

CANDIDATE ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Ivesia webberi*

COMMON NAME: Webber ivesia

LEAD REGION: Region 1

INFORMATION CURRENT AS OF: February 2003

STATUS/ACTION:

New candidate

Continuing candidate

Non-petitioned

Petitioned - Date petition received: ____

90-day positive - FR date: ____

12-month warranted but precluded - FR date: ____

Is the petition requesting a reclassification of a listed species?

Listing priority change

Former LP: ____

New LP: ____

Latest date species first became a Candidate: June 13, 2002

Candidate removal: Former LP: ____

A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

F - Range is no longer a U.S. territory.

M - Taxon mistakenly included in past notice of review.

N - Taxon may not meet the Act's definition of "species."

X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Rosaceae (Rose Family)

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Nevada and California

CURRENT STATES/ COUNTIES/TERRITORIES/COUNTRIES OF OCCURRENCE:
Lassen, Plumas, and Sierra counties, California; Douglas and Washoe counties, Nevada

LEAD REGION CONTACT: Diane Elam (CNO), 916-414-6464; Scott McCarthy (RO), 503-231-6131

LEAD FIELD OFFICE CONTACT: Jody Fraser, Nevada Fish and Wildlife Office, 775-861-6300; Susan Moore, Sacramento Fish and Wildlife Office, 916-414-6630.

BIOLOGICAL INFORMATION:

Ivesia webberi is a low, spreading, perennial herb that occurs very infrequently in Lassen, Plumas, and Sierra counties in California, and in Douglas and Washoe counties, Nevada. The range of the species lies along the transition zone between the eastern edge of the northern Sierra Nevada and the northwestern edge of the Great Basin Desert (Witham 2000). This region is characterized by the climatic influences of high mountains within and adjacent to the high desert, with ponderosa and Jeffrey pine (*Pinus ponderosa* and *P. jeffreyi*, respectively) in the mountains and sagebrush steppe dominating the valleys (Witham 2000). The species occurs in immediate proximity to rapidly growing urban areas in the foothills of the Sierra and in the western Great Basin near Reno, Nevada.

Ivesia webberi is restricted to sites with sparse vegetation and shallow, rocky soils composed of volcanic ash or derived from andesitic rock. Occupied sites generally occur on mid-elevation flats, benches, or terraces on mountain slopes above large valleys and are devoid of colluvial (loose deposit of rock debris) accumulation from upslope. The species generally occurs between 1,365 to 1,814 meters elevation (4,480 and 5,950 feet). This vernal moist, but otherwise dry and rocky habitat is typically dominated by a wide variety of cushion-like perennial herbs with low sagebrush (*Artemisia arbuscula*) and squirrel-tail grass (*Elymus elymoides*) (Witham 1991, 2000). The unique soils and hydrology of the *I. webberi* sites may exclude competition from other species. The shrink-swell of the clayey subsoils favors taprooted perennials and shallow-rooted, early annuals. The clayey soils and early spring saturation tend to exclude typical Great Basin species (Witham 2000).

Extensive field surveys for *I. webberi* were conducted between 1990 and 1998 to verify and refine historical reports, locate any additional populations, and document the biology, ecology, and conservation status of the species (Witham 2000). These data, together with information obtained from surveys performed in support of the 2000 status report, documented one new and seven historic, extant populations in Nevada and seven historic, extant populations in California. One historic site in Nevada (Pyramid Lake) is presumed erroneous, and three historic populations in California (American Valley, Indian Valley, and Webber Lake) are presumed extirpated or erroneous. The 15 currently known occurrences are clustered in seven general locations covering about 75 hectares (ha) (185 acres (ac)). In Washoe County, Nevada, five of the eight populations are clustered around north Reno, near the Peavine and Raleigh Heights areas that are experiencing tremendous population growth. These sites were visited in May 2002 and continue to be subject to threats associated with urban expansion (J. Baggs, U.S. Forest Service (Forest Service), pers. comm., 2002). The Douglas County population is somewhat disjunct and occurs in the Pine Nut Mountains adjacent to U.S. Highway 395 on lands managed by the Bureau of Land Management (BLM) and private lands.

