

(2) Benefits of Exclusion

Proactive voluntary conservation efforts are necessary to prevent the extinction and promote the recovery of these species on Lanai and other Hawaiian islands (Shogren *et al.* 1999, Wilcove and Chen 1998, Wilcove *et al.* 1998). Consideration of this concern is especially important in areas where species have been extirpated and their recovery requires access and permission for reintroduction efforts. For example, eleven of the 28 species associated with proposed unit D are extirpated from Lanai, and natural repopulation is likely not possible without human assistance and landowner cooperation.

Castle and Cooke Resorts, LLC, is involved in several important voluntary conservation agreements and is currently carrying out some of these activities for conservation and watershed protection purposes. For example, the Partners for Fish and Wildlife Awehi Gulch agreement was entered into in fiscal year 1998 with the stated purpose of restoring and protecting a mesic to dry forest community including a population of the endangered *Gardenia brighamii*. The strategy to be employed for this project was to construct a three-acre deer-proof fenced enclosure, ensure that all deer were removed from the fenced area, plant and water *G. brighamii* within the fenced area, and control invasive alien plants in areas around the out-planted individuals. The agreement is between Castle and Cooke Resorts, LLC, the State Division of Forestry and Wildlife (DOFAW), and the USFWS. The USFWS provided funding for fence materials (\$24,000), DOFAW provided the labor to construct the fence, and Castle and Cooke provided the labor and materials needed to plant, water, and weed the area. The fence was completed and no deer were left within the enclosure. Shortly thereafter, Castle and Cooke planted 150 *G. brighamii*, planted other native species (50 individuals) appropriate to the area within the Awehi enclosure, conducted alien plant removal above the level agreed upon, and set up a watering system (tank and delivery lines) that will be used for establishing more than just the original gardenia plants in the enclosure.

Another important voluntary project undertaken in partnership with the landowner is the Lanaihale Summit Forest Restoration Project. This is a very large and ambitious project (approximately 5,800 acres) within the area of proposed unit D, for which the USFWS has obligated a total of \$177,500 to date. The landowner is matching that amount with at least \$143,266 of in-kind

cost-share in the form of fence-line clearing and native-plant restoration (growing, planting, and weed control). It is understood that these amounts will not be sufficient to complete the summit fence but will allow the project to get started with the assumption that the partnership will be able to secure additional funding from various sources to help complete the project. Castle and Cooke has entered into other agreements with agencies besides the Service, such as the Hawaii Division of Forestry and Wildlife and Hawaii Department of Health for additional funds to assist with completion of this project. The agreement documenting this project lists 10 of the proposed critical habitat plant species (among others) that will benefit from its completion. The project is currently ongoing. Castle and Cooke's Conservation Department has almost completed clearing the fence line for the first (Unit 1) of three enclosure units that will make up the summit fence project. They have also obtained bids from private contractors for construction of this first phase of fencing.

A third voluntary partnership project undertaken in cooperation with this landowner is the Lanai Cloud Forest Enclosure project. For this much smaller enclosure project, the Service provided \$27,500 to be matched by in-kind services valued at \$9,213 to be provided by the company. The purpose of this project is to provide an area protected by a fence that excluded not only deer and sheep, but predators (rats and feral cats) as well. The exact size and location for this project have not yet been finalized, but will be selected to provide the greatest protection and restoration potential for listed plants and two species of imperilled tree snails. This project is yet to get underway due to the higher priority of the summit fence. The Service and the landowner are planning to complete this project by the end of fiscal year 2003.

Another noteworthy voluntary agreement is the Lanai Forest and Watershed Partnership. While this multi-party agreement does not commit the company (or any party) to complete any conservation actions, it does demonstrate the willingness of the company to work cooperatively with all involved parties toward landscape-scale conservation efforts.

In addition to the projects described above, to address the conservation needs of all of the listed species associated with proposed unit D and to cover a larger landscape area, Castle and Cooke Resorts, LLC, has recently entered into an agreement with the Service to voluntarily manage proposed unit D and some adjacent lands for the

conservation benefit of all of the listed species from Lanai. This agreement includes the following important voluntary commitments by Castle and Cooke Resorts, LLC:

1. Construction of enclosure fencing around large portions of Lanaihale and East Lanai (proposed unit D and adjacent lands); this fencing would expand upon the Lanaihale summit fence described above and protect a much larger area.

2. Active management of feral ungulates that are negatively affecting listed plants within the fenced areas; through a combination of public hunting and staff hunting, feral ungulates will be eliminated or controlled to allow for the restoration of listed plant species within fenced areas.

3. Active management of nonnative grasses and other fire hazards, and development of fire control measures;

4. Nursery propagation and planting of native flora, including these listed species, within the fenced areas;

5. In the unlikely event that future Federal projects occur on Lanai in the most important portions of proposed unit D (e.g., Lanaihale and some adjacent areas), the landowner has agreed to have these projects reviewed by the Service to a standard similar to that required by section 7 consultation for designated critical habitat. These areas were identified by the company's contract botanist as having the highest conservation value for these listed species. They include the Lanaihale area (2,339 ha (5,781 ac)), an adjacent area to the north (702 ha (1,734 ac)), and an area east of the Lanaihale area (1,082 ha (2,674 ac)).

The Service believes that each of the listed species originally included within proposed unit D will benefit substantially from this agreement due to a reduction in ungulate browsing and habitat conversion, a reduction in competition with nonnative weeds, a reduction in risk of fire, and the reintroduction of species currently extirpated from various areas and for which the technical ability to propagate these species currently exists or will be developed in the near future.

On Lanai, simply preventing "harmful activities" will not slow the extinction of listed plant species. Where consistent with the discretion provided by the Act, the Service believes it is necessary to implement policies that provide positive incentives to private landowners to voluntarily conserve natural resources and that remove or reduce disincentives to conservation. While the impact of providing these incentives may be modest in economic terms, they can be significant in terms