

practices.

Each captive flock of parrots was essentially founded by four individuals. However, differences between the two species in reproductive success (e.g., the average annual productivity rate from 1980 to 1990 was 12.2 for the Hispaniolan Parrot flock and 5.8 for the Puerto Rican Parrots) suggested that inbreeding may be a limiting factor in Puerto Rican Parrot productivity. Anecdotal evidence of inbreeding in the wild population of Puerto Rican Parrots further suggested that productivity differences in captivity may not have been just species differences. Therefore, DNA fingerprints were used to estimate the degree of relatedness among the parrots. Two minisatellite probes, human 33.6 and the mouse periodicity gene, *Per*, were used to generate DNA fingerprints from *AluI* digested genomic DNA extracted from whole blood. Standard techniques were used for restriction enzyme digests, gel electrophoresis, southern blotting, and autoradiography.

Segregation analyses of bands in the DNA fingerprints were conducted between parents and offspring in the largest pedigree of each species. Bands that were shared by both parents were excluded from the analysis. All other bands in the 2 to 21 kilobase size range of each parent were given a unique designation, and the presence or absence of each band was noted in each offspring. Bands that always co-migrated were considered linked, and bands that never co-migrated were considered allelic.

In a Hispaniolan Parrot family of 2 parents and 13 offspring, the *Per* probe identified a minimum of 13 maternal loci, and a minimum of 14 paternal loci. One "odd" band (a new length variant) was identified in one of the offspring, suggesting a mutation rate in these loci similar to other species. In the same family, the 33.6 probe identified a minimum of 17 maternal loci, and a minimum of 7 paternal loci.

In a Puerto Rican Parrot family of two parents and nine offspring, the *Per* probe identified a minimum of seven maternal loci and a minimum of eight paternal loci. In the same family, the 33.6 probe identified a minimum of 10 maternal loci and a minimum of 7 paternal loci.

Band-sharing coefficients (BSC), defined as twice the number of bands shared between a pair of individuals divided by the total number of bands scored in the 2 to 21 kilobase size range for both individuals, were estimated for Hispaniolan Parrots with confirmed pedigrees. Because *Per* gave faster and clearer autoradiographic signals, it was selected for the following analysis.

The average BSC for unrelated Puerto Rican Parrots, 0.41 ($CV = 29\%$), was greater than the BSC for unrelated Hispaniolan Parrots, 0.19 ($CV = 37\%$; $P > 0.05$). From 1979 to 1990, 38% of mated Puerto Rican Parrot pairs (5/13) successfully fledged offspring. Of mated pairs with BSC from 0.21–0.30, 2 of 3 were successful; 2 of 2 pairs with BSC from 0.31–0.40 were successful; 1 of 4 pairs with BSC from 0.41–0.50 was successful; and none of 4 pairs with BSC from 0.51–0.60 were successful. Of 10 mated pairs of Hispaniolan Parrots, 9 successfully produced fledglings. The majority of the successful pairs (6/9) had BSC lower than 0.30, and 3 of 9 mated pairs had BSC from 0.31–0.40. One pair that failed to breed had a BSC between 0.31 and 0.41. Therefore, the probability of successful breeding increased as the BSC of a

mated pair ranged from approximately 0.21 to approximately 0.40, but there was little chance of successful breeding when the BSC of a mated pair was greater than 0.41. Unfortunately, 8 of the 13 mated pairs of Puerto Rican Parrots had BSC greater than 0.41, and only one of the pairs was successful.

The results of this study indicate that "unrelated" Puerto Rican Parrots may be as genetically similar to each other as second degree relatives. Consequently, poor reproductive success of the captive parrots may be due to inbreeding. To increase the probability of success in the captive breeding program, pairs of Puerto Rican Parrots should have BSC (*AluI/Per*) lower than 0.41. Where behavioral problems or physical handicaps of the birds interfere with breeding performance, techniques such as artificial insemination may be used to breed genetically desirable pairs.

SOCIETY'S 1991 ANNUAL MEETING HELD IN ST. LUCIA

The Society of Caribbean Ornithology met at the St. Lucian Hotel in St. Lucia, 4-7 August 1991. Participating in the meetings, field trips, and festivities were 45 persons representing 17 countries, including St. Lucia, Martinique, Guadeloupe, Dominica, Montserrat, St. Vincent, Barbados, Saba, U.S. Virgin Islands, Bahama Islands, Puerto Rico, Dominican Republic, Jamaica, Turks and Caicos Islands, Cayman Islands, United States, and United Kingdom. New officers were elected, including Ms. Catherine Levy, who succeeds the founding President Jorge Moreno, and Ms. Patricia F. Bradley, who takes the Secretary position formerly held by Dr. Alexander Cruz. Dr. Joseph Wunderle, Jr., was elected to the newly created office of Vice President. Allan Keith will remain as Treasurer through the end of 1991.

