Sociedad de la Ornitología Caribeña

EL PITIRRE

Society of Caribbean Ornithology

1989 VOLUME 2, NUMBER 3

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El Pitirre is the newsletter of the Society of Caribbean Ornithology.

El Pittirre es el boletín informativo de la Sociedad de la Ornitología Caribeña.

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News, comments or requests should be mailed to the editor for inclusion in the newsletter.

Noticias, comentarios o peticiones deben ser envíadas al editor para inclusión en el boletín.

Tyrannus dominicensis

Pitirre, Gray Kingbird, Pestrige, Petchary

The Society of Caribbean Ornithology is a non-profit organization whose goals are to promote the scientific study and conservation of Caribbean birds and their habitats, to provide a link among island ornithologists and those elsewhere, to provide a written forum for researchers in the region (refereed journal--Ornitología Caribeña, published in conjunction with the Puerto Rico Ornithological Society) and to provide data or technical aid to conservation groups in the Caribbean.

La Sociedad de la Ornitología Caribeña es una organización sin fines de lucro cuyas metas son promover el estudio científico y la conservación de la avifauna caribeña, auspiciar un simposio anual sobre la ornitología caribeña, publicar una revista profesional llamada Ornitología Caribeña (publicada en conjunto con la Sociedad Ornitológica de Puerto Rico), ser una fuente de comunicación entre ornitólogos caribeños y en otras áreas y proveer ayuda técnica o datos a grupos de conservación en el caribe.

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Preliminary Assessment of the Impact of Hurricane Hugo to Columbid Populations in Puerto Rico and Offshore Satellite Islands

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Biologists of the Puerto Rico Department of Natural Resources conducted standardized roadside counts to evaluate the immediate effect of Hurricane Hugo on columbid populations in Puerto Rico. Counts were conducted in eight five-mile principal sampling units (=replicates) that covered the following municipalities: Aibonito, Arecibo, Barceloneta, Barranquitas, Cayey, Guayama, and Luquillo. Sampling units were divided according to life zone (wet versus moist) and estimated impact to vegetation (low versus high). Post-hurricane counts (October 1989) were compared to pre-hurricane counts (October 1986 and 1987) with the use of three-way analysis of variance with repeated measurements at one factor (years). Total counts of columbids were pooled and log-transformed (log + 0.5) prior to the analysis. *P*-values were considered significant at ≤ 0.05.

As expected for this time of the year, counts of columbids were significantly higher in the moist zone ($F = 46.629$; df = 1,4; $P = 0.002$); but, counts in the moist zone were significantly higher for replicates showing low impact to the vegetation ($F = 19.020$; df = 1,4; $P = 0.012$). When counts were pooled (n = 8), there were no significant differences among years ($F = 2.627$; df = 2,8; $P = 0.133$). That is, counts of October 1989 on average were not significantly different from counts of October 1986 (paired *t*-test, $P = 0.793$) and October 1987 (paired *t*-test, $P = 0.107$).

Post-hurricane counts could have been positively biased because of an increase in visibility along sampling units, and/or because of significant changes in the flocking behavior of columbids related to the availability of food at areas of low impact. Therefore, it is necessary to be cautious about the results obtained from counts unadjusted for effective area of detection (Rivera-Milán, in prep.). Assessment of the impact of Hurricane Hugo to columbid populations requires further intensive observations of nesting activity and success during the following season (February-July 1990).

Columbid populations in Vieques and Culebra islands were severely impacted by Hurricane Hugo. In Culebra Island, for example, scaly-naped pigeons (*Columba squamosa*) were detected forming foraging aggregations on the ground at patches of defoliated

Coccoloba uvifera. We also observed flocks of scaly-naped pigeons flying high from Culebra in the direction of eastern Puerto Rico. Food is expected to be a significant limiting factor during the next months at Culebra and Vieques islands. Columbid populations will be sampled during next season within nesting habitat to determine how the reproductive renewability of the resource has been affected.

Banding studies of zenaida doves (*Zenaida aurita*) will be continued at Culebra's offshore keys. In July and August 1989, 237 zenaida doves were banded at Culebra's Cayo del Agua. Surprisingly, the age (adult vs. juvenile) ratio was close to one (0.975). Our future studies will address survival of adults versus juveniles after the hurricane.

It will be of invaluable benefit if investigators exchange information about studies of the effects of hurricanes on the flora and fauna of the Caribbean islands. Therefore, I propose the creation of an accessible bank of information regarding the results of studies about the effects of hurricanes to the flora and fauna of the Caribbean. For example, as a starting point, abstracts can be presented as posters at the next meeting of the Society of Caribbean Ornithology at Jamaica in 1990.

Request for Information from the Society's Subcommittee on Columbid Game and Non-game Species

Submitted by Frank F. Rivera Milán

Project W-11 of the Department of Natural Resources of Puerto Rico, Terrestrial Ecology Section, is compiling information about hunting regulations of pigeons and doves in the Greater and Lesser Antilles. The purpose of this task is to present the information (probably as a poster) during the next annual meeting of the Society of Caribbean Ornithology at Jamaica (1990) as part of the achievements of the recently formed Columbid Game and Non-game Species Subcommittee of the Society. Please send such information to:

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Survey Reflects Worldwide Concern for the Environment

On June 20, 1989, Lou Harris of Lou Harris and Associates reported on the first worldwide survey of public opinion and leadership attitudes on the environment at a briefing sponsored by the Energy and Environment Study Committee and Americans for the Environment. The survey, conducted for the United Nations Environment Programme (UNEP), clearly shows that people are alarmed at the state of their environment. Although not yet fully complete, the survey is already the most comprehensive global environmental opinion survey to date.

