

By Janice Boyd, PhD
AFA Conservation and Research Committee

AFA Avian Grants Program Update

Four projects have been selected for the 2006-2007 AFA Avian Grants program:

- A joint avian conservation research grant in conjunction with Loro Parque Fundación
- Avian intelligence studies by Irene Pepperberg and the Alex Foundation
- Population Levels Assessment and Ecology of the Blue-headed Macaw under the oversight of Don Brightsmith of the Schubot Exotic Bird Health Center at Texas A&M University
- Assistance with equipping the new aviary for the Puerto Rican Parrot (PRP) Recovery Program

In this issue of the Conservation Corner, Jafet Velez of the PRP Recovery Project has helped write a summary of this project, its history, accomplishments, and future, so that readers may understand why this is such a valuable effort for aviculturists to support.

The Puerto Rican Parrot Recovery Project

Jafet Velez-Valentin - US Fish and Wildlife Service

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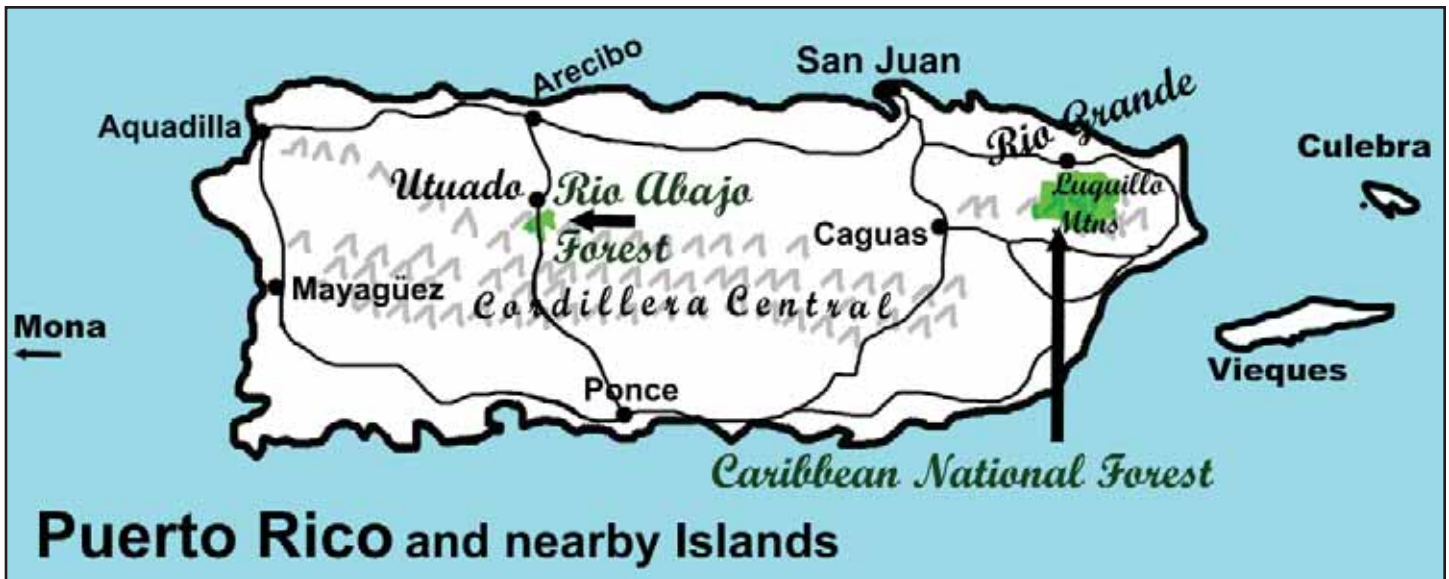
The Puerto Rican parrot (*Amazona vittata*) is the last survivor of the four native parrot species of the United States, the others -- now extinct -- being the Carolina parakeet, the thick billed parrot (hanging on in Mexico), and a parakeet endemic

to Puerto Rico with no common name, *Aratinga maugaei*. This last survivor has the dubious honor of being one of the 10 most endangered birds in the world, with fewer than 30 existing in the wild. But in the aviaries of the Puerto Rican Parrot Recovery Program live over 200 of these parrots, and because of this, the Puerto Rican parrot has a chance of making a comeback. The US Fish and Wildlife Service, the Puerto Rican Department of Natural and Environment Resources, and the US Department of Agriculture Forest Service are cooperating on the Recovery Program for the species. The agencies have successful captive breeding programs and so far about 40 individuals have been reintroduced into the Caribbean National Forest in eastern Puerto Rico.