The next meeting of the Society will be in Puerto Rico in August 1992.

ABSTRACTS OF PAPERS PRESENTED AT THE 1991 MEETING OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY, ST. LUCIA

Determination of Hematology and Serum Chemistry Values for Captive Puerto Rican Plain Pigeons (*Columba inornata wetmorei*)

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Data generated from hematology and serum chemistry analysis are often used in conjunction with clinical signs and history to access the diagnostic. In addition, these two parameters can be used to evaluate the physical condition of normal birds. Serum samples were randomly collected from 30 captive Puerto Rican

Plain Pigeons [PRPP] and evaluated for the following: glucose, creatinine, calcium, glutamic oxaloacetic transaminase (SGOT), uric acid, alkaline phosphatase, total protein, cholesterol, and lactate dehydrogenase (LDH). Differential white blood cell (WBC) counts, red blood cell (RBC) counts, WBC and hemoglobin estimates and packed cell volume (PCV) were also determined. The present study intends to establish reference values that are not available for wild and captive PRPP. Hemogram and blood chemistry profiles of other avian species are discussed.

Immediate Post-fledging Dispersal of White-crowned Pigeons from Florida Bay

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We radio-tagged 58 White-crowned Pigeon (*Columba leucocephala*) nestlings on Bottle and Middle Butternut Keys in Florida Bay from 1988-1990. Twenty-seven birds survived to leave the nesting key, 12 died before leaving the key, and the fate of the remaining 19 could not be determined. Mean age at dispersal was 34.1 days (range = 28-40 days). Young appeared to disperse at an earlier age in 1988 ($x = 28.5$ days) when an abundant fruit crop was available compared to 1989 ($x = 33$ days) and 1990 ($x = 35.5$ days) when fruit crops were poor. Of the 27 birds that survived to disperse, 17 flew to the mainline keys, 5 flew to other keys in Florida Bay, and 5 dispersed to the Florida mainland. We followed birds from initial dispersal until transmitter batteries failed to operate or we could no longer locate the birds in south Florida (< 58 days following initial dispersal). Mean distance from the nesting key on the first day of dispersal was 6.6 km. Four days following initial dispersal, birds averaged 21.7 km from the nesting key and by 12 days following initial dispersal, average distance from the nesting key stabilized at approximately 30 km. Immature White-crowned Pigeons dispersing to the mainline keys selected hammock fragments > 5 ha and birds dispersing to the mainland and Florida Bay used natural habitats nearly exclusively. Protection of forest fragments larger than 5 ha along the mainline keys will be critical for successful reproduction by White-crowned Pigeons.

BLM Strategy for Neotropical Migratory Birds

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In 1987, the Bureau of Land Management (BLM) embarked on a new era of habitat management with a strategic plan entitled "FISH AND WILDLIFE 2000: A PLAN FOR THE FUTURE." This Plan recognized the need for improved management of fish and wildlife on the more than 270 million acres of BLM-managed land. It calls for the development and execution of national strategy plans that identify specific goals

and objectives to assist in ensuring natural abundance and diversity of wildlife by improving management of wildlife; fisheries; riparian-wetland areas; threatened, endangered, and candidate species; and certain habitats of special concern. The Nongame (Neotropical Migratory) Bird Habitat Conservation Strategy Plan is a national strategy plan prepared in response to a growing concern about the precipitous declines of many nongame bird populations. This Plan will focus on a large subgroup of nongame species commonly known as "neotropical migratory birds." This Plan is an integral element of BLM strategies for avifauna and completes the FISH AND WILDLIFE 2000 strategy package. Additionally, this Plan assists in achieving national objectives for bird protection identified in two historic conservation acts. The first is the Migratory Bird Treaty Act of 1918 that responded to severe over-shooting of several bird species. The second act embraced is the Fish and Wildlife Conservation Act of 1980, whereby Congress asserted that the improved management of non-game wildlife will assure "...a productive and more aesthetically pleasing environment for all citizens." Through the implementation of this Plan, the BLM and its partners in nongame bird habitat conservation will increase public and resource manager awareness of the socio-economic importance of these birds to the recreative public. The overall intent is to reverse the decline of some bird populations and to implement this proactive program for other species.

