

**The Rule**

In consideration of the foregoing, the interim final rule revising 49 CFR part 234 which was published at 61 FR 31802 on June 20, 1996, is adopted as a final rule with the following changes:

**PART 234—GRADE CROSSING SIGNAL SYSTEM SAFETY**

1. The authority citation for part 234 continues to read as follows:

**Authority:** 49 U.S.C. 20103, 20107, and 49 CFR 1.49.

2. Revise § 234.215 to read as follows:

**§ 234.215 Standby power system.**

A standby source of power shall be provided with sufficient capacity to operate the warning system for a reasonable length of time during a period of primary power interruption. The designated capacity shall be specified on the plans required by § 234.201 of this part.

3. Revise § 234.247(b) to read as follows:

**§ 234.247 Purpose of inspections and tests; removal from service of relay or device failing to meet test requirements.**

\* \* \* \* \*

(b) If a railroad elects not to comply with the requirements of §§ 234.249 through 234.271 because all tracks over the grade crossing are out of service or the railroad suspends operations during a portion of the year, and the grade crossing warning system is also temporarily taken out of service, a full inspection and all required tests must be successfully completed before railroad operations over the grade crossing resume.

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Issued in Washington, D.C. on September 19, 2001.

**Allan Rutter,**

*Federal Railroad Administrator.*

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**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

**RIN 1018-AG02**

**Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for *Astragalus holmgreniorum* (Holmgren milk-vetch) and *Astragalus ampullarioides* (Shivwits milk-vetch)**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the Fish and Wildlife Service (Service), have determined endangered status under the Endangered Species Act (Act) of 1973, as amended, for two perennial herbs—*Astragalus holmgreniorum* (Holmgren milk-vetch) and *Astragalus ampullarioides* (Shivwits milk-vetch). Three small populations of *A. holmgreniorum* exist in Washington County, Utah, and adjacent Mohave County, Arizona. Five small populations of *A. ampullarioides* exist in Washington County, Utah. Significant portions of the habitat of both species are subject to disturbance from urban development, off-road vehicles (ORVs), grazing, displacement by exotic weeds, and mineral development. This determination that *A. holmgreniorum* and *A. ampullarioides* are endangered species implements the Federal protections provided by the Act for these plants.

**DATES:** Effective October 29, 2001.

**ADDRESSES:** The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Lincoln Plaza, Suite 404, 145 East 1300 South, Salt Lake City, Utah 84115.

**FOR FURTHER INFORMATION CONTACT:** John L. England, Botanist, Utah Field Office, at the address listed above (telephone 801/524-5001).

**SUPPLEMENTARY INFORMATION****Background**

*Astragalus holmgreniorum* (Holmgren milk-vetch) was first collected as a scientific specimen in 1941 by Melvin Ogden. Rupert Barneby and Noel and Patricia Holmgren rediscovered the species in 1979. Barneby (1980) recognized the species as a unique taxon occurring in a localized area on the Arizona-Utah border, and named it for its co-discoverers. *Astragalus ampullarioides* (Shivwits milk-vetch)

was first collected near Shem in Washington County, Utah, by Duane Atwood in 1976. The species was originally described by Stanley Welsh (1986) as a variety of *A. eremiticus*. Barneby (1989) questioned the taxonomic significance of the species and submerged *A. eremiticus* var. *ampullarioides* within typical *A. eremiticus*. Later research work by Harper and Van Buren (1998) and Stubben (1997) demonstrated significant genetic and ecological differences between typical *A. eremiticus* and *A. eremiticus* var. *ampullarioides*. Welsh (1998) revised the species' taxonomy elevating the taxon to full species status as *A. ampullarioides*. Both species are narrowly distributed Mojave Desert endemics restricted to the immediate vicinity of St. George, Utah.

A member of the pea family (Fabaceae), *Astragalus holmgreniorum* is a stemless herbaceous (non-woody) perennial that produces leaves and small purple flowers in the spring, both of which die back to its roots after the flowering season. The plant's pinnately compound leaves (leaves arranged on opposite side of the stem in a row) arise directly from the root crown. The leaves are pressed close to the ground, and are 4 to 13 centimeters (cm) (1.5 to 5.1 inches (in)) long, and have 9 to 15 leaflets. The leaflets are 0.8 to 1.6 cm (0.3 to 0.6 in) long and are broadly obovate (oval with the narrow end towards the base of the leaf) in shape. The flowers of *A. holmgreniorum* are 1.8 to 2.4 cm (0.7 to 0.9 in) long, and 0.6 to 0.9 cm (0.2 to 0.4 in) wide and have the distinctive papilionaceous flower shape of a legume (pea-like flower with five petals that include a large petal on top enclosing two lateral petals and two smaller lower petals). The flowers are borne in a raceme inflorescence (flowers occur along a stalk), commonly with 6 to 16 flowers. The peduncle (flower stalk) is 2 to 8.5 cm (0.8 to 3.6 in) long and arises directly from the root crown. The peduncle is erect during anthesis (period the flower is open) and is prostrate when the plant's in fruit (Barneby 1980; 1989; Welsh, et al. 1987; Stubben 1997). The fruits are pods 3 to 5 cm (1 to 2 in) long and 0.6 to 0.9 cm (0.2 to 0.4 in) across. The pods retain seeds even after the pods fully open up along the margin. With age, each pod eventually dries out and opens up at both the top and bottom ends (Barneby 1989; Stubben 1997).