The study, "The Rising Tide: Public Opinion, Policy and Politics," notes that industrially developed countries and developing countries are equally concerned over the present and future state of their environment. Most people surveyed are pessimistic about future progress, but feel the negative trend could be reversed if environmental protection were to become a national and an international priority. Harris predicted that governments will fall simply because they fail to control environmental degradation. He concluded that next to war and peace, the environment may be the most important global issue that we face today.

For more information, contact Joan Martin-Brown at UNEP, 1889 F St., N.W., Washington, D.C. 20006, U.S.A. (202-289-8456). A copy of the report may be obtained by sending U.S.$5.00 to Americans for the Environment, 1400 Sixteenth St., N.W., Washington, D.C. 20036, U.S.A.

From The Ecological Society of America Newsletter No. 11, September 5, 1989. Submitted by Fred Schaffner.

Book Review

Ay-Ay: an Island Almanac, by George A. Seaman. Macmillan Publ., Ltd., London, November 1989. U.S.$8.00, paper.

Hurricane Hugo and the tiny Caribbean island of St. Croix will forevermore be linked together. The U.S. island of St. Croix took a direct hit from that September 1989 storm, which may go down in the history of hurricanes as being the fiercest on record. Seemingly rising out of that disaster comes a wonderful 155-page book - *Ay-Ay: an Island Almanac* - that describes in a beautiful style the natural character of that tiny speck of land in the vast

Atlantic/Caribbean ocean. Author George Seaman, a St. Croix native, paints a word picture of St. Croix the way it was before Hugo, from a perspective of one who explored and understands that island's every nook and cranny. "Within her borders," he writes, "dwelt all the beauty and magic a man could wish for ...."

Rarely does a book appeal to me as does Seaman's *Ay-Ay*. It has the same character as Aldo Leopold's *Sand County Almanac*, Louis Halle's *Spring in Washington*, and Sally Carrighar's *Wild Heritage*. All are chuck-full of information, but written in a style that makes them special. These books must be part of one's personal library, so that favorite sections can be read time and again.

Ay-Ay is more than a word picture of a Caribbean island. It contains a treasurehouse of morsels that is a must read for anyone who loves nature and its infinite diversity. *Ay-Ay* blends the tropical Caribbean climate with the great whales and the tiny bananaquit, the African tulip tree and the kalaloo crab, the spring arrival of zenaida doves and fall arrival of shorebirds, and the native trees Cruzans use at Christmastime. Its 12 chapters describe the fascinating changes that occur duringthe 12 months of the year.

Seaman describes January as the end of a "great pivotal journey." He writes that, "the entire earth and the heavens are making tentative and quivering resolutions against the new galactic voyage ahead. It is the celestial cycle's primordial moment. It is the Alpha of the planet's roster of exquisitely precise decisions. It is our home's bugle call to march. It is the zero hour for a diminutive, insular press to roll out its bulletin. It is January."

February is described as the driest month, the"month of purification...of the earth by the winds and the sun." Seaman points out, "There are many 'firsts' in this month - previews and songs of glories. A hesitant and isolated John Phillip (black-whiskered vireo) reaches the careful ear, hardly to be credited as the song which will dominate the woods and hills of July. A shining white cap of a hurtling blue javelin announces the vanguard of the white-crowned pigeon legions which will later seek our mangrove swamps in which to breed. And weirdest and most beautiful of all, that onomatopoeic first call of the chuck-will's-widow out of the evening's depth."

In April, Seaman describes the spring migration of zenaida doves. "In apparent endless numbers, pairs and groups come in from the west. This vernal migration of our 'mountain dove' does not, of course, always coincide with the celebration of Easter, but since it occurs annually after the vernal

equinox, the birds are referred to in the Spanish islands as the 'doves of St. John'."

"As April is the month of promise, May is the month of fulfilment. Along the roads there are fallen flowers, the chartreuse of genep and the pink of dog almond." Later, he writes, "The lyrical fecundity of May is not alone in the vibrating boom of red-necked pigeons but emanates from all living things in one way or another and covers the entire island, appearing to reach even to the stars. Now on a clear night Crux, the Southern Cross, appears early and hangs straight and bright above our south coast. I have always liked to believe that here was where this symbolic constellation appeared brightest to Columbus and so inspired him to name the island Sancta Cruz, or Holy Cross."

Describing July, he writes, "Summer stilts are yapping, more nervous and watchful than ever since some have youngsters with no power of flight. Martins [our swallows] trill from the skies above Mt. Eagle, their nests no doubt still safe in the draft holes of Lower Love chimney."

The common bird song for October "is the rasping but cheerful *zee-e-e-te* of our little yellow-breast, *Coereba flaveola*. There is no better known bird on our island or one with more common names: sugar bird, bananquit, honey creeper, etc. This pretty and lively little creature is our national bird, and maybe rightly so, since it is found abundantly throughout the island and has a history closely associated with us as a once great sugar producing island."

For December, Seaman writes, "The sea has become alive again after the sultry calms of October. Along our north coast, particularly, an incessant low roar marks the seasonal change. It is a sound sweet to the islander and one always remembered. Sometimes one awakes in the absence of this ancient sonance in fear that it has been lost. It is an island decibel, first and last, describing in a hundred voices the moods of our encircling mother. It is always there, from birth to death, in calm and beauty, in rage and doom. It is one of the pulsing nuances that divide an island world from any other. It is a primordial throb in the saline blood of living man. It is the susurrus; it is thunder; it is the sea laving all island shores."

