var. *vineum* and *Lesquerella kingii* ssp. *bernardina* were again included as category 1 candidates, and *Eriogonum parishii* as a category 2 candidate. The February 21, 1990, notice also included *Astragalus albens* in category 1 and *Oxytheca parishii* var. *goodmaniana* in category 2. Since the publication of that notice, additional survey work has been completed for *O. parishii* var. *goodmaniana*, providing new information on the status of that species. Similarly, the Service is aware of increased threats to *Eriogonum parishii* in the form of two new pending mining operations which would likely adversely impact this species. The Service therefore believes that sufficient information is now available to support the proposed listing of these two species. Publication of the present proposal constitutes the final 1-year finding for the three petitioned species.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (16 U.S.C. 1533) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth

the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in Section 4(a)(1). These factors and their application to *Erigeron parishii* Gray (Parish's daisy), *Eriogonum ovalifolium* Nuttall var. *vineum* (Small) A. Nelson (Cushenbury buckwheat), *Astragalus albens* Green (Cushenbury milk-vetch), *Lesquerella kingii* Wats ssp. *bernardina* (Munz) Munz (San Bernardino Mountains bladderpod), and *Oxytheca parishii* var. *goodmaniana* Ertter (Cushenbury oxytheca) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* All five species proposed for listing, *Erigeron parishii* (Parish's daisy), *Eriogonum ovalifolium* var. *vineum* (Cushenbury buckwheat), *Astragalus albens* (Cushenbury milk-vetch), *Lesquerella kingii* ssp. *bernardina* (San Bernardino Mountains bladderpod), and *Oxytheca parishii* var. *goodmaniana* (Cushenbury oxytheca), are restricted to carbonate and adjacent carbonate/granitic substrates occupied by pinyon-juniper woodland on the northern side of the San Bernardino Mountains. The imminent and primary threat facing these species is the ongoing destruction of the carbonaceous substrates on which they grow by activities associated with limestone mining, including direct removal of mined materials, disposal of overburden on adjacent unmined habitat, and road construction.

The first burst of mining activity in the San Bernardino Mountains occurred in the 1860s, with the discovery of gold in Holcomb Valley. Historically, gold was extracted both by underground mining and by placer mining. Only small scale and weekend prospecting for gold continues today. However, gold-bearing alluvium in Holcomb Valley has a low to medium potential for development in the future, and a good potential exists for a large gold extraction operation in the Blackhawk area (U.S. Forest Service 1988). Several silver mines were also in operation during the late 1800s in Cushenbury Canyon and near Blackhawk Mountain.

The existence of *Erigeron parishii*, *Eriogonum ovalifolium* var. *vineum*, *Astragalus albens*, *Lesquerella kingii* ssp. *bernardina*, and *Oxytheca parishii* var. *goodmaniana* is being threatened primarily by the mining of limestone. Limestone, as are gold and silver, is considered a locatable mineral and therefore open to claim under the 1872 Mining Laws. Virtually all of the approximately 28,000 acres of limestone

within the San Bernardino Mountains is currently under claim. Most of the limestone is currently being processed by four processing plants that are located along the base of the north slope of the mountains. Because of the limited availability of limestone in the western United States, those claims currently not under production are still being maintained in anticipation of a future market.

In the surrounding Lucerne Valley mining district, the first limestone mines started operation in the 1940s; the current annual production of limestone is approximately 3,300,000 tons (U.S. Forest Service 1988). Annual production, however, typically represents only the fraction of material that is trucked off the mine site as product. The ratio of disturbed material to product material may range from 1:1 up to 5:1. Thus, for every ton of limestone product, as much as five times that volume may be impacted. A typical mine site consists of an open pit or terraced pit, haul roads on which the blasted rock is hauled to a processing plant, and the processing plant itself, which sorts and crushes the material. The overburden, that is, materials that need to be removed to reach the underlying limestone, as well as low-grade limestone that is currently not being marketed, is redistributed in piles onsite. It appears that in the future, less low-grade limestone will be left onsite as the market for limestone products changes. The direct impacts to the limestone endemic species from limestone mining include the removal and destruction of habitat from mining, the construction of haul roads, and the deposition of overburden piles on top of currently occupied habitat. Secondary impacts include the destruction of habitat through increased off-road vehicle and other recreational use that departs from currently used as well as abandoned mine roads.

Aside from impacts associated with gold and limestone mining, several species are potentially threatened by destruction of habitat by other activities. Sand and gravel mining has been proposed for several washes on the lower desert-facing slopes and may impact at least one occurrence of Parish's daisy. Urban development has encroached upon several occurrences of San Bernardino Mountains bladderpod near Big Bear City, and threatens to encroach upon an occurrence of Parish's daisy near Pioneertown. The proposed expansion of a downhill ski run on the north side of Sugarlump Ridge may eliminate portions of an occurrence of San Bernardino Mountains bladderpod.