*Astragalus holmgreniorum* grows on the shallow, sparsely vegetated soils derived primarily from the Virgin limestone member of the Moenkopi Formation. The species is a principal member of a warm-desert shrub

vegetative community dominated by the following perennial shrubs—

*Acamptopappus sphaerocephalus* (desert goldenhead), *Ambrosia dumosa* (white burrobush), *Krameria parvifolia* (range ratany), and *Lycium andersonii* (Anderson wolfberry). In addition, plant species associated with *A.*

*holmgreniorum* include several perennial and annual forbs and grasses; most significant are the introduced weedy species—*Bromus rubens* (foxtail brome), *Erodium cicutarium* (storksbill), and *Malcolmia africana* (African mustard) (Stubben 1997; Armstrong and Harper 1991; Van Buren 1992; Harper and Van Buren 1998, 2000b).

Only three populations of *Astragalus holmgreniorum* are known. The species primary population exists on the Arizona (Mohave County) and Utah (Washington County) border approximately 11 kilometers (km) (7 miles (mi)) south of the center of St. George, Utah (Stubben 1997). This population is fragmented by Interstate Highway 15, areas of urban development, and spotty natural habitat occurrences. The number of individual plants in all the species' populations varies considerably from year to year. This population averages about 9,000 to 10,000 plants in years with wet winters (Stubben 1997; R. Van Buren, Utah Valley State College, Orem, Utah, pers. comm. 1998). The second population is south of the town of Santa Clara about 8 km (5 mi) west of St. George. This population consists of 2 sites whose total numbers average about 1,000 individual plants (Stubben 1997; Van Buren 1992; R. Bolander, Bureau of Land Management, Salt Lake City, Utah, pers. comm. 2000). The third population consists of about 30 plants, and is located in Purgatory flat approximately 15 km (9 mi) east of St. George (Stubben 1997; R. Bolander, pers. comm. 2000). The small number of populations and restricted habitat of this species make it vulnerable to human-caused and natural environmental disturbances. Urban expansion of St. George and highway and power line construction have destroyed significant portions of the species' potential habitat and threaten additional occupied habitat. The species also is threatened by ORV use, displacement by exotic weeds, mineral exploration and development (Harper 1997, Stubben 1997, Van Buren and Harper 2000b).

*Astragalus ampullarioides* (Shivwits milk-vetch) is a perennial, herbaceous plant that is considered a tall member of the pea family, although some plants appear shorter because of grazing impacts. Stems may grow along the ground or to a height of 20 to 50 cm (8

to 20 in). However, ungrazed flowering stems may attain a height of 1 meter (40 in). Its leaves are pinnately compound, 4 to 18 cm (1.6 to 7.1 in) long, and have 11 to 23 elliptical leaflets. Each plant produces about 45 small cream-colored flowers about 2 cm (0.8 in) long on a single stalk in the spring. Seeds are produced in small pods, and the plant dies back to its root crown after the flowering season. The fruit is a short, broad pod between 0.8 and 1.5 cm (0.3 to 0.6 in) in length and 0.6 to 1.2 cm (0.2 to 0.5 in) in width (Barneby 1989; Welsh 1986, 1998; Welsh, et al. 1987).

Differences between *Astragalus ampullarioides* and typical *A. eremiticus*, which also is found in Washington County, Utah, are apparent from the following morphological and ecological characteristics—(1) *A. ampullarioides* has more flowers in each inflorescence, (2) *A. ampullarioides* has more elongated flower stalks, (3) *A. ampullarioides* has wider pods, (4) *A. ampullarioides* has taller plants, (5) *A. ampullarioides* has hollow stems, while *A. eremiticus* stems are solid, and (6) *A. ampullarioides* plants are highly palatable to grazing animals, while typical *A. eremiticus* is seldom if ever eaten (Barneby 1989; Welsh 1986, 1998; Welsh, et al. 1987; Van Buren 1992; Harper and Van Buren 1998). The variation between the two species also is apparent at the genetic level. The DNA analysis of *Astragalus* species have shown significant differences in genetic markers between *A. ampullarioides* and *A. eremiticus* (Stubben 1997).

