

## CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Transfer *Dudleya traskiae* from Appendix I to Appendix II.

B. Proponent

The United States of America.

C. Supporting statement1. Taxonomy

1.1 Class: Dicotyledoneae

1.2 Order: Rosales

1.3 Family: Crassulaceae

1.4 Species: *Dudleya traskiae* (Rose) Moran

1.5 Scientific synonyms: *Stylophyllum traskiae* Rose

1.6 Common names: English: Santa Barbara Island dudleya, Santa Barbara Island liveforever, Liveforever  
French:  
Spanish:

1.7 Code numbers:

2. Biological parameters

The genus *Dudleya* consists of 26 species and 24 infraspecific taxa; all are native to western North America (Kartesz 1999). *Dudleya traskiae* is a succulent, perennial herb with pentamerous flowers: five petals and carpels or follicles, and ten stamens. The flowering stems arise from the axils or basal rosettes. Clusters of 20-100 rosettes per plant are typical, with 25-35 leaves per rosette. The rosette leaves are 4-15 cm long, 1-4 cm wide, and 4-6 times broader than thick. The oblong to oblong-lanceolate leaves are acute to subacute at the tip and frequently concave above (Fish and Wildlife Service, 1985).

*D. traskiae* generally blooms from April to May, although it occasionally will flower as early as mid-February (Moran, 1978 as cited in Fish and Wildlife Service, 1985) through July depending on weather (National Information Services Corporation, 2002). Fruit is produced in July with seed and fruit dispersal occurring from July to September (National Information Services Corporation, 2002). Annual rainfall is from November through April (dependent upon the specific year) (National Information Services Corporation, 2002); there is no natural source of water on the island.

## 2.1 Distribution

*Dudleya traskiae* is endemic to Santa Barbara Island, a one-square-mile island of gentle slopes bordered on all sides by steep cliffs. The rocky, precipitous cliffs of the island's perimeter support the greatest number of *Dudleya traskiae*. However, the species is also found within several canyons on rocky outcrops where vegetation is sparse and plants are restricted to thin, poorly developed soils. Individual plants occur on flat to near-vertical slopes facing east, southeast, and southwest.

However, three individual plants have been located on a north-facing slope, which retains more moisture through the wet season, and does not receive the high summer solar radiation of other slopes (National Information Services Corporation, 2002).

The historical distribution of *D. traskiae* on the island is unknown other than in general terms. The species probably occurred throughout the major canyons on the eastern portion of the island and along the coastal areas on the southwestern and southern portion of the Island. The island has suffered extensive damage from farming and grazing, and it is assumed that this damage included a reduction in the range of the species (National Information Services Corporation, 2002).

## 2.2 Habitat availability

Little is known of the specific habitat requirements of *D. traskiae*. Sites occupied by *D. traskiae* are hot and dry, with high solar radiation. Data analyses of the descriptive features of the habitat indicate that bare rock and soil, annual grasses (exotic and native species), coastal cholla (*Opuntia prolifera*), boxthorn (*Lycium californica*), and the introduced crystalline iceplant (*Mesembryanthemum crystallinum*) are the most significant habitat components (National Information Services Corporation, 2002).

## 2.3 Population status

The last known systematic study of *D. traskiae* was conducted between 1985 and 1987 by Ronilee Clark. Clark sampled 10 of the 11 known occurrences of the species on the island over a three-year period, and estimated the number of individuals to be more than 350. Clark noted an increase in seedling recruitment during good rainfall years, but higher seedling mortality during drought years. She concluded that, although the structure of the population was dynamic, the number of plants remained essentially stable over that period (Clark, 1989). The status of *D. traskiae* in 1999 was reported as stable (California Department of Fish and Game, 2002). Furthermore, anecdotal evidence from botanists and ecologists indicates that, since the end of Clark's study [in 1987], recruitment of *D. traskiae* has been positive (Setnicka, 2002).

*D. traskiae* is ranked as Critically Imperiled on a global, national, and state level by NatureServe (<http://www.natureserve.org>). The species is also listed as Endangered by the IUCN-World Conservation Union (Walter and Gillett, 1998).

## 2.4 Population trends

In 1970, this species was feared extinct; however, a few individual plants were discovered in 1975. A number of factors in the land-use history of Santa Barbara Island may have contributed to the near-demise of *D. traskiae*, including ranching, farming (and associated use of heavy equipment), and the introduction of exotic herbivores, goats and more importantly rabbits. Domestic rabbits were introduced on the island, first in approximately 1915 by a rancher-farmer and again by the U.S. Navy, which occupied the island for a short time in the 1940s (National Information Services Corporation, 2002).

