ABSTRACTS OF PAPERS SUBMITTED FOR PRESENTATION AT THE 1995 ANNUAL SCO MEETING, TRINIDAD AND TOBAGO

A Preliminary Review of the Short-eared Owl *Asio flammeus* complex in the Greater Antilles

Orlando H. Garrido

Museo Nacional de Historia Natural, La Habana, Cuba

In historical times, the Short-eared Owl *Asio flammeus* was reported in the islands of Hispaniola and Puerto Rico as two breeding subspecies, *A. f. dominguensis* (Müller), 1776 and *A. f. portoricensis* Ridgway, 1882. Although reported from Cuba by Lembeye (1850), Gundlach (1876), Barbour (1923), Bond (1956, 1984), Garrido and Garcîa Montaña (1975), Garrido (1984) and Repilado (1983), its subspecific status was either not mentioned or it was considered as the continental race *A. f. flammeus* (Pontopiddan) 1763. During the past two decades, due to the increase of rice, sugar and citrus fields, Cuban populations (previously considered very rare and non-breeding) underwent a spectacular demographic explosion, being reported from practically every province. Individuals from Key West (specimens examined) and presumably the sighting from Cayman-Brac, are attributed to this explosion. To date I have examined 315 specimens belonging to all known described taxa, including taxa from islands: *snafordi* (Falkland Islands), *sandwichensis* (Hawaiian Islands), *ponapensis* (Ponapé, Caroline Islands), *galapagoensis* (Galapagos Archipelago), *dominguensis* (Hispaniola), *portoricensis* (Puerto Rico and Cuba). Island specimens are smaller than continental forms. As in continental forms, populations from islands other than the West Indies have a shorter tarsus, smaller feet, smaller bill and, especially, more densely feathered tarsus and toes. In contrast, West Indian populations (including specimens from Key West) have bigger feet, larger tarsi and bill, and much less feathered tarsus and toes. Furthermore, continental birds lay larger clutches (4 to 9 eggs), whereas West Indian birds (Cubans) lay smaller clutches of 3 eggs. Also, eggs of West Indian birds are larger: 44.1 mm X 33.5 mm compared with 39.0 mm X 31.0 mm in continental *flammeus*. West Indian birds are much darker on the upperparts, with the exception of the race *bogotensis* and *galapagoensis*, and show a different pattern and apparently exhibit different vocalizations. West Indian birds were represented by relict populations, whereas Cuba recently exhibited an "abnormal" increase due to the increase of suitable habitats plagued with rodents *Rattus* spp. and *Mus musculus*. In conclusion, birds from Cuba (including Key-West stragglers), Puerto Rico, and Hispaniola are indistinguishable in size (conventional measurements), color, and pattern, and therefore they should be designated *Asio dominguensis*, different from continental *Asio flammeus*.

Enseñanza De La Conservación A Traves De Las Plantas Y Las Aves Silvestres

Simón Guerrero

Dirrección Nacional de Parques, Av. Independencia #359, Apartado 2487, Santo Domingo, República Dominicana

Se describen las actividades de un programa de educación ambiental fundamentado en la importancia de la conservación de las plantas y los animales silvestres. El programa incluye charlas a estudiantes de la escuela primaria, acompañadas de pequeños censos de aves silvestres en el área verde de la escuela y siembras de plantas nativas de las que producen alimento para la fauna. El programa se extiende a la Escuela Nacional de Ciegos y al Cengtro de Rehabilitación de Inválidos. Como parte del proyecto se contempla la arborización de los parques urbanos con plantas nativas, reproduciendo en uno de ellos la vegetación representativa de algunos de nuestros parques nacionales, creando dentro del área mini-reservas de vida silvestre. Finalmente, se muestran fotografías de las portadas de los directorios telefónicos de una compañia local, en las que aparecen seis aves endémicas de la Hispaniola. Esta campaña forma parte del programa de educación en torno a la importancia de la conservación de la fauna autóctona.

