

North American migrants which overwinter in the Caribbean. This involves surveys of migrants to determine the types of habitats used by the migrants and the future of these habitats. The work has involved surveys in Puerto Rico, the Dominican Republic, Jamaica, Cuba, and the Bahama Islands. This work is done in collaboration with Robert B. Waide and is supported by the World Wildlife Fund.

2. Population biology and sexual habitat segregation of Black-throated Blue Warblers overwintering in Puerto Rico.

3. An analysis of the impact of Hurricane Gilbert on bird populations in Jamaica. The results of this work will be useful for reserve design and conservation of threatened and endangered wildlife species. This work is done in collaboration with Robert B. Waide and D. Jean Lodge.

4. Study of the development of foraging behavior in captive Hispaniolan Parrots to determine the optimal time for release of captive-produced parrots into the wild. This work is in collaboration with Marcia Wilson.

University of Puerto Rico

1. Population consequences of song learning by the Bananaquit. This three year study focuses on song and singing behavior of individuals and populations to understand the development and maintenance of song dialects by Bananaquits. Presently, two students, William Carronero and Rafael Cortes, are involved in the project.

2. Master's thesis supervision of a dissertation project by Iris Velazquez on observational learning in the Shiny Cowbird.

Requests for Information on Seabirds

Joanna Burger, Jaime Collazo, Michael Gochfeld, Jorge Saliva, and Kelly Wolcott are developing the U.S. Fish and Wildlife Service's recovery plan for the Caribbean Roseate Tern. Anyone able to provide information on this species in the Caribbean should contact one of the above individuals. Information needed include (1) present and local colony sites with estimated numbers of nests and habitat information, (2) estimates of reproductive success, (3) human intrusion or exploitation such as eggging, (4) types and impact of predators, (5) feeding areas, food availability, and food types, (6) distribution outside the breeding season, and (7) management successes or failures. Joanna Burger can be reached at Biological Sciences, Rutgers University, Piscataway, New Jersey 08855, U.S.A.

Joanna Burger and Michael Gochfeld are preparing a report on management of seabirds in the Caribbean for the 1990 I.C.B.P. meetings. Persons

interested in participating on and co-authoring the report should contact Joanna Burger.

Abstracts of Selected Papers Presented at the Third Annual Meeting of the Society of Caribbean Ornithology

Is the Pearly-eyed Thrasher a True Supertramp Species? Wayne J. Arendt. The results of an 11-year study of the ecology of the Pearly-eyed Thrasher (*Margarops fuscatus*) show that this widespread Caribbean bird is a prime example of a superior colonizer, but poor competitor and is a classic example of Jared Diamond's "supertramp" species. The Pearly-eyed Thrasher (1) is a strong flier, showing excellent dispersal and homing abilities, (2) is a habitat generalist, (3) is omnivorous, (4) occupies multiple spatiotemporal foraging niches, (5) obtains high population densities, (6) is sexually dimorphic, and (7) shows intra- and inter-island morphological variation, possibly as a result of ecological release.

Subspecific Taxonomy of the Mangrove Cuckoo, *Coccyzus minor*. Richard C. Banks and Robert Hole, Jr. Up to 13 subspecies of the Mangrove Cuckoo are currently recognized, depending on which authority is followed. Taxonomic confusion started early, when only two of the names had been proposed. Descriptions of most of the subspecies were based on only a few individuals, and there has never been a thorough study of variation in the species. Variation within populations is extensive and encompasses variation supposed to occur between populations. We believe that only three subspecies should be recognized. Birds on Dominica, Monserrat, and St. Vincent (*C. m. dominicae*) are consistently large and the ochraceous color is usually pronounced; Bahamas (*maynardi*) have extensive gray over the breast and are generally pale. We assign all other populations, including those on the mainland of South and Central America, to the nominate form, *minor*. We believe that the spread of the species has been from east to west, probably the result of storms like last year's Hurricane Gilbert.

