



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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IN REPLY REFER TO:

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JUN 7 1982

Colonel Alfred J. Thiede, USA
Commander and Division Engineer
U.S. Army Corps of Engineers, Pacific
Ocean Division
Building 230
Fort Shafter, Hawaii 96858

Dear Colonel Thiede:

This responds to your April 19, 1982 request for consultation under Section 7 of the Endangered Species Act of 1973, 16 U.S.C. 1531, et seq on the proposed 1982 25th Infantry Division Field Training Exercise (FTX'82) and similar, unspecified, FTXs in the future and their possible effect on species of plants and animals protected by that Act. FTX'82 is to be conducted in areas within and around Pohakuloa Training Area (PTA) on the Island of Hawaii during a five week period in August and September of this year. Similar, but unspecified, FTXs beyond that period are also proposed for that area. This letter represents the biological opinion of the U.S. Fish and Wildlife Service in accordance with Section 7, "Interagency Cooperation Regulations" (50 CFR 402, 43 FR 870) on the proposed activities.

On May 20, 1982, we completed our review of the information provided by you along with other related information in our files. We also contacted some of those familiar with the biology, management and recovery of the species involved. Copies of pertinent documents and documentation are contained in an administrative record maintained in this office.

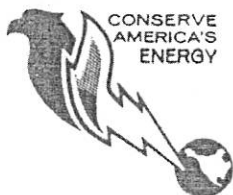
As stated in your Draft Environmental Assessment, the majority of the anticipated training areas lie in the central portion of the island in and around the saddle formed between Mauna Loa and Mauna Kea. Much of this consists of vast expanses of barren lava fields and sparsely vegetated pasture lands. Some forested lands will be encountered as well. A copy of your map showing the locations of FTX'82 is included (Figure 1). Also considered was the area designated as Puu Pa on your map delivered to this office on June 7, 1982.

Your "Draft Environmental Assessment for 25th Infantry Division Field Training Exercise (FTX)" (DEA) of April 6, 1982, identified seven species of birds, one mammal, and three plants as being listed as endangered and occurring in the proximity of the FTX. These species are:

Birds

Hawaiian goose (nene)
Palila
Hawaiian hawk ('io)

Branta sandvicensis
Psittirostra bailleui
Buteo solitarius



Save Energy and You Serve America!

Hawaiian dark-rumped petrel
'Akiapola'au
Hawaii 'akepa
Hawaiian crow ('alala)

Pterodroma phaeopygia sandwichensis
Hemignathus wilsoni
Loxops coccinea coccinea
Corvus tropicus

Mammals

Hawaiian hoary bat

Lasiurus cinereus semotus

Plants

Stenogyne angustifolia var. angustifolia
Haplostachys haplostachya var. angustifolia
Lipochaeta venosa

BIOLOGICAL OPINION

A review of the project data and other sources of information including the biological data and, most importantly, the magnitude of the potential threats to the Hawaiian goose, palila, Stenogyne angustifolia var. angustifolia, Haplostachys haplostachya var. angustifolia, and Lipochaeta venosa indicates that FTX'82 and subsequent unspecified FTXs may negatively affect these five species and the Palila Critical Habitat. In consideration of the above, it is our biological opinion that the proposed 1982 and subsequent FTXs are likely to jeopardize the continued existence of the five species and may result in the destruction or adverse modification of the Palila Critical Habitat.

The following provides background information and those factors considered in this determination. As FTX'82 and subsequent unspecified FTXs would be considered to have similar impacts on the species involved, both will be considered together.

Species Accounts

Hawaiian goose (nene):

Living on the high mountain slopes and lava flows, this endemic bird was formerly found in large numbers on the Island of Hawai'i, on Maui, and possibly other islands of the state. Due to predation, destruction of habitat, and over-hunting, by 1900 the nene had decreased to a small remnant population found only on Hawai'i. In recent years, through a captive rearing program, nene have been released on Hawai'i to increase the wild breeding population. A new breeding population has also been established on Maui.