A Land Manager's Guide To Point Counts Of Birds In The Southeast

Paul B. Hamel, Winston Paul Smith, Daniel J. Twedt. James R. Woehr, Eddie Morris, Robert B. Hamilton, and Robert J. Cooper

USDA Forest Service, Southern Hardwoods Lab, P. O. Box 227, Stoneville, MS 38776, USA

Current widespread concern for the status of neotropical migratory birds has sparked interest in techniques to inventory and monitor populations of these and other birds in southeastern forest habitats. Members of the Southeast Management Working Group, Partners in Flight, have developed a guide for land managers that gives detailed instructions for conducting point counts of birds. It further presents a detailed methodology for design and conduct of inventorial and monitoring surveys using point counts, including discussion of sample size determination, distribution of counts among habitats, cooperation among neighboring land managers, vegetation sampling, standard data format, and other topics. Appendices provide additional information making this guide a stand-alone text for managers interested in developing inventorial information for bird populations on their lands. The methodology developed by the Southeast Management Working Group is applicable to inventory and monitoring tasks for resident and migratory landbirds in Caribbean countries.

Status, Ecology And Behavior Of The Threatened White-tailed Sabrewing, *Campylopterus Ensipennis*, On Tobago, West Indies: Preliminary Report

F. E Hayes, A. L. Bullard, D. R. Hardy, D-A. D. Wilson, D. J. Wilson, T. O. Garnett, M. V. Bernard, B. Y. Y. Wong, H. S. Gurley, V. L. Joseph, and M. F. Hayes
Department of Biology, Caribbean Union College, P. O. Box 175, Port of Spain, Trinidad and Tobago

The White-tailed Sabrewing (*Campylopterus ensipennis*) is a threatened species whose distribution is restricted to montane forest on two coastal ranges in Venezuela and Tobago. It was considered a common resident in Tobago until Hurricane Flora destroyed most of its habitat in 1963. Afterward it was feared extinct until its rediscovery in 1974. During 20-24 March 1995, we located about 32 sabrewings along approximately 17.5 km of trails in the Main Ridge Forest Reserve of northeastern Tobago, indicating that the population is recovering. We studied the behavior of two singing males defending adjacent territories of roughly 90 m² in tall, dense forest. Both males spent most of their time perched and alert on thin, midstory branches. Preening was most frequent during the late morning and early afternoon. The rate of calling was highest in the early morning and late afternoon. The rate of foraging was highest in the early morning and lowest in the late afternoon. More than half of their foraging sallies covered a distance less than 1 m. More than 95% of their foraging time was spent capturing insects (mostly mosquitoes), with less than 5% feeding on nectar from bromeliads. No heliconias were present within their territories, but elsewhere we often saw sabrewings feeding from heliconias. Intraspecific interactions were most frequent during the early morning. Subsequent funding from the Conservation Expedition Competition of British Petroleum, BirdLife International, and Fauna and Flora International will enable us to continue this study.

A Comparison Of Bird Populations In Exotic Caribbean Pine And Native Montane Forest At Mount Saint Benedict, Trinidad

Floyd E. Hayes[1], Ishmael A. Samad[2], and Dale R. Hardy[1]
[1]*Department of Biology, Caribbean Union College, P. O. Box 175, Port of Spain, Trinidad and Tobago*, [2]*El Tucuche Nature Retreat, Loango Village, Maracas, Trinidad and Tobago*

Monoculture stands of exotic Caribbean pine (*Pinus caribaea*) have been planted extensively on the southern slopes of the Northern Range in Trinidad. During the dry season of 1995, we compared bird populations in a 172-ha stand of pine forest, planted in 1972, with an adjacent stand of native montane forest at Mount Saint Benedict, Trinidad. Forty-five fixed-radius (25 m) point counts, each of 10 min duration, were conducted in each habitat; birds seen flying above the canopy were excluded. Species richness was significantly higher in the native forest; of 48 species recorded during the counts, 41 (85%) were found in native forest whereas only 25 (52%) were found in pine forest (chi-square test, $X^2 = 10.91$, $P = 0.001$). Species diversity was higher in native forest (Shannon index of diversity, H' = 2.51) than in pine forest (H' = 2.35). The mean number of birds/count was significantly higher in native forest (= 8.11) than in pine forest (= 5.22; Mann-Whitney U test, $z = 2.57$, $P = 0.01$). The mean number of species/count was significantly higher in native forest (= 6.00) than in pine forest (= 4.13; $z = 2.65$, $P = 0.008$). These results document a general reduction in the number of birds and species of birds in exotic Caribbean pine forest.