*Astragalus ampullarioides* grows only on purple clay soils derived from the Petrified Forest member of the Chinle geological formation. The species is known from five separate sites in Washington County, Utah. These sites are distributed on a narrow band of the exposed Chinle formation over a distance of about 72 km (45 mi) near St. George, Utah. These 5 populations contain a total of approximately 1,000 individual plants (R. Van Buren, pers. comm. 1998, 2000). Two of the five populations occur near Shivwits on the western edge of the species range. One population occurs on the Shivwits Indian Reservation and contains about 50 individual plants (L. England, pers. comm. 1999); the other population occurs on Bureau of Land Management (BLM) land and contains about 135 individual plants (Utah Natural Heritage Program 1999). Two other populations occur near Harrisburg Junction on the eastern edge of the species range. One of these populations with 4 disjunct sites occurs on a mixture of State and BLM lands and contains about 300

individual plants (L. England, pers. comm. 1999, Utah Natural Heritage Program 1999, Van Buren, pers. comm. 2000). The second population in the Harrisburg area is located within a rapidly expanding commercial, recreational, and residential development. This population contained over 1,000 individuals in 1995 (England, pers. comm. 1995) and had declined to about 200 individual plants in 1998 (Utah Natural Heritage Program 1999). This population declined to less than 50 individuals in 2000 (England, pers. comm. 2000). Most of its habitat has been converted to a golf course. The fifth population occurs in the southwest corner of Zion National Park with a population estimated at 300 to 500 individuals (Harper, pers. comm. 2000; Van Buren, pers. comm. 2000). Native plant species normally associated with *A. ampullarioides* include *Dichlostemma pulchellum* (beautiful bluedicks), *Lotus humistratus* (birdsfoot trefoil), *Gutierrezia microcephala* (snakeweed), *Calochortus flexuosus* (mariposa lily), and several other Mojave Desert plants. Currently the most significant plant species associated with *A. ampullarioides* are the introduced weedy species *Bromus rubens* (foxtail brome), *B. tectorum* (cheat grass), *Erodium cicutarium* (storksbill), and *Malcolmia africana* (African mustard) (Armstrong and Harper 1991; Van Buren 1992, 1998; Harper and Van Buren 1998, 2000a).

*Astragalus ampullarioides* is threatened by the same activities as *A. holmgreniorum*. In addition, *A. ampullarioides* is heavily grazed by most wild and domestic herbivores, and one of its five populations is threatened by activities associated with clay quarry mining and unauthorized waste disposal (Harper 1997). *A. ampullarioides* is restricted to clay soils derived from outcrops of the Chinle formation, which naturally limits its potential habitat and population (Van Buren and Harper 2000a). The populations of both species fluctuate significantly year to year primarily due to extreme variations in local precipitation. The population numbers cited above reflect the highest levels observed since 1992; in an average precipitation year populations will be about half of that cited above, while drought-year population numbers will be 10 percent or less of the maximum observed levels (Van Buren and Harper 1998, 2000a; Van Buren 1999; R. Bolander, pers. comm. 2000; J. Anderson, Bureau of Land Management, Phoenix, Arizona, pers. comm. 2000).

### Previous Federal Action

Section 12 of the Act (16 U.S.C. 1533 *et seq.*) directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct in the United States. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975. We published a notice in the July 1, 1975, **Federal Register** (40 FR 27823) announcing our decision to treat the Smithsonian report as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act, and our intention to review the status of those plants.

The July 1975 notice was updated by a notice in the **Federal Register** on December 15, 1980 (45 FR 82480). On November 28, 1983, we amended the 1980 notice (48 FR 53640) and added *Astragalus holmgreniorum* as a category 2 candidate species. Category 2 candidates were defined as taxa for which information indicated that proposing to list the taxa as endangered or threatened was possibly appropriate but substantial data on biological vulnerability and threats were not currently known or on file to support a listing proposal. A later Notice of Review published on February 21, 1990 (55 FR 6185), maintained *A. holmgreniorum* as a category 2 species and included *A. eremiticus* var. *ampullarioides* (a synonym of *A. ampullarioides*) as a category 2 species.

Based on new biological and threat information (Armstrong and Harper 1991; Van Buren 1992) we identified *Astragalus holmgreniorum* as a category 1 candidate in the 1993 plant Notice of Review (58 FR 51133). At that time, category 1 candidates comprised taxa for which we had significant biological information to propose the species as endangered or threatened.

In the February 28, 1996, Notice of Review (61 FR 7596), we ceased using the category designations for candidates and included both *Astragalus holmgreniorum* and *A. ampullarioides* (*A. eremiticus* var. *ampullarioides*) as candidate species. Candidate species are those for which we have on file sufficient information on biological vulnerability and threats to support proposals to list the species as threatened or endangered.