Breeding Biology and Ecology of the Lesser Antillean Bullfinch

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The Lesser Antillean Bullfinch (*Loxigilla noctis*) is widely distributed in the West Indian region, occurring from St. John and St. Croix through the Lesser Antilles, with the exception of the Grenadines. Despite its wide distribution, little is known about the life history of the species. During the summers of 1984 and 1985, we undertook a study on the ecology and breeding biology of this species in dry coastal lowlands and coastal hills in southern St. Lucia. The bullfinch was among the most common species, with an estimated density of 85.6 birds per km². In its feeding habits, it is a generalist, with insects and fruits predominating in the diet. Mean clutch size was 2.75 eggs and mean number of nestlings per nest was 1.41. Young were produced from 21.2% of the eggs laid.

U.S.D.A. Forest Service Role in the Neotropical Migratory Bird Conservation Program

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The Forest Service, U.S. Department of Agriculture, has been instrumental in helping to establish a new initiative to conserve neotropical migratory landbirds, affectionately known as "Partners in Flight — Aves de las Americas." About 30 research scientists, distributed among 8 Forest Service Experiment Stations, are addressing this conservation program through ongoing and planned studies on cause and effect relationships, migrant habitat use, monitoring methodology, sensitive species, avian productivity and survival, bird responses to land use practices, avian productivity, and landscape ecology. Studies of migrant populations on the wintering grounds are underway at the Forest Service's Institute of Tropical Forestry in Puerto Rico. Several technical assistance and training projects targeting neotropical migrants, tropical deforestation, and biological diversity problems were sponsored in 1991 through International Forestry's Tropical Forestry Program. In the management arena, action plans stressing habitat evaluation and improvements, bird population monitoring, training for resource professionals, and public awareness were developed by the nine Regions of the National Forest System. The Forest Service is aggressively supporting the Partners in Flight through internal activities, as well as through new partnerships with non-traditional cooperators like the International Council for Bird Preservation and World Wildlife Fund and through cooperative agreements with university researchers.

Diet, Foraging Behavior, and Nutrition of the Bahama Parrot (*Amazona leucocephala bahamensis*) on Abaco Island, Bahama Islands

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The endangered Bahama Parrot (*Amazona leucocephala bahamensis*) is restricted to only two islands in its formerly extensive range — Abaco and Great Inagua. As part of a larger study into its breeding biology on Abaco Island, we collected data on the parrot's feeding behavior during the breeding season (May-September). From 1985 to 1988, we recorded 686 feeding observations in the nest area. The nest area was in Caribbean pine (*Pinus caribaea*) forest, characterized by a shrub understory of 31 species and herbaceous growth dominated by Bahamian holly (*Xylosma buxifolium*) and common ernodea (*Ernodea littoralis*). Bahama Parrots fed on 18 plant species in the nest area. Caribbean pine, wild guava (*Tetrazygia bicolor*), and poisonwood (*Metopium toxiferum*) accounted for 76% of all feeding records. The nutrient composition was determined for 16 food items, which accounted for 97% of the feeding records. Seeds provided major dietary protein and lipids, whereas flowers and fruits provided primarily carbohydrates.

Caribbean pine seeds were a major staple and provided 91% of the proteins and lipids in the total diet.

Desarrollo Morfológico y Conductual en la Paloma Coronita (*Columba leucocephala*) en Cautiverio

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En este estudio se presentan datos sobre el desarrollo morfológico y conductual en polluelos de Paloma Coronita (*Columba leucocephala*) en cautiverio, durante las cuatro primeras semanas de vida. Los datos corresponden a observaciones sobre el aumento de peso, aparición y desarrollo de las plumas primarias y caudales, apertura de los ojos y los oídos, cambios en la coloración de la piel y el iris y aparición de la conducta de miedo. Se describen, además, algunas experiencias en condiciones de semicautiverio.

The History of the Ivory-billed Woodpecker in Cuba

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The Ivory-billed Woodpecker (*Campephilus principalis*) is endemic to the southeastern United States and Cuba and in both areas it has been known as a bird of extensive mature pine or hardwood forests. A separate subspecies (*C. p. bairdii*) is recognized from Cuba, but geographic variation in the species is slight and predictable under well-known eco-geographic rules. The ivory-bill almost certainly arrived in Cuba during a peak in Pleistocene glaciation, when sea levels were lower and distance between Florida and Cuba was minimal. Both mainland and Cuban populations were drastically fragmented and brought to the brink of extinction as a result of habitat destruction and hunting. The mainland population survived into the twentieth century in bottomland hardwood forests, the pines being more accessible and heavily exploited. In Cuba, however, montane pine forests in the east provided the last refuge for the species.