As stated in your Environmental Assessment, nene may migrate daily through the eastern section of the FTX range. The months of September and October are just prior to the main nesting season (November and December), and, as such, disturbance from the exercises may be crucial to nesting success in that area. The fact that live ammunition and other explosives will only be used on the PTA and not in these eastern sections will help greatly to reduce harassment or other harm to the birds.

Palila:

This member of the Hawaiian honeycreeper family (Drepanididae) received Federal recognition as an endangered species in 1966. The primary reasons for this status classification were that it was extant on only 10 percent of its historical range, its present habitat was being adversely modified by feral sheep browsing, and its total population had decreased to the low hundreds. Originally occurring widely over the Island of Hawai'i, its present range is believed to be limited to the mamane-naio ecosystem above approximately 6,000 feet on Mauna Kea. Although the details of this decline are not well known, the adverse impact of feral sheep browsing on mamane trees has been recognized as the major factor in the birds' decline. Because mamane provides most of the food, nest sites, and shelter for the palila, the implications of the trees' decline can be easily recognized. In response to the circumstances of the birds' decline a critical habitat was designated for the palila on August 11, 1977.

The nesting season for the palila usually starts in the late spring and lasts from five to six months.

Hawaiian hawk ('io):

The 'io is endemic to the Island of Hawai'i and occurs on the slopes of Mauna Loa, on both the windward and Kona coasts, Hualalai, and less commonly on Mauna Kea. It is likely to be found almost anywhere below about 8500 feet where woodsy vegetation exists, but prefers the outer, more open forest rather than the dense rain forest. The present population of Hawaiian hawks is estimated to be in the low hundreds. The major factor responsible for the decline of this population is believed to be intentional or inadvertent shooting. However, pesticide contaminants, predation on eggs and young, and general habitat destruction may have contributed to this decline. 'Io nest in the late spring and fledge by September or October.

Hawaiian dark-rumped petrel:

Historically endemic to the main Hawaiian Islands, predation has eliminated this bird on all islands except Maui and Hawai'i. There is a possibility that it may still occur on Kaua'i as the mongoose, a major predator, has not yet become well established there. This petrel has been recorded from Puu Kole and Puu Kanakaleonui on Mauna Kea. It lays its eggs in April and May with young fledgling in October.

'Akiapola'au:

Endemic to the Island of Hawai'i, this bird was formerly found throughout the native forest from 400 meters upward. Presently, however, it is found primarily at the higher elevations of Mauna Loa and occasionally on Mauna Kea. Two other populations can be found in the Honaunau and Ka'u Forest reserves. Its diet consists largely of the larvae of beetles which it digs out of the bark of trees. The population on Mauna Kea inhabits the mamane-naio forest, with most observations recorded above 7,000 feet elevation.

Hawaii 'akepa:

The Hawaii'i 'akepa was formerly widespread over the Island of Hawaii'i and was described as abundant in parts of Kona, Hilo, and on Kohala Mountain at the turn of the century. Its present distribution includes the upper slopes of the windward coast and the southwestern slopes of Hualalai. It feeds mainly on small insects; caterpillars and spiders. The present population is unknown, but the dramatic decrease in observed individuals during the past decades is probably due to avian diseases and general habitat destruction.

Hawaiian crow:

Endemic to the Island of Hawaii'i, the 'alala has been reported recently only from the higher elevations in the Kona and Ka'u districts. They are omnivorous, eating a wide variety of berries and fruits as well as carrion. The population of the crow has dwindled to fewer than 100 individuals since the turn of the century. This dramatic decline has been attributed to shooting, habitat destruction, and introduced predators. Although a captive propagation program may be successful, a suitable habitat for reintroduction must be maintained.

Hawaiian hoary bat:

Widely distributed on the Island of Hawaii'i, this bat is the only endemic land mammal in the State. Although its solitary nature and wide distribution have made it difficult to study, it is known to roost in almost any species of tree. Depletion of forested lands on the Island may have contributed to the bats' declining population. Information on the ecology of the bat is very sparse, consequently the reasons for its decline are not known.