On June 2, 1999, we received a petition from Peter Galvin of the Southwest Center for Biological Diversity, Tucson, Arizona, to list both *Astragalus holmgreniorum* and *A. ampullarioides* as endangered species under the Act. The petition specified endangered status because of the rarity

of the plants and the significant population and individual losses of both plants. The petition also requested designation of critical habitat concurrent with the listing. Inasmuch as *A. holmgreniorum* and *A. ampullarioides* are currently designated candidate species with assigned listing priorities of two and three, respectively, we consider them already under petition and covered by a warranted but precluded finding. We responded to this petition on June 14, 1999, notifying the petitioner that our Endangered Species Petition Management Guidance issued in July 1996 considers a petition for a candidate species as redundant, and as such will be treated as a second petition. We also notified the petitioner that preparation of a proposed rule for listing of *A. holmgreniorum* and *A. ampullarioides* was ongoing and would be published in the **Federal Register** in the near future.

On April 12, 2000, we published a proposed rule to list *Astragalus holmgreniorum* and *A. ampullarioides* as endangered species in the **Federal Register** (65 FR 19728). The comment period was open until June 12, 2000. With the publication of this final rule, we now determine that *A. holmgreniorum* and *A. ampullarioides* are endangered.

We have updated this rule to reflect any changes in distribution, status, and threats since publication of the proposed rule and to incorporate information obtained during the public comment period. This additional information did not alter our decision to list these species.

### Summary of Comments and Recommendations

We have reviewed all written and oral comments received during the comment period and have incorporated updated data and information into appropriate sections of this rule. We have organized substantive comments concerning the proposed rule into specific issues. We grouped comments of a similar nature or subject matter into a number of broader issues. These issues and our response to each are presented in the subsections below.

In the April 12, 2000, proposed rule in the **Federal Register** (65 FR 19728) and associated notifications, we requested all interested parties to submit factual reports or information that might contribute to the development of a final rule. We contacted and requested comments from all appropriate Federal and State agencies, City and County governments, scientific organizations, and other interested parties. We published

newspaper notices requesting public comment on the proposed rule in the following newspapers—the Salt Lake Tribune and the Deseret News, both published in Salt Lake City, Utah, with general circulation throughout Utah, on May 6, 2000; The Spectrum, published in St. George, Utah, with circulation in Washington County, Utah, on April 28, 2000; and The Kingman Daily Miner, published in Kingman, Arizona, with circulation in Mohave County, Arizona, on May 9, 2000. No public hearing requests were made pursuant to the April 12, 2000, proposed rule. However, at the invitation of the Shivwits Band of the Paiute Tribe, the Washington County Commission, and the St. George Area Chamber of Commerce, we met with those groups respectively on May 3, 2000, May 18, 2000, and June 7, 2000, and answered and addressed the questions and concerns of those groups concerning the impact of the proposed listing on regional land use and urban development plans in the St. George area.

We received a total of five comments (one from private organization, two from a Federal agency, one from a State agency, and one from a local government) during the proposed rule's open comment period from April 12, 2000 to June 12, 2000. Three comments were in general agreement with and supportive of our proposal. One of these provided additional information on the status of the species and made suggestions to clarify our proposed rule. One comment was a request for continued consultation on their actions affecting one of these species. One comment raised a series of issues related to the listing of *Astragalus holmgreniorum* and *A. ampullarioides* and is discussed below. A summary of comments received in response to the proposed rule follows.

*Issue 1.* Will actions affecting unoccupied potential habitat of *Astragalus holmgreniorum* and *A. ampullarioides* invoke the need for formal interagency consultation under the provisions of section 7 of the Act?

Response—We do not consult on projects that do not affect listed species or their critical habitat. We have not yet delineated critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides*. Actions affecting only unoccupied, potential habitat for the species will not trigger formal consultation unless such areas are ultimately designated as critical habitat.

*Issue 2.* How will land exchanges for the Red Cliffs Desert Reserve (Mojave desert tortoise) impact these two species? Can BLM proceed with the exchanges? Is the land exchange subject

to formal consultation? Will the exchange be halted completely?

Response—The statement in the proposed rule concerning the impact of the Red Cliffs Desert Reserve on *Astragalus holmgreniorum* and *A. ampullarioides* referred to urban development in the local area in general. The presence of the tortoise reserve, established as the primary mitigation measure under the Washington County Habitat Conservation Plan, approved in 1996, will accelerate development in a southern direction from St. George and other surrounding cities. Thus, the reserve may hasten development in habitat occupied by both of these plant species. However, some land acquisition and protection associated with the reserve will improve recovery prospects for *A. ampullarioides*. Land exchanges are one mechanism used by the BLM to acquire tortoise habitat within the reserve. All administrative land exchanges are subject to section 7 interagency consultation under the Act. Land exchanges that could result in loss of habitat for either plant species will be evaluated, and neither the Service nor the BLM will approve any exchanges that jeopardize the future existence of either species. Currently, the BLM, as a matter of policy, does not exchange lands occupied by either *A. holmgreniorum* and *A. ampullarioides* for private or State lands within the boundaries of the Reserve. Land exchanges that do not adversely affect *A. holmgreniorum* and *A. ampullarioides* will proceed as normal.

