

JOB PROGRESS REPORT RESEARCH PROJECT SEGMENT

STATE: Territory of Guam

PROJECT NO.: W-1R-7
SUB-PROJECT NO.: W-2
STUDY NO.: 1
JOB NO.: 1

JOB TITLE: Population Numbers and Distribution of Philippine Turtle-Doves
(1460, 1430)

PERIOD COVERED: October 1, 1998 to September 30, 1999

SUMMARY

This year's Spring Bird Surveys showed an overall decrease in Philippine turtle-dove (*Streptopelia bitorquata*) numbers over last year's counts. The Cross Island Road, Reserve Craft Beach Road, and MSA routes had averages of ≥ 1.0 bird recorded per station. Eleven routes recorded decreases in dove abundance, 6 had increases, and 6 had no change in bird numbers per station count, as compared to last year's counts.

BACKGROUND

The Philippine turtle-dove was introduced to Guam in about 1771 by the Spanish during their colonization of the island (Baker 1951), and has been regulated as a game bird since at least 1903 (Conry 1987). Turtle-doves were abundant in northern and southern Guam up through the early 1960s. Population abundance began to decline in southern and central Guam in the mid to late 1960s and has since stabilized at low to moderate levels. Populations in northern Guam decreased to similar levels in the late 1970s and early 1980s. Turtle-doves remain common on snake-free Cocos Island. Predation by brown tree snakes (*Boiga irregularis*) is the major cause of nest loss in turtle doves (Conry 1988) and this introduced pest is responsible for the species' decline. Because of the decrease in numbers and poor nesting success, the Department of Agriculture officially closed the turtle-dove hunting season in March 1987. The season will be reopened if nesting success improves and numbers recover to a level that can support recreational hunting.

OBJECTIVES

1. To determine present population levels and distribution, and monitor population trends.
2. To investigate nesting success and causes of nest failures.

PROCEDURES

Philippine turtle-doves were surveyed during spring bird counts conducted on 23 routes throughout the island in May. These surveys consisted of 5-minute station counts at up to 10 stations per route, with the number of birds seen or heard recorded at each station. Results are summarized as the average number of birds detected per station.

RESULTS

Spring Bird Surveys

Philippine turtle-doves were recorded on 16 of 23 (70%) spring bird surveys conducted this year (Table 1).

Table 1. Numbers of Philippine turtle-doves recorded per count and average number of birds per station as detected in spring bird surveys at various locations on Guam in May 1999. Values in the trend column are the difference between the average station count between years.

Survey Location	No. Stations	No. Doves Observed	1999 Ave./Station	1998 Ave./Station	Trend in Ave 99-98
North Surveys					
Tarague	10	1	0.10	0.10	0.00
MSA	10	10	1.00	1.80	-0.80
NWF	10	2	0.20	1.10	-0.90
NCTAMS	10	4	0.40	0.10	0.30
Capitol Improvement Road	10	0	0.00	0.00	0.00
Mt. Santa Rosa	10	8	0.80	0.70	0.10
Y-Sengsong Road	10	0	0.00	0.00	0.00
Two Lover's Point	10	0	0.00	0.00	0.00
Andersen South	10	0	0.00	1.00	-1.00
Navy Golf Course	10	4	0.40	0.20	0.20
Barrigada Hill	10	3	0.30	0.00	0.30
Toto Pipeline	8	6	0.75	0.50	0.25
South Surveys					
Nimitz Hill	10	0	0.00	0.10	-0.10
Reserve Craft Beach Road	4	7	1.75	2.50	-0.75
Orote Point	6	1	0.17	2.20	-2.03
Pulantat	10	3	0.30	0.60	-0.30
Cross Island Road	10	10	1.00	0.00	1.00
Ordnance Annex	10	5	0.50	0.50	0.00
Umatac	10	0	0.00	0.00	0.00
Dandan	7	1	0.14	1.00	-0.86
Ija	8	4	0.50	1.00	-0.50
Merizo	4	0	0.00	0.38	-0.38
Cocos Island	10	9	0.90	2.60	-1.70

Cross Island Road, Reserve Craft Beach Road, and the Munitions Storage Area (MSA), had the highest counts, with averages of ≥ 1.0 birds detected per station. Cocos Island, which usually has the highest average count per station, recorded a 35% decline in total dove numbers since last year (DAWR 1998). The Dandan route was reduced from 10 to 7 stations in FY '99 due to the closure of off-road trails. Only 0.14 birds were recorded per station on this route, as compared to 1.00 birds per station last year. Of the 23 routes surveyed in 1999, 11 (48%) had decreases in dove numbers, 6 (26%) showed increases, and

6 (26%) had no change in the numbers of birds detected, as compared to FY '98 (DAWR 1998). Three of the 23 routes recorded decreases of ≥ 1.0 birds per station.

RECOMMENDATIONS

1. Continue spring bird surveys across Guam to monitor distribution, relative abundance, and population trends of the Philippine turtle-dove.
2. Keep Philippine turtle-dove hunting season closed until nesting success improves and the population recovers.

PROGRAM COST

The estimated cost of the Philippine turtle-dove project under W-1R-7 is \$15,000.

LITERATURE CITED

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