

"frequent. . . from the north shore to the southwest portion of the island" (Hochberg *et al.* 1980a). A total of 14 historical locations are known from herbarium records. In 1980, eight of these populations were relocated (Hochberg *et al.* 1980b); in 1991, individuals were found at six of these locations, and none were found at five other locations (Klinger 1994b). In 1993, no individuals were found at any of the 14 known locations. Survey reports indicate that, in addition to abundant rainfall that may have increased competition from alien grasses, rooting by feral pigs was observed at all 14 locations (Klinger 1994b).

*Thysanocarpus conchuliferus* occurs on rocky outcrops on ridges and canyon slopes, and is associated with a variety of herbs, ferns, grasses, dudleya, and *Selaginella* (Santa Barbara Botanical Garden 1994). Threats to *Thysanocarpus conchuliferus* are soil loss, habitat alteration and predation resulting from feral pig rooting. In favorable years, competition with luxuriant alien grasses may also constitute a threat (Klinger 1994b). Because of the small numbers of isolated populations and individuals, the plant is also vulnerable to stochastic extinction by such events as storms, drought, landslide, or fire. The small numbers of populations and restricted number of individuals also make the taxon vulnerable to reduced reproductive vigor.

#### Previous Federal Action

Federal action on these plants began as a result of section 12 of the Endangered Species Act of 1973, which 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. In that document, *Arabis hoffmannii*, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Galium buxifolium*, *Gilia tenuiflora* ssp. *hoffmannii*, and *Berberis pinnata* ssp. *insularis* were considered to be endangered, and *Dudleya nesiotica* and *Malacothamnus fasciculatus* var. *nesiotica* (as *Malacothamnus fasciculatus*) were considered to be threatened. The Service published a notice in the July 1, 1975, **Federal Register** (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (petition provisions are now found in section 4(b)(3) of the Act) and its intention thereby to review the status of the plant taxa named therein. On June 16, 1976,

the Service published a proposal in the **Federal Register** (42 FR 24523) to determine approximately 1,700 vascular plant species to be endangered species pursuant to section 4 of the Act. *Dudleya nesiotica* was included in the June 16, 1976, **Federal Register** document.

General comments received in relation to the 1976 proposal were summarized in an April 26, 1978, **Federal Register** publication (43 FR 17909). The Endangered Species Act Amendments of 1978 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. In the December 10, 1979, **Federal Register** (44 FR 70796), the Service published a notice of withdrawal of the portion of the June 6, 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 *Arabis hoffmannii*, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Dudleya nesiotica*, and *Malacothamnus fasciculatus* var. *nesiotica* as Category 1 taxa. Category 1 taxa are those for which the Service has on file substantial information on biological vulnerability and threats to support preparation of listing proposals. *Arctostaphylos confertiflora* and *Galium buxifolium* were included as Category 2 taxa. Category 2 taxa are those for which data in the Service's possession indicate listing is possibly appropriate, but for which substantial data on biological vulnerability and threats are not currently known or on file to support proposed rules. On November 28, 1983, the Service published in the **Federal Register** a supplement to the Notice of Review (48 FR 53640), in which *Arabis hoffmannii* was listed as a Category 1\* taxon, the asterisk indicating that the species is believed to be extinct. In the same notice, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Dudleya nesiotica*, *Helianthemum greenei*, *Heuchera maxima*, *Berberis pinnata* ssp. *insularis*, *Malacothamnus fasciculatus*, *Phacelia insularis* var. *insularis*, and *Thysanocarpus conchuliferus* were included as Category 2 candidates.

The plant notice was revised again on September 27, 1985 (50 FR 39526). In that notice, all taxa maintained their previous status. On February 21, 1990 (55 FR 6184), the plant notice was again revised. In this notice, *Arabis hoffmannii* was included as a Category 1 candidate, as individuals of this taxon had been rediscovered since the

previous Notice of Review.

*Arctostaphylos confertiflora*, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Dudleya nesiotica*, *Galium buxifolium*, *Gilia tenuiflora* ssp. *hoffmannii*, *Helianthemum greenei*, *Heuchera maxima*, *Berberis pinnata* ssp. *insularis*, *Malacothamnus fasciculatus*, *Phacelia insularis* var. *insularis*, and *Thysanocarpus conchuliferus* were included as Category 2 candidates. *Malacothrix indecora* was included in the February 21, 1990, notice for the first time as a Category 2 candidate.

The plant notice was revised on September 30, 1993 (58 FR 51144). In this notice, *Arabis hoffmannii*, *Arctostaphylos confertiflora*, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Galium buxifolium*, *Gilia tenuiflora* ssp. *hoffmannii*, *Berberis pinnata* ssp. *insularis*, *Malacothamnus fasciculatus* var. *nesioticus*, *Malacothrix indecora*, *Phacelia insularis* var. *insularis*, and *Thysanocarpus conchuliferus* were included as Category 1 candidates. *Dudleya nesiotica*, *Helianthemum greenei*, and *Heuchera maxima* were included as Category 2 candidates; *Malacothrix squalida* was included for the first time as a Category 2 candidate. *Dudleya nesiotica*, *Helianthemum greenei*, *Heuchera maxima*, and *Malacothrix squalida* are being included in this proposal based on a more thorough review of existing information, and additional information that was brought to the attention of the Service by Steve Junak, botanist at Santa Barbara Botanic Garden. *Dudleya* sp. nov. "East Point" is being included in this proposal on the basis of new published information concerning its distinctness as a taxon and a review of existing biological information that indicates the species should be elevated to Category 1 status and that listing is warranted.

Section 4(b)(3)(B) of the Act requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Arabis hoffmannii*, *Castilleja mollis*, *Dudleya blochmaniae* ssp. *insularis*, *Dudleya nesiotica*, *Galium buxifolium*, *Gilia tenuiflora* ssp. *hoffmannii*, *Berberis pinnata* ssp. *insularis*, and *Malacothamnus fasciculatus* var. *nesioticus* because the 1975 Smithsonian report had been accepted as a petition. On October 13, 1983, the Service found that the petitioned listing of these species was warranted, but precluded by other