**Issue 3.** Habitat conditions favorable to the growth of *Astragalus holmgreniorum* and *A. ampullarioides* are more widespread than the actual known populations. Listing should be delayed until the true extent of the populations is determined.

Response—There have been extensive surveys for both species within and far beyond their known habitat. While these species may occupy other currently unknown sites, it is unlikely that unknown sites would be of significant size to materially change the current status of either species.

#### Peer Review

In accordance with our policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we solicited the expert opinion of four appropriate and independent specialists regarding pertinent scientific or commercial data and assumptions relating to the supportive biological and ecological information for *Astragalus holmgreniorum* and *A. ampullarioides*. The purpose of this review is to ensure

that listing decisions are based on scientifically sound data, assumptions, and analyses, including input from appropriate experts and specialists. Three specialists responded to our request for peer review of this listing action and supported the listing and our analysis of the biological and ecological situation facing these species. In addition, two reviewers provided additional biological, ecological, and demographic information concerning these species. That information was incorporated into this final rule.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Act 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 *Astragalus ampullarioides* (Welsh) Welsh (Shivwits milk-vetch) and *A. holmgreniorum* Barneby (Holmgren milk-vetch) are as follows:

*A. The present or threatened destruction, modification, or curtailment of its habitat or range.* The entire population of *Astragalus holmgreniorum* and most of the population of *A. ampullarioides* are vulnerable to habitat loss and extirpation due to urban growth and development in the St. George area of Washington County, Utah. St. George is a rapidly growing city. The population of the St. George area has grown from about 48,000 in 1990 to over 75,000 in 1999, and is projected to double within the next 20 years. The construction of residential housing, commercial buildings, and recreational facilities has destroyed occupied and potential habitat of both species during the last 5 years (Harper 1997; Stubben 1997; R. Van Buren, pers. comm. 1998, 2000; K. Harper, pers. comm. 2000). The continued demand for land for urban expansion of Washington County communities threatens all populations of *A. holmgreniorum* and the central populations of *A. ampullarioides* (Harper 1997; Stubben 1997). Residential and commercial development, along with associated construction of new roads, highways, electric power transmission lines, pipelines, airports, residential and commercial buildings, recreational facilities such as golf courses, and maintenance of existing roads will

encroach on and threaten the habitat of both species.

Habitat degradation from ORV use is increasing within both species' habitats. Both *Astragalus holmgreniorum* and *A. ampullarioides* are in the same general area as the listed plant species *Arctomecon humilis* (dwarf bear-poppy), which has been severely impacted by ORV use and urban development (Harper 1997; R. Van Buren, pers. comm. 1998). The Utah Army National Guard conducts military training on State of Utah lands within the occupied habitat of *A. holmgreniorum* between the current urbanized center of St. George and the Utah-Arizona border (D. Johnson, Utah Army National Guard, pers. comm. 2000). This activity has destroyed individual *A. holmgreniorum* plants and has degraded the species' habitat (Van Buren, pers. comm. 2000).

Conservation measures to protect the recently listed Mohave Desert tortoise (*Gopherus agassizii*) population from development may have caused a change in urbanization patterns that may lead to an increase in urban development and encroachment into the habitat of *Astragalus holmgreniorum* and *A. ampullarioides* (Stubben 1997; Harper 1997; D. Pietrzak, BLM, St. George, Utah, pers. comm. 1993). Patterns of urban, commercial, and residential expansion north of St. George City were affected by conservation efforts for the Desert tortoise including the Washington County Habitat Conservation Plan. Significant areas of potential community growth in the St. George area, especially between the city and the Arizona border, are within the occupied habitat of *A. holmgreniorum* and *A. ampullarioides*.

The presence of the tortoise reserve, established as the primary mitigation measure under the Washington County Habitat Conservation Plan approved in 1996, will accelerate development in a southern direction from St. George and other surrounding cities. Thus, the reserve may hasten development in habitat occupied by both plant species (E. Owens, U.S. Fish and Wildlife Service, Salt Lake City, Utah, pers. comm. 2000).

In Utah, occupied *Astragalus holmgreniorum* and *A. ampullarioides* habitat occurs on Federal (BLM), State of Utah, Tribal (Shivwits Band of the Paiute Tribe), and private land. In Arizona, *A. holmgreniorum* is restricted to State of Arizona lands immediately adjacent to the Utah border. Private and State lands may be subject to land use changes such as an increase in urban development. Federal lands with populations of *A. holmgreniorum* may