Since the location of the limestone endemics is tied primarily to the location of calcium carbonate deposits, it is useful to discuss such threats as they occur adjacent to their primary population centers. A description of the primary population centers of limestone endemics and the threats in each area follows:

The westernmost occurrences of limestone endemic species are in the vicinity of White Mountain, an outcrop that rises to 6,900 ft (2,103 m) in elevation above the desert community of Lucerne Valley. The third largest of the limestone mines is located here, with an annual production of approximately 500,000 tons. The proximity of occurrences of Parish's daisy and Cushenbury buckwheat to current mining operations indicate that individuals of these two species have likely already been extirpated from the site. Populations of these two species, which both reach their western limits here, will soon be eliminated under a recently approved mining plan of operations. As compensation, the County of San Bernardino has directed the mining company to sponsor experimental reseedling on reclaimed portions of the mine site.

Approximately 6 miles (9.7 km) to the east of White Mountain, the north side of Holcomb Valley drops off abruptly into Furnace Canyon. The second largest operating limestone mine, with an annual production of 800,000 tons, is operating in the vicinity of Furnace Canyon. Parish's daisy and Cushenbury buckwheat have been impacted by the construction of haul roads and the dumping of overburden at this site. Three small outlying populations of Cushenbury milk-vetch are also found in this area.

Four miles to the east of Furnace Creek is the deeply incised Cushenbury Canyon. The mining operation located at this site has an annual production of 2,000,000 tons of limestone, the largest of the four currently operating limestone mines. Parish's daisy, Cushenbury buckwheat, and Cushenbury milk-vetch are found on the rocky slopes surrounding Cushenbury Canyon and adjacent Marble Canyon. A number of populations have already been impacted by mining and road construction. Up until several years ago, cement dust from the crushing operation was settling on the slopes downwind from the operation. The resultant crust that formed on the slopes is thought to have inhibited the growth and survival of a number of plant species, including the limestone endemics. The easternmost population of Cushenbury oxytheca, one

of the most restricted of the limestone endemics, was also rediscovered in this area in 1978. Owing to continuing drought conditions, the species was not searched for in a 1990 survey at this location. A few populations of Parish's daisy are found on alluvial substrates below the mouth of the Canyon. A recent proposal to mine these alluvia for sand and gravel threatens these populations.

To the east another 5 miles (8 km), Blackhawk Mountain rises up to an elevation of 6,700 ft (2,042 m). Parish's daisy, Cushenbury buckwheat, and Cushenbury milk-vetch occur here. Historically, gold and silver were mined near Blackhawk Mountain. New gold mining activity has been proposed for the north slope of Blackhawk Mountain, though to date only exploratory drilling has been done. Blackhawk Mountain currently supports one of the best assemblages of the limestone endemic species. Old roads bisect the habitat, but the lack of limestone mining has left much of the landscape intact.

The east flank of Blackhawk Mountain drops down into Blackhawk Canyon and Grapevine Creek. On the east side of Grapevine Creek, the terrain rises up to the twin peaks of East Knob and West Knob. Three species, Parish's daisy, Cushenbury buckwheat, and Cushenbury milk-vetch, occur in this area. Currently, the smallest of four limestone mines, with an annual production of 40,000 tons, is in operation just below East Knob and West Knob. The proximity of occurrences of all three limestone endemic species to current quarry operations indicates that habitat destruction has already occurred. The 5 year plan of operations being submitted by the current operators would eliminate occurrences of all three species on East Knob (Lilburn Corporation 1990).

Heading south and east from Blackhawk Mountain, the limestone belt parallels the Helendale Fault, which is drained by Arrastre Creek. A cluster of occurrences of Parish's daisy and Cushenbury buckwheat are scattered on the rocky slopes adjacent to Horsethief Flat. Further up the Arrastre Creek drainage, another dozen occurrences of these two species are scattered along a rocky ridge for a distance of approximately 4 miles (6.4 km). There is currently no active mining along the Helendale fault, though historic mining may have impacted certain occurrences, and new proposals for mining have recently been received by the Forest Service. Some of the densest stands of Cushenbury buckwheat have been bisected by motorcycle and jeep trails

near Rose Mine Valley (Krantz 1979b); such use of the area continues.