Datos Preliminares De La Expansión Geográfica Del Gorrión Inglés, *Passer Domesticus*, En El Oeste De Puerto Rico

Liza V. Jiménez
Departamento de Biología, Universidad de Puerto Rico, Recinto Universitario de Mayagüez, PR 00680

En Puerto Rico el Gorrión Inglés *Passer domesticus* se observó por primera vez a finales de la decada de los 60, convirtendose en un ave exótica de la cual se conoce poco. En este estudió se describió la dinámica de la expansión geográfica, el hábitat utilizado y el período de reproducción de ésta ave. Utilizando el método muestreo de punto, se realizaron rastreos sistemáticos en 27 municipios al oeste de Puerto Rico. Se encontró que estas aves prefieren las áreas litorales donde se localizan los grandes asentamientos humanos y que construyen sus nidos en cavidades artificales. El ciclo de reproducción se extiende a lo largo de todo el año, pero con una mayor actividad de marzo a septiembre. Esto tiende a indicar que *P. domesticus* utiliza recursos alimentarios y refugios disponibles en los asentamientos humanos, lo que hace su distribución paralela a la dispersión del ser humano.

Conservation Of The Black-billed Parrot And Yellow-billed Parrot In Jamaica

Susan Koenig[1], Chandra Degia[2], and Garfield Brown[2]
[1]*Wildlife Preservation Trust International, Philadelphia, PA, USA,* [2]*Wildlife Preservation Trust International, and Gosse Bird Club, Kingston, Jamaica, WI*

Jamaica hosts two native Amazona parrots that are found nowhere else; the Yellow-billed Parrot, *Amazona collaria*, and the Black-billed Parrot, *Amazona agilis*. Although the other islands composing the Greater Antilles have resident Amazon parrots, Jamaica is unique in being the only island to presently support two endemic Amazon parrots. The conservation of both species has been a concern for many years, as both are considered threatened or at risk and yet neither has been the subject of a comprehensive biological research program. Available information suggests that both species still face significant problems with habitat destruction and harvest for

Swamp, Trinidad's largest freshwater ecosystem, as a prohibited area was a direct result of their efforts.

Predicting Population Changes From Habitat Change In Belize

C. S. Robbins[1], B. A. Dowell[1], J. Fallon[1], and J. Hepinstall[2]
[1]NBS, PESC, Laurel, MD 20708, [2]University of Maine, Orono, ME 04469

Systematic banding and point count surveys of major forest and agricultural habitats throughout the Belize lowlands were used with vegetation maps and satellite imagery to map relative abundance and to estimate national populations of many species. These baseline data will be used in conjunction with satellite imagery to predict changes in bird abundance as habitats change. Species estimated as most abundant (millions) in the Belize lowlands during the northern winter are: Red-capped Manakin, 3.3; Red-throated Ant-Tanager, 3.1; Rufous-tailed Hummingbird 2.9; Gray Catbird, 2.8; Ochre-bellied Flycatcher, 2.0; Tawny-winged Woodcreeper, and Ovenbird, 2.0. Wood Thrushes, ovenbirds, waterthrushes, antbirds, woodcreepers, and furnariids are especially vulnerable to population declines as a result of habitat changes; Magnolia and Black-and-white Warblers, American Redstarts, and Ochre-bellied Flycatcatchers are less habitat specific.