Four of the seven California populations occur in eastern Sierra County on Federal lands managed by the Humboldt-Toiyabe National Forest (HTNF) in and around Dog Valley. The type locality is in Sierra Valley, Plumas County, and two sites occur in Lassen County in Evans Canyon and Constantia (Witham 2000).

Surveys of approximately 1,619 ha (4,000 ac) of potential habitat in western Washoe County and in the Pine Nut Mountains in Douglas County, Nevada, documented no additional

populations of the species. An unknown amount of potential habitat remains unsurveyed in Nevada. However, field observations indicate the likelihood of discovering any significant populations is low. In California, the western rim of Upper Long Valley in Sierra County is the only area supporting high quality potential habitat that has not been surveyed (Witham 2000).

THREATS:

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

Threats to *I. webberi* generally include urban development, authorized and unauthorized roads, off-road vehicle activities and other dispersed recreation, livestock grazing and trampling, fire and fire suppression activities including fuels reduction and prescribed fires, and displacement by noxious weeds (Forest Service 2001). Evidence of impacts from these types of use has been documented at the majority of *I. webberi* populations (Witham 2000).

Development is currently the greatest threat to *I. webberi* populations on private lands. At the time of the 1997-1998 field surveys, sites supporting three of the eight known Nevada populations were identified for low-density housing development. A fourth site occurs adjacent to a recently developed high-density housing project and is subject to impacts associated with human use. Witham (2000) observed that three sites on private lands had been fenced perhaps to protect the species; however, the proximity to newly graded roads and development indicates that these sites are highly imperiled. Rapidly increasing residential development, commercial development, and infrastructure improvements around the Reno area are significant, imminent threats to five of the eight Nevada populations (Witham 2000; J. Baggs, pers. comm., 2002). At least three of the California populations are threatened by private or municipal development. Two different sites on private lands face a significant, imminent threat from development and maintenance of utilities. In addition, dispersed recreation by residents with immediate access to these areas continues to increase, resulting in disturbance and fragmentation of habitat (Witham 2000).

Most of the *I. webberi* populations occur on or adjacent to dirt roads that are prominent features of the eastern California and western Nevada landscape. Authorized and unauthorized roads present a serious threat to all of the populations on public lands as they contribute to increased off-road activity and habitat fragmentation. All but one of the extant populations, including the type locality in Sierra Valley, are affected by road development, maintenance, and associated off-road vehicle activity. This is considered a significant, imminent threat to six of the eight populations in Nevada and two of the California populations. Long-term population viability is at risk without focused planning of authorized roads, decommissioning of unauthorized roads, and the cooperation of land users (Witham 2000; J. Baggs, pers. comm., 2002).

On Federal lands, livestock grazing is the dominant resource use within the range of this species. While the relatively sparse, low vegetation of most *I. webberi* sites may not be optimal for grazing, the lack of topography makes these sites attractive for allotment operators to install various range modifications, which likely concentrate trampling (Witham 2000). At least two of the populations in Nevada and three of the populations in California are affected by grazing and associated activities (Forest Service 2001; Witham 2000). Heavy grazing by cattle and sheep

contributes to reduced vigor and potentially extirpation of this species. Plant size, number of leaf and flower stems, and number of viable fruit have been observed to be much reduced in areas that are heavily grazed compared to average plants (Forest Service 1992). Neither the Forest Service nor BLM include specific conservation measures for this species in grazing permits for allotments where this species occurs (Witham 2000; Dean Kinerson, BLM, pers. comm., 2002).

Ivesia webberi habitats are generally conducive to establishment of staging areas for fire suppression activities because they are relatively flat and accessible (Witham 2000). Under these circumstances, plants are trampled, soils are disturbed or compacted, and the probability of an invasion by nonnative species is high. Evidence of impacts from these activities has been observed at two populations in Nevada and two populations in California (Forest Service 2001; Witham 2000). As the urban interface continues to expand into wildland areas, fire suppression activities required to protect human life and property will intensify, increasing the threats to the species and its habitat (Witham 2000).