Exotics in Jamaica — Past and Present

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In the last two years, three species of introduced granivorous birds have been discovered living in the wild in Jamaica. Since the release and establishment in the wild of the Green-rumped Parrotlet (*Forpus passerinus*) over 80 years ago, these are the first exotics known to survive outside of captivity. An examination of records from the seventeenth century to the present indicates that many exotic birds have been introduced into Jamaica for various reasons through the ages. Some have been released, some have escaped, but up to recently the

number of successful survivals in the wild has been limited. As yet unconfirmed reports indicate the possibility of another three species at large. A new trend seems to be emerging, and this reflects developments due to a dramatic increase in the cage bird trade in the 1980s, to the onslaught of Hurricane Gilbert (the first hurricane to hit Jamaica directly in over 30 years), and a certain shift to apartment or townhouse dwelling.

Patterns of Morphological Variation in Introduced and Native Populations of *Lonchura cuculatta*

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The Bronze Mannikin (*Lonchura cuculatta*), an African estrildid introduced to Puerto Rico at least 200 years ago, is morphologically distinct both within Puerto Rico and between Puerto Rico and Africa. Here, I describe observed patterns of variation and suggest possible causal mechanisms.

The Taxonomic Position of the Greater Antillean Pewee (*Contopus caribaeus*)

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Bond gives the distribution of the Greater Antillean Pewee (*Contopus caribaeus*) as Jamaica, Hispaniola, Gonave Island, Cuba and adjacent islands, and the Bahama Islands. *Contopus*, as well as many other genera in the Tyrannidae, have *Species-Specific Dawn Songs!* These are stereotyped, repetitive, and given in a predictable pattern at a fast rate. Parts, or all, of the song may be given during other, daylight hours, but then at a much slower pace. Our tape recordings revealed three distinctly different Dawn Songs, from Jamaica, Hispaniola, and the third from Cuba and the Bahamas. Tape recordings will be presented, and also spectograms, of the three performances, plus several secondary calls. The last also varied from island to island. Recent close-up photographs will be shown, showing similarities and differences among populations. One outstanding difference is a large, whitish quarter moon-shaped spot at the back of the eye in birds from Cuba and the Bahamas. This character had been shown in two books, both entitled "Birds of the Bahamas," by Patterson (1972), and by Brudenell-Bruce (1975), and more recently by Kaufman (1984, Birding, June) from a trip to Grand Cayman. We reviewed and will comment on measurements from

published accounts, from over 337 specimens, plus some of our own unpublished information. We conclude that we are dealing with three species (as a superspecies with three allospecies). The suggested classification is, 1st, Jamaican Pewee (*C. pallidus*), 2nd, Hispaniolan Pewee (*C. hispaniolensis*), and, 3rd, *C. caribaeus*, for which we coin a range-descriptive new name, the Cubahaman Pewee.

Standardized Call and Sight Counts of Columbids in Puerto Rico: A Comparison of Density and Relative Abundance Estimates

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From July 1986 to September 1988, standardized call and sight counts were conducted to seasonally estimate the density and relative abundance of 10 native species of pigeons and doves in 3 major life zones of Puerto Rico. Relative abundance estimates based on aural and visual detections are commonly assumed to be valid indicators of population density changes at multiple spatial and temporal scales of sampling. However, seasonal estimates of relative abundance need to be adjusted for effective area of detection, especially when comparisons of different species in heterogeneous habitats are of interest. Density estimates were derived from circular plots (CPs) and fixed-radius point counts (FRPCs) with a radius of 60 m, and were compared on a seasonal basis with call and sight counts unadjusted for area of detection. CPs and FRPCs ranked the species in the expected order of abundance. Overall, density and relative abundance estimates derived from CPs and unadjusted counts were satisfactorily correlated (mean $r = 0.733$, $P = 0.020$, $n = 6$) at calling peaks (March-June) in the life zones. However, CPs and FRPCs were not satisfactorily correlated with total detections (call + sight) (mean $r = 0.550$, $P = 0.296$, and mean $r = 0.240$, $P = 0.562$, $n = 6$, respectively). Density estimates derived from CPs can be used as auxiliary variables to calibrate call counts via double sampling. The use of CPs facilitated comparisons of species abundances at different spatial (habitats, routes, life zones) and temporal (months, seasons, years) scales of resolution. Moreover, at calling peaks the variance of CPs compared favorably with the variance of unadjusted call counts.