Biology And Conservation Of Psittacids In Venezuelan Islands

F. Rojas-Suárez, M. Albomoz, D. Carnilo, A. Rodriguez, and V. Sanz Provita

We present the status of research and conservation of three psittacid species in Venezuelan Islands. We have studied *Amazona barbadensis* in Margarita Island since 1989 including its basic reproductive parameters and its success, development of fledglings, relative availability, and characteristics of tree holes used as nests by the parrots and other species. In 1989, the population size was estimated at 750 individuals. Current population estimates indicate a minimum size of 1580 birds. On La Blanquilla Island we estimated the current population size breeding biology habitat use, and identification of the factors that threaten *A. barbadensis*. Population size is below 80 individuals. In 1991 we began a study of *Aratinga acuticaudata neoxena* (endemic to Margarita Island), including population size, habitat use, basic reproductive parameters and the factors that threaten it. In 1993 the population size was 180-200 individuals. The following year it declined to less than 100 birds. The related *Aratinga pertinax marganitensis* (Coche, Cubagua and Margarita Islands) is not endangered in spite of the sustained poaching pressure on the nestlings. We have compiled information about breeding, nestling growth, predators, and potential threats. The subspecies *A. p. tortuguensis* (endemic to La Tortuga Island) could be in jeopardy. Preliminary information shows low population levels, poaching of nestlings, and habitat destruction. Our conservation programs have focused on *A. barbadensis* and *A. acuticaudata*, and include strategies to improve juvenile recruitment, effectively protect the breeding areas, monitoring of population size, captive maintenance and liberation of confiscated birds, use of "foster nests," design of protected areas, and environmental education essays of sustainable development. As a result of the management plan, the number of fledglings recruited into the population and active nests have increased.

Predation Of Artificial Nests Of West Indian Whistling-Ducks On Long Island, Bahamas

Nancy Staus
Graduate Program in Conservation Biology, University of Minnesota, 100 Ecology Building, St. Paul, MN 55108

The West Indian Whistling-Duck (*Dendrocygna arborea*) is a non-migratory species of waterfowl found only on the islands of the West Indies. Although little is known about this species, most sources believe its numbers are declining, and recently the IUCN categorized *D. arborea* as a rare and endangered species. The reasons for this species' drastic decline are unknown, but are usually attributed to predation, hunting, and habitat destruction. Since hunting and habitat destruction do not appear to be major factors on my study site, I decided to test whether predation, specifically nest predation, could be a significant factor affecting West Indian Whistling-Ducks on Long Island and adjacent Hog Cay, Bahamas. This summer, I am using artificial nests to study nest predation rates of the ground-nesting West Indian Whistling-Duck. I am testing whether these rates differ among 1) artificial nests on Hog Cay and artificial nests on Long Island and 2) artificial nests in two different habitat types on Long Island. I am also using automatic cameras randomly placed at nests to determine which species act as nest predators on these islands. My objectives are to determine if nest predation could be an important factor in the decline of the West Indian Whistling-Duck, and to identify species that prey on duck eggs.

Populations Of Orangequits In A Mid-Level Limestone Woodland, Jamaica, 1991-1994

Ann Sutton and Robert Sutton
Marshall's Pen, P. O. Box 58, Mandeville, Jamaica

Very little is known about fluctuations in populations of Jamaican endemic birds. Following sporadic banding in the 1970's and 1980's, a constant effort banding programme began at Marshall's Pen in the 1990's to generate such data. The Orangequit, *Euneornis campestris*, a Jamaican endemic species belonging to a monotypic genus, was among the most frequently caught species. Therefore preliminary data analysis has been focused on this species. Monthly and annual fluctations in Orangequit populations as suggested by banding data were examined. Results of banding were compared with

point counts and both were interpreted in relation to rainfall data for Marshall's Pen. Recapture rates were examined with reference to sex and age. Data on longevity were generated.

The Dickcissell: A Neotropic Migrant In Trouble

Stanley A Temple and Gianfranco Basili
Department of Wildlire Ecology, University of Wisconsin, Madison, Wisconsin, U. S. A.

Like many neotropical migrants, Dickcissels (*Spiza americana*) have been declining. We studied Dickcissels throughout their Nearctic breeding range and Neotropical wintering range. Breeding Bird Surveys show that Dickcissels have declined by over 35% since 1968. We found no reproductive problems; instead nesting success was normal for a small passerine. We found no shortage of nesting habitat; instead Dickcissels are below the carrying capacity of their large breeding range. But, over-winter survival is abnormally low. Dickcissels are considered an agricultural pest in Venezuela, where most birds winter. Since the 1960s, rice growers have killed millions of Dickcissels each year by spraying huge nocturnal roosts with pesticides.