The abundance of *D. traskiae* on the island prior to and during the time of high rabbit densities is not known. Collection data for *D. traskiae* are sparse, and with the exception of the initial discovery of the species in 1901, do not include collections prior to extensive farming use and feral animal introductions. Data representing collections from the late 1930s indicate that *D. traskiae* was never abundant on the island, and as today, was restricted to rocky slopes. It is unknown if the distribution as deduced from historical collections and present observations represents an artifact of herbivory and agricultural development or an ecological limitation of physiology or dispersal of *D. traskiae* (National Information Services Corporation, 2002).

## 2.5 Geographic trends

*Dudleya traskiae* is endemic to Santa Barbara Island.

## 2.6 Role of the species in its ecosystem

*D. traskiae* is an associate within the plant communities defined as maritime cactus scrub and the sea-cliff phase of the coastal bluff community. Succession and stability in these plant communities is at present unknown. Some authors believe that the cactus scrub community is successional to the coastal sage scrub community; however, others disagree with that assessment. Little is known of the floral composition of Santa Barbara Island before European influence, and considering the land-use history of the island, it is not possible to assume the present-day condition as even close to natural (National Information Services Corporation, 2002).

## 2.7 Threats

Ronilee Clark (1989) identified five factors that may limit population growth of *D. traskiae*: 1) the production of viable seed, 2) seed herbivory, 3) seed dispersal, 4) herbivory of seedlings by native deer mice and owl moth larvae, and 5) seedling mortality from drought. National Park Service botanists have suggested additional threats to *D. traskiae* may come from human-induced climatic change and competition from exotic vegetation. In the latter case, the threat may not be from direct competition but from the ability of the exotic vegetation (i.e., non-native annual grasses) to prevent expansion of *D. traskiae* beyond the rocky, coastal bluff habitat it primarily occupies (Setnicka, 2002).

## 3. Utilization and trade

### 3.1 National utilization

Artificially propagated specimens can be found for sale in various cactus and succulent nurseries in California (Trager, 2002). Members of *Dudleya* have attractive silvery leaves and are valued by plant collectors for their use in rock gardens, and as ornamental pot plants. This species is being grown and propagated vegetatively for future introductions at some botanical gardens, such as the Huntington Botanical Gardens (Trager, 2002).

### 3.2 Legal international trade

The WCMC trade database contains the following trade data for *Dudleya* spp. (no species names were recorded).

1984: 1 specimen from Mexico to the United States of America  
1985: 2,641 specimens (artificially propagated) from France to Switzerland  
1986: 1 specimen from Mexico to the United States of America  
1990: 7 specimens from Mexico to the United States of America

The U.S. CITES Annual Report data show no exports of *D. traskiae* from 1994 to 2000 (U.S. Fish and Wildlife Service, 2002).

### 3.3 Illegal trade

There is no evidence of illegal international trade in wild-collected specimens from the United States of America. The National Park Service is also unaware of any legal or illegal collecting efforts of *D. traskiae* (Setnicka, 2002).

### 3.4 Actual or potential trade impacts

Various members of the genus *Dudleya* are artificially propagated as ornamental plants in the United States and elsewhere. International trade in *Dudleya* has only been recorded at the genus level

(see 3.2) since the species was listed in Appendix I. The transfer of *D. traskiae* to Appendix II may encourage illegal collection of specimens from the wild, although we believe the likelihood of such an event to be low.

### 3.5 Artificial propagation for commercial purposes (outside country of origin)

Not known at this time. However, as with many other *Dudleya* species, *D. traskiae* is reported to be easy to artificially propagate by cuttings (Trager, 2002).

## 4. Conservation and Management

### 4.1 Legal status

#### 4.1.1 National

*D. traskiae* was designated an Endangered species in April 1978 under the U.S. Endangered Species Act of 1973, as amended. This species only occurs on Santa Barbara Island, part of the Channel Islands National Park managed by the National Park Service of the U.S. Department of the Interior. Because of this designation, it receives a high level of protection under U.S. law.

The National Park Service is required by the Endangered Species Act of 1973 to conserve endangered and threatened species and their critical habitats and to avoid actions that may jeopardize the listed species' survival. By policy, the National Park Service also protects species that are listed by states or rare in states.

