

**JOB PROGRESS REPORT
RESEARCH PROJECT SEGMENT**

STATE: Territory of Guam

PROJECT NO.: E-2-3

SUB-PROJECT NO.: B

JOB NO.: 3

JOB TITLE: Captive Propagation of Micronesian Kingfishers

PERIOD COVERED: October 1, 1999 to September 30, 2000

SUMMARY

As of September 30, 2000 there were 60 Micronesian kingfishers, *Halcyon c. cinnamomina*, in captivity at mainland U.S. zoos, including 12 viable offspring hatched during FY00. A proposal was submitted to the Packard Foundation for construction funds for a kingfisher facility in FY99 and no decision has been made. Construction of flight cages began in August 2000, which can be used to house kingfishers until facility is built.

BACKGROUND

The Guam Native Forest Bird Captive Breeding Program began in 1983 as a cooperative effort between the Division of Aquatic and Wildlife Resources (DAWR), member zoos of The American Zoo and Aquarium Association (AZA), and the U.S. Fish and Wildlife Service (USFWS) (DAWR 1983, Derrickson 1986, Shelton 1986). Predation by the Brown treesnake, *Boiga irregularis*, now believed to be the single most important factor in the recent drastic decline of Guam's native forest birds (Savidge 1986, 1987; Conry 1988), precipitated the need for a captive breeding program, since at least 5 species of Guam endemic species or subspecies were nearing extinction in the wild by 1982. Unfortunately, by 1984, attempts at captive breeding 3 of these species, the bridled white-eye, *Zosterops c. conspicillata*, rufous fantail, *Rhipidura rufifrons uraniae*, and the Guam flycatcher, *Miagra freycineti*, were abandoned due to their disappearance from the wild (DAWR 1984). The Micronesian kingfisher was successfully brought into captivity (DAWR 1983-1986), with the capture of 31 wild birds that were immediately transferred to U.S. mainland zoos.

Micronesian kingfishers (MKF) were first bred in 1985 at 3 mainland U.S. zoos (Bronx Zoo, Philadelphia Zoo, and the Conservation and Research Center of the National Zoological Park). During FY88, the Philadelphia Zoo published the first studbook for the MKF (Bahner 1989), which has been designated as a Species Survival Plan species by the AZA and Beth Bahner of the Philadelphia Zoo, who is currently the studbook keeper. The MKF program has been relatively successful, as 17 of the 29 founders produced descendants (the last previously unrepresented living founder sired offspring in 1994). The population peaked in August 1990

with 62 individuals. However, problems such as high chick mortality, high young adult mortality, aggression, and infertility continue to limit population growth (Bahner 1993).

OBJECTIVES

The objectives for the MKF include the following for FY00:

- 1) Continue acting as field consultants to the SSP.
- 2) Finalize and obtain construction plans and a grant for a captive breeding facility.
- 3) Transfer 2.0 (males females) or 1.1 from mainland zoos to initiate a captive breeding program on Guam.
- 4) Identify appropriate reintroduction sites that meet criteria for snake control.
- 5) Recruit or train 2 additional staff for captive management on Guam.

RESULTS

MKF continued to be captive bred at five of the 10 zoos housing birds. The population decreased to 60 birds in FY00. Twenty eggs were produced of which: 12 were successfully reared including six at the Brookfield Zoo in Chicago, two at the Houston Zoo, 5 at the San Diego Zoo, 4 at the Milwaukee Zoo, and 3 at the National Zoo's Conservation Research Center; and 8 eggs failed to hatch or chick died soon after. Three of the 12 successfully raised offspring were parent-reared (1 at Houston, 2 at Brookfield).

Suzanne Medina replaced Kelly Brock as field consultant to the MKF SSP. Construction of 4 additional outdoor flight aviaries began in September to increase capacity of Guam DAWR Captive Facility, Wildlife Lab, to hold Mariana crows. The addition will increase total to 10 flight cages. The unoccupied cages can be also used to house the first MKF returning to Guam. DAWR is still waiting for a response on a proposal sent to the Packard Foundation regarding construction costs for a new MKF facility.

RECOMMENDATIONS

- 1) Continue acting as a consultant to the MKF SSP.
- 2) Continue pursuing the Packard Foundation grant for construction of a facility.
- 3) Transfer 2.0 or 1.1 MKF from mainland zoos to Guam by December 2001.
- 4) Send Wildlife technical staff to facilities housing MKF for husbandry and breeding management.

- 5) Complete flight cages at the DAWR Wildlife Lab that can be used to house MKF.

PROJECT COST

The estimated cost of this project is \$50,000.

This report was prepared by: Suzanne Medina, Wildlife Biologist III.

LITERATURE CITED

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