

those only known from low elevation areas, only degraded habitat remains. Therefore, some units still contain degraded habitat, but only if experts agreed that the areas could be restored. Management for the restoration of these habitats is addressed in the species' recovery plans.

(14) *Comment:* The recovery effort in Hawaii will not be effective without a well-developed and implemented management strategy. The designation of critical habitat without adequate management does not necessarily ensure benefit or recovery to a plant species. Some of the critical habitat units cannot sustain the projected recovered populations at current levels of habitat management and investment. Control of key threats such as feral ungulates, alien weeds, and wild fires is crucial to the recovery of listed plants. Alien species are significant problem that need to be addressed in order to be effective in the conservation of Hawaiian plants and animals. However, the land managers have not been able to control some invasive weeds, such as banana poka and lantana. There are workable methodologies for dealing with some of the factors that affect listed species and critical habitat (e.g., fencing and removal of ungulates). For other factors, such as lost pollinators, dispersers, or climate change, effective and appropriate techniques are still being sought. However, from a practical standpoint, if efforts to save threatened and endangered species were dependent on full knowledge of all factors relating to their survival, few if any would have a chance. This lack of knowledge or control tools should not be a reason to give up on recovery efforts for the native species that are affected. Waiting for all factors to be identified and validated would perpetuate current levels of habitat loss and/or management inaction.

*Our Response:* Critical habitat designation is one of a number of conservation tools established in the Act that can play an important role in the recovery of the species, and the Service is directed to designate critical habitat based on the best available scientific and commercial information. The management of alien species is an important conservation issue that is addressed in the recovery plans for these species. Other, less understood issues are identified in the recovery plans as requiring research to determine appropriate actions. The Service's role in the recovery of these species is to work with other agencies, organizations, and individuals to coordinate the implementation of the recovery plans in a strategic manner.

(15) *Comment:* "Reduced reproductive vigor due to small numbers of extant individuals" or inbreeding depression should not be cited as potential problems unless species-specific information is available. Hawaii's endangered species are biologically incompetent, and totally unable to repopulate the vast areas you are proposing as critical habitat. They should just be grown in a garden setting, since that is the only way they will survive. Extinction is a natural part of evolution.

*Our Response:* We are required under section 4 of the Act to designate critical habitat based on the best available information we have at the time of designation. In addition, we are directed by the Act to recover the species and the ecosystems on which they depend, not just preserve them in a horticulture facility. We realize that designation of critical habitat alone will not achieve recovery. 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. We also realize that management of the habitat is essential to the species' recovery. All of these issues are addressed in the species' recovery plans. And, while extinction is a natural part of evolution, there are numerous references in the conservation literature that the rate of extinction today is unprecedented.

(16) *Comment:* It should be noted that in many cases disturbance has been shown to contribute to the survival of species when it occurs at an appropriate level and at appropriate intervals.

*Our Response:* For some species it may be true that disturbance was a natural process that may have benefitted the species in the past. Today, however, many listed species are greatly reduced in numbers and occur in fragmented habitats that have been highly altered by alien species, to the point that the natural disturbance process is no longer present. When disturbances, such as hurricanes, do occur now, the most likely result is an increase in alien species, rather than native habitat. In addition, the small numbers of remaining individuals in greatly reduced ranges are far more vulnerable

to extinction from one disturbance event, whether natural or human-caused.

(17) *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 proposal. The following endangered plant species lack critical habitat on Kauai and/or Niihau: *Caesalpinia kavaensis*, *Haplostachys haplostachya*, *Hibiscadelphus distans*, *Marsilea villosa*, and *Scaevola coriacea*.

*Our Response:* These species were not part of the lawsuit and subsequent stipulations, and therefore were not included in this rulemaking. Critical habitat for these species may be considered in the future if warranted and funding and resources are available.

(18) *Comment:* One peer reviewer stated that the Service did consider the entire range of plants found on multiple islands, particularly since they are going through the same process of designation of critical habitat on all of the Hawaiian Islands. On the other hand, some commenters stated that the revised proposal's treatment of "multi-island" plants historically, but not currently, found on Kauai or Niihau makes it impossible to determine whether the Service is complying with its statutory duty to identify adequate habitat for these species' recovery. By proposing critical habitat island-by-island, rather than species-by-species, there is no way for reviewers to know what areas statewide ultimately will be proposed for the multi-island species. The revised proposal's treatment of "multi-island" plants historically, but not currently, found on Kauai or Niihau makes it impossible to determine whether the Service is complying with its statutory duty to identify adequate habitat for these species' recovery.

*Our Response:* In response to this concern, the Service reopened the comment periods for the proposed designations and nondesignations of critical habitat for plant species on the islands of Kauai, Niihau, Molokai, Maui, Kahoolawe, northwestern Hawaiian Islands, Hawaii, and Oahu after these proposals were published. This comment period, which was open from August 26, 2002 to September 30, 2002, allowed all interested parties to submit written comments on these proposals simultaneously and address issues associated with multi-island species.

(19) *Comment:* The boundaries of critical habitat should follow elevation contours, ridge lines, and other natural