History

Puerto Rico was formerly entirely forested, and the Puerto Rican parrot once was abundant throughout all forest types on the main island, on the nearby offshore islands of Culebra, Vieques, and Mona, and some claim also on St Thomas in the US Virgin Islands. "Iguaca," as it was called by the now extinct Taino Indians, is a bright green bird with a red forehead, a white ring around the eye, a white beak, and blue underwing feathers. The juveniles are very similar in appearance to the adults, and as with most Amazons, the males and females appear alike to the limited human eye.

Human impacts upon the islands were largely to blame for the decline of the parrot population during historic times. Deforestation and shortage of nesting sites, hunting because it was considered an agricultural pest, and capture for the pet trade began to noticeably reduce its numbers by the latter half of the 19th century. Up to 99% of the original forests were cut down for sugar cane monoculture and other agricultural uses, later replaced by industrial development and urbanization. The Culebra subspecies (*A. v. gracilipes*) was extinct by the late 1800's - early 1900's. Hurricanes in 1899, 1928 and 1932 drastically reduced and in some cases eliminated the remaining enclaves on the islands and on the mainland. As



Map of Puerto Rico and adjacent islands, with locations mentioned in the text indicated. The major mountain ranges are the Cordillera Central and the Luquillo Mountains, both of which provide suitable habitat for the Puerto Rican parrot.

the population declined, the effects of nest site competitors (honey bees as well as other birds), predators (including red-tailed hawks, Puerto Rican boas, mongooses, feral cats, and common black rats), and parasitic flies (*Philornis pici*) became increasingly damaging to the reproduction and survival of the species. Perhaps 2,000 birds existed in the wild in the 1930s, 200 in the 1950s, 70 in 1964, and a low of 13 was reached in 1975. The last remnants of the wild population found a refuge in the wet rain forest of the rugged Luquillo Mountains 40 km southeast of San Juan in the Caribbean National Forest (known as El Yunque).

After 1975, the highest number of individuals reached in the wild was 47. Then came Hurricane Hugo in 1989. The wild population was reduced by over 50% to around 20 - 23 individuals. The situation was beginning to look grim for the Puerto Rican parrot in the wild.

Recovery of the Species

In March 1967 the Puerto Rican parrot became one of the first species to be listed under the U.S. Endangered Species Act. A conservation and recovery program was begun between the U.S. Fish and Wildlife Service (FWS) the Puerto Rico Department of Natural and Environmental Resources (DNER), and the US Forest Service. Presently, the U.S. Geological Survey and Mississippi State University and North Carolina State University are also providing assistance. Captive breeding for species preservation and

for possible reintroduction into the wild was started in 1972. The first and oldest aviary, known as the Luquillo Aviary, was set up in an old military installation within the Caribbean National Forest in the Sierra de Luquillo Mountains. The first captive bred chick was not produced until 1978, but with experience came better breeding success and a gradual increase in the captive population

This increase in captive numbers allowed an additional breeding population to be set up in a second aviary located in Utuado in the Río Abajo State Forest. The Jose J. Vivaldi Memorial Aviary, better known as the Río Abajo Aviary, was constructed in the 1980s by DNER, and in April 1993, 10 birds were transferred from Luquillo to Río Abajo. Two additional transfers of more birds took place later, including chicks from the wild population near the Luquillo Aviary so as to maximize genetic variability in the Río Abajo breeding population. For biosecurity reasons the two aviaries were managed as separate installations and separate populations for about 10 years, but now they are going to be managed as one population and pairings will be based upon the best genetic combination from both aviaries to preserve the existing genetic diversity in the population. The oldest Puerto Rican Parrot in the program, Rudy, hatched around 1968, makes his home in the Río Abajo Aviary.

Good News!