Few people know that Alexander Hamilton, that historic signer of the American Constitution, grew up on St. Croix. Young Alexander was an apprentice clerk in a Christiansted store in September 1772, when St. Croix experienced a devastating hurricane. His letter to his father, describing that hurricane, is included in full by Seaman. "Our distressed helpless condition taught us humility and a contempt of ourselves," he wrote. "The horror of the night - the prospect of immediate cruel death - or, as one may say, of being crushed by the Almighty in his anger -

- filled us with terror."

I have not read another book that gives me a better sense of the natural character of a small island and man's existence there as does Seaman's *Ay-Ay*. It is biologically and historically accurate, and contains a smorgasbord of readable facts. It is worth the £4.95 or approximately U.S.$8.00 price. **Ro Wauer.**

New Book on West Indian Biogeography

"Biogeography of the West Indies: Past, Present, and Future," edited by Charles A. Woods. 1989. 896 pp. U.S.$125.00 + $2.00 postage and handling. Sandhill Crane Press, Inc., 2406 NW 47th Terrace, Gainesville, Florida 32606, U.S.A.

Abstracts of Selected Papers Presented at the Third Annual Meeting of the Society of Caribbean Ornithology, Dominican Republic, August 1989 [Concluded from El Pitirre Vol. 2(2)]

Use of Agricultural Habitat by Avian Migrants in Puerto Rico, Jamaica, and Belize. C.S. Robbins, B.A. Dowell, R.L. Sutton, A.H. Sutton, and D.D. Weyer. During January-February of 1987-89 we conducted systematic surveys (mist netting and point counts) of bird populations in citrus, cacao, coffee, mango, rice, and pine plantations to determine comparative use by migrants and to compare use of agricultural habitats with use of native forests. Results for Belize and the Greater Antilles are discussed. Mature citrus and cacao (under a canopy of *Erythrina*) attracted large numbers of migrants. Shade coffee was much favored over sun coffee. Pine plantations had low densities of both migrants and residents. Fallow rice had huge numbers of indigo buntings and good numbers of common yellowthroats, but poor diversity of migrants. Heavily sprayed habitats contained little animal food and had low to extremely low bird populations. Some species, such as least flycatcher, gray catbird, and Tennessee, magnolia, and black-and-white warblers use certain agricultural habitats in large numbers. Others, such as spotted thrushes, vireos, Louisiana waterthrushes, and Kentucky warblers, were found only rarely in agricultural habitats.

Morphological Development on Captive Puerto Rican Plain Pigeon (*Columba inornata wetmorei*). Carlos

R. Ruiz. A morphological study in the captive program of the Puerto Rican plain pigeon was made from August 1987 to May 1989 at the Humacao University College (UPR), Humacao, Puerto Rico. I present the development of fostered plain pigeon squabs in this study, including weight increase, wing cord, culmen, ulna, tarsus, 9th primary, tail, and body size of squabs for the first two months of life. Other body characteristics are presented, such as: changes in skin, eye, and claw color; eye opening; feather development; and other behavioral patterns related to development. I propose making a guide of measurements to determine age of squabs. This aging table will be useful for later studies in the wild population and/or to determine differences between captive and wild pigeons. Also, those measurements could be compared with other columbids, setting correlations among them. Behavioral and morphological characteristics are useful for management of the species in captivity.

Studies of Resident Columbid Game Species in Puerto Rico. Frank F. Rivera Milán. Columbids are severely hunted in the Caribbean. It is unfortunate to find a lack of significant (integrated) biological and ecological evidence on which to base critical management decisions in the majority of the Caribbean islands. Results of studies conducted in Puerto Rico are presented. With some exceptions (e.g., *Columba inornata* in Puerto Rico), columbid populations are considered to be highly resilient. Columbids are capable of faculative feeding and multiple nesting. In Puerto Rico, for example, *Zenaida aurita* is capable of raising up to four broods per year; over 100 plant species are listed as probable food sources; nesting activity peaks between April and June, but active nests are detectable year-round. Columbids successfully inhabit a wide variety of habitats dominated by xeric and/or mesic environments. Many species are ecologically ecotonal, inhabit edges, and exploit urban and agricultural landscapes. Therefore, rapid population turnover rate is a dominant characteristic of Columbidae.

Regulation of Food Provisioning Patterns of White-tailed Tropicbirds. Fred C. Schaffner. Observations of the food provisioning patterns of individually identified white-tailed tropicbird (*Phaethon lepturus*) parents indicated that the food delivery intervals of adults to their chicks were more variable than food payload mass and that there was no day-to-day relationship between the feeding interval and feed mass. Energetic considerations suggest that there is strong selection for parents to decrease the feeding frequency and increase feed mass, to some limit

imposed by either the limits of the parents' delivery capabilities, or the limits of the chick's food receiving (swallowing) capabilities (the volume a chick can ingest in one feeding bout). In fact, the limits of the chick's swallowing capabilities occur well before the parents' delivery limits are reached, and thereby set the feed mass at both a weight and volume which is easily within the adults' lifting and transporting capabilities. The mean feed mass is viewed as reflecting a particular "target" payload mass which parents strive to collect as quickly as conditions, and their own individual foraging abilities will allow, and is a practical compromise between the short term interest of the chick and those of the adult.

