

SENTRY MILK-VETCH
(Astragalus cremnophylax var. cremnophylax)

STATUS: Endangered (55 FR 50184, December 5, 1990) without critical habitat.

SPECIES DESCRIPTION: A member of the pea family (Fabaceae), sentry milk-vetch is usually less than 2.5 cm (1 in) high and forms a mat 2.5-25.0 cm (1-10 in) in diameter. The short, creeping stems have compound leaves less than 1 cm (0.4 in) long and composed of 5-9 tiny leaflets. The fruit is obliquely egg-shaped and densely hairy. Pale purple flowers are 0.5 cm (0.2 in) long and appear from late April to early May. Seeds are set in late May-early June. The plants appear to be long lived and have a thick tap root that penetrates the limestone surface to reach a more constant source of moisture.

HABITAT: Sentry milk-vetch grows on a white layer of Kaibab limestone with little (less than 1.2 cm (0.5 in)) or no soil, in an unshaded opening in the piñon-juniper-cliffrose plant community above 1,219 m (4,000 ft) elevation. In these openings, sentry milk-vetch is the co-dominant plant with rock mat (*Petrophytum caespitosum*).

RANGE: Current: The two previously known populations of this variety occur on the South Rim of the Grand Canyon. A third population on the North Rim was recently discovered. A historic record indicates the variety may have occurred where the El Tovar hotel is presently located. Known populations occur in Coconino County, Arizona.

Potential: Open areas of the limestone pavement within the piñon-juniper-cliffrose plant community along the South Rim of the Grand Canyon or the east rim of Marble Gorge.

REASONS FOR DECLINE/VULNERABILITY: The largest population of this variety is vulnerable to threats because fewer than 500 individuals occupy an area less than 0.4 ha (1 acre). The variety is threatened by trampling from park visitors. General habitat degradation (including soil erosion) is occurring in the largest population due to heavy foot traffic which occurred in the past.

LAND MANAGEMENT/OWNERSHIP: National Park Service and possibly the Navajo Nation.

NOTES: The National Park Service and Fish and Wildlife Service are studying the demographics of the species. In the spring of 1990, the Grand Canyon National Park constructed a wooden fence to exclude visitors from the site. The fence has effectively removed most of the trampling at the site but the population continues to decline. Protected by the Arizona Native Plant Law.