Generally, undisturbed *I. webberi* habitat is resistant to invasion by nonnative species. However, on sites where range improvements and/or disturbance associated with recreation or development have occurred, cheatgrass (*Bromus tectorum*) and medusahead (*Taeniatherum caput-medusae*) are becoming established and may eventually displace native plant species (Witham 2000; Forest Service 2001).

B. Overutilization for commercial, recreational, scientific, or educational purposes.

No known threats.

C. Disease or predation.

Ivesia webberi is not known to be palatable to livestock or wildlife. Other than livestock trampling of the plants and habitat discussed above, no disease or herbivory has been observed at any of the populations (Witham 2000).

D. The inadequacy of existing regulatory mechanisms.

Prior to 1996, *I. webberi* was designated as a category 2 candidate for listing under the Endangered Species Act, as amended (Act). In 1996, we revised the method by which species are categorized to strengthen the scientific basis of the endangered species program. The revised candidate list replaced a system that identified nearly 4,000 candidate species under three categories. Under the revised list, only those species for which enough information to support a listing proposal existed (category 1) were maintained as candidates (61 FR 7595). As a category 2 candidate, *I. webberi* was removed from candidate status because of the lack of sufficient information to support a proposal for listing at that time.

The BLM and Forest Service have designated *I. webberi* as a sensitive species in both California and Nevada (Weixelman and Atwood 1991; D. Kinerson, pers. comm. 2002). Both the BLM and Forest Service are directed to manage for sensitive species and their habitats and consider

these resources during project planning (BLM Manual 6840 and Forest Service Manual 2670 et seq.); however, no specific management guidelines to ensure the conservation of this species currently exist.

Because of a narrowly restricted range and existing threats, the participants of the 2000 and 2001 Nevada Rare Plant Workshop, sponsored by the Nevada Native Plant Society, recommended that the State of Nevada consider the species for listing as critically endangered under Nevada Revised Statutes (NRS) 527.270 et seq. If the species were to be listed under the NRS, permits for the disturbance of habitat or taking of individuals would have to be obtained from the Nevada Division of Forestry. The adequacy of this law depends greatly on informed and cooperative landowners and land managers or some form of deterrent enforcement, which the current NRS do not articulate. *Ivesia webberi* is designated as threatened by the Nevada Native Plant Society, and is on the California Native Plant Society's (CNPS) 1B list (plants considered rare, threatened, or endangered in California and elsewhere). All plant species on the CNPS 1B list meet the definitions under the Native Plant Protection Act (Sec. 1901, Chapter 10) and the California Endangered Species Act (Secs. 2062 and 2067) of the California Department of Fish and Game Code, and are eligible for State listing. The species is not listed by California under its State Endangered Species Act, but plants on the CNPS 1B list must be fully considered during the environmental documentation process under the California Environmental Quality Act (CEQA) (Skinner and Pavlik, eds. 1994). However, CEQA only requires disclosure of a project's impacts on the species; it does not provide protective management for *I. webberi*.

E. Other natural or manmade factors affecting its continued existence.

Ivesia webberi may be vulnerable to stochastic perturbations, natural climatic shifts, or unprecedented climatic extremes due to its small, localized populations and its apparent adaptation to unusual edaphic conditions (Witham 2000). The population biology of this species remains relatively unstudied, and the importance of insect pollinators to successful reproduction is unknown. Therefore, fragmentation or losses of habitat through any of the threats discussed above may affect the long-term viability of potential pollinators as well as the species itself.

FOR RECYCLED PETITIONS: N/A

- a. Is listing still warranted? _____
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions? _____
- c. Is a proposal to list the species as threatened or endangered in preparation?

d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LAND OWNERSHIP:

The 8 Nevada populations of *I. webberi* occur on a total of about 12 ha (30 ac) on Federal lands managed by the BLM, Carson City District (0.9 percent), HTNF (69.8 percent), and private lands (29.3 percent). The 7 California populations occur on a total of about 65 ha (160 ac) on lands managed by the HTNF (84.9 percent), BLM, Susanville District (0.5 percent), California Department of Fish and Game (0.1 percent), and private or county lands (14.5 percent).