be subject to exchange or sale to the States or private parties. The State of Utah had proposed to the BLM to acquire lands that harbor the largest portion of the *A. holmgreniorum* population in exchange for occupied desert tortoise habitat north of St. George in Washington County (Stubben 1997; D. Pietrzak, pers. comm. 1993). A private land developer has proposed to develop much of the Utah portion of the *A. holmgreniorum* habitat for a planned residential community. A major highway is proposed for construction through the *A. holmgreniorum* habitat between St. George and the Arizona border. A proposed planned community development near Harrisburg Junction has significantly reduced and has the potential to destroy one of the two central *A. ampullarioides* populations (Rosenberg Associates 1999). Another planned community development near Atkinville has significantly impacted the main *A. holmgreniorum* population, and projected community development south of Santa Clara has the potential to significantly impact the species' northwestern population (R. Bolander, pers. comm. 2000). An electric power transmission line is proposed to pass through the two western *A. ampullarioides* populations. A second electric power transmission line is proposed to pass through its eastern population. Gypsum mining operations occur adjacent to occupied *A. holmgreniorum* habitat south of St. George. An existing clay pit now being used as an unauthorized waste disposal area occurs adjacent to occupied *A. ampullarioides* habitat east of St. George. Both of these mining-related activities have the potential to destroy both *A. holmgreniorum* and *A. ampullarioides* habitat.

**B. Overutilization for commercial, recreational, scientific, or educational purposes.** *Astragalus holmgreniorum* and *A. ampullarioides* have no known commercial, recreational, or scientific use at this time. There is no evidence of over collection by botanists or horticulturists at this time.

**C. Disease or predation.** We have no information to indicate that diseases threaten the continued survival of either *Astragalus holmgreniorum* or *A. ampullarioides*.

*Astragalus ampullarioides* is extremely palatable to both wildlife and domestic livestock, but *A. holmgreniorum* is not. The two western *A. ampullarioides* populations currently are overgrazed, often to the point that reproduction is forgone due to the loss of the entire flower and fruit of virtually every plant in the population (Harper 1997, Harper and Van Buren 1998). In

addition, overgrazing over a period of time can cause a shift in the plant communities to favor faster growing invasive alien plants, which has a negative effect on both *A.*

*holmgreniorum* and *A. ampullarioides*.  
**D. The inadequacy of existing regulatory mechanisms.** No Federal or State laws or regulations directly protect *Astragalus holmgreniorum* and *A. ampullarioides* or their habitat. However, the BLM Manual 6840 states that "The BLM shall carry out management, consistent with multiple use, for the conservation of candidate species and their habitats and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as Threatened or Endangered." The BLM has incorporated its intent to conserve these species into the "Dixie Resource Area Proposed Management Plan and Final Environmental Impact Statement" (Bureau of Land Management 1998). However, the location of these species in areas valued for future urban expansion makes the long-term security of their habitat, even on Federal lands, uncertain. There is no legal protection for either species on State of Arizona or State of Utah lands or on private property.

**E. Other natural or manmade factors affecting its continued existence.** Past habitat disturbance has caused the proliferation of introduced annual weeds into both species' occupied habitat (Harper 1997, Van Buren and Harper 2000a, 2000b). Foxtail brome, cheatgrass, storks-bill, and African mustard are now the dominant species within the plant communities of both *Astragalus holmgreniorum* and *A. ampullarioides* (Stubben 1997; Harper and Van Buren 1998, 2000; Van Buren 1999). Both species are vulnerable to displacement by introduced weeds (Harper 1997; Harper and Van Buren 1998; Stubben 1997; Van Buren 1999). Concurrent with the establishment of these invasive species is further habitat modification and perhaps permanent change of the vegetative community caused by the introduction of fire into the Mojave Desert ecosystem. Cheatgrass and foxtail brome grow in densities and dry up sufficiently to carry fire over large areas. The native Mojave Desert vegetation is not adapted to a frequent fire regimen (R. Bolander, pers. comm. 2000).

Pollination of both *Astragalus holmgreniorum* and *A. ampullarioides* is a long-term concern. Both species are pollinated by native solitary ground-dwelling bees (V. Tepidendo, U.S. Agricultural Research Service, Bee Biology Laboratory, Utah State

University, Logan, Utah pers. comm. 2000; R. Bolander, pers. comm. 2000). Fragmented, isolated populations restrict pollinator exchange between occupied population sites. This situation may cause genetic isolation, which may potentially lead to inbreeding and local extirpation of isolated populations. Urban expansion and associated impacts may directly and indirectly affect pollinators through loss of pollinator habitat and increased pesticide use (R. Bolander, pers. comm. 2000).

Any factor preventing seed set or seed germination, in addition to natural abiotic factors (i.e., precipitation and temperature), will adversely affect both species' viability (R. Bolander, pers. comm. 2000). These factors include reduced pollination and weed competition.

Both species exhibit varying high and low population counts. However, trend data show that, even with the highs, the general total populations are declining (R. Bolander, pers. comm. 2000). A long-term trend study indicates a significant reduction in the population numbers of *A. holmgreniorum* at the BLM's monitoring plot on state land in Arizona (J. Anderson, pers. comm. 2000). Both species are relatively short-lived (about 4 years for *A. holmgreniorum* and 6 years for *A. ampullarioides*) and depend on soil seed banks to maintain the long-term viability of their populations (R. Bolander pers. comm. 2000; K. Harper pers. comm. 2000, R. Van Buren pers. comm. 2000).

