

features that naturally delineate the units, rather than long, straight-line segments.

*Our Response:* The boundaries of the proposed critical habitat designations were generalized for ease of mapping. With this final rule, the new units are separately mapped for each species and are more true to the elevation contours, the distribution of habitat, and other natural features.

(20) *Comment:* The agricultural and grazing lands proposed for designation will never contribute to the conservation of these species, they are certainly not essential, and it is doubtful that listed species still occur on these lands.

*Our Response:* When delineating critical habitat units, we made an effort to avoid developed areas such as towns, agricultural lands, and other lands with similar features that do not contain the primary constituent elements. Less than one percent of the critical habitat designated in this final rule is within lands districted as agricultural lands, with most of the designated critical habitat in lands districted as conservation lands. However, some species, such as *Ischaemum byrhone* and *Sesbania tomentosa*, only occur in low elevation areas where agriculture is most common, and enough habitat necessary for the conservation of the species that contains some of the primary constituent elements and can be restored to have all of the primary constituent elements is not available outside of agriculturally zoned lands.

(21) *Comment:* One commenter asked if "historical" equals post-Polynesian, or post-European, or is it defined by the prevailing climate. The dates of population extirpations should be provided (e.g., *Delissea rhytidosperra*). These dates are important in defining "historical" sightings.

*Our Response:* The Service's definition of the term "historical" is any plant location information gathered prior to the 1970s. The term does not refer to post-Polynesian or post-European time periods, and is not defined by the prevailing climate. Documented botanical collections in the Hawaiian Islands began in the late 1700s and continued intermittently through the early half of the 20th century. In the early 1970's there was a renaissance in Hawaiian botanical surveys that continues today. This included the establishment of several botanical gardens (e.g. National Tropical Botanical Garden in 1970; Lyon Arboretum in the early 1970s), which have served as an important source of information on native plant species status and locations. The passage of the

National Environmental Policy Act in 1969 also encouraged increased surveys of areas as part of the EA/EIS process and thus provided support for private contract botanists whose work entered the public arena as addenda to EAs and EISs. This invigorated effort to document the occurrences of Hawaiian plants was also accompanied by observations on the loss of plant populations from previously known locations due to habitat loss and impacts of free ranging ungulates. These observations lead to a more regular documentation of the causes of decline of Hawaiian plants. Prior to the 1970s, such impacts were rarely recorded even though declines in Hawaiian plant populations were noted. Also at this time there was a growing national recognition that species of plants and animals were being threatened by extinction due to human activities. This concern led to the passage of the U.S. Endangered Species Act in 1973.

(22) *Comment:* *Phlegmariurus nutans* has survived for at least a century without having any habitat on Kauai. If these plants could grow or be cultivated anywhere else, the designated area is not essential. Designating more such areas as critical habitat would not improve that species' chances of survival. Much of the area that would be restricted from human use by the critical habitat designation may be useless to the species that the Service is trying to protect. Four of the plants have not been seen in more than 30 years, and two others were reported as having been seen within the past 30 years on Kauai. Critical habitat should only be designated for areas that host existing populations of the designated species. If a species is gone from an area, it could mean that the designated area is no longer ideally suited to support that species for one reason or another (water table may have changed, ground may have become more saline, animal or insect encroachment, etc.) so no matter what actions are prescribed, the species will most likely not return and successfully thrive in that environment. A critical habitat area should not be designated for a species that does not already live in it if there is no reasonable way for the species to get to that area under its own power. If it has to be artificially transported, then that area should not be designated. On the other hand, two of the plantiffs supported the Service's inclusion of critical habitat designation for seven species not currently known from Kauai: *Ctenitis squamigera*, *Diellia erecta*, *Diplazium molokaiense*, *Ischaemum byrhone*, *Mariscus*

*pennatiformis*, *Phlegmariurus nutans*, and *Phyllostegia waimeae*.

*Our Response:* We designated critical habitat for those species not recently seen on Kauai only if historic information was available on the primary constituent elements for those species on Kauai and if such areas still exist with those primary constituent elements or in which the primary constituent elements can be restored. We agree that the species will most likely not disperse to these sites under natural circumstances, because the intervening areas are often not suitable habitat for the species or have become too degraded, or because the pollinator may be lacking in those areas. Therefore, recovery plans include propagation and reintroduction into currently unoccupied but historical habitat. While not all designated critical habitat may contain all the primary constituent elements in their present condition, we believe that they can be restored with management actions.

(23) *Comment:* The Service has undertaken a detailed evaluation of the proposed critical habitat areas on State lands on Kauai to assess how much of the unoccupied habitat is really essential and which lands can be effectively managed for the benefit of the species. The Service should extend its evaluation to private land and land on other islands.

*Our Response:* We agree, and have met with any landowner who has requested to discuss and visit their lands. Many of those discussions have resulted in changes to some of the critical habitat units, as described in the "Summary of Changes from the Revised Proposed Rule" section.

(24) *Comment:* The hunters, hikers, and local people are the first line resources in protecting these plants, and at no cost to the government. Spend Federal monies to educate and teach the local people, rather than on critical habitat designation.

*Our Response:* We agree that the local people are an excellent resource to aid in the management of endangered species. For example, the Service has funded for several years a weed control project in the Kokee area of Kauai which operates largely on local volunteer efforts. While these management efforts are extremely beneficial for endangered species protection, section 4 of the Act still requires the Service to designate critical habitat.

(25) *Comment:* The statement that designating critical habitat would not provide significant benefits to the *Pritchardia* species is flawed because critical habitat designation would help them to recover to a non-imperiled