EL PELÍCANO NORTEAMERICANO *PELECANUS OCCIDENTALIS CAROLINENSIS* (AVES: PELECANIDAE) CRÍA TAMBIÉN EN CUBA

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EL PELÍCANO O ALCATRÁZ es relativamente común en determinados sitios de las costas de nuestro territorio. Se encuentran dos subespecies: *Pelecanus occidentalis occidentalis* Linneo, que es nuestra forma residente, y la raza norteamericana *P. o. carolinensis* Gmelin, que ha sido reportada prácticamente todos los meses del año en base a individuos anillados en Florida y Carolina del Sur (Bond 1956). Bond además planteó la posibilidad de que la subespecie norteamericana *P. o. carolinensis* pudiese anidar en cayos de la costa norte de Cuba. El planteamiento de Bond ha sido corroborado con este nuevo hallazgo.

Sin embargo, a pesar de ser una especie común y bien distribuída, son muy pocos los lugares de cría que se conocían: Cayo Mono Grande y el Canal del Toro (entre Cayo Coco y Cayo Guillermo) en la costa norte y Cayo Piedra y Cayo Largo del Sur en la costa sur (Bond 1956, Garrido y García Montaña 1975; J. de la Cruz, comun. pers.).

El autor senior mientras estudiaba aspectos ecológicos de una colonia nidificante, descubrió, pelícanos que anidaban en los manglares de la zona conocida como "Pueblo de los Pájaros," en el "Estero de la Mojarra," de la desembocadura del Río Máximo, al norte de la Provincia de Camagüey. El macho de una de la parejas estaba anillado con la incripción oficial del U. S. Fish and Wildlife Service, lo que corroboraba su origen norteño. La hembra no tenía anillo, y los dos pichones fueron retratados en el nido en abril de 1987.

Aunque la raza norteamericana es mayor y fácil de identificar en la mano en base a las medidas de la curvatura del ala y del largo del pico; en el campo, y durante la época de cría los plumajes son muy semejantes y, por lo tanto, muy difíciles de separar a menos que sean colectados, por lo que para evitar molestias en la colonia no se hicieron esfuerzos por averiguar qué cantidad de individuos pertenecían a una u otra raza.

LITERATURA CITADA

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REGIONAL EDUCATIONAL INSTITUTIONS

ORNITHOLOGICAL EDUCATION AND RESEARCH AT CARIBBEAN UNION COLLEGE, TRINIDAD

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SNUGGLED AMONGST SCENIC, CLOUD-CAPPED MOUNTAINS in the Maracas Valley of Trinidad, Caribbean Union College is a private tertiary institution whose degree programs are affiliated with Andrews University in Michigan, USA. Several years ago the College constructed a new science building and began offering a Bachelor of Science degree in biology with a concentration in zoology. Enrollment increased dramatically—far beyond the expectations of the institution's administrators—and the first graduates of the program were produced in 1994. Currently more than a hundred students are enrolled in the program. Most come from a variety of Eastern Caribbean countries, with less than half from Trinidad; each year a small but increasing number of students come from various African countries.

In 1993, I was recruited to instruct the program's natural history courses. Having spent several years studying South American birds, I jumped at the opportunity of exploring a new, biologically rich country: Trinidad and Tobago. Representing the interface between the Caribbean and South America, Trinidad and Tobago boast a mixture of continental and island biotas—an irresistible paradise for a tropical ecologist.

After arriving in Trinidad, I was disappointed to learn that there were no formally trained ornithologists in the country, especially given the country's reputation as a mecca for visiting foreign birders. Furthermore, ornithology had never been taught at the tertiary level in the country. Perceiving an untapped opportunity, I took up the challenge of developing what I suspect is the first program of ornithological education and research at a tertiary institution in the English-speaking Caribbean. And I hope that my experiences, detailed below, will stimulate other tertiary institutions in the region to recognize the economic and aesthetic importance of birds (e.g., as environmental indicators and as a source of revenue from ecotourists), and to develop a similar program of ornithological education and research.

During each of the past three academic years I have taught an upper division course in ornithology for four quarter units of credit. Thus far 80 students have completed the course, which includes three hours of lectures per week for ten weeks, and five days of instruction in the field with an emphasis on the identification of local birds. After a few mornings spent identifying birds on the campus, a full day is spent birding at the Asa Wright Nature Centre, Aripo Savannas

and the Trincity ponds. Another morning is spent capturing birds with mist nets, obtaining pertinent scientific data, color banding, and then releasing the birds for observation. The final field exercise comprises a census of the birds combined with habitat measures in the vicinity of the campus, using the fixed-radius point count method. We then analyze the data in an effort to better understand the habitat use of the most common species of birds. The ornithology course has benefited by donations of binoculars, field guides and hundreds of ornithological books and journals (see Acknowledgments section).