Radio-tracking of White-tailed Tropicbirds Over the Caribbean Sea. F.C. Schaffner, M.R. Fuller, C.J. Pennycuick, H.H. Obrecht III, and J. Gonzalez-Martinez. Sixteen white-tailed tropicbirds (*Phaethon lepturus*) (body mass = 370 g) were radiomarked in June 1987 and May 1988 at the Culebra National Wildlife Refuge, Puerto Rico. Transmitters were attached to birds using harnesses to hold 9-11 g packages on the birds' backs, or with glue and thread to tie 6 or 8 g packages ventrally on retrices. The tail-mounted transmitters proved most useful. Birds were tracked over the open sea from a Cessna 182 aircraft equipped with side-ways mounted four-element Yagi antennas, arranged in a null-peak configuration, and connected to a scanning receiver. Locations were determined by recording bearing and distance from at least one of three VOR/DME aeronautical navigation beacons at the San Juan (SJU), St. Thomas (STT), and St. Croix (STX) international airports. In 1987, one bird was tracked as far as 155 km north of San Juan at the close of the nesting season, and in 1988 a foraging parent was tracked as far as 116 km south of the nesting colony. Individuals were tracked from 1-4 days in 1988, when we obtained an average of 2.6 locations per radiomarking effort. While there were no statistically significant differences between the chick provisioning performance of radio marked versus unencumbered parents, doubly labeled water ($D_2{}^{18}O$) analysis indicated that the radio marked parents consumed markedly more energy in their efforts.

The Role of Aviculture in the Captive Propagation of the Puerto Rican Parrot (*Amazona vittata*). Teri Sorenson. The following topics in Puerto Rican parrot aviculture will be presented and discussed briefly: cage and aviary design, nest box design and placement, adult breeder diet, artificial incubation techniques, hand-rearing diet techniques, and

problems of low production and their possible causes and solutions.

Algunos Aspectos de la Ecologia Reproductiva del Jui de Puerto Rico (*Myiarchus antillarum*) en el Refugio Nacional de Vida Silvestre de Cabo Rojo, Puerto Rico. Pablo Torres Baez and Jaime A. Collazo. El jui de Puerto Rico es endémico de la Gran Region de Puerto Rico. Previo a este trabajo no existen estudios sobre su ecología reproductiva. Mediante este estudio se determinó la cronologia de anidaje, el éxito reproductivo, y patrón de crecimiento de los juveniles de Jui. Se estudiaron 24 nidos, 14 en 1987 y 10 en 1989. El éxito reproductivo obtenido fue sobre un 80%. La variable morfométricas más significativas fueron largo del ala, culmen y largo del tarso.

History of Introduced Species of Birds in Jamaica. Robert Sutton and A. Haynes-Sutton. The historical pattern of introduction of bird species to Jamaica is described, and the effects discussed with reference to ecology and survival.

Population Responses of the Puerto Rican Nightjar to Forest Clear Cutting. Francisco J. Vilella. From 1985 to 1987, we used call count surveys to investigate the effects of forest clear cutting on the local distribution and density of the Puerto Rican nightjar (*Caprimulgus noctitherus*). This species is the only endemic caprimulgid of the islands in the Puerto Rican Bank and is presently limited to the southwestern region of Puerto Rico where it mostly inhabits coastal dry limestone forest. It is listed on the IUCN Red Data Book and the U.S. Fish & Wildlife Service's Endangered Species list. The easternmost populations inhabit a privately owned limestone forest region known as the Guayanilla Hills. Within this region, there is an area of approximately 600 ha on which we selected 5 survey routes covering 322 ha. During the first survey, when the area was completely forested, we heard 25 nightjar males on our routes. Starting on July 1985, clearing of the area for pasture using slash and burn practices began. Between July 1985 and July 1986, approximately 20% of the study area was cleared, with clearings ranging from 50 to 100 ha. Call count surveys indicated that the total number of nightjars remained similar to numbers before clearing started. However, the number of nightjars per route changed considerably (i.e., the number of birds remained constant, but their distribution changed). During the following year, clearing activities increased.

History of an Unsuccessful Colonization of an Island by a Psittacine. James W. Wiley. *Aratinga pertinax* is native to Panama, northern South America, and the

islands off the northern coast of Venezuela. The parakeet is widely considered to have been brought to St. Thomas from Curaçao before the mid-19th century, although no records exist of when or how it was introduced. The parakeet was not recorded from Vieques or Culebra islands, or from mainland Puerto Rico before 1975. However, in that year *pertinax* underwent an apparent natural range expansion from St. Thomas to each of these islands. The April 1975 population in eastern Puerto Rico consisted of 5 individuals. That population made 5 breeding attempts, produced a total of 11 chicks, and grew to a maximum size of 10 birds in June 1979. The population declined to 1 bird by July 1980, and was extinct by the beginning of the 1982 breeding season. The Culebra and Vieques islands populations were apparently extinct by 1976. Habitat use, general behavior, breeding ecology, and competitors of the colonizing population in eastern Puerto Rico are described. Biogeographic, evolutionary, and conservation implications of these observations are discussed.

