

**JOB PROGRESS REPORT
RESEARCH PROJECT SEGMENT**

STATE: Territory of Guam

PROJECT NO.: W-1R-5

SUB-PROJECT NO.: W-2

STUDY NO.: 2

JOB NO.: 1

JOB TITLE: Population Size and Distribution of Black Francolin on Guam (1460)

PERIOD COVERED: October 1, 1996 to September 30, 1997

SUMMARY

Black francolin (*Francolinus francolinus*) were detected on 15 of 23 (65%) survey routes conducted on Guam. Ten routes had decreases, seven routes had increases, and six routes had no change in the numbers of francolin recorded per count. This pattern of change was statistically significant ($p < 0.005$) compared to FY96.

BACKGROUND

In 1961, 171 black francolin were introduced to southern Guam as part of the Foreign Game Bird Introduction Program of the U.S. Fish and Wildlife Service. Surveys conducted in 1980 indicated the population was adequately established in most parts of southern Guam to open a hunting season. Regulations were promulgated to open a one-month season in December 1981 with a 4-bird daily limit and a 20-bird season limit. Francolin populations continued to increase from 1980-1982, but hunting pressure remained low, probably because of the unfamiliarity of the hunting public with the sporting qualities of the bird. With the bird population increasing and little hunting pressure, the francolin season and bag limits were further liberalized in FY83 to a 2-month split season, one month in January and one month in July, and the bag limit was increased to 5 birds per day with no season limit. Revisions to the francolin season were again made in FY '90, extending the season from January 1 to February 28 and from July 1 to August 31. Francolin hunting has increased in popularity and Guam hunters are successfully harvesting birds during the open seasons. Regulations implemented in FY83 remain in effect with hunter participation and adherence to game laws monitored by spot checks by Division of Aquatic and Wildlife Resources biologists and conservation officers. During recent years, francolin populations have been well established and stable throughout southern Guam and in shrub-grass habitats in central and northern Guam.

OBJECTIVES

To determine current relative abundance and current distribution of black francolin on Guam and monitor population trends and hunter harvest.

PROCEDURES

1. Conduct annual island-wide spring bird surveys (station counts) to monitor distribution and status of francolin throughout the island.

RESULTS

Spring Bird Surveys

Black francolin were detected on 15 of 23 (65%) spring bird surveys conducted during May 1997 (Table 1). Ten survey routes had decreases, seven route had increases, and six routes had no change in the numbers of birds per count (DAWR 1996), which was a statistically significant pattern of change from last year (Wilcoxon Signed-rank Test, $T_s = 60.0$, $Z = -0.782$, $p < 0.005$). Francolin, were found on 9 of 11 surveys south of Route 4, which was no change from last year. They were found on 6 of 12 routes in northern Guam, a decrease of two from last year (DAWR 1996). The Merizo survey route had the highest station counts this year with an average of 6.50 birds/station (Table 1). The Umatac route recorded the largest increase in birds per station this year, with a mean increase of 2.60 birds/station.

RECOMMENDATIONS

1. Continue to monitor francolin population status, distribution, and hunter harvest.
2. Collect information on hunter participation, effort, harvest, and areas hunted.

PROGRAM COST

The estimated cost of the black francolin project under W-1R-5 is \$15,000.

LITERATURE CITED

Division of Aquatic and Wildlife Resources. 1996. Job Progress Report. Federal Aid to Fish and Wildlife Restoration. Div. Aquatic and Wildl. Res., Dep. Ag., Mangilao.

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Table 1. Numbers of black francolin observed per count and average number of birds observed per station as detected in spring game bird surveys at various locations on Guam during May 1997. Values in the trend column are the difference between the average station count between years. (Ave. = average)

Survey Location	No. Stations	No. Birds Observed	1997 Ave./ Station	1996 Ave./ Station	Trend in Average 97-96
NORTH SURVEYS					
Tarague	10	0	0.00	0.00	0.0
CWSA	10	0	0.00	0.00	0.0
NWF	10	5	0.2	0.30	0.2
NCTAMS	10	20	2.00	1.50	0.5
Capitol Improvement Road	10	0	0.00	0.50	-0.5
MT. Santa Rosa	10	0	0.20	0.00	0.2
Y Sengsong Road	10	0	0.00	0.00	0.0
Two Lover's Point	10	6	0.60	0.90	-0.3
Andersen South	10	5	0.00	0.50	-0.5
Navy Golf Course	10	16	1.60	2.50	-0.9
Barrigada Hill	10	7	1.00	1.50	-0.5
Toto Pipeline	8	0	0.00	0.25	-0.3
SOUTH SURVEYS					
Nimitz Hill	10	36	3.60	3.40	0.2
Reserve Craft Beach Road	4	0	0.00	0.00	0.0
Orote Point	6	7	1.16	1.17	-0.01
Pulantat	10	38	3.80	3.00	0.8
Cross Island Road	10	5	0.50	1.50	-1.0
Naval Magazine	10	12	1.20	1.90	-0.7
Umatac	10	53	5.30	2.70	2.6
Dandan	10	55	5.50	5.50	0.0
Ija	8	26	3.25	4.13	-0.9
Merizo	4	26	6.50	5.50	1.0
Cocos Island	10	0	0.00	0.00	0.0