Still heading south and east, the tributaries of Arrastre Creek run off the north and west slopes of Tip Top Mountain, which rises to an elevation of 6,700 ft (2,042 m). On the south and east side of Tip Top Mountain, tributaries flow into the Rattlesnake Canyon drainage. Along this drainage is another cluster of occurrences of Parish's daisy and Cushenbury buckwheat. Historic mining has impacted the two plants; Krantz (1979b) noted that a dirt road leading to an abandoned quarry had bisected habitat for both plants. Parish's daisy may be able to tolerate some disturbance, as evidenced by its occurrence along roadsides, while Cushenbury buckwheat remains absent from such areas (Krantz 1979a, 1979b). Off-road vehicle traffic currently adversely impacts plants in this area.

About 15 miles (24 km) south and east of Tip Top Mountain, the mountains give way to the broad alluvial fans of the upper desert. Near Burns Pinyon Reserve, and Pioneertown nearby, a few disjunct occurrences of Parish's daisy are found. The Burns Pinyon Preserve is protected by the State of California through the auspices of the Reserve System of the University of California. The Pioneertown site has been proposed for urban development. The Nature Conservancy has secured a voluntary agreement with the landowner to protect Parish's daisy at this site.

Scattered patches of limestone substrate occur outside of the main belt that traverses the San Bernardino Mountains. On the east end of Bertha Ridge, north of the eastern tip of Big Bear Lake, several small patches of San Bernardino Mountains bladderpod and Cushenbury buckwheat occur. These populations are adjacent to the community of Big Bear and are subject to impacts associated with urban development. Surveys by Myers and Barrows (1988) indicated that several occurrences of San Bernardino Mountains bladderpod have been reduced in size since the previous surveys were performed in 1980 (Wilson and Bennett 1980).

At the northern edge of Holcomb Valley, Cushenbury oxytheca is found near an old gold mine site. There is a low to medium potential for reactivating mining activity in this area in the future, depending on the price of gold (U.S. Forest Service 1988).

On the north-facing slope of Sugarlump Ridge on the south side of Big Bear Lake, several large populations of San Bernardino Mountains bladderpod were recently discovered. Several of

these populations may be impacted by a currently proposed expansion of a downhill ski run.

In summary, virtually all of the limestone outcrops where these five species occur are under claim and subject to being mined. The only sizable limestone outcrop not under claim is located on the south side of Big Bear Lake. Those claims that are not currently being mined are being maintained in anticipation of expanding operations once current quarry supplies are depleted.

A limited number of occurrences of each of the five species is noted. These occurrences are located in an area of active and potential mining claims; occurrences of two of the species are also subject to urbanization. Due to the limited number of occurrences; the current, proposed, and potential mining; and other threats, the species' habitats are subject to destruction.

B. Overutilization for commercial, recreational, scientific, or educational purposes. Although these species are not presently sought-after by collectors, they are vulnerable to taking, owing especially to their limited distribution. The increased public attention that may be brought to bear as a result of this proposal could potentially increase the desirability of these species, thereby increasing the threat of collection.

C. Disease or predation. No data exist to substantiate whether disease threatens any of the five plants. The seed capsules of *Lesquerella kingii* ssp. *bernardina* were recently observed to have been broken open by unknown seed predators (Rutherford and Lardner, pers. obs.) at one of the Big Bear occurrences. It is unknown whether seed predation would affect the viability of the species. In the vicinity of Round Mountain, several occurrences of *Astragalus albens* are known to occur within a grazing allotment administered by the Bureau of Land Management. The effects of cattle grazing on this species have not yet been investigated.

D. The inadequacy of existing regulatory mechanisms. All five plants are on List 1B of the California Native Plant Society, indicating that, in accordance with section 1901, chapter 10 of the California Department of Fish and Game Code, they are eligible for State listing. Even if State listing were pursued, however, State law appears to exempt the taking of such plants via habitat modification or land use change by the landowner. After the California Department of Fish and Game notifies a landowner that a State-listed plant grows on his or her property, State law evidently requires only that the

landowner notify the agency "at least 10 days in advance of changing the land use to allow salvage of such plant" (chapter 1.5 1913). About a quarter of the occurrences of *Erigeron parishii* and *Eriogonum ovalifolium* var. *vineum* occur on private land. The mining of limestone on private land is under the purview of the County of San Bernardino, which is responsible for administering regulations in accordance with the California Environmental Quality Act (CEQA) and the California Endangered Species Act (CESA). As such, the County has included Terms and Conditions in the granting of certain operating permits that have directed the applicants to undertake efforts to restore the habitat for and re-introduce Parish's daisy and Cushenbury buckwheat to the site. The remaining occurrences of these two species, as well as almost all the occurrences of the other three species are primarily on lands managed by the U.S. Forest Service and, to a lesser degree, by the Bureau of Land Management.