Stenogyne angustifolia var. angustifolia,
Haplostachys haplostachya var. angustifolia,
Lipochaeta venosa:

All three plants were determined to be endangered on October 30, 1979. They are known from populations existing solely within Kipuka Kalawamauna on the Island of Hawaii'i, although all were once more widely distributed on the Island. A kipuka is a vegetated area surrounded by relatively recent lava flows. The extirpation of historic populations of these taxa has apparently been due to human disturbance and the impact of feral animals and introduced weedy vegetation. The Federal Register publication determining these plants to be endangered cited trampling by military units using the Pohakuloa Training Area, accidental fires touched off by military ordnance, and the introduction of exotic weed seeds by hunters and military personnel and equipment.

ANALYSIS OF IMPACTS

Of the eleven species previously mentioned, only five could reasonably be expected to be significantly affected by the proposed FTX. These are the Hawaiian goose, the palila, and the three species of plants. The other six species may occur occasionally as fly-overs, but would not be expected to be

in or around the training area once the exercise commences. Additionally, one would not expect any of the species to be actively nesting in the FTX area during the FTX'82 training period. However, as the dates for future, unspecified FTXs on the island have not yet been determined, it is premature to comment on the effects of these exercises on nesting birds.

As presented in your DEA, the major factors to be considered in regards to impacts are increased noise, destruction of vegetation by vehicles and troops, modification of the land (minor constructions such as foxholes, barricades, roadways, latrines, encampments, etc.), inadvertent taking of animals or plants by explosives or pyrotechnics, and uncontrolled fires. During the late summer, some Hawaiian geese migrate daily through the easternmost areas of the FTX lands from north of Saddle Road southward towards the Volcanoes National Park. As they are in flight and would be expected to avoid human concentrations, the immediate action of the exercise would not be expected to affect the birds. Since no live ammunition will be used in these areas, there is little chance of the birds being shot. The long range effects of the FTX, however, could be detrimental. The clearing of brush for encampments and camouflage and the possibility of fires destroying nene habitat and food sources exist. The population of nene found in these areas is of crucial importance to the recovery effort; they represent a sizable percentage of the wild breeding stock which has declined significantly from the late 1970's. During the FTX'82 period, the birds will be searching out nesting sites, and fires or widespread clearing of vegetation would be very undesirable. Likewise, other FTXs may be deleterious as well in this regard.

A similar situation exists in the Palila Critical Habitat. Although the palila rarely occurs in that area north of Saddle Road within the FTX site, destruction of trees and other vegetation would further degrade the palila's habitat. An uncontrolled fire could burn well beyond the FTX border.

As with last year's FTX, trampling and cutting of vegetation, and fires are the most serious threats created by the FTX in regards to the three listed plants. As live ordnance is to be used in the PTA, direct impact of explosives or resulting fires could pose serious problems. During and after the 1981 FTX, members of the staff of this office toured PTA to assess the impact of the exercise on listed species and the environment in general. Although the area was reasonably clean considering the great number of personnel using the area and the operations involved in the FTX, cigarette butts and the remains of an open fire were observed. It is true that the fire could have been left by non-military personnel, such as hunters, but the several widely scattered, intact, cigarette butts were probably discarded by troops. It is certainly understandable that in a group of over 4,000 men, some littering of this type is to be expected, but it does emphasize the very real danger of wild fire ignition. It must be emphasized that the PTA represents the total known plants' range, and as such makes any action in the area potentially threatening to the existence of the species.

FTX'82, for the purposes of this consultation, is essentially the same as the FTX conducted during the Fall of 1981 (FTX'81). The DEA forwarded with your initiation of consultation for FTX'82 is, for all practical purposes, identical to the assessment prepared for FTX'81. As such, our respective biological

opinions are also identical. No new safeguards or changes to the FTX'81 procedures, such as firebreaks or new water sources, to lessen potential negative impacts on listed species have been added. Our opinion remains the same (refer to our letter to you of September 2, 1981 enclosed); FTX'82 is likely to jeopardize the continued existence of the five species and may result in the destruction or adverse modification of the Palila Critical Habitat. The reasons for this determination are the same as those we expressed concerning last year's FTX. These are:

1. that cutting and otherwise destroying vegetation may occur without regard for endangered plants or major vegetation types vital to the existence of the palila and other listed birds in the area.
2. as stated in the DEA Sections 3.5 (Water Quality) and 4.3.2.a. (Fire), there is insufficient water and equipment to control a large wildfire. Uncontrolled fire is our major concern in the FTX'82 proposal. Future, yet unspecified, FTXs would generate the same concerns.