Estrategia Educativa Con La Participación Comunitaria Para La Protección De La Cotorra Y El Perico En República Dominicana (Proyecto Cotorra Libre)

R. E. Vásquez, T. Lara, y R. Lorenzo
Grupo Ecologista Tinglar, Calle El Vergel #33, Reparto El Vergel, Santo Domingo, República Dominicana

La Cotorra de la Hispaniola, *Amazona ventralis*, y el Perico, *Aratinga chloroptera*, son especies endémicas de nuestra isla. Estas se encuentran bajo presión debido a su valor comercial como mascotas y a la destrucción de su ambiente. a) Ejecutar planes de protección de estas especies conjuntamente don instituciones públicas y privadas. b) Implementar estragias de educación para la protección, autosurgeridas por las comunidades (partiendo de la aplicación de grupos focales). c) Elaborar materiales educativos que faciliten la comprensión y adopción de actitudes positivas hacia la protección de estas especies en sus habitates. Una fase inicial incluye estudios cualitativos (grupos focales) a fin de elaborar la estrategia para la campaña educativa. La investigación permite identificar contenidos para elaborar los materiales educativos y las dificultades para su inserción, divulgación y distribución. Los grupos focales incluyen la participación de personas representantes de organizaciones comunitarias. La creción de redes de "Amigos de las Cotorras Libres". Integrar la participación de sectores gubernamentales y privados. a) fomento de associaciones comunitarias pro-protección de las cotorras y pericos en sus habitates. b) Mayor incidencia en la Campaña Nacional para la Protección de la Fauna en Peligro de Extinción. c) Adecuar el diseño de materiales educativos a la realidad social de los habitates que tienen poblaciones de cotorras y pericos. d) Incorporación activa del sector escolar a las actividades de protección.

Habitat Use And Nest Habitat Structure Of The Puerto Rican Nightjar

Francisco J. Vilella
Mississippi Cooperative Fish and Wildlife Research Unit, Department of Wildlife and Fisheries, Mississippi State University, Mississippi 39762 USA

I studied the reproductive ecology of the Puerto Rican Nightjar, *Caprimulgus noctitherus*, at Guánica Forest, southwestern Puerto Rico. I used multivariate analysis on structural habitat data collected at nests (n = 23) and random sites (n = 103), and found that nesting sites had larger amounts of leaf litter biomass, more overhanging nest cover, and more openness of the understory and midstory than randomly selected sites. However, within the forested upland areas found at higher elevations, the openness of the lower layers of the forest appeared to be the main factor to which nightjar pairs were responding when selecting a nest site. The loss of leaf litter from the forest floor during years of high precipitation probably negatively affected reproductive output due to nest substrate loss, nest washouts, and increased predator activity. The main factors associated with the use of some areas by breeding nightjars in the upland regions of the forest were the presence of dense, tangled vegetation within 2-3 m of the ground. However, these results were used in an exploratory way to illuminate ecologically meaningful relationships and serve as a basis for future experimental work. Thus, further research should concentrate on experimental testing of the hypotheses raised by this study.

Flux Genitique Entre Populations Et Fidelite Des Couples Pour Une Especie Endemique Et Insulaire, Le Pic De Guadeloupe

Pascal Villard
Parc National de la Guadeloupe, Habitation Beausoleil, Montéran, 97120 Saint Claude, Guadeloupe, French West Indies

Pendant 16 mois, l'écologie et la biologie du Pic de Guadeloupe, *Melanerpes herminieri*, ont été étudiés. Des mesures morphologiques et la pose de bagues colorées ont été effectuées sur 52 adultes capturés sur les deux principales files de Guadeloupe (connectées par un pont). Les individus provenant de Basse-Terre sont plus grands que ceux de Grande-Terre. 1) S'agit-il de deux populations distinctes ou bien certains individus se déplacentils d'une île à l'autre? Pour répondre à cette question, il faudrait disposer de plusieurs centaines de pics marqués et poursuivre l'étude pendant plusieurs années. Ce qui permettrait peut-être d'observer un individu sur l'autre île que celle où il a été marqué. Les couples restent ensemble toute l'année et défendent un territoire. Durant la péruide de travail de terrain, seulement 2 accouplements ont pu être obserés (il s'agissait d'oiseaux

non marqués). 2) Est-ce que les femelles s'accouplent avec d'autres mâles que celui attitré? Une technique d'analyse de l'ADN (fingerprinting) a été employée pour permettre de répondre à ces 2 questions. Les 3 premiers mois de laboratoire ont permis de tester la méthode et de voir qu'elle pouvait être utilisée avec les échantillons de pic. Actuellement plus d'échantillons de sang sont collectés. Trois mois seront ensuite nécessaires pour terminer le travail de laboratoire et effecturer l'analyse des résultas obtenus.