"Partners in Flight – Aves de Las Americas," the Neotropical Migratory Bird Conservation Program

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Results from long-term monitoring programs indicate that some populations of neotropical migratory birds declined during the period 1978-1987. Conservation programs for these species are complex, given that over 150 species breeding in, migrating through, or wintering in more than a dozen

countries are involved. The National Fish and Wildlife Foundation has catalyzed the formation of a comprehensive and coordinated program for conservation of neotropical migrants. The program builds on the strengths of federal and state agencies, non-government conservation organizations, and private sectors in both North and Latin America. Federal agencies in North America have responded with development of strategic plans for conservation of neotropical migrants, and increased funding to implement current and new programs. State agencies in North America have instituted new monitoring programs to document population changes on the local level and to identify areas of high species richness. The non-government conservation community has stimulated formation of new partnerships with federal and state agencies that benefit both groups. A strategic plan for conservation of neotropical migrants on the wintering grounds is being developed. This talk will include a discussion of the problem background, development of the "Partners in Flight" program, and specific information about agency and non-government programs.

Puerto Rican Plain Pigeon (*Columba inornata wetmorei*): is it Monomorphic?

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Literature on the Puerto Rican avifauna states that the sexes of the Plain Pigeon (*Columba inornata wetmorei*) differ in color and size. According to Biaggi (1983), males are brighter and larger than females. However, all available information is based on field observations. The first goal of the captive program for the Plain Pigeon was to determine the morphological differences between the sexes. Initially, the captive pigeons were observed for any external differences, but none were found. After that, morphological measurements were taken, including wing chord, bill length from feathers and nares, bill height and width, size of head from bill, tarsus, length of primary feather number nine and retrices, and body mass. A Student's *t* test was performed to compare both sex measurements on known male and female captives. Body mass and wing chord showed a significant difference between sexes. For body mass, I found a t_{calc} (0.745), which was less than the t_{crit} (2.021) at the 0.05 alpha level (d.f. = 40). For that reason, I accept my null hypothesis ($H_0: x_1 = x_2$). Wing chord also was significantly different between the sexes. For this measurement, the t_{calc} (2.021) was greater than the t_{calc} (1.059) at the 0.05 alpha level (d.f. = 40). Those two measurements could be used to sex this species in captivity and particularly the wild population of the Plain Pigeon. No significant difference was found between the sexes in the other measurements tested. Another sexing method that is accurate is karyotyping, using blood samples or feather pulp of wild individuals.

Aspects of the Breeding Biology of Roseate Terns in Puerto Rico

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We studied two colonies of Roseate Terns (*Sterna dougallii*) breeding in Puerto Rico to explain the year to year variability in reproductive success and colony site tenacity. In the Culebra archipelago, Roseate Terns exhibit unpredictable nesting behavior, shifting colony sites up to four times within a breeding season, and low reproductive success. In the keys off La Parguera, Roseate Terns exhibit a more predictable nesting behavior, with little shifting once a breeding colony has been established, and higher reproductive success. We discuss how differences in the number and type of predators at each colony may affect the breeding behavior and survival of eggs, young, and adult terns. We suggest that intercolony movement may be occurring among colonies in Puerto Rico and the Virgin Islands.

Some Aspects of the Breeding Biology and Growth Patterns of the Puerto Rican Flycatcher (*Myiarchus antillarum*) at Cabo Rojo, Puerto Rico

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The breeding biology and growth patterns of the Puerto Rican Flycatcher (*Myiarchus antillarum*) were studied at the Cabo Rojo National Wildlife Refuge from 1987 to 1991. Throughout the study, a total of 50 nests built in wooden nest structures were monitored. The breeding season extended from February through June. Mean clutch size was 4.38. Average number of young per successful nest was 3.3, with 79% of monitored nests fledging at least one young. Mean morphometric dimensions for fledglings were 9.2 mm for culmen, 22.9 mm for tarsus, and 58.7 mm for wing length. The mean weight of fledglings was 22.3 g, which was significantly lower than the weight of adults. Wing length and weight were used to generate a regression equation to estimate age of nestlings. Nestling growth pattern was logistic, with rapid growth occurring between 5-13 days post-hatch. Growth rates of young originating from broods of three to five were not significantly different. Preliminary data suggest that nest location could be an important factor allowing for similar growth rates among differing brood sizes. However, other factors that might yield similar results and questions regarding adult activity budgets will be discussed. Censuses were conducted in 1991 to determine population numbers.