The 1978 amendments to the Endangered Species Act of 1973 include a mandate that "reasonable and prudent alternatives" be suggested when a biological opinion indicates jeopardy to a listed species. "Reasonable and prudent alternatives" refers to alternate courses of action or project modifications open to the consulting Federal agency, the Army, with respect to an activity or program that are technically capable of being implemented and are consistent with the intended primary purpose of the activity or program.

To this end, we believe that jeopardy to the listed species and the destruction or adverse modification to the Palila Critical Habitat would be avoided if the following were incorporated in the FTX'82 and subsequent FTX plans (as they were for FTX'81):

1. It is crucial that the firefighting capability of units involved in the FTX be increased to control wildfires should they start. In the event of any fire out of immediate control, the primary mission of the unit commanders in the practical and geographical area of the fire should shift from FTX objectives to one of fire control. The occurrence of any fire which is out of control should be reported immediately to the FTX command headquarters and the District Forester. Fire control must take immediate precedence over the other objectives. A fire-dedicated source of water supply and supplementation of vehicles at PTA must be guaranteed, and, if at all possible, helicopter operated fire buckets should be available to help extinguish any fire out of control.
2. All field personnel, and especially the inspection teams mentioned in Section 6.1.d of your assessment, should be briefed on the listed plants and animals present at the FTX site and the potential harm to these species which could be caused by trampling, cutting, burning, or otherwise affecting plant life. In February of 1978, Colonel Rodolph, then Director of Facilities Engineering of the Headquarters, U.S. Army Support Command, Hawai'i, initiated Section 7 consultation with this Service on the possible effect of the Army's training activities at

PTA on the palila and its critical habitat. On June 1 of that year, we responded by indicating that the training activities do negatively impact the palila and its critical habitat. A subsequent meeting between the Army and the Service developed two major practices to lessen those impacts:

First, the preparation and use of a 35mm slide program that was to be shown to all troops using PTA explaining the status of the palila and guidelines to be followed during field training and, second, the strict control of all open fires used or accidentally started in the area.

We would wish the Army to continue using this training and, simultaneously, to employ it as a platform for the briefing mentioned previously.

3. We appreciate the need to cut vegetation for camouflage purposes. However, the cutting of mamane, naio or koa trees of any size, the cutting of any vegetation in Kipuka Kalawamauna, or any tree within the Palila Critical Habitat must not be allowed. The troops should use Chenopodium sp. or Verbesina encelioides for camouflage.

The importance of the procedures outlined must be stressed to troops involved in any FTX. Individual violations of measures designed to lessen the negative impacts of the FTX (such as field-stripping of cigarette butts, avoidance of cutting trees, and other precautions you listed in your assessment) must be identified and any punitive measures necessary to stress the harmful effects of those actions should be implemented. Naturally, we realize this will be largely a self-policing effort, but a follow-up review of the FTX will influence our judgment of future exercises of this type.

The Army is reminded of its continuing responsibility to review its activities and programs in light of Section 7 and to reinitiate this consultation if new information becomes available which identifies that the project may affect species listed or proposed for listing in ways not addressed in this opinion, the action described is modified, or if a new species or new critical habitat area is listed that may be affected by your action.

This concludes formal consultation for your action. Should any changes be made in the alternative courses of action or mitigation suggested, the project be modified beyond the scope of this letter, or new species be listed that may be affected by the project, you must reinitiate consultation with this Service.

Sincerely yours,


 ACTING Pacific Islands Administrator

Enclosure

cc: Regional Director, FWS, Portland, OR (AFA-SE)
 Director, FWS, WO (AFA-SE)

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