

Plain Pigeon (Continued)

northwestern Puerto Rico, is near completion. The first releases into the wild will occur once these facilities are finished and a sufficient number of birds is available for re-introduction.

Genetics and Bird Conservation

by Kelly Brock, Department of Biology, Queen's University, Kingston, Ontario K7L 3N6

Population declines, such as those suffered historically by the Puerto Rican Parrot (*Amazona vittata*), have predictable biological consequences on the genetic diversity of species. Random genetic drift, inbreeding, and population bottlenecks result in dramatic reductions in genetic variability and fitness correlates. Phenotypic manifestations of reduced genetic diversity and inbreeding depression in small populations include decreased fertility and fecundity, poor parental care, increased juvenile mortality, and vulnerability to disease. With this in mind, recombinant DNA technology is being used in a new approach to the Puerto Rican Parrot conservation program. With the use of "DNA fingerprints," it will be possible to determine the degree of relatedness among individual parrots. These molecular profiles can be used to design a more effective captive breeding program, and they can also be used to assess the genetic structure of the wild flock. Genetic variation in the Puerto Rican Parrots will also be evaluated using other "DNA probes," such as the major histocompatibility complex (MHC), a highly variable gene complex involved in the immune system, and Restriction Fragment Length Polymorphisms (RFLPs). With insights into some underlying mechanisms involved in population biology of the Puerto Rican Parrot, such as at the molecular level, it will be possible to address management questions from a whole new perspective. As a result, it is hoped that a genetic management plan can be generated that will boost the recovery of the species.

Additional benefits can be reaped when molecular techniques are applied to conservation. For instance, DNA fingerprints and RFLPs can be maintained in a species data management system, such that molecular "tags" can be used to trace the origin of individuals, as well as conduct pedigree analyses. These applications of recombinant DNA technology may have significant impact on wildlife law enforcement.

Draft Forestry and Wildlife Legislation for Monsterrat and Antigua

Legislation has been drafted for forestry and wildlife for both Monsterrat and Antigua under the terms of reference of a Food and Agriculture Organization of the United Nations Project. This legislation may be of interest to other Caribbean countries. Further information can be obtained by contacting the author, Thomas J.P. McHenry, 444 South Flower Street, Fifth Floor, Los Angeles, California 90071, U.S.A. (telephone 213-623-2322).

Requests for Assistance

One aspect of the molecular study of the Puerto Rican Parrot involves an investigation of the phylogenetic relationship of the Greater Antillean parrots. Small blood samples are needed from the Jamaican Black-billed (*Amazona agilis*) and Yellow-billed (*A. collaria*) parrots and the Yellow-lored Parrot (*A. xantholora*). If anyone has, or knows of, individuals of these species in captivity and is willing to cooperate in this project, please contact Kelly Brock, Department of Biology, Queen's University, Kingston, Ontario, Canada K7L 3N6 (telephone: 613-545-6124).

As part of an ongoing conservation project on the endangered Bahama Parrot on Abaco Island, Bahamas, information is needed on feral cat control programs on islands. Bahama Parrots are extremely vulnerable to nest predation by feral cats because of the parrot's subterranean nesting habitat. In 1988, 53% of the parrot nests in our study areas suffered from feral cat predation. The Bahamas National Trust chapter on Abaco is hoping to begin a feral cat control program in 1989 and seeks logistical advice. Please send information to Rosemarie Gnam, Department of Ornithology, American Museum of Natural History, Central Park West at 79th St., New York, NY 10024, U.S.A.

Sound recordings are needed for a forthcoming cassette of voices of New World pigeons and doves. Sounds of over 50 of the 70 species have been assembled, but a recording of vocalizations of the Antilles Quail-Dove (*Geotrygon martinica*; island of Martinique) is needed. If you can supply this recording, please write to John W. Hardy, Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611, U.S.A.