The Santa Barbara Island liveforever was also listed as endangered by the State of California in November 1979 under the Native Plant Protection Act. Under this California law, an endangered species means "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease."

This species is protected by the U.S. Lacey Act, which makes it unlawful to possess any wild plant (including roots, seeds, and other parts) that is indigenous to any State and which is either listed in an appendix to the Convention on International Trade in Endangered Species of Wild Fauna and Flora, or listed pursuant to any State law that provides for the conservation of species threatened with extinction. According to the Act it is unlawful to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign commerce any wild plant (including roots, seeds, and other parts) taken, possessed, transported, or sold in violation of any State law or regulation. It is also unlawful to import, export, transport, sell, receive, acquire, or purchase any wild plant (including roots, seeds, and other parts) taken or possessed in violation of any U.S. law, treaty, or regulation or in violation of Indian tribal law.

#### 4.1.2 International

*D. traskiae* has been listed in Appendix I of CITES since 1983.

### 4.2 Species management

#### 4.2.1 Population monitoring

The U.S. Fish and Wildlife Service is responsible for the management, recovery, listing status, law enforcement, and the protection of this species. A Recovery Plan for *D. traskiae*

was approved in 1985. The prime objectives of the Recovery Plan are to secure the Santa Barbara Island liveforever in a vigorous self-sustaining condition, expand the distribution to include 95 percent of the suitable habitat, and eventually delist the species (U.S. Fish and Wildlife Service, 1985).

#### 4.2.2 Habitat conservation

The National Park Service's fundamental purpose is to conserve the Park's natural scenery and wildlife, and to provide for the longevity of the park for future generations.

The U.S. Fish and Wildlife Service's Recovery Plan for *D. traskiae* states that, when 50 percent of the suitable habitat is occupied by individual plants that are self-sustaining populations, reclassification of the species to threatened can be considered (U.S. Fish and Wildlife Service, 1985).

#### 4.2.3 Management measures

The National Park Service is responsible for law enforcement and protection of *D. traskiae* within the Channel Islands National Park, and must also conduct plant surveys, inventories, and monitoring, and protect listed species' habitats. Land management practices on the island include restricting visitor use to a designated trail system and the removal of all exotic herbivores. These actions have to reduced disturbance within the species' habitat to low levels; current disturbances are attributed only to natural causes (National Information Services Corporation, 2002).

### 4.3 Control measures

#### 4.3.1 International trade

International trade does not appear to be a factor affecting the status of the species at this time. There have been no applications for export of wild-collected specimens of this species in the last five years. In addition, there is no evidence that trade is likely to occur as a result of transferring this species to Appendix II.

#### 4.3.2 Domestic measures

Collection of plants from the wild on National Park Service lands is strictly prohibited. Furthermore, the species is listed as Endangered under the U.S. Endangered Species Act, and is fully protected because it occurs on Federal lands.

### 5. Information on Similar Species

There are approximately 50 members of this genus (Kartesz 1999). *Dudleya stolonifera* is listed in CITES Appendix II.

### 6. Other Comments

*D. traskiae* was proposed for downlisting by Switzerland, as the Depositary Government for CITES, at COP11 in 2000. At that time, the proposal was withdrawn as a result of discussions with the U.S. delegation, which requested additional time to review the status of the species.

The Scientific Authority of the United States of America solicited public comments via a public notice (U.S. *Federal Register* Vol. 66, No. 113, 2001). Consultation letters were also sent to appropriate State and Federal agencies in the state of California where this species occurs.

7. Additional Remarks

The Plants Committee believes that this species does not qualify for Appendix I (although *D. traskiae* is considered rare based on a very small population size), in particular because international trade appears not to exist. The main threats to the species are local and do not appear to be related to collection from the wild or trade. Transfer to Appendix II, in accordance with the provisions of Annex 4 of Resolution Conf. 9.24, would be appropriate and would provide for continued protection and monitoring of trade under the provisions of the Convention.

8. References

- Clark, R.A. and W.L. Halvorson. 1989. Final Report: Status of the Endangered and Rare Plants on Santa Barbara Island Channel Islands National Park. Ventura, CA. 55pp.
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- Moran, R.V. 1978. Resurrection of *Dudleya traskiae*. *Fremontia* 5 (4):37-38.
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