The Effect of Hurricane Gilbert on Terrestrial Bird Populations in Jamaica. Joseph M. Wunderle, Robert B. Waide, and D. Jean Dodge. Hurricane Gilbert struck Jamaica on 12-13 September 1988 with sustained winds of 126 mph which swept through our 10 sites established before the storm in December 1987. We returned to these 10 sites 4 months after the storm (January 1989) and replicated our baseline methods (mist netting, fixed radius point counts, vegetation measurements). The storm's short-term impact on terrestrial bird populations was complex, depending upon elevation, habitat type, and diet. Three montane sites (cloud forest, pine, coffee) showed significant declines in total number of individuals and species, while two lowland sites showed no change. In the montane habitats, the bird species most dependent upon plants for food (nectar, fruit, or seeds) showed significant declines, while insectivores (residents or migrants) showed no change. Within the 10 sites, 8 bird species showed significant declines, 7 species showed significant increases, and 3 species showed both significant increases in some habitats and decreases in others. These results suggest that some species moved from badly damaged habitats to less damaged habitats.

Group Foraging Dynamics in the Blackbird *Quiscalus lugubris*. A. Worrel, J.A. Horrocks, and E. Krebs. The relationship between individual pecking rate and group size in birds is often assumed to be bell-shaped since vigilance rates per bird is expected to be higher at smaller group sizes, and chase frequencies are expected to be higher at larger group sizes. The assumption is that less time will

therefore be available for pecking at small and large group sizes. Relationships between pecking rate, vigilance rate, aggression and group size at controlled food densities were investigated in groups of grackles (*Quiscalus lugubris*) in Barbados. The relationship between pecking rate and group size was not bell-shaped. Vigilance rate per bird was higher at smaller group sizes as expected, suggesting that one function of vigilance may be predator detection; but vigilance rate was positively correlated with pecking rate. This may suggest that a second function of vigilance is observation of conspecific foraging rates. Aggression rate was positively correlated with group size as expected, but pecking rate was not correlated with aggression rate. The results suggest that foraging behaviours are not time-budgeted so tightly that increases in one behaviour necessarily lead to decreases in others. The absence of time trade-offs is consistent with the observation that the relationship between pecking rate and group size is not bell-shaped for grackles in Barbados.

Evidencias Citogeneticas en Torno al Status Taxonomico de la Cigua Palmera, *Dulus dominicus* (Passeriformes: Dulidae). Celeste Mir. La cigua palmera es un ave endémica de la isla Hispaniola e islas adyacentes. Es un ave gregaria que construye nidos comunales donde anidan varias parejas. Es el único miembro de la familia Dulidae. Se consideran como familias más cercanas a ella a Bombycillidae y Ptilogonatidae, aunque las relaciones entre estas tres familias son aún muy controversiales. Este estudio realiza una comparación de los cromosomas de esta especie con un miembro de la familia Bombycillidae, utilizando células de la médula ósea. Se encontró que coinciden en 4 de los 8 cromosomas mayores, en el número diploide y en el tamaño de los cromosomas sexuales. Se propone que Dulidae sea incluída en Bombycillidae, aunque la falta de estudios con otras especies de esta familia con las cuales comparar impide que la evidencia sea más fuerte.

Indices de Densidad de las Comunidades de Aves en el Parque Nacional de los Haitises, República Dominicana. Carlos Cano Corcuera and Domingo Siri. Son importantes los estudios que abordan los indices de densidad en comunidades animales ya que dan una visión bastante aproximada de como fluctuan dichas poblaciones en el tiempo. En este trabajo se dan los resultados obtenidos en los censos realizados en dos comunidades de aves en las áreas de Pilancón y Trepada Alta, localizadas dentro del Parque Nacional de los Haitises, así como del status de cada grupo de residentes, endémicos, migratorios, etc., dentro de cada comunidad.

Habitos Alimentarios de la Madám Sagá (*Ploceus cucullatus*) en Zona Agricola Cercana a Santo Domingo, República Dominicana. Tomás A. Vargas Mora. La madam saga o chichiguao fue introducida en la Hispaniola durante el siglo XVIII. Desde entonces se ha dispersado por toda la Isla convirtiéndoes en una de las especies más abundante, particularmente en hábitats áridos y alterados, y en una de las peores plagas de la agricultura. En los períodos de enero a julio de 1979 y 1980 realizamos trabajos de campo para investigar las preferencias alimentarias de esta ave en un área donde cultivan arroz situada a unos 15 km al noroeste de Santo Domingo. Colectamos y analizamos una muestra de 236 estómagos durante este estudio. Los resultados de nuestra investigación indican que, en el área del estudio, el arroz fue la materia alimentaria preferida, con un 77.5% del total del volumen consumido. Semillas de plantas silvestres, principalmente cebadilla (*Rottboellia exaltata* L.f.), cabeza de indio (*Panicum fasciculatum* Sw.), y una especie desconocida (Graminea?), constituyeron un 12.8% de los contenidos estomacales. Los insectos representaron practicamente el 100% de la materia animal y un 2.4% del volumen total. De la materia animal, los coleópteros constituyeron el 53.9% del número total de presas ingeridas, mientras que los lepidópteros e hymenópteros representaron un 12.4% cada uno. Piedrecitas, principalmente calizas, formaron un 1.4% del total de los contenidos estomacales.

Algunos Aspectos Sobre la Composicion Estructural de una Comunidad Ornitica en el Parque Nacional de los Haitises, República Dominicana. Carlos Cano Corcuera and Domingo Sirí. Son pocos los trabajos publicados en la República Dominicana acerca de la composición y estructura de las comunidades de aves. Parámetros básicos que nos pueden dar una idea de en que condiciones se encuentran dichas comunidades y que pueden ser la base para estudios posteriores más puntuales. En este trabajo se expresan los datos de diversidad, equitabilidad y riqueza de las comunidades de aves que se encuentran en el Parque Nacional de los Haitises, de naturaleza karstica, localizado en el noreste de la República Dominicana.

