

## U.S. FISH AND WILDLIFE SERVICE - SPOTLIGHT SPECIES ACTION PLAN

**Common Name:** Mariana Crow

**Scientific Name:** *Corvus kubaryi*

**Lead Region:** Region 1

**Lead Field Office:** Pacific Islands Fish and Wildlife Office

### **Species Information:**

Status: Endangered

Recovery Priority Number or Listing Priority Number: 5C

Recovery Plan or Candidate Assessment Form: Draft Revised Recovery Plan for the Aga or Mariana Crow (*Corvus kubaryi*), May 2005.

Most Recent 5-year Review: August 25, 2009

Other: Critical habitat was designated for the species on the islands of Rota and Guam in 2004.

Threats: Habitat loss and degradation (Factor A); introduced mammalian predators (Factor C); human persecution (Factor E); single, small population (150 or fewer) highly vulnerable to chance environmental and demographic events (Factor E).

**Target:** Within five years we plan to identify and initiate, if feasible, management of the primary sources of adult and juvenile mortality and, if identified as appropriate and feasible, begin to bolster the aga population through supplemental releases of captive reared individuals on Rota and/or begin the establishment of another population.

**Measure:** Increased juvenile and adult survival rates (as measured by re-sighting color-banded individuals) and increased species' population on Rota and, if applicable, a second wild population (as measured by territorial pair surveys).

### **Actions:**

1. Support field research to identify sources of adult and juvenile mortality (Factors C and E – human persecution)
2. Conduct feasibility study to identify sources and levels of animosity toward aga and identify appropriate measures to reduce this animosity (Factor E)
3. Develop private landowner conservation initiative projects with appropriate parties on Rota and support conducting other incentive measures identified in action two above (Factors A and E)
4. Support implementation of appropriate management measures to increase adult and juvenile survival (Factors C and E – human persecution)
5. Support aga population and demographic monitoring on Rota (Factors C and E)
6. Evaluate need to intervene in the Rota population and appropriate method(s) of intervention (i.e., captive rearing and release and/or establishing another wild population) (Factor E – increased extinction risk for single, small, and fluctuating population)
7. If appropriate, support population intervention program (Factor E – increased extinction risk for single, small, and fluctuating population)

*Identify responsible parties for the actions:* US Fish and Wildlife Service, Ecological Services and Commonwealth of the Northern Mariana Islands Division of Fish and Wildlife (CNMI DFW)

*Estimated costs of the actions:*

| Action   | Estimated Cost (all figures approximate)   |   |  |
|--|--|---|--|
|  | USFWS  | Partners  | Total  |
| 1. Support field research to identify sources of adult and juvenile mortality  | -  | \$200,000 per year, 2-3 years   | \$200,000 per year, 2-3 years  |
| 2. Conduct feasibility study to identify sources and levels of animosity toward aga and identify appropriate measures to reduce this animosity                                 | \$40,000, 1 year   | -   | \$40,000, 1 year   |
| 3. Develop private landowner conservation initiative projects with appropriate parties on Rota and support conducting other incentive measures identified in action two above  | \$4,000, Workshop<br><br>\$5,000 per landowner project, ideally 2-3 projects per year<br><br>TBD after completion of 2 above, Other incentive measures | -<br><br>-<br><br>TBD after completion of 2 above, Other incentive measures | \$4,000, Workshop<br><br>\$5,000 per landowner project, ideally 2-3 projects per year<br><br>TBD after completion of 2 above, Other incentive measures |
| 4. Support implementation of appropriate management measures to increase adult and juvenile survival   | TBD after completion of 1 above  | TBD after completion of 1 above   | TBD after completion of 1 above  |
| 5. Support aga population and demographic monitoring on Rota   | -  | \$32,000 per year, 5 years  | \$32,000 per year, 5 years   |
| 6. Evaluate need to intervene in the Rota population and appropriate method(s) of intervention (i.e., captive rearing and release and/or establishing another wild population) | [Part of Ecological Services Recovery workload]  | -   | [Part of Ecological Services Recovery workload]  |
| 7. If appropriate, support population intervention program   | TBD after completion of 6 above  | TBD after completion of 6 above   | TBD after completion of 6 above  |

**Role of other agencies:** The Recovery Team for the aga includes a range of researchers and resource managers associated with universities, other federal agencies, and local resource agencies. In addition, researchers from the University of Washington are contracted by CNMI DFW to conduct research and monitor the species on Rota. Personnel from the Association of

Zoos and Aquariums may be asked to participate in planning and implementing any population intervention measures for the species. The National Resource Conservation Service is expected to participate and partner with the Service on the landowner incentive workshop and any programs which develop.

**Role of other ESA programs:** ESA section 7 provides internal consultation on the issuance of 10(a)(1)(A) recovery permits; Recovery provides overall project coordination and fundraising assistance, as well as some field assistance; the Section 6 Federal Aid program provides funds to CNMI DFW which are primarily used for the aga conservation program.

**Role of other FWS programs:** The Service's Partners Program would conduct the landowner workshop and develop and administer any landowner programs. The Federal Aid program provides funds to CNMI DFW which are used, in part, to support the aga conservation program.

**Additional funding analysis:** The actions described above cannot be undertaken nor the stated target reached without the estimated funding from the Service and outside sources described above. If we received additional funding within the next five years, we would use it to fund the management activities above whose costs have yet to be determined (e.g., conduct management to increase adult and juvenile survival), initiate a captive rear and release program on Rota, and expand the ongoing research program identified above. Funding the management activities above would allow us to achieve the target of initiating these management actions for the species. The costs of these activities has yet to be determined but would likely be initiated by a Service and/or CNMI contractor. The captive rear and release program would assist us in reaching our plan target sooner by allowing us to track released birds to identify sources of mortality for management and help bolster the Rota population by increasing the number of individuals. The captive rearing project on Rota would be run by a Service and/or CNMI contracted American Zoo and Aquarium Association (AZA) institution while the release and monitoring program would be conducted by a Service and/or CNMI contractor. Lands for the rearing facility would be provided by the CNMI. Expected start up costs for the rearing facility is \$960,000 while the annual cost of running the facility and release program is \$570,000. Finally, expanding the ongoing research program would allow us to achieve our target of identifying sources of adult and juvenile mortality sooner. An additional \$100,000 a year for the next two years would allow the Service to fund the hiring of additional research staff to capture and monitor a larger sample of aga which would allow us to identify the sources of adult and juvenile mortality sooner.