

**JOB PROGRESS REPORT
RESEARCH PROJECT SEGMENT**

STATE: Territory of Guam

PROJECT NO.: E-2-1

SUBPROJECT.: B

JOB NO.: 3

JOB TITLE: Captive Propagation of Guam Micronesian Kingfishers

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

SUMMARY

As of September 30, 1998, there were 60 Micronesian kingfishers, *Halcyon c. cinnamomina*, in captivity at mainland U.S. zoos, including 16 viable offspring hatched in FY98. Plans are being developed to begin captive breeding kingfishers on Guam.

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 tree snake, *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 when by 1982 at least five species of Guam endemic species or subspecies were nearing extinction in the wild. Unfortunately, by 1984, attempts at captive breeding three of these species, the bridled white-eye, *Zosterops c. conspiciillata*, rufous fantail, *Rhipidura rufifrons uraniae*, and the Guam flycatcher, *Miagra freycineti*, were abandoned due to their disappearance from the wild (DAWR 1984).

Kingfishers were first bred in 1985 at three mainland U.S. zoos (Bronx Zoo, Philadelphia Zoo, and the Conservation and Research Center of the National Zoological Park). During FY88, the first studbook for the Micronesian kingfisher was published by the Philadelphia Zoo (Bahner 1989). The kingfisher has been designated as a Species Survival Program species by the AZA. Beth Bahner of the Philadelphia Zoo was designated by the AZA as studbook keeper. The kingfisher program has been relatively successful, as 17 of 29 founders produced descendants (the last previously unrepresented living founder sired offspring in 1994), and the population reached a peak of 62 individuals in August 1990. However, problems such as high chick mortality, high young adult mortality, aggression, and infertility continue to limit population growth (Bahner 1993).

OBJECTIVES

1. Participate in the management of captive Micronesian kingfishers by acting as a "field consultant".
2. Develop plan for captive breeding Micronesian kingfishers on Guam.

PROCEDURES

1. Continue routine maintenance and operation of a cooperative captive breeding program for the Micronesian kingfisher with the AZA and its member zoos.
2. Continue to consult with recognized authorities regarding captive breeding methodology, facility designs, and captive population management techniques.
3. Consult and coordinate with USFWS, U.S. Department of Agriculture, and other government agencies with jurisdiction over the interstate movement and captive maintenance of wildlife. Acquire all necessary local and federal permits.
4. Maintain regular contact with the Micronesian kingfisher studbook keeper and make recommendations to the SSP.

RESULTS

Micronesian kingfishers continued to be captive bred at 8 mainland U.S. zoos, with total numbers increasing to 60 birds. Eight viable offspring were reared at the San Diego Zoo, three at the Brookfield Zoo in Chicago, two at the Lincoln Park Zoo in Chicago, and two at the Houston Zoo. Two offspring were successfully parent-reared (one at San Diego Zoo and one at Houston Zoo). Several organizations, including the USFWS, awarded grants to Dr. Susan Haig at Oregon State University for her proposed field study of Micronesian kingfishers in Pohnpei. This project is expected to start in FY99.

Planning continued for the development of a captive breeding program for Micronesian kingfishers on Guam.

RECOMMENDATIONS

1. Continue routine maintenance and operation of a cooperative captive breeding program for the Micronesian kingfisher with the AZA and its member zoos.
2. Continue to consult with recognized authorities regarding captive breeding methodology, facility designs, and captive population management techniques.
3. Consult and coordinate with USFWS, U.S. Department of Agriculture, and other government agencies with jurisdiction over the interstate movement and captive maintenance of wildlife. Acquire all necessary local and federal permits for shipment of kingfishers between Guam and mainland U.S. zoos.
4. Initiate plans for the repatriation of Micronesian kingfishers to the captive breeding facility on Guam. Apply for outside funding for a proposed kingfisher captive management facility at the Guam Department of Agriculture.

PROGRAM COSTS

The estimated cost for this project under E-2-1 is \$5,000.

LITERATURE CITED

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