Estudio Preliminar de la Avifauna en las Lagunas Limón y Redonda, Miches, República Dominicana. Tammy G. Dominguez Montandón and Domingo Sirí Nuñez. Un estudio comparativo entre dos comunidades de aves fue realizado en las lagunas Limón y Redonda, Miches, Prov. El Seibo, durante los días 20-21 de Mayo 1989. Se hizo un recorrido en bote a remos en cada laguna durante las primeras

horas de la mañana. En la laguna Limón el recorrido fue de 8.65 km, en el cual se observaron 388 individuos correspondientes a 21 especies, siendo las más abundantes el *Podilymbus podiceps*, *Ploceus cucullatus*, *Oxyura jamaicensis* y *Fulica americana*; mientras que en la laguna Redonda el recorrido fue de 11.25 km en donde se detectaron 196 ejemplares distribuidos en 22 especies, resultando ser las más abundates el *Quiscalus niger*, *Fulica americana*, *Gallinula chloropus* y *Fregata magnificens*. Se determinaron la diversidad, riqueza, equidad y predominio en ambos cuerpos de agua. Los valores más altos para estos parametros excepturando el predominio se obtuvieron en la laguna Redonda.

Announcements

Supplements to the "Checklist of the Birds of the West Indies," by James Bond are available on request from:

Ornithology Department
Academy of Natural Sciences of Philadelphia
19th and the Parkway
Philadelphia, Pennsylvania 19103 U.S.A.

The Academy normally charges a fee of $1.00 per Supplement, but will waive the fee for Caribbean workers. Questions can be directed to Christine Bush, Department Assistant, at telephone 215-299-1181.

The American Ornithologists' Union has published "Latin American Research Libraries in Natural History: A Survey", compiled by Tristan Davis. It surveys 112 libraries in 27 South and Central American countries, including information on library size, services provided, and kinds of researchers who use their holdings. The report is designed to encourage and assist individuals, organizations, and institutions interested in donating publications. It may be ordered for U.S.$5.50 + $2.00 postage and handling from Max C. Thompson, Assistant to AOU Treasurer, Biology Department, Southwestern College, 100 College St., Winfield, Kansas 67156, U.S.A.

Manomet Bird Observatory announces its 1990-91 Field Biology Training Program. Upperclass and beginning graduate students are given a thorough and intense experience in field biology, and work closely with staff biologists in continuing research. For detailed information, write Katherine C. Parsons, Manomet Bird Observatory, Box 936, Monomet, Massachusetts 02345, U.S.A.

Opportunities

The Peregrine Fund offers a position as a Research Scientist, available 1 January 1990, for a Ph.D. level scientist with a strong background and proven scientific ability in ornithology, preferably with raptors. Experience in tropical environments and at least conversational ability in Spanish and/or French desirable. Excellent spoken and written skill in English is manditory. Non U.S. citizens will be considered. Must be willing to relocate to Boise, Idaho, U.S.A., spend several months a year in the field, design and direct research, supervise student workers, write proposals, synthesize data and prepare publications, and answer correspondence or other activities the job may require. Salary will depend, in part, on qualifications. Benefits include health, dental, life and disability insurance, retirement, and workman's compensation. Send letter and resume to William Burnham, The Peregrine Fund, World Center for Birds of Prey, 5666 West Flying Hawk Lane, Boise, Idaho 83709, U.S.A. Deadline 31 December 1989.

Post-Doctoral Opportunity in the Brazilian Amazon. Money is being sought to support a full-time biologist to manage the ornithological research of the Biological Dynamics of Forest Fragments Project in Manaus, Brazil. Responsibilities include training and supervision of field interns who will continue the ongoing banding study of birds in forest islands and management of the associated data base. It is expected that the candidate chosen will take advantage of the ample opportunities to develop independent research into some aspect of the local avifauna, particularly, but not exclusively, in the context of the forest islands being studied by the project. Those interested should contact Rob Bierregaard, NHB-106, Smithsonian Institution, Washington, D.C. 20560, U.S.A.

The Peregrine Fund and Boise State University are offering a scholarship for a Master of Science degree in raptor biology to a qualified Latin American citizen. To qualify, the individual must have a Bachelor of Science degree in biology or a related field, be fluent in Spanish and English, and have an intense interest in birds of prey and making a career in conservation in Latin America. The degree is based on a 2-year program that requires course work and research. The research must be accomplished in Latin America in conjunction with The Peregrine Fund. The scholarship will include tuition and fees, books, 12 months living stipend, and 2 round trip tickets from Latin America annually. Send resume and explanation of interest in conservation and birds of prey in Latin America (in English) to William

Burnham, The Peregrine Fund, World Center for Birds of Prey, 5666 West Flying Hawk Lane, Boise, Idaho 83709, U.S.A. Deadline 31 December 1989.