Response of Young Terns to Human Handling Joanna Burger and Michael Gochfeld. Seabird young are exposed to predators and people as nestlings, and their behavior when handled may affect whether they are subsequently eaten, harmed or escape. We examined the behavior of young of several terns (Sooty, Roseate, Royal, Sandwich terns and Brown Noddies) on Culebra since 1983 to determine species

and individual differences. Generally, Sooty Terns were the most aggressive, calling loudly, struggling and biting; and Sandwich and Roseate Terns were least aggressive. For Sooty Terns and Brown Noddies individual defensive behaviors were highly correlated, whereas they were not correlated for Royal and Sandwich terns. Most tern chicks, when released, moved to cover so they were less visible than before the disturbance. We discuss reasons for the behavioral differences among species.

Cowbirds in South Florida - Potential Threats from Opposite Directions. Alexander Cruz. Recent changes in the range of two brood parasites, the Shiny Cowbird (*Molothrus bonariensis*) and the Brown-headed Cowbird (*M. ater*), have brought them into contact with avian communities in south Florida that have never experienced brood parasitism. Originally confined to South America, Trinidad and Tobago, the Shiny Cowbird has spread dramatically into the West Indies during the past century, and since 1985 it has been recorded in Florida. From the opposite direction, the North American Brown-headed Cowbird has spread rapidly through peninsular Florida since the 1950's. In addition to providing a unique opportunity to study brood parasitism at an early interfacing of host and parasite populations, the presence of these formerly non-sympatric cowbird species are expected to have important negative consequences for Florida breeding passerines. Both cowbird species are obligate brood parasites that use a generalist strategy in host selection; more than 200 host species have been recorded for each cowbird species. The potential negative implications for host species in south Florida are discussed based on work in the West Indian region and North America.

Effect of Vegetation Structure on the Feeding Behavior of Warblers (Aves: Parulidae) in Puerto Rico. Roberto Díaz and R.F. Ramos. During 1985-88 we made a total of 942 observations on feeding behaviors of warblers in relation to foraging modes, habitat selection, tree species and substrates used in three contrasting habitats in Puerto Rico: low-montane, mangrove and albizia forests. We found that forests with high tree species diversity may have fewer warbler species but more abundance than monospecific forests. This may be attributed to the fact that different tree species account for more available substrates, providing more opportunities for different foraging behaviors. Vegetation structure on canopy and understory are important to certain species which depend on them for their foraging. Ecological similarities and niche overlap in habitat use are discussed on a multivariate approach basis.

Population Estimates for the Bahama Parrot (*Amazona leucocephala bahamensis*) on Abaco Island, Bahamas. Rosemarie Gnam, Ian Lothian, and Albert Burchsted. As part of a long-term study of the biology of the endangered Bahama Parrot of Abaco, population counts were done during the nonbreeding season to estimate the relative size of this population and assess its relative stability. Since 1986, we have conducted 3 population counts. The only previous census of the Abaco population was done in 1976 and the then total population was estimated to be between a minimum of 450 birds and a loosely defined maximum of 650 to 800 birds. Since parrots on Abaco roosted communally at night and dispersed from/to roosts in flocks, survey counts were made at roosts and along flight paths to roosts. In 1989, we counted a minimum of 830 to a maximum of 1082 birds on southern Abaco. Present threats to this population include: (1) nest predation by feral cats, (2) poaching and (3) unprotected habitat.

Banding and Recaptures of Sooty Terns and Brown Noddies at Morant Cays, Jamaica. Ann Haynes-Sutton. Sooty Terns and Brown Noddies were first banded at Morant Cays, Jamaica, in the 1960's. The programme was continued irregularly in the 1970's and 1980's. The banding programme is described and the results concerning immigration, recruitment, non-breeding dispersal and longevity are examined.

Foraging Behaviour in Cattle Egrets: Is Grazer Association Beneficial? W. Hunte and D. Riven. The effects of grazer association on individual foraging rates of cattle egrets (*Bubulcus ibis*) was investigated in Barbados. Almost twice as many egrets foraged without grazers as with grazers. This was not the consequence of non-availability of grazers, since only 40% to 60% of available grazers were used by egrets. Mean group size of associated birds (1.7) was smaller than that of non-associated birds (5.8), reflecting the localized food source for associated birds, and implying that access to the food source can be controlled by single birds. At group sizes >3, the foraging rates of associated egrets decline and were lower than the foraging rates of non-associated birds over all group sizes. This suggests that egrets can improve their foraging rates by feeding without grazers rather than with grazers at group sizes >3. In dry months when prey availability may be low, variation in foraging rates of associated egrets at a given group size was lower than that of non-associated egrets, and the percentage of egrets associating with grazers was higher. It is concluded that feeding with grazers may not maximize feeding rates, but may decrease the

probability of obtaining very low rates when food availability is low. This suggests that egrets may be 'risk-sensitive' foragers, switching from 'risk-prone' to 'risk-averse' behavior as mean food availability decreases.

