

and the critical habitat designation process. The portion of proposed Unit 1 that lies within Ulupalakua Ranch has been identified as essential to the conservation of the Blackburn's sphinx moth and has been addressed in this rule. In addition, the existing conservation activities being conducted within proposed Unit 1, as well as within other areas of Ulupalakua Ranch, by the Service and other Federal agencies (e.g., NRCS), the State, and private organizations (e.g., Ducks Unlimited, Incorporated (DU)) demonstrates that the landowner and the public is already aware of the importance of this area for the conservation of Blackburn's sphinx moth.

In summary, we believe that a critical habitat designation for Blackburn's sphinx moth on Ulupalakua Ranch lands would provide a relatively low level of additional regulatory conservation benefits to the species. Any regulatory conservation benefits would accrue through the benefit associated with section 7 consultation. Based on a review of past consultations and consideration of the likely future activities in this area, there is little Federal activity expected to occur on this privately owned land that would trigger section 7 consultation. We also believe that a final critical habitat designation provides little additional educational benefits since the conservation value is already known by the landowner, the State, Federal agencies, and private organizations, and the area has been identified as essential to the conservation of Blackburn's sphinx moth. Both the additional regulatory conservation benefits to the species and the additional educational benefits appear marginal when considering the past and likely future conservation partnership opportunities with this landowner. Through cooperative and creative land restoration activities which have occurred on the ranch and are likely to continue to occur, a significant amount of land (hundreds of acres or more) can and will likely be restored for the long-term conservation of the moth, its host plant species, and other native Hawaiian ecosystem components. No such future conservation partnerships with this landowner are likely to occur if the proposed portions of the ranch are designated as outlined by the landowner within several letters.

(2) Benefits of Exclusion

Proactive voluntary conservation efforts on private lands are necessary to prevent the extinction and promote the conservation of this species on Maui

and other Hawaiian islands (Wilcove and Chen 1998; Wilcove *et al.* 1998; Shogren *et al.* 1999). This is especially important in areas where species or their essential habitat components, *i.e.*, host plants, have been extirpated and their recovery requires access and permission for reintroduction or restoration efforts. For example, the Blackburn's sphinx moth's larval stage host plant species, *Nothocestrum latifolium*, associated with proposed Unit 1, are in decline on Ulupalakua Ranch lands, and natural repopulation is likely not possible without human assistance and landowner cooperation.

Ulupalakua Ranch is involved in several important voluntary conservation agreements, and is currently carrying out some of these activities for the conservation of the moth and its essential habitat components. For example, the Partners for Fish and Wildlife Auwahi and Puu Makua agreements were entered into in 1997 and 1998 with the stated purpose of protecting and restoring dryland forest, including construction of enclosure fences, a greenhouse, access road, and propagation and outplanting of native plants. Preservation of these areas conserves critically endangered species of plants and animals in one of Hawaii's most degraded ecosystem types, the lowland dry forest. This management strategy is consistent with recovery of the Blackburn's sphinx moth. The Auwahi agreement is between Ulupalakua Ranch, USGS-BRD, and the Service. We provided funding (\$64,388) for fence materials, plant propagation and outplanting, and weed control. Ulupalakua Ranch provided labor and materials valued at \$18,000, and USGS-BRD provided materials and technical assistance as well as staff and volunteer labor. In the 4 ha (10 ac) Auwahi project area, Ulupalakua Ranch has built the enclosure fence, outplanted native plants grown in the greenhouse including *Nothocestrum latifolium*, removed the majority of non-native alien species within the fence, and removed all ungulates. We provided \$31,675, through an agreement with Ulupalakua Ranch, for restoration work at Puu Makua. Ulupalakua Ranch has provided in-kind labor and materials valued at \$37,055 to construct a fence around the 40 ha (100 ac) enclosure, removal of ungulates, control of nonnative plants and out-planting of native plants. The first two tasks have been completed, with weed control and out-planting ongoing.

A third voluntary partnership project undertaken in cooperation with the landowner is the Auwahi II Dryforest

Restoration Project. We provided \$76,500 (matched by in-kind services valued at \$52,000) for this 8 ha (20 ac) restoration effort adjacent to the Auwahi I project. This project is ongoing, and will employ the same methods used at Auwahi I: Construct ungulate enclosure fence, remove ungulates, control nonnative plants, and outplant native species, including listed species.

Ulupalakua Ranch entered a partnership with Ducks Unlimited (DU), a private conservation organization, and the NRCS's Wetland Reserve Program (WRP) in 2000, to create wetland complexes suitable for the Hawaiian goose, nene (*Branta sandvicensis*) and Hawaiian duck, koloa (*Anas wyvilliana*). The NRCS WRP provided \$100,000 for funding and technical support to develop the wetland complex, DU provided funds and provided full survey, design, construction management and completion of wetland development practices, and Ulupalakua Ranch provided fencing, equipment, labor or other in-kind services as required to match the WRP funds. DU also conducted waterfowl monitoring at the four ponds for 1 full year after pond construction. In 2001, a 14 ha (35 ac) area was fenced and encompassed the four constructed ponds and associated upland habitat at a 1,585 m (5,200 ft) elevation site. The ponds were created to attract nene and koloa pairs to forage and nest within the protected pond/wetland area, which totals approximately 0.4 ha (1 ac) of surface water, with 0.9–1.8 m (3–6 ft) depths filled and maintained by natural hydrology and rainfall.

In addition to the projects described above, to address the conservation needs of the species in a larger area, Ulupalakua Ranch has expanded their Partners for Fish and Wildlife projects with the Service and in cooperation with the State NAR program for conserving additional areas, which include the following important voluntary actions by Ulupalakua Ranch:

(1) Construction of enclosure fencing around a portion of Ulupalakua Ranch and the Ka naio NAR (a portion of proposed Unit 1 (approximately 283 ha (700 ac)) with \$50,000 provided us, matched by in-kind services (e.g., labor and materials) valued at \$50,000;

(2) Active management of feral ungulates that are negatively affecting listed plants within the fenced areas;

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

(4) Nursery propagation and planting of native flora, including *Nothocestrum latifolium*, within the fenced areas.