Field Assistant needed for 2 studies in avian biology in Monteverde, Costa Rica, 1 March to 30 June 1990. Will alternate time between (1) study of foraging ecology of euphonias eating mistletoe and (2) study of evolution of clutch size in tropical house wrens. Job involves field observations of foraging birds, nest checks, nest observations, and surveys of fledgling birds. Previous field experience, ability to climb trees and to follow small birds with binoculars a must; ability to speak Spanish desirable. Some or all travel expenses and all living expenses provided. Send letter of interest, resume, and names and phone numbers of 2-3 references as soon as possible (certainly before 1 February 1990) to Bruce E. Young, Department of Zoology, NJ-15, University of Washington, Seattle, Washington 98195, U.S.A. (FAX 206-543-3041)

Field Assistant(s) needed for study of male-male cooperation, demography and delayed plumage maturation in long-tailed mannakins in Monteverde, Costa Rica (see Animal Behavior 37:1007-1022). Duties include behavioral observations, plumage experiments and coordinating EarthWatch volunteers. Long hours. Relevant experience, Spanish and an interview are desirable, but not necessary. I will provide air fare, room and board, a small stipend; you will have a fascinating system to explore in a fabulous location. In return, I expect you to be diligent, enthusiastic, and of good humor. Must be able to commit for the period 1 March to 30 June 1990. For further information, contact David McDonald, Department of Zoology, 223 Bartram Hall, University of Florida, Gainesville, Florida 32611, U.S.A.

Opportunity Wanted

I am an 18-year old student in the United Kingdom. Between July 1990 and October 1991, I intend to study birds in North and possibly Latin America, after which I intend to do a degree in zoology and work as an ornithologist. I am interested in doing work connected with ornithological research in the Americas. I would require a subsistence grant or other funding, but would consider volunteer work. I have birding experience in Europe, China, Fiji, Borneo, and Australia. References available. Ian Tomlinson, Ghyll House, Blindcrake, Cumbria CA13 OQP, United Kingdom.

Grants and Awards

The Cooper Ornithological Society is offering a limited number of 2-year student membership awards through support from the Western Foundation of Vertebrate Zoology. Applicants should submit a curriculum vitae and a letter of recommendation from their major professor by 31 December 1989 to Lloyd F. Kiff, Suite 1400, 1100 Glendon Ave., Los Angeles, California 90024, U.S.A.

The American Ornithologists' Union will offer several Marcia Brady Tucker Travel Awards to help defray expenses of outstanding students wishing to present a lecture or poster paper at the Stated Meeting in Los Angeles in 1990. The paper may have multiple authors, but the student's name must be the first and the student must present the paper. Application materials must reach Robert M. Zink, Museum of Natural Science, Louisiana State University, Baton Rouge, Louisiana 70803, U.S.A., by 2 April 1990.

News of Society Members

David Blockstein has recently accepted a position with the American Institute of Biological Sciences. However, he will be continuing his field research on the endangered Grenada dove and Grenada hook-billed kite. Dr. Blockstein can be reached on Grenada c/o George Vincent, Manager of National Parks, Ministry of Agriculture, Archibald Ave., St. Georges, Grenada, West Indies.

After 1 January 1990, Don Buden can be reached at Division of Natural Sciences, College of the Bahamas, Nassau, Bahamas.

Meetings of Interest

23-27 January 1990 – First Pan American Congress on Conservation of Wildlife through Education, Caracas, Venezuela. Sponsored by the New York Zoological Society and International Association of Zoo Educators. (Annette Berkovits, Pan American Congress Chair, Education Department, New York Zoological Society, Bronx Zoo, New York, NY 10460, U.S.A.)

15-18 March 1990 - National Wildlife Federation Annual Meeting, Denver, Colorado, U.S.A.

16-20 March 1990 - The Wildlife Society Annual Meeting, Sheraton Denver Tech Center Hotel, Denver, Colorado, U.S.A. (Harry E. Hodgdon, Executive Director, TWS, 5410 Grosvenor Lane, Bethesda, Maryland 20814, U.S.A. Telephone: 301-897-9770)

17-22 March 1990 - 55th North American Wildlife and Natural Resources Conference, Sheraton Denver Tech Center Hotel, Denver, Colorado, U.S.A. (L.L. Williamson, Wildlife Management Institute, Suite 725, 1101 14th St. N.W., Washington, D.C. 20005, U.S.A. Telephone: 202-371-1808)

29 April - 3 May 1990 – Society for Ecological Restoration, 2nd Annual Conference, Chicago, Illinois. Abstracts due by 15 January. (William R. Jordan III, University of Wisconsin Arboretum, 1207 Seminole Highway, Madison, Wisconsin 53711, U.S.A.)

7-11 May 1990 – Society for the Preservation of Natural History Collections, 5th annual meeting, Chicago, Illinois. (David Willard, Bird Division, Field Museum of Natural History, Roosevelt Road at Lakeshore Dr., Chicago, Illinois 60605, U.S.A. Telephone: 312-922-9410, ext. 269)

31 May-3 June 1990 - The Wilson Ornithological Society and The Association of Field Ornithologists, joint meeting, Wheaton College, Norton, Massachusets, U.S.A. (John Kricher, Chair of Local Committee; Richard Conner and Edward H. Burtt, Jr.; Co-Chairs of Scientific Program Committee)

4-8 June 1990 – Association for Biology Laboratory Education (ABLE), Southwest Missouri State University. Includes 12-15 innovative interactive workshops suitable for undergraduate biology lab courses. (John Glase, Section of Neurobiology and Behavior, 1130 Comstock Hall, Cornell University, Ithaca, New York 14853, U.S.A. Telephone: 607-255-3007)

10-15 June 1990 - Animal Behavior Society, State University of New York, Binghamton, New York, U.S.A. (Stim Wilcox, Department of Biology, SUNY Binghamton, New York 13901, U.S.A.)

