

high potential that one or more of these populations will be eliminated by normal or random adverse events, such as fires and nonnative plant invasions (Hawaii and Pacific Plant Recovery Committee (HPPRCC) 1994; Luijten *et al.* 2000; Mangel and Tier 1994; Pimm *et al.* 1998; Stacey and Taper 1992). We conclude that designation of adequate suitable habitat for 8 to 10 populations as critical habitat is essential to give most species a reasonable likelihood of long-term survival and recovery, based on currently available information. Each recovery plan states that these recovery goals will be revised as more specific information becomes available for each species.

(6) *Comment:* One peer reviewer commented that we should be wary of making propagation or reintroduction decisions based on the preservation of interpopulational genetic diversity. Observed or measurable genetic diversity is always at neutral loci, which gives absolutely no indication of differences in relative fitness. Another peer reviewer asked if the consequences of small, isolated populations on genetic drift or inbreeding have been addressed, *e.g.*, through occasional gene flow.

*Our Response:* Many of the species have been reduced to such low numbers that the recovery plans identify propagation and reintroduction as a key step. While we do not have direct evidence for most species to indicate that reduced reproductive vigor or inbreeding are problems, we believe they should be considered, based on current conservation biology theory and practice. This is particularly important to consider when developing a propagation and reintroduction program, to ensure that recovery efforts do not cause or exacerbate genetic issues. While measures of genetic diversity do not directly measure relative fitness, it is reasonable to assume that the two are correlated. The issue of gene flow and genetic drift will be addressed through research actions identified as needed in the recovery plans.

(7) *Comment:* The proposal failed to contain the total of historically known listed plants, and therefore failed to propose critical habitat for all listed plants Statewide. About 10 percent of the historically known listed endangered plant species from the Hawaiian Islands are missing from the proposals. The following Oahu plants are listed as endangered, but not included in proposed critical habitat designations: *Abutilon menziesii*, *Achyranthes splendens* var. *rotundata*, *Caesalpinia kawaiensis*, *Chamaesyce skottsbergii* var. *skottsbergii*, *Panicum*

*fauriei* var. *carteri*, *Scaevola coriacea*, and *Scheidea adamantis*. It is unclear why critical habitat was not discussed with respect to *Abutilon menziesii*, *Achyranthes splendens* var. *rotundata*, *Caesalpinia kawaiensis*, *Chamaesyce skottsbergii* var. *skottsbergii*, and *Gardenia brighamii*. For example, the recovery plan for *G. brighamii* specifically calls for the establishment of three populations on Oahu. This is a serious concern since the proposed rule states "the U.S. Fish and Wildlife Service proposes critical habitat for 99 of the 101 plant species known historically from the island of Oahu that are listed under the ESA." This statement is incorrect. The above-mentioned species are found on Oahu, they are listed under the ESA, and they are not addressed in the proposed rule.

*Our Response:* We have corrected the statement cited above in this final rule. The following species were not part of the 1998 court order and subsequent stipulations, and therefore were not included in this rulemaking: *Abutilon menziesii*, *Achyranthes rotundata* (currently *Achyranthes splendens* var. *rotundata*), *Euphorbia skottsbergii* var. *kalaeloana*, *Gardenia brighamii*, *Mezouneuron kawaiense* (currently *Caesalpinia kawaiensis*), *Scaevola coriacea*, and *Scheidea adamantis*. Critical habitat for these species will be considered if funding and resources become available. In addition, critical habitat has already been designated for *Panicum carteri* (currently *Panicum fauriei* var. *carteri*) on the island of Mokoli'i (48 FR 46328).

(8) *Comment:* One peer reviewer expressed concern that the Service may remove areas from designation if the landowner provides sufficient assurance that the land is adequately managed for a particular species. The Service cannot lawfully exclude areas from critical habitat based on a finding that they are adequately managed or protected. Critical habitat should be determined independent of the management situation. Another peer reviewer stated that none of the lands should be excluded from proposed critical habitat because of their existing land management.

*Our Response:* In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may require special management

considerations or protection. If an area is covered by a plan that meets our management criteria, we believe it does not constitute critical habitat as defined by the Act because the primary constituent elements found there are not considered to be in need of special management or protection. For a detailed explanation of this evaluation see the "Analysis of Managed Lands Under Section 3(5)(A)" section below. However, to the extent that special management considerations and protection may be required for any of these areas and they, therefore, would meet the definition of critical habitat according to section 3(5)(A)(i), they are also properly excluded from designation under section 4(b)(2) of the Act (see *Analysis of Impacts under Section 4(b)(2)*).

(9) *Comment:* One peer reviewer and many commenters stated that focusing conservation efforts on the most pristine, least degraded sites is a logical, efficient, and cost-effective strategy whenever possible. Unfortunately, for many of the listed plant species, there is simply not enough suitable habitat remaining. Another peer reviewer stated that, in general, as much habitat should be protected as possible. Many peer reviewers were optimistic about the potential for degraded areas to be restored. One peer reviewer commented that populations could be established in the most degraded habitat if sufficient funds and person hours are dedicated toward follow-up maintenance after restoration. Another commenter stated that there is only a nominal possibility that the endangered native plants would survive in highly degraded areas and areas dominated by nonnative plants that are proposed as critical habitat. Yet another commenter stated that designations in degraded habitats are unrealistic and could waste resources on impractical restoration efforts. The commenter went on to suggest that low elevation areas may not be adequately represented; therefore it is important that the proposal not be trimmed back in any lower elevation areas. Another peer reviewer stated that the Service should designate lowland areas for potential future restoration and population recovery efforts.

*Our Response:* We agree that recovery of a species is more likely in designated critical habitat in the least degraded areas containing the primary constituent elements. To this end, several units have been excluded for some species, as sufficient numbers of alternative critical habitat units are available in less degraded areas. However, for some species, especially those only known from low elevation areas, only degraded