The Yellow-shouldered Blackbird (*Agelaius xanthomus*) Recovery Project

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A recovery effort for the Yellow-shouldered Blackbird has been conducted in southwestern Puerto Rico since 1982. A history of the project, including results and host-parasite interactions with the Shiny Cowbird (*Molothrus bonariensis*), are presented. The current status of this population, as well as short- and long-term projections of the recovery effort, are also discussed.

Post-hurricane Management and Conservation Strategies for the Wild Puerto Rican Parrot Population: An Overview

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The Puerto Rican Parrot (*Amazona vittata vittata*) is the last endemic psittacine found in the islands of the Puerto Rican Bank. Once abundant and widely distributed, the species declined largely due to deforestation and habitat destruction. Conservation efforts began in 1968, when a relict population of approximately 24 wild parrots was found restricted to the rainforest area of the Luquillo Mountains within the Caribbean National Forest (CNF). Captive breeding efforts were initiated in 1972. Progress in the project was slow, yet consistent, over the years. By August 1989, there were 5 active nesting areas and an estimated total wild parrot population of 45-47 individuals. On 18 September 1989, Hurricane Hugo hit CNF with sustained winds in excess of 150 miles per hour. Damage to the tabonuco (*Dacryodes excelsa*) and palo colorado (*Cyrilla racemiflora*) forest types, the main parrot habitat at CNF, was severe over large sections of the forest. Conservation and management efforts since the passage of Hugo include newly designed observation blinds, the re-implementation of a discarded parrot census method, modified canopy level platforms, and the use of colored metal leg bands for marking parrot chicks.

Impact of Shiny Cowbird Parasitism on the Reproductive Success of the Puerto Rican Vireo in Gúanica Forest, Puerto Rico

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The Puerto Rican Vireo (*Vireo latimeri*) is a single island endemic which may decline in numbers because of brood parasitism by the Shiny Cowbird (*Molothrus bonariensis*). In 1990, I began an ongoing project to document the chronology, extent, and effects of cowbird parasitism on this species in the

Gúanica Commonwealth Forest Reserve, a mature subtropical dry forest in southwestern Puerto Rico. This research has shown that the Puerto Rican Vireo is a frequent cowbird host in the study area, and that parasitized nests are not successful in fledging vireo young. The decrease in reproductive success of parasitized nests is due to two factors. First, cowbirds frequently remove host eggs from the nest (partial or entire clutch). Second, hatching success of vireo eggs decreases because of the larger size of cowbird eggs. The implications of these data for the population status of the Puerto Rican Vireo will be discussed. Research is currently underway to investigate the distribution and abundance of Shiny Cowbirds in Gúanica Forest, and the effects of forest openings on parasitism rates there.

The Effect of Hurricane Hugo on Bird Populations in a Puerto Rican Rain Forest: The First Year and a Half

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Bird populations in the El Verde rain forest were sampled at 2-3 week intervals by mist nets, starting 2 weeks after the passage of Hurricane Hugo and continuing for 1-1/2 years. The results were compared with a baseline netting study completed before the hurricane. Bird captures were initially higher after than before the hurricane, but then declined to a low level 50 days after the storm. Bird captures reached their highest levels at 100 days after the storm, corresponding with fruit production in old treefall gaps. By 200 days after the storm, bird captures had returned to pre-hurricane baseline levels. However, the pattern of population change differed among species. For example, a major decline was observed in one species (Ruddy Quail-Dove *Geotrygon montana*); four species increased (Pearly-eyed Thrasher *Margarops fuscatus*, Black-faced Grassquit *Tiaris bicolor*, Puerto Rican Bullfinch *Loxigilla portoricensis*, Red-legged Thrush *Turdus plumbeus*); five species showed an initial increase, followed by a decline to previous population levels (Puerto Rican Tanager *Nesospingus speculiferus*, Puerto Rican Tody *Todus mexicanus*, Black-whiskered Vireo *Vireo altiloquus*, Northern Parula *Parula americana*, Black-throated Blue Warbler *Dendroica caerulescens*); and the remaining species showed no consistent pattern. Thus, most hurricane-induced wandering or nomadism occurred within 200 days following the storm, after which birds appeared to respond to successional changes in the plant community.

Additional papers presented at the meeting, for which no abstracts were received, included:

Monitoring Trends in Annual Abundance of Migratory Birds Hunted in Barbados

Debbie Riven-Ramsey, Barbados