PRELISTING:

Currently, no conservation strategies or agreements exist for *I. webberi*. The Forest Service is in the early stages of developing a strategy to protect this species on its lands. The intent is to produce a conservation agreement which may include identifying parcels for potential land exchanges and developing and implementing a monitoring program across the species' range. A conservation strategy for *Ivesia aperta* var. *canina* (Dog Valley ivesia) is in draft form, and in this geographic area, *I. aperta* var. *canina* and *I. webberi* are sympatric. Therefore, despite differences in habitat preferences between the two species, the final conservation strategy may benefit the Dog Valley population of *I. webberi*.

REFERENCES:

- Duron, Wendie. 1990. Survey of Historic Locations for *Ivesia webberi* on the Plumas and Tahoe National Forests. Unpublished report prepared under a challenge cost share project between The Nature Conservancy and the Plumas and Tahoe National Forests. 18 pp. plus appendices.
- Skinner, M.W. and B.M. Pavlik, eds. 1994. Inventory of Rare and Endangered Vascular Plants of California. Special Publication No. 1 (Fifth Edition). California Native Plant Society, Sacramento, California. 338 pp.
- U.S.D.A. Forest Service. 1992. Interim Management Guide for *Ivesia aperta* var. *aperta*, *Ivesia aperta* var. *canina*, *Ivesia sericoleuca*. Pacific Southwest and Intermountain Regions: Tahoe, Plumas, and Toiyabe National Forests. 24 pp.
- U.S.D.A. Forest Service. 2001. Biological Assessment for the Amendment to the Land and Resource Management Plan, Humboldt-Toiyabe National Forest for the Northern Sierra Area. Carson Ranger District, Humboldt-Toiyabe National Forest. 41 pp.
- Weixelman, D. and D. Atwood. 1991. Toiyabe National Forest sensitive plant field guide. U.S.D.A. Forest Service, Intermountain Region. Ogden, Utah.
- Witham, Carol W. 1991. Focused Field Survey: *Ivesia webberi*, Webber's Ivesia, Toiyabe

National Forest, Sierra County, California, and Washoe County, Nevada, June 3-27, 1991. Unpublished report prepared for the Toiyabe National Forest. 17 pp. plus appendices.

Witham, Carol W. 2000. Current Knowledge and Conservation Status of *Ivesia webberi* Gray (Rosaceae), the Webber Ivesia, in Nevada. Unpublished status report prepared for the Nevada Natural Heritage Program and U.S. Fish and Wildlife Service. 33 pp. plus appendices.

LISTING PRIORITY (* after number)

THREAT

Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5*
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

Rationale for listing priority number:

Magnitude: Observations in 2002 confirmed that direct and indirect impacts to *I. webberi* specifically from urban development and off-highway vehicle activity remain high and continue to increase. The expanding human population and associated activities mostly around the Reno area in Nevada poses the greatest threat to this species because of the proximity of the plant populations to the urban fringe. *I. webberi* is currently being considered for State-listing as critically endangered by the Nevada State Forester, and unless actions are taken to eliminate further habitat losses and degradation, the Service may evaluate the need to list the species under the Act.

Imminence: Threats to *I. webberi* from development, off-highway vehicle activity, and other land uses remain non-imminent at this time; however, these types of uses are becoming more of a concern as the human population expands. Proposals for new residential and commercial development are on the rise in areas immediately adjacent to occupied and potentially suitable habitat for *I. webberi*. These and other ongoing activities within the urban fringe continue to impact the species and its habitat. State listing of this species would provide necessary protection through the permitting process and potentially prevent these threats from becoming imminent.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Steve Thompson _____ March 6, 2003 _____
Acting Regional Director, Fish and Wildlife Service Date

Concur: _____
Director, Fish and Wildlife Service Date

Do not concur: _____
Director, Fish and Wildlife Service Date

Director's Remarks: _____

Date of annual review: February 2003
Conducted by: _____

Comments: _____