In the recently released Management Plan for the San Bernardino National Forest (1988), the Forest Service recommends establishing refugia for conserving selected occurrences of these limestone endemic species as part of a regional conservation plan. This would entail securing refugia sites either by withdrawal from mineral entry or by transferring claim rights. However, the Forest has not yet initiated development of such a regional conservation plan.

E. Other natural or manmade factors affecting its continued existence. Populations made up of a small number of individuals always face the possibility of stochastic extinction (extinction due to random events, including fire, flood, drought, landslide, disease, or predation). As the total known populations of *Astragalus albens* and *Oxytheca parishii* var. *goodmaniana* currently consist of fewer than 3,000 individuals each, the possibility of stochastic extinction is high.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these five species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Erigeron parishii*, *Eriogonum ovalifolium*, *Astragalus albens*, *Lesquerella kingii* ssp. *bernardina*, and *Oxytheca parishii* var. *goodmaniana* as endangered. The destruction of their habitat by activities associated with limestone mining, sand and gravel mining, and off-road vehicle and other

recreational use, as well as their vulnerability to stochastic events, makes these five plant species in danger of extinction throughout all or a significant portion of their ranges. These species thus fit the Act's definition of endangered.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary propose critical habitat at the time the species is proposed to be listed as endangered or threatened. The Service finds that designation of critical habitat is not presently prudent for these species. As discussed in the Summary of Factors Affecting the Species, all of the limestone endemic plants are threatened by taking, an activity difficult to enforce against and only regulated by the Act with respect to plants in cases of (1) removal and reduction to possession of listed plants from lands under Federal jurisdiction, or their malicious damage or destruction on such lands; and (2) removal, cutting, digging up, damaging, or destroying in knowing violation of any State law or regulation, including State criminal trespass law. Such provisions are difficult to enforce, and publication of precise maps and descriptions of critical habitat would increase the degree of threat to these plants from take or vandalism and, therefore, could contribute to their decline and increase enforcement problems. The proper agencies have been notified of the location and importance of protecting these species' habitat. Protection of these species' habitat will be addressed through the recovery process and through the section 7 consultation process. Therefore, the Service finds that the designation of critical habitat for the five plants is not prudent at this time, because such designation likely would increase the degrees of threat from vandalism, collecting, or other human activities.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed

species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against certain activities involving listed plants are discussed, in part, below.

Federal activities potentially impacting one or more of the five plants likely will include the approval of mining plans of operations, rights of way, and grazing allotments. Populations of all five plant species occur in large part on Federal land. *Erigeron parishii*, *Eriogonum ovalifolium* var. *vineum*, and *Astragalus albens* occur on land managed by the San Bernardino National Forest and the California Desert District of the Bureau of Land Management. *Lesquerella kingii* ssp. *bernardina* and *Oxytheca parishii* var. *goodmaniana* occur entirely on land managed by the San Bernardino National Forest.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general prohibitions and exceptions that apply to all endangered plants. With respect to the five limestone endemics from southern California, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, make it illegal with respect to any endangered plant, for any person subject to the jurisdiction of the United States to import or export; transport in interstate or foreign commerce in the course of a commercial activity; sell or offer for sale these species in interstate or foreign commerce; remove and reduce to

possession any such species from areas under Federal jurisdiction; maliciously damage or destroy any such species on any area under Federal jurisdiction; or remove, cut, dig up, damage, or destroy any such endangered plant species on any other area in knowing violation of any State law or regulation or in the course of any violation of a State criminal trespass law. Certain exceptions apply to agents of the Service and State conservation agencies.

The Act of 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species under certain circumstances. It is anticipated that few trade permits would ever be sought or issued because the five plant species are not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Office of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, room 432, Arlington, Virginia 22203-3507 (703) 358-2104 or FTS 921-2104).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to these species;

(2) The location of any additional populations of these species and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;

(3) Additional information concerning the range, distribution, and population size of these species; and

(4) Current or planned activities in the subject area and their possible impacts on these species.

The final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of

publication of the proposal. Such requests must be made in writing and addressed to the Field Supervisor at the Southern California Field Station (see ADDRESSES section).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, or Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

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Author

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List of Subjects in 50 CFR Part 17

Endangered and threatened species. Exports, Imports, Reporting and recordkeeping requirements, and Transportation.

Proposed Regulations Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1367; 16 U.S.C. 1581-1584; 16 U.S.C. 4201-4245; Pub. L. 89-625, 100 Stat. 2506; unless otherwise noted.