12-16 June 1990 - Malaysia International Conference on Conservation of Tropical Biodiversity, "In Harmony with Nature," Kuala Lumpur, Malaysia. (Ministry of Science, Technology & Environment, 50662 Kuala, Lumpur, Malaysia).

18-24 June 1990 – American Birding Association, Fort Collins Marriott Hotel, Fort Collins, Colorado, U.S.A. (Bob Berman, ABA, P.O. Box 6599, Colorado Springs, Colorado 80934-6599. Telephone: 800-634-7736)

25 June-1 July 1990 - Joint meeting of the American Ornithologists' Union and the Cooper Ornithological Society, Los Angeles, California, U.S.A. (Lloyd F. Kiff, Western Foundation of Vertebrate Zoology, 1100 Glendon Ave., Suite 1400, Los Angeles, California 90024; Bryan Obst, Department of Biology, University of California, Los Angeles, California 90024, U.S.A.)

1-7 July 1990 - ICSEB-IV, International Congress on Systematics and Evolutionary Biology, University of Maryland, College Park, Maryland, U.S.A. Theme: "The Unity of Evolutionary Biology." (Congress Secretary, ICSEB-IV, Dept. of Microbiology, University of Maryland, College Park, MD 20742, U.S.A.).

5-8 August 1990 – Association of Systematic Collections, joint meeting with AIBS, Richmond, Virginia, U.S.A. (ASC, 730 11th St. N.W., 2nd Floor, Washington, D.C. 20001-4584, U.S.A.)

15-17 August 1990 - Managing Predation to Increase Production of Wetland Birds Symposium, Jamestown, North Dakota, U.S.A. (Alan B. Sargeant, Northern Prairie Wildlife Research Center, P.O. Box 2096, Jamestown, North Dakota 58402, U.S.A. Telephone: 701-252-5363).

22-26 August 1990 – Third International Conference of Behavioural Ecology and Foraging Behaviour, Uppsala, Sweden. (Steffan Ulfstand, Department of Zoology, Box 561, S-751, 22 Uppsala, Sweden)

22-30 August 1990 – "Granivorous Birds as Pests of Agriculture and Epidemiological Vectors," a symposium within the 5th International Congress of Ecology, Yokohama, Japan. (Jan Pinowski, Department of Vertebrate Sciences, Dziekanow Lesny, 05-092 Lomianki, Poland)

29 August–4 September 1990 – 11th International Symposium on Biotelemetry, Yokohama International Conference Center, Yokohama, Japan. (Dr. Akihiko Uchiyama, School of Science & Engineering, Waseda University, 3-4-1, Ohkubo, Shinjuku-ku, Tokyo 169, Japan. Telephone: 03-203-13-4141, extension 73-3413)

13-16 September 1990 - The Second International

Parrot Convention, Tenerife (Canary Islands). The theme of the convention will be "Captive Breeding for Conservation." The primary language of the Convention will be English, with simultaneous translations into Spanish and German. The cost of the Convention is U.S.$175, which includes participation in all conferences, excursions, some meals, and a guided tour of Loro Parque. Hotel and meal packages are available. (Loro Parque, 38400 Puerto de la Cruz, Tenerife, Spain. Telephones: 3422-38 30 12 or 3422-38 30 90. Fax: 3422-38 73 21; Telex: 92398 LORO)

11-14 November 1990 - National Symposium on Urban Wildlife, Stouffer Five Seasons Hotel, Cedar Rapids, Iowa, U.S.A. (Dr. Lowell Adams, Symposium Program Chairman, National Institute for Urban Wildlife, 10921 Trotting Ridge Way, Columbia, Maryland 21044, U.S.A. Telephone: 301-596-3311).

21-27 November 1990 - 20th World Conference of the International Council for Bird Preservation, Hamilton, New Zealand.

2-9 December 1990 - XX International Ornithological Congress/XX World Conference ICBP, Christchurch, New Zealand. The general theme is "The World of Birds -- a Southern Perspective." The scientific program will consist of 8 events, including 4 plenary addresses and 6 symposia. (Dr. Ben D. Bell, Secretary-General, XX Congressus Internationalis Ornithologicus, Department of Zoology, Victoria University, Private Bag, Wellington, New Zealand; and Dr. Charles G. Sibley, President, XXth International Ornithological Congress, Tiburon Center for Environmental Studies, San Francisco State University, Box 855, Tiburon, California 94920, U.S.A. Telephone: 415-435-1717).

22-27 March 1991. 56th North American Wildlife & Natural Resources Conference, Edmonton Convention Centre, Edmonton, Alberta, Canada. (L.L. Williamson, Wildlife Management Institute, Suite 725, 1101 14th St. N.W., Washington, D.C. 20005, U.S.A. Telephone: 202-371-1808)

15-19 May 1991 – Joint annual meetings of the Cooper and Wilson Ornithological Societies, University of Oklahoma, Norman, Oklahoma, U.S.A.

13-17 August 1991 – 109th Stated Meeting of the American Ornithologists' Union, Montreal, Quebec, Canada.

24-30 November 1991 - IV Neotropical Ornithology Congress, Quito, Ecuador. (Humberto Alvarez-Lopez, President; Nancy Hilgert de Benavides, Local Arrangements Committee, Corporación Ornitológia del Ecuador, Casilla 9068 S-7, Quito, Ecuador. Telephone: [593-2]-240-642).

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