Roost Use by Cattle Egrets (*Bubulcus ibis*) in Barbados. E. Drebs and W. Hunte. Weekly variation in the number of roosting cattle egrets in a permanent non-breeding colony (site A) and in two breeding colonies (sites B and C) was investigated in Barbados. No nesting activity has occurred at site A during six years of continuous occupation, although the population at this site is twice the population at site B and half the population at site C. This suggests that population size at the roost is not the only prerequisite for establishing a breeding colony at a roost site. Roost population sizes at sites B and C greatly exceeded the nesting population at all times, indicating that breeding colonies function both as nesting and roosting sites. The number of egrets declined at sites B and C and increased at site A in non-breeding months, suggesting that some adults relocated to the non-breeding colony after breeding. Numbers at the breeding colonies increased again at the start of the subsequent breeding season. In spite of the apparent movement of birds between roosts, use of space by individual birds at a given roost is predictable. Even in the non-breeding season, individually marked adult birds at site B consistently returned to the same location within the roost on every observation day.

Breeding Biology and Habitat Use Patterns of the Wilson's Plover (*Charadrius wilsonia*) at the Cabo Rojo Salt Flats, Puerto Rico. Gloria Lee, Jaime A. Collazo, and John R. Sweeney. The Wilson's Plover is one of the three resident plovers in Puerto Rico. Baseline data on its breeding biology and habitat use patterns are scarce. Data obtained in this study were used to determine breeding chronology and success, to examine overall activity budgets, and to determine frequency of occurrence on each major habitat type. In addition, cover characteristics of nesting habitat were assessed. Seventeen nests were found at the salt flats, beginning in February 1988. Peak breeding occurred in May and overall nest success was 0.75. Plovers used semipermanently flooded areas more frequently than expected for resting, locomotion, and feeding. Roosting occurred more frequently during the afternoon hours. Maintenance activities were observed in higher frequencies during the morning hours. Agonistic behavior occurred at a higher frequency during the mid-day hours. The immediate vicinity of nests was characterized by live vegetation or rubble, as

compared to randomly selected sites. These data highlight the importance of understanding species' habitat requirements in order to formulate appropriate conservation practices.

Abundance and Distribution of Cattle Egrets in Barbados. D. Riven and W. Hunte. Cattle Egrets (*Bubulcus ibis*) first appeared in Barbados during the 1950's, when range extension was occurring from South America through the Caribbean islands. The first colony was formed on the south coast of the island. Four roosting colonies were present in Barbados at the time of the study (1980-88); three of which were also nesting colonies. The stabilization in the number of birds at the original colony when the three new roosts were being formed suggests that they were formed by birds leaving the first roost. The second colony was formed on the north coast of the island, the third on the east and the fourth (the present non-breeding colony) on the west coast. This sequence suggests that egrets have attempted to maximize inter-colony distances, and may imply that new colonies are formed to reduce competition for food near colony sites. The population size of cattle egrets in Barbados was estimated at 8000 birds in 1988. The island population continues to increase through increases in the number of birds at the three newest colonies.

Announcements

Centro de Documentación para América Latina. BIODOC es un centro de documentación para América Latina que apoya en la búsqueda de literatura poco conocida o escasa sobre manejo de vida silvestre en la región. BIODOC está preparando un boletín trianual en el cual anunciará adquisiciones recientes a su colección. BIODOC está en constante búsqueda de literatura publicada y no publicada sobre vida silvestre y recursos naturales en Latinoamérica. Si Ud. puede contribuir con títulos o si desea ser incluido en nuestra lista de envío, sírvase enviar su nombre, dirección y afiliación institucional a:

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