

JOB PROGRESS REPORT RESEARCH PROJECT SEGMENT

STATE: Territory of Guam

PROJECT NO.: W-1R-6
SUB-PROJECT NO.: W-1
STUDY NO.: 2
JOB NO.: 1

JOB TITLE: Population Size and Distribution of Wild Pigs on Guam (1460)

PERIOD COVERED: October 1, 1997 to September 30, 1998

SUMMARY

Examination of hunter logs for Andersen Air Force Base (AAFB) revealed a total of 4,786 hunter sorties, a harvest of 133 pigs, and a harvest rate of one pig per 19.4 hunter-days. An additional 88 pigs were removed from other areas of the base under a depredation permit. Hunter harvest data were not available for other parts of Guam.

BACKGROUND

Wild pigs (*Sus scrofa*) are Guam's most important game species in terms of total numbers of animals harvested. This species has been studied by the Division of Aquatic and Wildlife Resources (DAWR) since 1967 (Conry 1988, DAWR 1967-1997). The island's wild pig population is descended from domestic *S. scrofa* introduced by the Spanish from the Philippines between 1672 and 1685. Wild pigs are found island-wide, but appear to be most numerous in the secondary limestone forests of the north and the ravine forests of southern Guam. Pigs occur at high enough densities in many forested areas that rooting and wallowing damage is common and can be quite severe locally. Depredation on agricultural crops is also a problem, especially in southern Guam. About 20-30 animal depredation permits are issued annually to primarily control pig damage. Controlling the effects of pig damage is recognized as an important measure to protect native forest and agricultural resources. Recreational harvest is the primary tool used to control pig numbers and current hunting regulations allow for a year-round season with bag limits of 2 pigs per day and 40 per year. There is a need to consider more liberal regulations to control pig populations island-wide and in localized areas.

OBJECTIVES

To monitor trends in pig population size and hunter participation and harvest.

PROCEDURES

1. Monitor hunter participation and harvest during the legal hunting season.
2. Collect biological data from animals killed during the hunting season and from incidental sources such as road kills or confiscated animals.

RESULTS

Pig Hunting Statistics

Records of hunting activity and harvest were kept by officials at AAFB during the year (Table 1). According to hunter logs from AAFB, 2,061 hunter-days (3,572 sorties; gun hunting only) were expended at Northwest Field and resulted in the harvest of 81 pigs. Hunting areas on the main portion of the base (Munitions Storage Area [formerly the Conventional Weapons Storage Area], Tarague basin, and areas near the landfill and to the north and east of the flightline) recorded 505 hunter-days (1,162 sorties; primarily bow hunting), with 49 pigs killed. At Andersen South, 15 hunter-days (52 sorties; bow hunting only) were registered, with 3 pigs taken. These records indicate a total harvest of 133 pigs on AAFB. The Naval Computer and Telecommunications Area Master Station (NCTAMS) was closed to hunting this year

Table 1. Hunter effort and wild pigs taken on Andersen Air Force Base during FY98, based on official hunter logs.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Andersen Air Force Base													
<u>Northwest Field</u> (gun hunting only)													
No. hunter sorties	741	657	547	189	104	118	15	138	231	0	0	832	3,572
No. hunter days (8 hr)	456	395	313	98	55	60	7	70	124	--	--	483	2,061
Pigs taken	18	13	10	4	0	6	1	1	7	--	--	21	81
Days effort/take	25.3	30.4	31.3	24.5	--	10.0	7	70	17.7	--	--	23.0	25.4
<u>Main Base</u> (primarily bow hunting)													
No. hunter sorties	247	292	113	28	33	36	13	7	31	2	16	344	1,162
No. hunter days (8 hr)	99	129	49	10	14	15	5	3	16	7	6	152	505
Pigs taken	10	11	0	1	0	0	2	1	3	0	1	20	49
Days effort/take	9.9	11.7	--	10.0	--	--	2.5	3.0	5.3	--	6	7.6	10.3
<u>Andersen South</u> (bow hunting only)													
No. hunter sorties	25	27	0	0	0	0	0	0	0	0	0	0	52
No. hunter days (8 hr)	7	8	--	--	--	--	--	--	--	--	--	--	15
Pigs taken	2	1	--	--	--	--	--	--	--	--	--	--	3
Days effort/take	3.5	8.0	--	--	--	--	--	--	--	--	--	--	5.0

Hunter questionnaires were discontinued in FY96 because of a lack of manpower and low return rates, which may have resulted in biased sampling of the hunter community. Proposed revisions to hunting regulations may remedy this problem by requiring hunters to complete a questionnaire for the previous season prior to purchase of a new license.

Depredation Permits

Twenty-two animal depredation permits were issued in FY98. Of these, 11 permits were issued to farmers registered with the Guam Department of Agriculture. Nineteen permits authorized pig take in agricultural areas, while three permitted take in suburban areas. One permit authorized pig take on a military installation, i.e., AAFB. The requirement of a monthly report of pig take by permittees was initiated this year. Eighty-eight pigs were taken on AAFB, while 19 pigs were taken by other permittees.

Hunting Regulations

The DAWR proposed new game hunting regulations in FY98, including the unlimited year-round take of pigs in an effort to reduce the extensive habitat damage caused by this species. Oral and written testimony given during and after a public hearing held in June was generally supportive of attempts to increase the harvesting of pigs. The proposed hunting regulations will be submitted to the Twenty-fourth Guam Legislature for approval, and will hopefully be enacted for the FY00 hunting season.

Supertyphoon Paka / El Nino-Southern Oscillation

Supertyphoon Paka struck Guam on December 16-17 with estimated winds of 150-185 mph. The forests of central and northern Guam sustained extensive damage. The island subsequently experienced a severe dry season associated with an El Nino Southern Oscillation event. Continued pig rooting and wallowing magnified the habitat damage caused by these two weather events. By July, many areas (e.g., Munitions Storage Area, Tarague basin, Pati Point, and Haputo) exhibited a lack of forest undergrowth. Biologists did not observe any noticeable change in pig mortality because of the drought.

RECOMMENDATIONS

Continue to monitor the annual pig harvest and hunter participation. Hunting at NCTAMS should be reopened. Coordinate accurate record keeping and reporting of hunter effort and harvest at military bases is recommended. An increase in the hunter harvest of pigs is needed island-wide.

PROGRAM COST

The estimated cost of the wild pig project under W-1R-6 is \$30,000.

LITERATURE CITED

Conry, P. J. 1988. Ecology of the wild (feral) pig (*Sus scrofa*) on Guam. Tech. Rept. No. 7. Div. Aquatic and Wildl. Res., Dept. Agric., Mangilao. 60 pp.

Division of Aquatic and Wildlife Resources. 1967-1997. Job Progress Report - Federal Aid to Fish and Wildlife Restoration. Guam Dept. Agric., Mangilao.

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