This year, 2006, has been a banner year for the recovery of the species. 20 to 25 birds exist in the Caribbean Forest (the area is so rugged it is hard to



*Wild Puerto Rican Amazon pair in the Luquillo rainforest. Female on left; male on right. Further to the right is fruit of the sierra palm (*Prestoea montana*), a major wild food source for the species.
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know exact numbers) and 4 active nests are being monitored every day or every other day. Since 2002, 28 chicks have been fledged in the wild, and breeding success is even greater in the captive populations. As of August 2006, the Rio Abajo Aviary had 140 birds and 29 new birds fledged that year. The Luquillo Aviary had 70 birds and 13 chicks fledged in 2006. That means in 2006 the total population of Puerto Rican parrots (including those in the wild) increased by 52 birds or almost 29%!

2006 is also a banner year for the Puerto Rican Parrot for two other reasons. On November 19, 2006, a new contingent of 20 parrots will be released into the wild. Previous recent releases in the Caribbean National Forest where the last remnants of the original wild population survive were smaller: 10 individuals in 2000, 16 in 2001, 9 in 2002, and 5 in 2004. And even more exciting is that this time the birds will be released into the Rio Abajo State Forest (not far from the Rio Abajo Aviary) which has not heard the cries of the Puerto Rican parrot for many decades. This will be the

beginning of a new population of wild birds, which is absolutely crucial if the survival of the species is to be assured. The habitat in the Caribbean National Forest is not optimal for the birds. In addition, a disaster could wipe out one wild population. Having several populations established throughout the island makes it more likely that a significant number of birds will survive a disaster such as a hurricane or even a localized disease outbreak. Once a successful population is established in Rio Abajo, repopulation of other former parts of the birds' habitat is planned.

The third bit of good news for the Puerto Rican parrot is that finally the birds in the Luquillo Aviary are going to have a new and more satisfactory home. The present Luquillo Aviary is located at a high elevation in the very wet rain forest. Conditions are ideal for every type of noxious mold you can imagine, and those sub-optimal conditions have caused many reproductive and health problems in the birds. A new state-of-the-art aviary, the Antonio Rodriguez Vidal Aviary, is under construction on a 1.2 acre installation not far from the town of Rio

Grande at the entrance to the Caribbean National Forest. The aviary is named after the scientist who did the first known study on the Puerto Rican parrot back in 1953-1959. His was the first loud voice to call attention to the precarious state of the Puerto Rican parrot, and it is fitting that the new breeding aviary has been named in his honor. A groundbreaking ceremony was held on February 18, 2005, and movement of the Luquillo birds to their new home will take place sometime in October or November of 2006. The facility has a primary building and some auxiliary buildings for a total of 5,200 square feet of usable space. It contains a nursery, a hospital, a hurricane shelter room, a kitchen, and outdoor cages. Total cost is roughly \$2.5 million. Congress appropriated \$1.7 million and the remaining funds are coming from outside donations. The nonprofit, nongovernmental US Fish and Wild Foundation has been working with commercial partners, foundations, and other nonprofit organizations to raise the necessary matching funds. And here is where aviculturists, aviculture organizations, and most assuredly the American Federation of Aviculture can help the Puerto Rican parrot.

How Aviculture Can Help

The \$2.5 million covers the facility essentials only; many other relatively small items and expenses are not covered. Jafet Velez, the Luquillo Aviary Operations Manager (soon to be the Rio Grande Aviary Operations Manager) has indicated that there are a number of items still needed by the vet clinic, including a new x-ray machine, dehumidifiers, a centrifuge, and an endoscope setup and biopsy forceps. Assistance in equipping the new Rio Grande Breeding Aviary is one of the programs selected for funding in 2006-2007 by the AFA Avian Research Grants Program.

With our help -- your help -- the Puerto Rican Parrot Recovery Project's goal of down-listing the Puerto Rican parrot from endangered status (CITES I equivalent) to threatened status (CITES II equivalent) by the year 2020 can be met. Can we count on you?

The information for this article was assembled from a number of public websites, including the ones listed below. For more information on the Puerto Rican Parrot Program, start with the following links:

<http://www.fws.gov/southeast/prparrot/>

http://www.fws.gov/caribbean-ecoteam/PRP_aviaries.htm

<http://www.fws.gov/caribbean%2Decoteam/>

(See the links under "Rio Grande Field Office Puerto Rican Parrot Project (PRP)" ■



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