Genetic Structure Within And Among Populations And Patterns Of Mating In An Endemic Island Species, The Guadeloupe Woodpecker

Pascal Villard

The ecology and the biology of the Guadeloupe Woodpecker, *Melanerpes herminieri*, have been studied for 16 months. Measurements were made and split plastic rings were placed on 52 adult birds caught on the two main islands of Guadeloupe (connected by a bridge). The birds coming from Basse-Terre are bigger than those from Grande-Terre. 1) Are there two "distinct" populations or are some birds moving from one island to another? To answer this question we need to have several hundred birds banded and to continue the study many more years to have the opportunity to watch a bird on the island other than the one on which it was banded. The pair remains bonded through the year defending one territory. During the field work only two copulations (unbanded birds) were observed. Perhaps females have extra copulations with males other than their mates. DNA analysis (fingerprinting) was applied to answer those two questions. The first three months of lab work showed that the technique can be used with our woodpecker samples. At the present time, more blood samples are being collected. Three more months will be needed to process all the samples (about 100) and to do the analysis.

Red-footed Boobies Nest At White Cay, San Salvador

A. W. White[1], B. Hallet[2], and M. Bainton[3]
[1]5872 Marbury Rd., Bethesda, MD 20817, [2]697 Darlington Road NE, Atlanta, GA 30305, [3]P. O. Box N7776, Nassau, Bahamas

On 28 April 1995 we observed and photographed a pair of adult Red-footed Boobies (*Sula sula*), a subadult, and a downy chick on White Cay north of San Salvador, Bahamas. A. Sprunt, IV, sighted and photographed a pair of adult Red-footed Boobies on the same cay on 16 May 1988, but did not publish his observations. These records are the first sightings and nesting records of Red-footed Boobies in the Bahamas and the northernmost nesting record for this species in the Atlantic and Caribbean regions.

Contribución Del Dosel A La Abundancia Y Diversidad De Aves En Cafetales De Sombra En La Republica Dominicana

Joseph M. Wunderle, Jr., and Steven C. Latta
International Institute of Tropical Forestry, P. O. Box B, Palmer, PR 00721

Plantaciones de café de sombra con un dosel de Inga vera fueron caracterizadas con un abundancia de nectívoros, un radio de sexo inclinado hacia los machos en dos especies de aves migratorias nearcticas (*Dendroica caerulescens* y *Setophaga ruticilla*) y un mayor número de especies comunes en bosques latifolios. Por el contrario, el café de sol posée más frugivoros, un radio de sexo inclinado hacia las hembras en las mismas especies de aves migratorias, y especies típicas de un ambiente de matorral. La riqueza de especies fue casi igual en los dos plantaciones. La diversidad de las especies (H') fue similar en los contéos en punto en los cafetales, pero un "sobrepredominio" se hizo evidente en las muestras con redes en los cafetales de sombra. El café de sombra contribuye a la biodiversidad en los regiones agrícolas al proveer hábitat para las especies de bosques latifolios en contraste al café de sol, que puede proveer hábitat para algunas especies de matorral.

Contribution Of The Shade Overstory To Avian Abundance And Diversity In Dominican Coffee Plantations

Joseph M. Wunderle, Jr., and Steven C. Latta

Shade coffee plantations with an overstory of Inga vera were characterized by an abundance of nectarivores, male-biased sex ratios in two nearctic migrants (*Dendoirca caerulescens*, *Setophaga ruticilla*) and species common in broadleaf forest. In contrast, plantations without a shade overstory (i.e., sun coffee) had more frugivore/seedeaters, female-biased sex ratios in the two nearctic migrants, and species of open brushland ("matorral"). Species richness was similar in the two plantation types as was species diversity (H') in point counts but not net samples in which overdominance was evident in shade coffee. The shade overstory was important because more birds fed in the overstory than in the coffee understory. Shade coffee contributes to biodiversity in agricultural regions by providing habitat for broadleaf forest species in contrast to sun coffee which may provide habitat for some "matorral" species.