Because of the low numbers of individuals, low number of populations, and restricted habitats of both *Astragalus holmgreniorum* and *A. ampullarioides*, these plants are vulnerable to human disturbances, which may increase the negative impacts of natural disturbances to populations of these species. The numbers of individuals and populations are sufficiently low that future losses may result in the loss of population viability. The extremely small and disjunct populations of *A. ampullarioides* may be vulnerable to a loss of genetic viability (Harper 1997; Harper and Van Buren 1998).

We have carefully assessed the best scientific and commercial information available concerning the past, present, and future threats faced by these species in finalizing this rule. Threats to *Astragalus holmgreniorum* and *A. ampullarioides*, including development of land for residential and urban use, habitat modification from human disturbances, competition with non-native plant species, and impacts from mining and grazing, imperil the

continued existence of these species. Much of the habitat where these species occur is suitable for development and for modification by mining and grazing, and is unprotected from these threats. Because of the high potential of these threats to result in the extinction of both species, the preferred action is to list *A. holmgreniorum* and *A. ampullarioides* as endangered. The Act defines an endangered species as one in danger of extinction throughout all or a significant portion of its range. Endangered status reflects the vulnerability of these species to factors that may adversely affect these species and their extremely limited habitat.

### Critical Habitat

Critical habitat is defined in section 3, paragraph (5)(A) of the Act as the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and specific areas outside the geographical area occupied by a species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Critical habitat designation directly affects only Federal agency actions through consultation under section 7(a)(2) of the Act. 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 a listed species or destroy or adversely modify its critical habitat.

Section 4(a)(3) of the Act, as amended, and our implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist: (1) The species is threatened by taking or other activity and the identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

In the proposed rule, we indicated that designation of critical habitat was not prudent for *Astragalus holmgreniorum* and *A. ampullarioides* because of a concern that publication of precise maps and descriptions of critical habitat in the **Federal Register** could increase the vulnerability of these species to incidents of collection and vandalism. We also indicated that designation of critical habitat was not prudent because we believed it would not provide any additional benefit beyond that provided through listing as endangered.

In the last few years, a series of court decisions have overturned Service determinations that designation of critical habitat for a variety of species would not be prudent (e.g., *Natural Resources Defense Council v. U.S. Department of the Interior* 113 F. 3d 1121 (9th Cir. 1997); *Conservation Council for Hawaii v. Babbitt*, 2 F. Supp. 2d 1280 (D. Hawaii 1998)). Based on the standards applied in those judicial opinions, we have reexamined the question of whether critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* would be prudent.

As with other species we list, we have the concern that unrestricted collection, vandalism, or other disturbances could be exacerbated by the publication of critical habitat maps and further dissemination of locational information. However, we have examined the evidence available for *Astragalus holmgreniorum* and *A. ampullarioides* and have not found specific evidence of taking, vandalism, collection, or trade of these species or any similarly situated species. Consequently, consistent with applicable regulations (50 CFR 424.12(a)(1)(i)) and recent case law, we do not expect that the identification of critical habitat will increase the degree of threat to these species of taking or other human activity.

In the absence of a finding that critical habitat would increase threats to these species, if any benefits would result from a critical habitat designation, then a prudent finding is warranted. In the case of both of these species, designation of critical habitat may provide some benefits. The primary regulatory effect of critical habitat is the section 7 requirement that Federal agencies refrain from taking any action that destroys or adversely modifies critical habitat. While a critical habitat designation for habitat currently occupied by these species would not be likely to change the section 7 consultation outcome because an action that destroys or adversely modifies such critical habitat also would be likely to result in jeopardy to these species, in

certain instances, section 7 consultation might be triggered only if critical habitat is designated. Examples could include some actions in unoccupied habitat or occupied habitat that may become unoccupied in the future. Designating critical habitat may provide some educational or informational benefits. Therefore, we find that critical habitat is prudent for both *Astragalus holmgreniorum* and *A. ampullarioides*.

As explained in detail in the Final Listing Priority Guidance for Fiscal Year 2000 (64 FR 57114), our listing budget is currently insufficient to allow us to immediately complete all of the listing actions required by the Act. We focus our efforts on those listing actions that provide the most conservation benefit. Deferral of the critical habitat designation for these species will allow us to concentrate our limited resources on higher priority critical habitat and other listing actions, without delaying the final listing decision for both *Astragalus holmgreniorum* and *A. ampullarioides*. We will develop a proposal to designate critical habitat for *Astragalus holmgreniorum* and *A. ampullarioides* as soon as feasible, considering our workload priorities and available funding. Unfortunately, for the immediate future, most of Region 6's listing budget must be directed to complying with numerous court orders and settlement agreements, as well as due and overdue final listing determinations.

### Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing can encourage and result in public awareness and conservation actions by Federal, State, Tribal (Shivwits Band of the Paiute Tribe), and local agencies, private organizations, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Funding may be available through section 6 of the Act for the States to conduct recovery activities. The protection required by Federal agencies and prohibitions against certain activities involving listed plants are discussed, in part, below.

Section 7(a) of the Act 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 proposed or

designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(1) of the Act requires Federal agencies to use their authorities to further the purposes of the Act by carrying out programs for listed species. 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 a listed species or destroy or adversely modify its designated critical habitat. If a Federal action may affect a listed species or its designated critical habitat, the responsible Federal agency must enter into formal consultation with us.

Considerable portions of the habitat of both *Astragalus holmgreniorum* and *A. ampullarioides* are on lands under Federal jurisdiction managed by the BLM. The BLM is responsible for ensuring that all activities and actions on lands that they manage are not likely to jeopardize the continued existence of *A. holmgreniorum* and *A. ampullarioides*. Such activities include grazing, mining, and recreational management on Federal lands. Proposed highway and power line projects within the habitat of both species will require Federal permits from the Federal Highway Administration and Federal Energy Regulatory Commission. These agencies, also, must ensure that actions which they permit are not likely to jeopardize the continued existence of both species. In addition, sections 2(c)(1) and 7(a)(1) of the Act require Federal agencies to use their authorities in furtherance of the purposes of the Act to carry out conservation programs for endangered and threatened species.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61 for endangered plants, will apply. These prohibitions, in part, make it illegal 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 in interstate or foreign commerce, or remove these species from areas under Federal jurisdiction. In addition, for plants listed as endangered, the Act prohibits the malicious damage or destruction on areas under Federal jurisdiction and the removal, cutting, digging up, damaging, or destruction of such plants in knowing violation of any State law or regulation, or in the course of a violation of State criminal trespass law. Certain exceptions to the prohibitions apply to

our agents and agents of State conservation agencies.

The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered and threatened plant species under certain circumstances. Such permits are available for scientific purposes and to enhance the propagation or survival of the species. We anticipate that few trade permits would be sought or issued for *Astragalus holmgreniorum* and *A. ampullarioides* because these species are not common in the wild and are unknown in cultivation.

It is our policy, published in the **Federal Register** (59 FR 34272) on July 1, 1994, to identify to the maximum extent practicable those activities that would or would not likely constitute a violation of section 9 of the Act if a species is listed. The intent of this policy is to increase public awareness of the effect of the species' listing on proposed and ongoing activities within its range. Collection of listed plants or activities that would damage or destroy listed plants on Federal lands are prohibited without a Federal endangered species permit. Such activities on non-Federal lands would constitute a violation of section 9 of the Act if they were conducted in knowing violation of State law or regulation, or in the course of violation of State criminal trespass law. Otherwise, such activities would not constitute a violation of the Act on non-Federal lands. Conducting commerce with this species is also prohibited.

Questions regarding whether specific activities, such as changes in land use, constitute a violation of section 9 should be directed to the Utah Field Office (see **ADDRESSES** section). Requests for copies of the regulations regarding listed species and inquiries about prohibitions and permits may be addressed to—Regional Director, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225-0486.

#### National Environmental Policy Act

We have determined that an environmental assessment, 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 Act, as amended. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

#### Paperwork Reduction Act

This rule does not contain any collections of information that require Office of Management and Budget (OMB) approval under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An information collection related to the rule pertaining to permits for endangered and threatened species has OMB approval and is assigned clearance number 1018-0094. This rule does not alter that information collection requirement. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number. For additional information concerning permit and associated requirements for endangered species, see 50 CFR 17.22.

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**Author**

The primary author of this proposed rule is John L. England (see **ADDRESSES** section).

**List of Subjects in 50 CFR Part 17**

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

**Regulation Promulgation**

For the reasons given in the preamble, we amend part 17, subchapter B of

chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—[AMENDED]**

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

**Authority:** 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend 17.12(h) by adding the following, in alphabetical order under FLOWERING PLANTS, to the List of Endangered and Threatened Plants:

**§ 17.12 Endangered and threatened plants.**

\* \* \* \* \*

(h) \* \* \*

Species		Historic range	Family	Status	When listed	Special rule
Scientific name	Common name					
FLOWERING PLANTS						
* <i>Astragalus ampullarioides</i> .	* Shivwits milk-vetch .....	* U.S.A. (UT) .....	* Fabaceae .....	* E	* 711	* NA
* <i>Astragalus holmgreniorum</i> .	* Holmgren milk-vetch ....	* U.S.A. (AZ, UT) .....	* Fabaceae .....	* E	* 711	* NA
* 	* 	* 	* 	* 	* 	* 

Dated: September 17, 2001.  
**Marshall P. Jones, Jr.,**  
 Acting Director, Fish and Wildlife Service.  
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