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under the plant families indicated, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Asteraceae—Aster family:						
<i>Eriogonum parishii</i>	Parish's daisy	U.S.A. (CA)	E		NA	NA
Brassicaceae—Mustard family:						
<i>Lesquerella kingii</i> ssp. <i>bernardina</i>	San Bernardino Mountains bladderpod	U.S.A. (CA)	F		NA	NA
Fabaceae—Pea family:						
<i>Astragalus albens</i>	Cushenbury milk-vetch	U.S.A. (CA)	E		NA	NA
Polygonaceae—Buckwheat family:						
<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Cushenbury buckwheat	U.S.A. (CA)	E		NA	NA
<i>Oxytheca parishii</i> var. <i>goodmaniana</i>	Cushenbury oxytheca	U.S.A. (CA)	E		NA	NA

Dated: October 21, 1991.

Richard N. Smith,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 91-27685 Filed 11-18-91; 8:45 am]

BILLING CODE 4310-05-M

50 CFR Part 17

RIN 1018-AB66

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Eight Freshwater Mussels and Proposed Threatened Status for Three Freshwater Mussels in the Mobile River Drainage

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes the upland combshell (*Epioblasma metastrata*), southern acornshell (*Epioblasma otcaloogensis*), Coosa moccasinshell (*Medionidus parvulus*), southern clubshell (*Pleurobema decisum*), dark pigtoe (*Pleurobema furvum*), southern pigtoe (*Pleurobema georgianum*), ovate clubshell (*Pleurobema perovatum*), and triangular kidneyshell (*Ptychobranthus greenii*) to be endangered species; and the fine-lined pocketbook (*Lampsilis altilis*), orange-nacre mucket (*Lampsilis perovalis*), and Alabama moccasinshell (*Medionidus acutissimus*) to be threatened species under the authority of the Endangered Species Act of 1973, as amended (Act). These eleven species are found in localized portions of the Mobile River drainage in Alabama, Georgia, Mississippi and Tennessee. They have been eliminated from much of their former ranges by impoundments,

channel modification, and water quality degradation. Habitat alteration and water quality degradation continue to threaten the remaining populations. There is also a presently developing threat from incidental take associated with commercial mussel harvesting. This proposal, if made final, would implement the protection of the Act for these species. The Service seeks relevant data and comments from the public.

DATES: Comments from all interested parties must be received by March 18, 1992. Public hearing requests must be received by January 3, 1992.

ADDRESSES: Comments and materials concerning this proposal should be sent to Complex Field Supervisor, U.S. Fish and Wildlife Service, 6578 Dogwood View Parkway, Jackson, MS 39213. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Paul Hartfield at the above address (telephone 601/968-4900 or FTS 490-4900).

SUPPLEMENTARY INFORMATION:

Background

The Mobile River basin drains approximately 43,000 square miles and is the largest Gulf Coast drainage east of the Mississippi River. The basin is composed of several major river systems: The Mobile Delta (Mobile and Tensaw Rivers), Tombigbee, Black Warrior, Alabama, Cahaba, Coosa, and Tallapoosa Rivers and their tributaries. These rivers drain a variety of physiographic provinces, including the Appalachian Plateau, Alabama Valley

and Ridge, Piedmont Upland, and East Gulf Coastal Plain. The basin's size, diversity of habitat, and geographical isolation, have resulted in a high degree of variation and endemism in the unionid mussel (mussels) fauna. This proposed rule addresses 11 species that are known to have been collected from the Mobil drainage within the past 20 years. These species are believed to currently exist in the drainage. Historic distributions are based on the scientific literature, technical reports, and museum records. The names used in this rule follow mollusk nomenclature suggested by the American Fisheries Society (Turgeon *et al.* 1988).

The upland combshell (*Epioblasma metastrata* (Conrad 1838)) is a bivalve mollusk that rarely exceeds 60 millimeters (mm) (2.4 inches (in.)) in length. The shells are rhomboidal to quadrate in outline and are sexually dimorphic. Males are moderately inflated with a broadly curved posterior ridge. Females are considerably inflated, with a sharply elevated posterior ridge that swells broadly post-ventrally forming a well-developed sulcus (the groove anterior to the posterior ridge). The posterior margin of the female is broadly rounded and comes to a point anterior to the posterior extreme. Periostacrum (the epidermis) color varies from yellowish-brown to tawny, and may or may not have broken green rays, or small green spots. Hinge teeth are well-developed and heavy. Johnson (1978) considered the upland combshell to be a variation of the southern combshell (= penitent mussel, *Epioblasma penita*) and synonymized the two. Starobry (1963a) recognized consistent morphological differences between the two and considered both