In addition to our educational program, my students and I (along with local naturalist Ishmael Samad) have been involved in several ornithological research projects. In Trinidad, Tobago, and their satellite islands, we have been using fixed-radius point counts to study the population dynamics of birds in a variety of native habitats. Also, in Trinidad we have studied bird populations in two exotic Caribbean pine (*Pinus caribaea*) plantations, one in the mountains and the other in the lowlands. Within a few years we will be able to compare the diversity and abundance of birds in a variety of habitats on islands varying in size, topography, and distance from the mainland.

In Tobago, we have focused primarily on studying the status, ecology and behavior of the White-tailed Sabrewing (*Campylopterus ensipennis*), a large species of hummingbird regarded by BirdLife International as the only species threatened with extinction on Tobago. Our study, dubbed "Project Sabrewing," has benefited by a series of small grants and corporate contributions exceeding US$5,700 (see Acknowledgments section). Thus far 31 students representing 14 countries have participated during five expeditions of Project Sabrewing. In addition to receiving free advanced training in field ornithology, most of the students have obtained academic credit for either independent research or for a Tropical Ecology course offered during the summer of 1996.

During Project Sabrewing expeditions our activities include exploring and mapping trails in search of sabrewings, banding forest birds (including sabrewings) at several sites, and recording observations on the behavior and ecology of selected territorial male sabrewings. We also measure and analyze the vegetation structure at several sites in an effort to better understand the ecological requirements of the forest birds. In addition to learning as much as we can about the biology of the White-tailed Sabrewing, we hope (pending future funding) to turn Project Sabrewing into a long-term biomonitoring program for gauging the health of Tobago's forest bird populations. As a byproduct of Project Sabrewing, many young, aspiring "Third World" students are obtaining an unprecedented opportunity to learn about and appreciate the complex ecological interrelationships of the rainforest.

A colorful painting of two White-tailed Sabrewing on a heliconia was donated to the project by Dr. John P. O'Neill, a prominent ornithologist and artist at Louisiana State University. The painting has been printed on T-shirts that are being sold to raise further funds and to increase environmental awareness.

The results of our ornithological research were presented by three students at the 1995 society meeting in Trinidad, and by myself at the 1996 meeting in Nassau.

The success of our program is largely due to the organizations and individuals who have generously donated resources and have recognized the untapped potential of West Indian students who are anxious for opportunities to study their environment. Our success is also attributable to the birds, whose bright colors, melodious songs and entertaining antics pique the curiosity of students more than any other group of animals. Although we realize that other organizations in the Caribbean (especially in the Spanish-speaking countries) have initiated conservation projects and obtained funding for ornithological education and research, we encourage others who have not (particularly the tertiary institutions) to develop such a program.

Acknowledgments

Ornithological education and research at CUC has been greatly facilitated by the contributions of numerous individuals (too many to name) and organizations to whom we owe a debt of gratitude. The Manomet Observatory for Conservation Sciences Birder's Exchange donated binoculars and field guides. The Latin American Library Enhancement Project, sponsored by the American Ornithologists' Union, donated books and journals. Project Sabrewing has been financed by the American Bird Conservancy, Amoco Trinidad Oil Company, BirdLife International, British Petroleum, Center for the Study of Tropical Birds, Fauna and Flora International, Guardian Life of the Caribbean Ltd., Republic Bank Ltd., Trinidad and Tobago National Petroleum Marketing Company Ltd., and Trinmar Ltd. In addition, food and drinks were donated by College Health Foods, C. Yip Choy Baillie Ltd., Pan American Standard Brands Inc., and Romike Ltd. Hummingbird bands were donated by Bob Sargent of The Hummer/Bird Study Group Inc. Topographic maps were donated by Robert Stacy.

Abstracts of Papers Presented at the 1996 Annual Meeting of SCO at Nassau, Bahamas

(Continued from Vol. 9 Issue 3)

RESOURCE PARTITIONING BETWEEN GLOSSY IBIS AND WHITE IBIS IN A RICE FIELD SYSTEM IN SOUTH-CENTRAL CUBA

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Population density, foraging microhabitat and diet composition were analyzed for the White Ibis (*Eudocimus albus*) and the Glossy Ibis (*Plegadis falcinellus*) while they fed in the rice field system of "Sur del Jibaro" (Sancti-Spiritus, Cuba), from May to December. Population density for *E. albus* was 2.2 ind/ha in October and for *P. falcinellus* ranged from 1.4 ind/ha in August to 217 ind/ha in October. Both ibises share the same main foraging microhabitat, except in October when, coinciding with their highest population densities, they segregate their foraging grounds. In this month the